



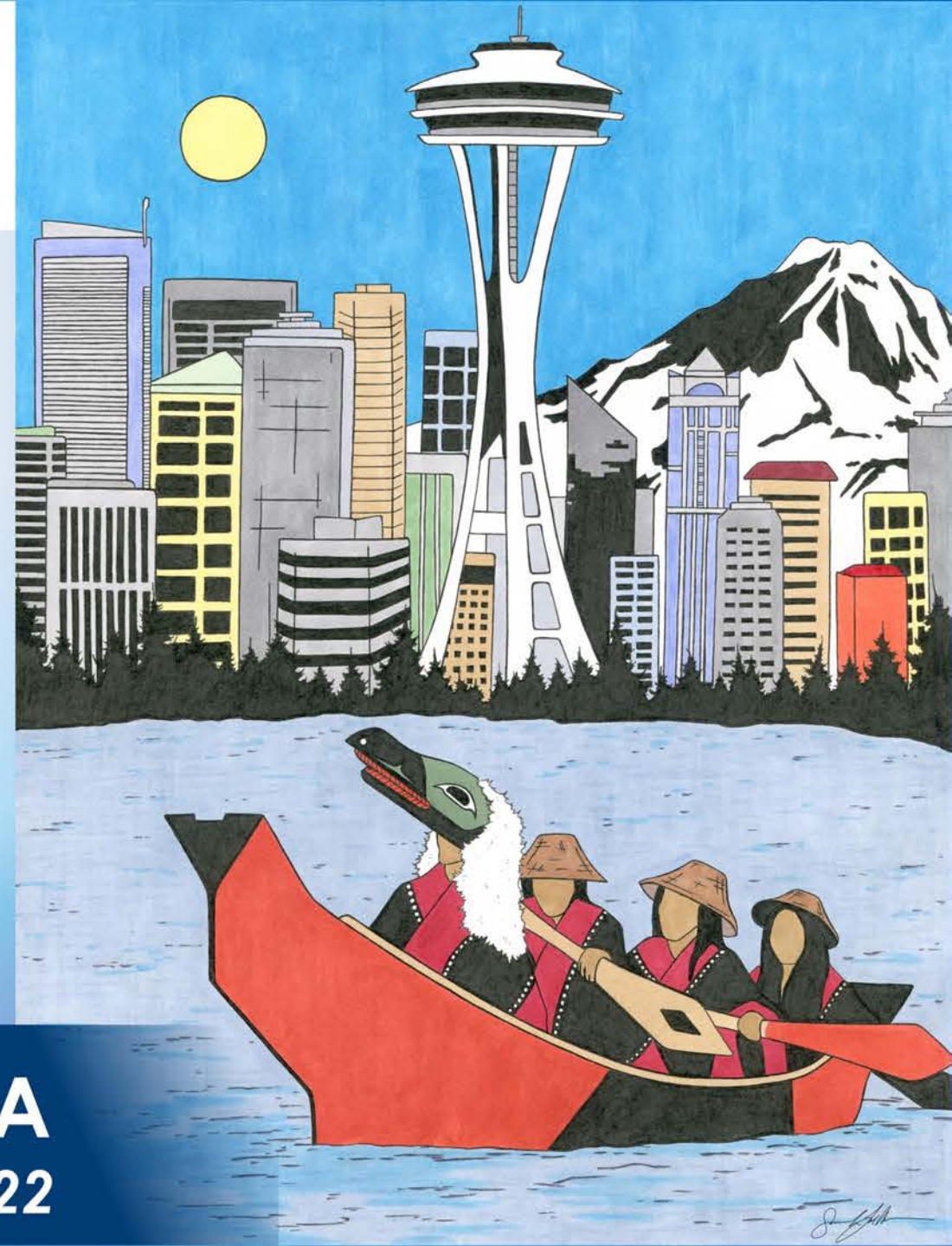
PICES-2023



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

Connecting Science and Communities for Sustainable Seas

Oct 23–27, 2023 • Seattle, USA
with pre-conference workshops Oct 20–22



PICES-2023 Welcome Address



Robert Duff

Executive Director of Policy & Outreach
Office of the Governor, WA



**NOAA
FISHERIES**



PICES-2023 Welcome Address



Francisco E. Werner

Director of Scientific Programs and Chief Science Advisor
National Marine Fisheries Service, NOAA



**NOAA
FISHERIES**



North Pacific Marine Science Organization



PICES-2023 Opening Remark

Enrique Curchitser
Chair of PICES





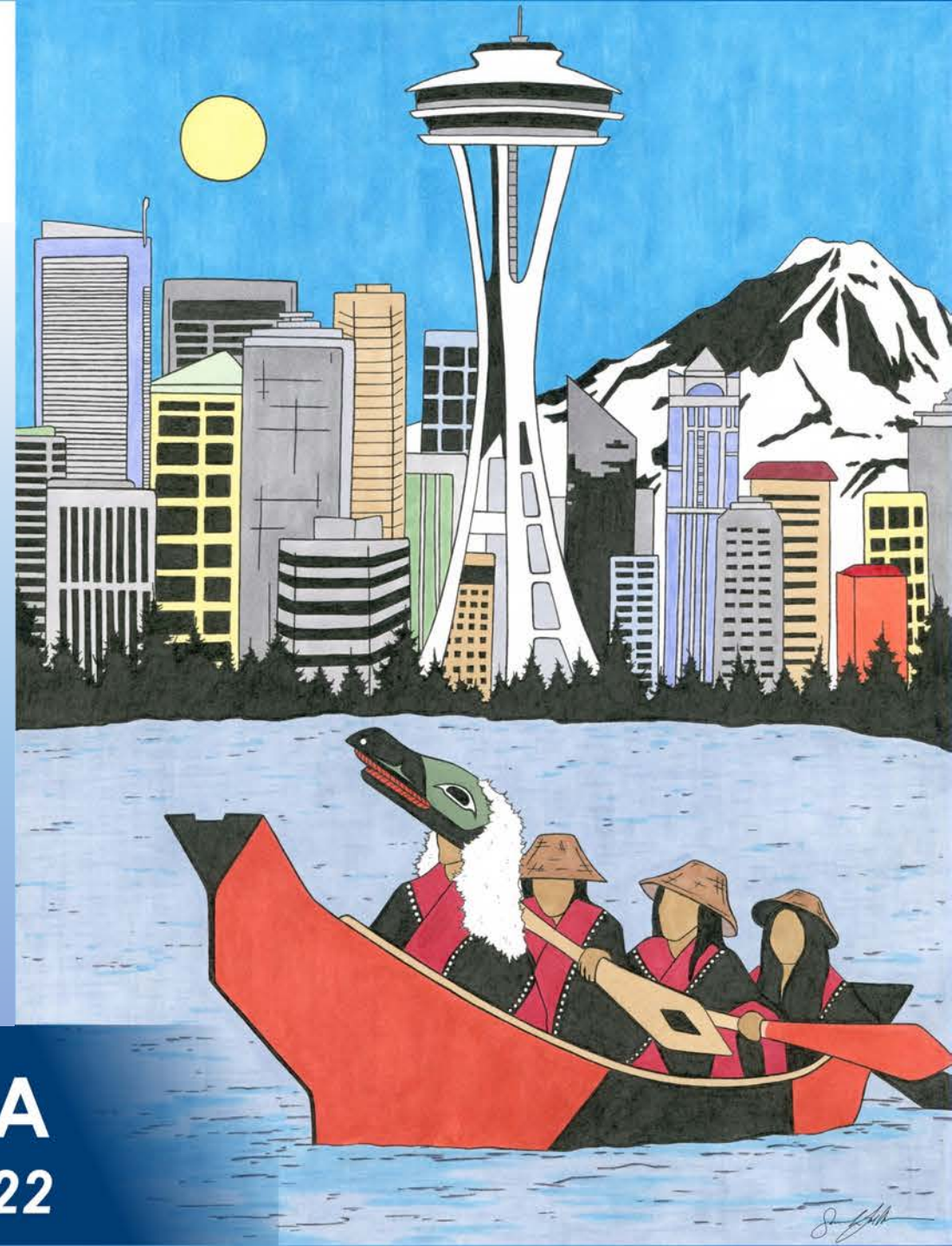
PICES-2023



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

PICES Awards

Oct 23–27, 2023 • Seattle, USA
with pre-conference workshops Oct 20–22



Chair Award - Background



- **Established in 2016** by PICES Governing Council
- Awarded for sustained contributions to the development of PICES, that have allowed it to meet its purpose as set out in *Article III* of *PICES Convention*:
 - *Article III: Purpose of the Organization:*
 - *to promote and coordinate marine scientific research in order to advance scientific knowledge of the area concerned and of its living resources, including but not necessarily limited to research with respect to the ocean environment and its interactions with land and atmosphere, its role in and response to global weather and climate change, its flora, fauna and ecosystems, its uses and resources, and impacts upon it from human activities;*
 - *to promote the collection and exchange of information and data related to marine scientific research in the area concerned.*



Chair Award Past Recipients



- 2016:** Rich Marasco (USA) and Alex Bychkov (PICES Secretariat)
- 2018:** Tokio Wada (Japan) and John Stein (USA)
- 2019:** Pat Livingston (USA)
- 2021:** Laura Richards (Canada)
- 2022:** Chul Park (Korea)



PICES-2023 Chair Award Winner Robin Brown



2023 Chair Award Winner: Robin Brown



Robin has made substantial and continuing contributions to the success and growth of PICES from his time with Fisheries and Oceans Canada

- First TCODE Chair (1995-2001)
- Science Board member (1995-2001)
- Chair of FUTURE AP-SOFE (2009-2012)
- F&A member (2013-2015)
- Canadian advisor/alternate delegate to GC
- Head of Local Organizing Committee for PICES-2013

.....to his time as Executive Secretary of PICES (2015-2020). And even now in retirement!

Robin attended the first PICES meeting in 1992 and has rarely missed one since.



2023 Chair Award Winner: Robin Brown



"PICES is a stronger, more engaged and networked, and a more relevant scientific organization because of Robins' efforts over the past thirty-one years"

Andrew Thomson, Canadian National Delegate



Thank you for your contributions, Robin!



2023 Chair Award Winner: Robin Brown



Acceptance Remark



WOOSTER Award - Background



- Established in 2000 by PICES Governing Council
- Named in honour of [Professor Warren S. Wooster](#), principal founder and first Chairman of PICES; world-renowned researcher and statesman in the area of climate variability and fisheries production.
- Presented annually to an individual who has made significant scientific contributions to North Pacific marine science, such as understanding and predicting the role of human and climate interactions on marine ecosystem production.
- Main selection criteria: sustained excellence in research, teaching, administration or a combination of the three in the area of North Pacific marine science.
- Special consideration is given to individuals who have worked towards integrating marine science disciplines
- Preference to individuals involved in PICES activities





PICES-2023 WOOSTER Award Winner Steven J. Bograd



Who is Steven?

NOAA awards recognize scientists in Fisheries Collaborative Program

September 23, 2021

By Tim Stephens

The National Oceanic and Atmospheric Administration (NOAA) has awarded its prestigious Bronze Award to three researchers affiliated with the Institute of Marine Sciences (IMS) at UC Santa Cruz. These awards recognize the important research contributions of scientists in the Fisheries Collaborative Program, which brings together UCSC and NOAA scientists to conduct research for the conservation and management of California's living marine resources.

The Department of Commerce Bronze Medals recognize superior performance and are the highest honor that can be granted by the Under Secretary for Oceans and Atmosphere.

The 2021 Bronze Award winners in the Scientific or Engineering Achievement



Steven Bograd

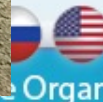


Who is Steven?

Workers of the world, unite!



Who is Steven?







Published: 22 June 2011

Tracking apex marine predator movements in a dynamic ocean

[B. A. Block](#) , [I. D. Jonsen](#), [S. J. Jorgensen](#), [A. J. Winship](#), [S. A. Shaffer](#), [S. J. Bograd](#), [E. L. Hazen](#), [D. G. Foley](#), [G. A. Breed](#), [A.-L. Harrison](#), [J. E. Ganong](#), [A. Swithenbank](#), [M. Castleton](#), [H. Dewar](#), [B. R. Mate](#), [G. L. Shillinger](#), [K. M. Schaefer](#), [S. R. Benson](#), [M. J. Weise](#), [R. W. Henry](#) & [D. P. Costa](#)

[Nature](#) **475**, 86–90 (2011) | [Cite this article](#)

Tagging of Pacific Predators



WIKIPEDIA
The Free Encyclopedia

 Add languages 

[Article](#) [Talk](#)

[Read](#) [Edit](#) [View history](#) [Tools](#) 

From Wikipedia, the free encyclopedia

Tagging of Pacific Predators (TOPP) began in 2000 as one of many projects formed by [Census of Marine Life](#),^{[1][2]} an organization whose goal is to help understand and explain the diversity and abundances of the ocean in the past, present, and future.^[2] After they were formed, TOPP began by building a coalition of researchers from all over the world to find and study predators of the Pacific Ocean.^[3] Since then, they have satellite-tagged 22 different species and more than 2,000 animals.^[4] These animals include [elephant seals](#), [great white sharks](#), [leatherback turtles](#), [squid](#), [albatrosses](#), and more.^{[5][6]}

Through the efforts of TOPP, information never before accessed by humans was now available, such as migration routes and ecosystems,^{[1][7]} but from the animals', rather than human, aspects.^[8] It also became possible to learn about the ocean itself through use of the animals, because they can go where humans cannot. We learn through their everyday actions, and through these data, researchers have been able to determine better ways of protecting endangered species, such as the leatherback turtle.^{[1][9][10]}

The tagging research is ongoing, but the TOPP program itself ended in 2010.







North Pacific Marine Science Organization





PICES-2023 WOOSTER Award Winner

Steven J. Bograd

Acceptance Remark





POMA - Background

- **The PICES Ocean Monitoring Service Award (POMA)** aims to recognize organizations, groups and outstanding individuals that have contributed significantly to the advancement of marine science in the North Pacific through long-term ocean monitoring, data management, and innovative advances in ocean monitoring.
- The award also strives to enlighten the public on the importance of those activities as fundamental to marine science.
- It draws attention to an important aspect of the PICES Convention that is not so much in the limelight: "to promote the collection and exchange of information and data related to marine scientific research in the area concerned."





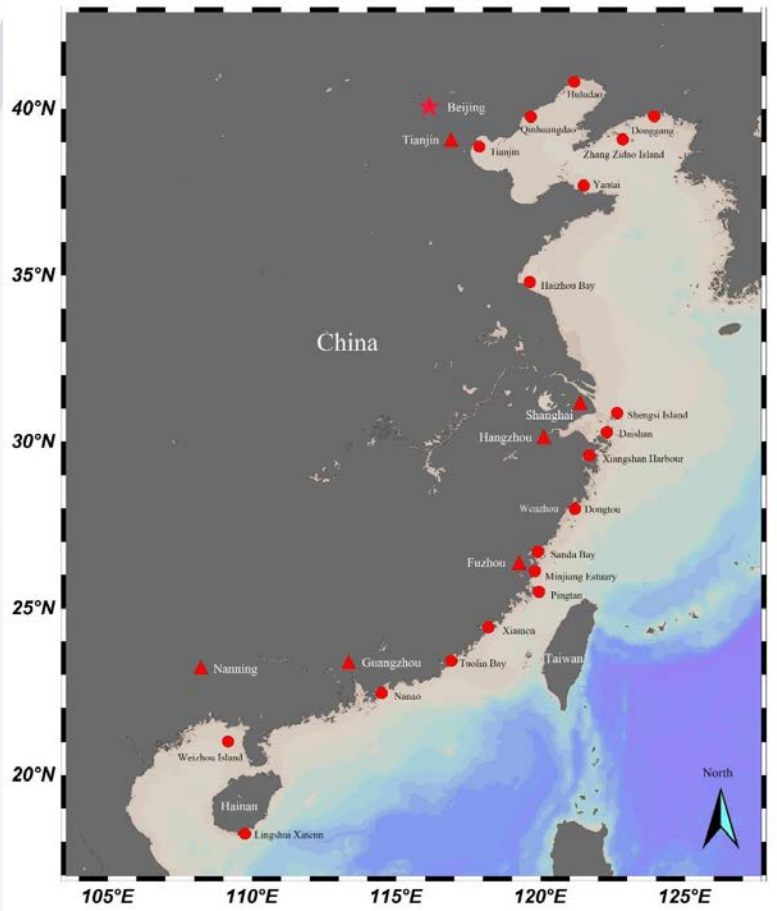
PICES-2023 POMA Winner HAB monitoring and research programmes in China



PICES-2023 POMA Winner



HAB monitoring and research programmes in China



Distribution of 19 HAB (microalgae) monitoring areas in China's coastal waters. Each area has at least 6 monitoring stations.

- Motivated by dinoflagellate bloom impacts on the coastal environment off the Yangtze River estuary in the early 2000s.
- Started as the nationwide coastal red tide monitoring in 2004 (Figure) which contributed to disaster reduction and protection of the marine ecological environment.
- Expanded the monitoring efforts through 3 **GEOHAB** programmes.
 - **GEOHAB1 (2002-2006)** Ecology, Oceanographic Mechanism, Forecast and Prevention of the Occurrence of Hazardous Red Tides in China Offshore
 - **GEOHAB 2 (2010-2014)**: Evolution mechanism and ecological security of recent algal blooms in China
 - **GEOHAB 3 (2021-2027)**: Formation mechanism, monitoring and prediction, evaluation and control techniques of disaster-causing red tides in China's coastal waters
- Over 300 scientists and 500 graduate students were involved in these monitoring and research projects



PICES-2023 POMA Winner

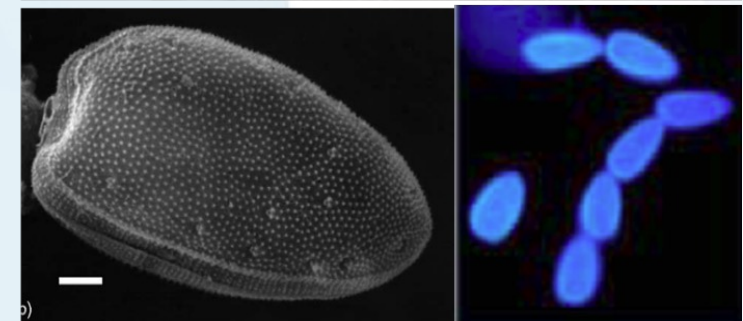
HAB monitoring and research programmes in China

Participant Research Organizations

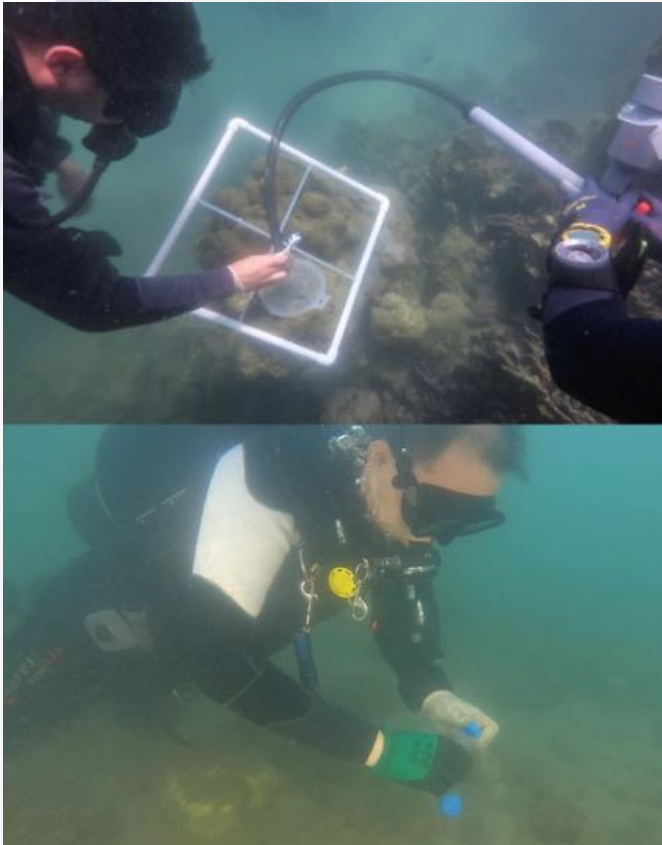
- First Institute of Oceanography
- Second Institute of Oceanography
- Third Institute of Oceanography
- Fourth Institute of Oceanography
- National Marine Environmental Monitoring Center
- Marine Science Institute
- Chinese Academy of Sciences
- the South China Sea Marine Research Institute
- Jinan University
- China Ocean University
- Xiamen university
- City University of Hong Kong
- China Inst. of the East China Sea Fisheries Research

Supported by:

- Ministry of Natural Resources of China
- Ministry of Science and Technology and the National Natural Science Foundation of China



Prorocentrum donghaiense bloom and morphology in East China Sea



Benthic dinoflagellate samples collection in the southern coastal areas of China.





PICES-2023 POMA Winner

HAB monitoring and research programmes in China

Acceptance Remark



Zhu-Peterson ECS Award - Background



Professor Mingyuan Zhu of the First Institute of Oceanography, State Oceanic Administration, China, trained many graduate students and young scientists, who carry on his rich legacy of honest enthusiasm for cooperative approaches to marine science research.



Dr. William (Bill) Peterson of the Northwest Fisheries Science Center of NOAA, USA, was cherished by his students, technicians, and PICES early career scientists who regarded him as “a great teacher, and a fun, humble and inspiring mentor”.

Established by PICES Governing Council in 2019 the Zhu-Peterson Early Career Scientist Award is named in honor of Professor Zhu and Dr. Peterson, two marine scientists who strongly encouraged early career scientists to become engaged in PICES. The Zhu-Peterson ECS Award may be given annually to an individual who has performed innovative research at the frontier of science relevant to the PICES mission as set out in the PICES Convention.



PICES 2023 Zhu-Peterson ECS Award Winner



Minkyung Kim



PICES 2023 Zhu-Peterson ECS Award Winner Minkyoung Kim



**Assistant professor of Ocean Chemistry
at Kyungpook National University**

- PhD from Seoul National University on marine biogeochemistry
- **PICES AP-ECOP** co-chair & Mentor Task Team Leader
- Korea-ECOP co-chair



Awardee of:

- Korea LOREAL-UNESCO for Women in Science Awards, Korea (2023)
- King-Munmu's Ocean awards-Early Career Scientist, Korea (2022)
- The first prize of Ministry of Maritime Affairs and Fisheries Korea (2021)
- Best PhD dissertation award, The Korean Society of Oceanography (2020)

And many more....





PICES 2023 Zhu-Peterson ECS Award Winner

Minkyung Kim

Discipline

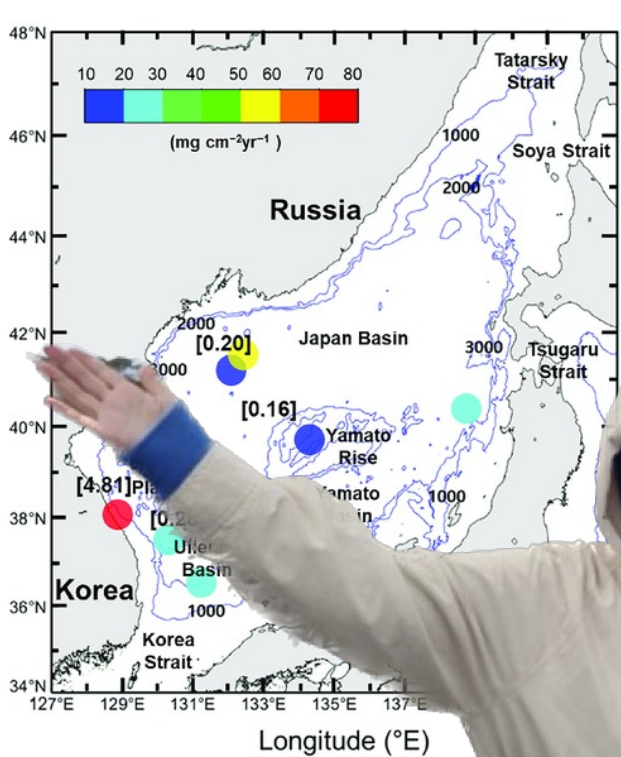
Marine biogeochemistry and paleoceanography

Research Interest

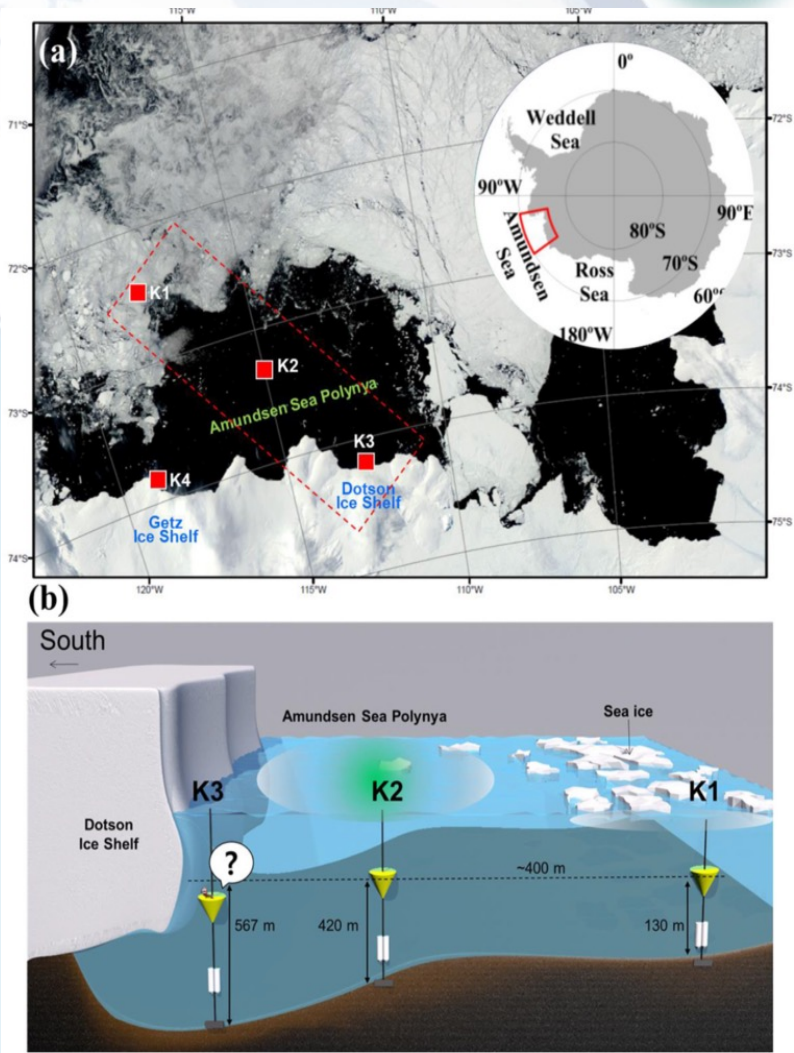
Ocean particulate carbon cycling processes in the Antarctic and North Pacific Oceans

Active ocean goer!!

Published 17 Journal papers and presented at more than 40 scientific conferences.



Kim et al, 2023, *Frontiers in Marine Science*



Kim et al, 2023, *Frontiers for Young Minds* *outreach journal article



PICES 2023 Zhu-Peterson ECS Award Winner

Minkyoung Kim



Acceptance Remark





Congratulations to all Awardees!!





PICES-2023



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

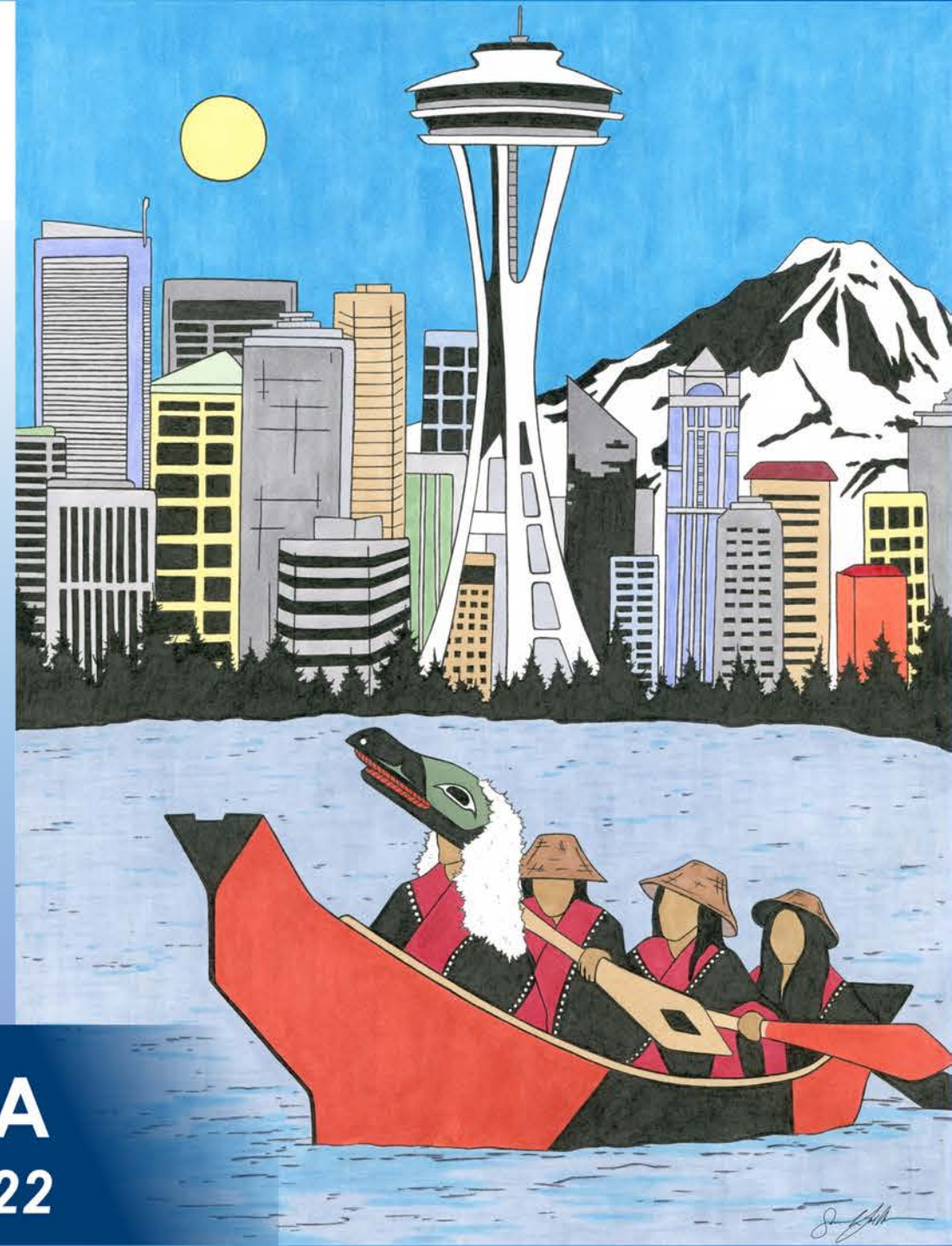
Year in Review

PICES Scientific Excellence

Moving PICES Science Forward

Sukyung Kang

PICES Science Board Chair



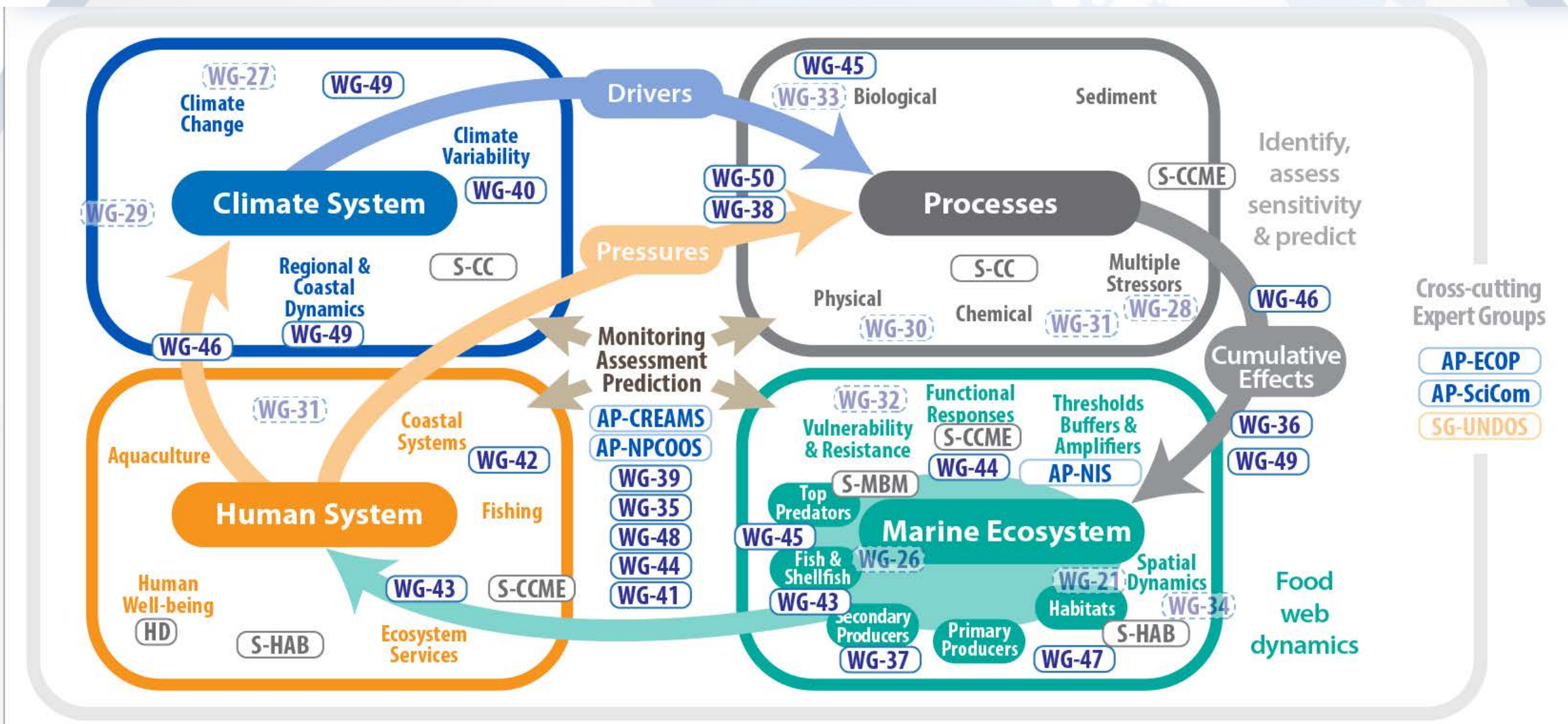
Oct 23–27, 2023 • Seattle, USA
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FUTURE Science Program

Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems

Collaborating to Understand the Predictability and Sustainability of Social-Ecological-Environmental Systems (SEES)





The Future of F U T U R E

Phase III PRIORITIES

1. Retain a Flagship Science Program to integrate PICES science
2. Maintain the momentum of FUTURE and proceed with *Phase III* tasks
3. Bring ECOPs, others into SSC membership for new ideas and enthusiasm
4. Facilitate cross-pollination across FUTURE, AP-UNDOS, AP-ECOP, AP-SciCom [FUTURE recommendation: Joint AP meeting at Annual Meeting]
5. Renewed focus on science-based solutions & operational products
6. Around 2025-2027, rethink a new Science Program for PICES, informed by emergent themes identified in UNDOS



Early Career Ocean Professional SEES Award

Objective:

Encourage
career sci

Vivitskaia J.D. Tulloch

Conservation Decisions Lab, University of British Columbia (UBC), BC, Canada

Session 1 Invited Speaker

Viv Tulloch is a conservation decision scientist researching innovative solutions for managing, conserving, and protecting marine species and natural resources, with a special interest in cetaceans. Viv completed her Ph.D in Quantitative Decision Science and Ecological Modelling at the ARC Centre of Excellence for Environmental Decisions, University of Queensland, Australia, where she researched the impacts of multiple disturbances including climate change on coastal and pelagic systems. She has worked on a diverse range of problems globally, from inclusive regional cumulative effects assessment for salmon-linked ecosystems of British Columbia; to ridge-to-reef MPA planning across the Coral Triangle; finding cost-effective mitigation cetacean bycatch around Australia; and understanding the impacts of whaling and climate change on whales and krill across Southern oceans. Viv is a member of the IWC Ecosystem Modelling and Climate Change Subcommittees; and the Committee on the Status of Endangered Wildlife in Canada Marine Mammals Subcommittee. Viv is currently a Banting Postdoctoral Fellow at the University of British Columbia, where she is developing multi-species models to understand the effects of anthropogenic change on salmon and endangered killer whales.



ch, and engage early

Award:

FUTURE :
career sci
scientist
Science E
SEES app

the travel costs of early
Annual Meeting. The young
present the work in the
the application of the



2021
2030

United Nations Decade
of Ocean Science
for Sustainable Development



ICES
CIEM



North Pacific Marine Science Organization



*Promotion
of ECOPs*

*Indigenous
knowledge*

*Empowerment
of Women*

*Greener
Ocean
Science*

*Science
Communication*

*Involvement
of SIDS*



Sustainability of Marine Ecosystems through Global Knowledge Networks





Promotion of ECOPs

Indigenous knowledge

Science Communication

Empowerment of Women

Involvement of SIDS

Greener Ocean Science

Ambition
Build on existing joint activities of ICES and PICES to facilitate research and knowledge generation for our members and beyond to share research, develop ideas and contribute to sustainable ocean solutions



Sustainability of M

through Global Knowledge Networks





New PICES Expert Groups

SB, FIS, MONITOR

SG-ARC

Study Group on the Arctic Ocean and the Pacific Gateways

Develop a strategic plan for the coordination and promotion of joint scientific activities on the Arctic Ocean and its Pacific Gateways.



To address UNDOS Challenges

TCODE

SG-DATA

Study Group on encouraging Data Awareness and increased Transmission and Accessibility

Review the current PICES data management system and make recommendations for future PICES data strategy

HD

WG51

Working Group on Exploring Human Networks to Power Sustainability

Facilitate PICES activities supporting UNDOS within PICES and at a global scale and develop a methodology to evaluate how the human networks can power 'Transformative Ocean Science'.





SG-GREEN Request

Study Group on *Generating Recommendations to Encourage Environmentally- Responsible Networking*

PICES SG-GREEN survey – please help!

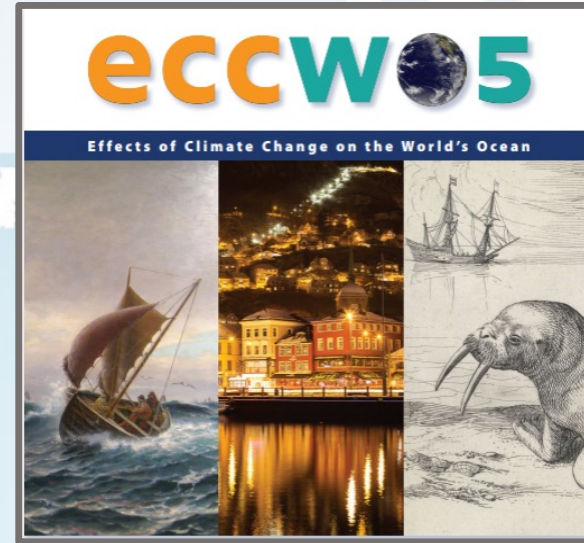
Please help SG-GREEN by completing this survey about future PICES meetings



On the web: <https://qr.page/g/2KVeIQvcHfP>



PICES Sponsored International Symposia



ICES/PICES/FAO SPF-2022

Small Pelagic Fish:
New Frontiers in Science for
Sustainable Management
Lisbon, Nov. 2022

ICES/PICES ECCOW5

5th Effect of Climate Change
on the World's Ocean
Bergen, April 2023



ICES/PICES/FAO SPF-2022

To improve the ecological understanding, management, and future status of Small Pelagic Fish populations



6 Workshops, 7 Sessions

288 participants, from 39 countries across the world with 47 participants being from developing countries

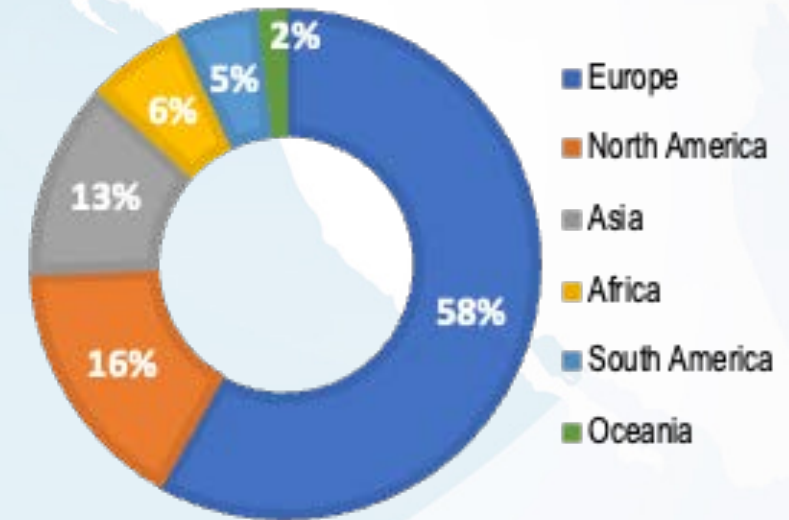
Gender- and generation-balanced: 47% female, 53% male, 44% ECS

Diverse discipline: climate, physical oceanography, zooplankton, fisheries biology and socioeconomics

Mentoring event for ECS

Support from more than 20 sponsors facilitated the participation of ECS

SPF2022 PARTICIPANTS REGIONS



The symposium convenors



See PICES Press 2023 Vol. 1 for the detailed report

ICES/PICES ECCOW5

5th Effect of Climate Change on the World's Ocean



5th of the conference series initiated in 2023

4 Workshops, 19 Sessions

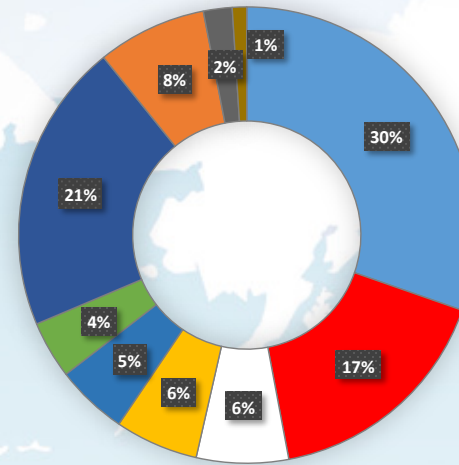
462 in-person and 254 remote participants from 71 countries. Hybrid meeting format allowed participation from around the world.

Gender- and generation-balanced: ca. 50% Female, ca. 45% ECOP (in-person and remote)

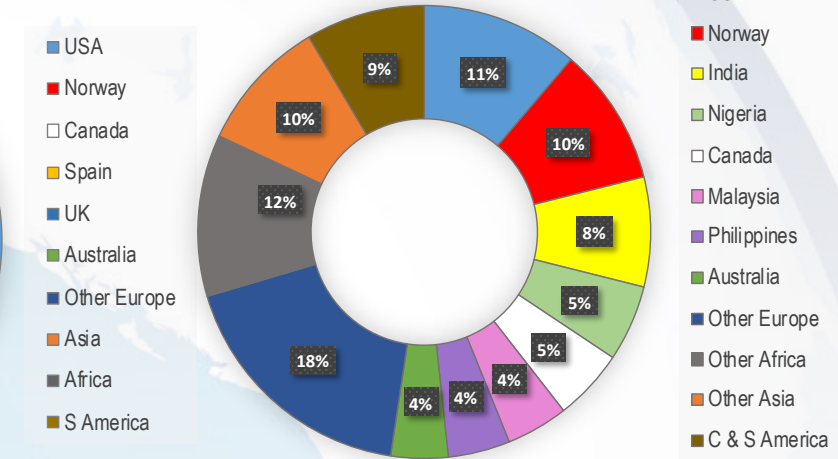
Evolved with the progress of IPCC from ECCOW1 to 5, highlighting the solution-oriented studies at ECCOW5.

Popular keywords: climate-ready, marine-socio-ecological systems, adaptive management, "smart - xxx".

Countries of In-Person Participants



Countries of On-line Participants



See PICES Press 2023 Vol. 2 for the detailed report

PICES Scientific Excellence

Examples of the recent publications (PICES-2022~)



Journal papers produced by WGs



Year: 2022 Innovation Bulletin of Chinese Academy of Sciences

These 3 papers are the products of [PICES Working Group 46](#) activities.

Cai, W. J., & Jiao, N. (2022).
Wastewater alkalinity addition as a novel approach for ocean negative carbon emissions.

[The Innovation](#), 3(4), 100272



Liu, J., Robinson, C., Wallace, D., Legendre, L., & Jiao, N. (2022).
Ocean negative carbon emissions: A new UN Decade program. *The Innovation*, 3(5), 100302.

[The Innovation](#), 3(5), 100302

Wang, Y., Lu, Y., Liu, J., & Zhang, C. (2022).
Advocating eco-engineering approach for ocean carbon negative emission.
[Bulletin of Chinese Academy of Sciences \(Chinese Version\)](#), 36(3), 279-287



Year: 2022 Environmental Pollution

These 3 papers are the products of [PICES Working Group 42](#) activities.

Savoca, M.S., et al.
Towards a North Pacific Ocean long-term monitoring program for plastic pollution: A review and recommendations for plastic ingestion bioindicators.
[Environmental Pollution](#), Vol. 310, 1 Oct. 2022, 119861

Uhrin, A.V., Hong, S., Burgess, H.K., Lim, S. and Dettloff, K.
Towards a North Pacific long-term monitoring program for ocean plastic pollution: A systematic review and recommendations for shorelines.
[Environmental Pollution](#), Vol. 310, 1 Oct. 2022, 119862

Shim, W.J., Kim, S.K., Lee, J., Eo, S., Kim, J.S. and Sun, C.
Toward a long-term monitoring program for seawater plastic pollution in the north Pacific Ocean: Review and global comparison.
[Environmental Pollution](#), Vol. 311, 15 Oct. 2022, 119911



WG-37 Final Report

PICES Sci. Rep. No. 63, 2022
Report of Working Group 37 on
Zooplankton Production
Methodologies, Applications and
Measurements in PICES Regions

WG-38 Final Report



Progress in Oceanography
Volume 212, March 2023, 102955

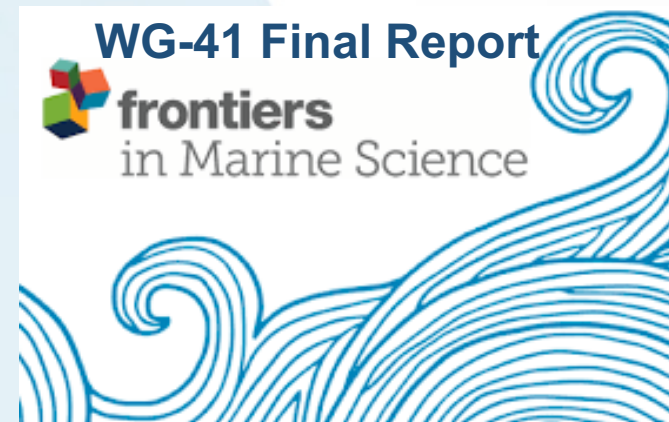


Review of oceanic mesoscale processes in the North Pacific: Physical and biogeochemical impacts

WG-41 Final Report



frontiers
in Marine Science



A special issue of [Frontiers in Marine Science](#) on North Pacific Climate and Ecosystem Predictability on Seasonal to Decadal Timescales.



PICES Capacity Development Framework



PICES AP-ECOP: The “Cross-Pollinators”

Champion AP-ECOP activities

New definition adopted in 2022:

*“An **ECOP** is someone who self-identifies as an early career professional in the beginning of their career, with ten years or less of professional experience”*





Outreach/Engagement

- **ECOP Opportunity fliers**
 - Highlight opportunities at the annual meeting for ECOPs to better engage in PICES
 - Translated into 6 languages to lower the barriers to engagement
 - Next steps: continue preparing annual meeting fliers as well as an “evergreen” flier that can highlight longer term engagement opportunities and can live of the PICES website beyond the lead up to the annual meeting
- **Name Badges:**
 - ECOP sticker - Help ECOP identify each other and to encourage increased cross career stage engagement
 - Smiley face sticker - indicates an AP-ECOP member/mentor who is happy to answer questions about PICES/ECOP opportunities.



ECOP Engagement Opportunities at PICES 2023

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- Shadow a Business meeting at PICES 2023
 - Check the PICES 2023 [general schedule](#) for meeting opportunities
 - List of groups [\(PDF\)](#); contact the group's chair to inquire about sitting in on a meeting
- Sign up for the PICES Mentorship Program
 - Indicate interest when filling out the form below until 3 Oct.
 - Contact a Governing Council [member](#) for more information
- Join a Working Group, Study Group, or Advisory Group
 - Contact a Governing Council [member](#) for more information
- Share your ideas on how to make PICES more Green by taking the survey in the green QR code

😊 = someone who can help answer questions about PICES, the conference, and/or ECOP Opportunities

PICES 2023年会的ECOP参与机会

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- 参与观摩PICES 2023年度事务会议
 - 请查阅PICES 2023年度大会的一般日程，以获取会议机会信息 [\(PDF\)](#)
 - 以下各组组织列表，请联系该组织的主席，以询问是否可以参加其会议 [\(PDF\)](#)
- 报名参加PICES导师计划
 - 请在以下表格中，表明您的兴趣。截止日期为10月3日。
 - 联系管理委员或成员以获取更多信息 [\(PDF\)](#)
- 加入一个工作组、研究组或咨询组
 - 通过扫描绿色二维码参与调查，分享您对如何使PICES更加环保的想法

😊 = 可以帮助回答有关PICES、会议和/或ECOP机会的问题的人员

PICES 2023: ECOP 참여 기회

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- PICES 2023 비즈니스 미팅 참석
 - 시간: PICES 2023 [스케줄](#) 참조
 - 회의 참여를 원하시면 [조직 그룹](#) QR 코드를 문의
- PICES 멘토링 프로그램 지원
 - 차별한 사람은 운영위원회 [\(PDF\)](#)에 문의
- 실무 그룹, 연구 그룹, 자문 그룹 참여
 - 차별한 사람은 운영위원회 [\(PDF\)](#)에 문의
- SG-Green 설문 참여
 - 학단 녹색 QR 코드를 통해 아이디어 공유

😊 PICES, 학회, ECOP 관련 전반 문의: 스마일 스티커를 붙인 도우미를 찾아주세요

Possibilités de participation à la conférence PICES 2023 pour les professionnels de l'océan en début de carrière (ECOP)

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- Observez une séance de travail à la conférence PICES 2023
 - Consultez le [calendrier officiel](#) de PICES 2023 pour les horaires des séminaires.
 - Liste des groupes [\(PDF\)](#); communiquez avec le président du groupe pour demander l'autorisation d'assister à la séance.
- Inscrivez-vous au Programme de mentorat de PICES
 - Jusqu'au 3 octobre, indiquez vos intérêts en remplissant le formulaire ci-dessous.
 - Rejoignez un groupe de travail, un groupe d'étude ou un groupe consultatif
 - Communiquez avec un [membre](#) du conseil d'administration pour plus d'informations.
- Faites connaître vos idées sur la façon de rendre PICES plus écologique en participant à l'enquête qui s'ouvre après lecture du code QR vert
 - Participez à l'enquête sur la façon de rendre PICES plus écologique

😊 = quelqu'un qui peut répondre aux questions sur PICES, la conférence et/ou les possibilités pour les ECOP

Возможности для участия молодых учёных-океанолов (ECOP) на PICES 2023

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- Посетите деловую встречу на PICES 2023!
 - Проверьте [календарь мероприятий](#) PICES 2023 чтобы узнать о возможных встречах.
 - Список групп находится [здесь](#); свяжитесь с председателем группы, чтобы узнать о возможности присутствия на встрече.
- Вступите в программу наставничества PICES!
 - Если вы заинтересованы - заполните форму по [ссылке](#) до 3 октября.
- Присоединяйтесь к Рабочей, Исследовательской или Консультативной группе!
 - Связаться с членом Совета администраторов для получения дополнительной информации.

😊 Присоединяйтесь к сообществу PICES ECOP! Узнайте больше об AP-ECOP! Вступайте в программу наставничества! Пройдите опрос SG-Green!

ECOP 参加の機会 PICES 2023

PICES-2023
Oct 23-27, 2023 • Seattle, USA
PICES2023@pices.org

Connecting Science and Communities for Sustainable Seas

- PICES 2023のビジネスミーティングに参加しよう
 - ここで参加できるミーティングをチェック
 - グループの参加の依頼については、各グループの委員長にお問い合わせ下さい。
- PICESメンタリング・プログラムへ登録しよう
 - お申込みは10月3日まで、以下のフォームから [http://www.pices2023.org/mentor](#)
- ワーキンググループ、研究グループ、アドバイザーグループに参加しよう
 - 詳しくは運営委員会 (Governing Council) [\(PDF\)](#)まで
 - PICESをもっとGREENにするために、緑のQRコードのアンケートであなただけの意見を

😊 = このマークをつけた人はPICES、会合、ECOPについて答えてくれる人です

NORTH PACIFIC MARINE SCIENCE ORGANIZATION
PICES-2023, Seattle, USA

Hannah Lachance

USA



AP-ECOP Mentorship platform



PICES 2023 mentorship opportunity

Total **59** responses from ocean biology, physics, chemistry, and modelling.

26 Teams will do the in-person mentoring during the PICES 2023!

[Activity plan 1] : Group photo

[Activity plan 2] : Best mentor/mentee of the year

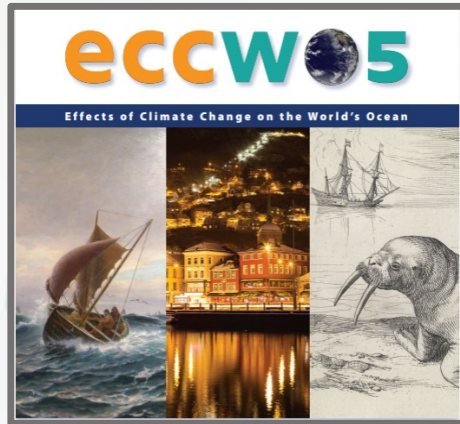
(details regarding the activity will be announced via email soon)



PICES Capacity Development Framework

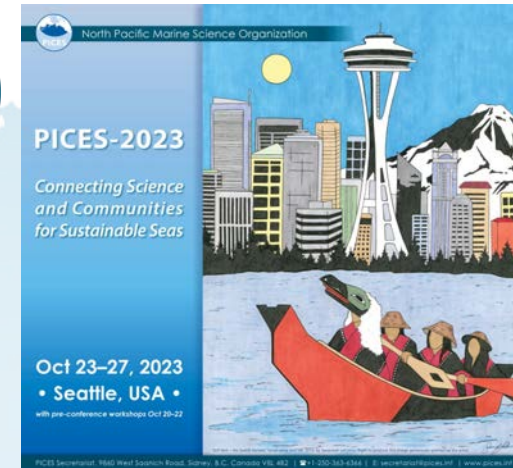


Support participation of ECOP and scientists from underrepresented communities to PICES events



with SCOR travel support programme

**PICES Sponsored
International Symposia**



Travel of 35 ECOPs are supported by PICES Trust Fund

PICES Annual Meeting



PICES Capacity Development Framework



Support PICES ECOP participation to the events hosted by partner organizations

SOLAS Open Science Conference Sept 2022

Cape Town, South Africa (Hybrid)
PICES funded US\$ 4.5K for ECOPs travel support from PICES countries and the ECOP event (Early Career Scientist Day)



Open Science Conference 2022

25-29 September 2022, Hybrid in Cape Town, South Africa

SOLAS Summer School June 2023

Cape Verde, Senegal
PICES funded CA\$ 10K for travel support of ECOPs from PICES countries.



OSC 2022 in-person participants in front of Table Mountain, at the UCT Graduate School of Business Conference Centre in Cape Town, South Africa

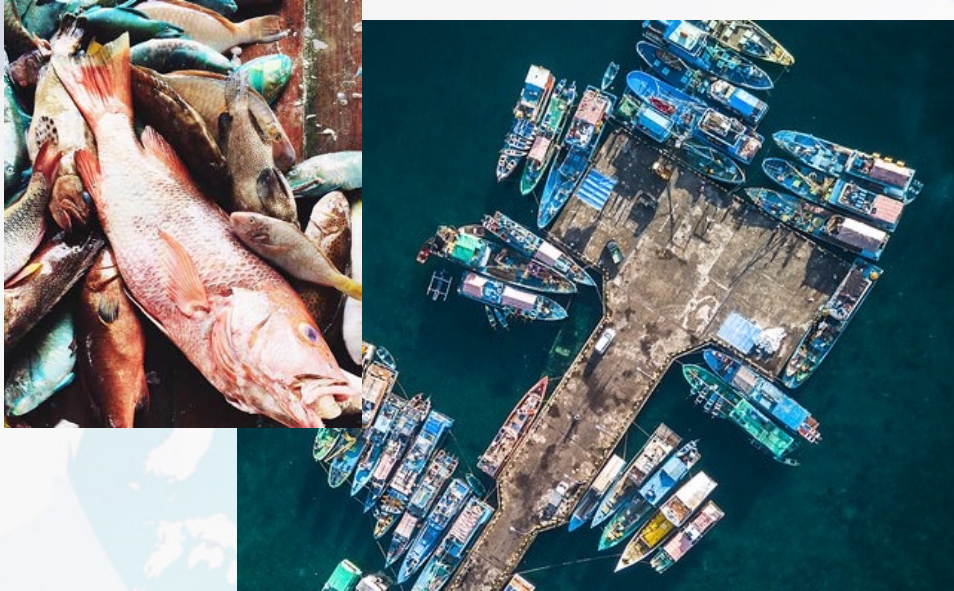
IMBeR ClimEco8 Summer School July 2023

Koper, Slovenia
PICES funded CA\$ 5K for travel support of ECOPs from PICES countries.



PICES Capacity Development Framework

Promote regional Capacity Development through the PICES Special Projects



FishGIS, Ciguatera to FishPhyto (MAFF)

Provide local communities in Indonesia with the capacity and knowledge to sustainably manage their fisheries resources and ensure seafood safety, and identify research needs for deploying these tools in PICES member countries. 2017-

Funded by in Indonesia by: Japan MAFF (Ministry of the Agriculture, Forestry and Fisheries)



SEAturtle

Studies on Sea Turtle Ecology in Relation to Environmental Stressors in the North Pacific Regions. The project includes ocean literacy program for the local community. 2018-

Inha University collaboration with PICES funded by Korea Institute of Ocean Science and Technology (KIOST)



PICES Capacity Development Framework



PICES Intern Program

19 interns have assisted/trained at the PICES Secretariat since 2000



2000~

2019-2022
Saeseul Kim
Korea

New Intern from China will join PICES very soon...



PICES Collaborations & Partnerships

International / regional organization partners and collaborators



INTERNATIONAL PACIFIC HALIBUT COMMISSION



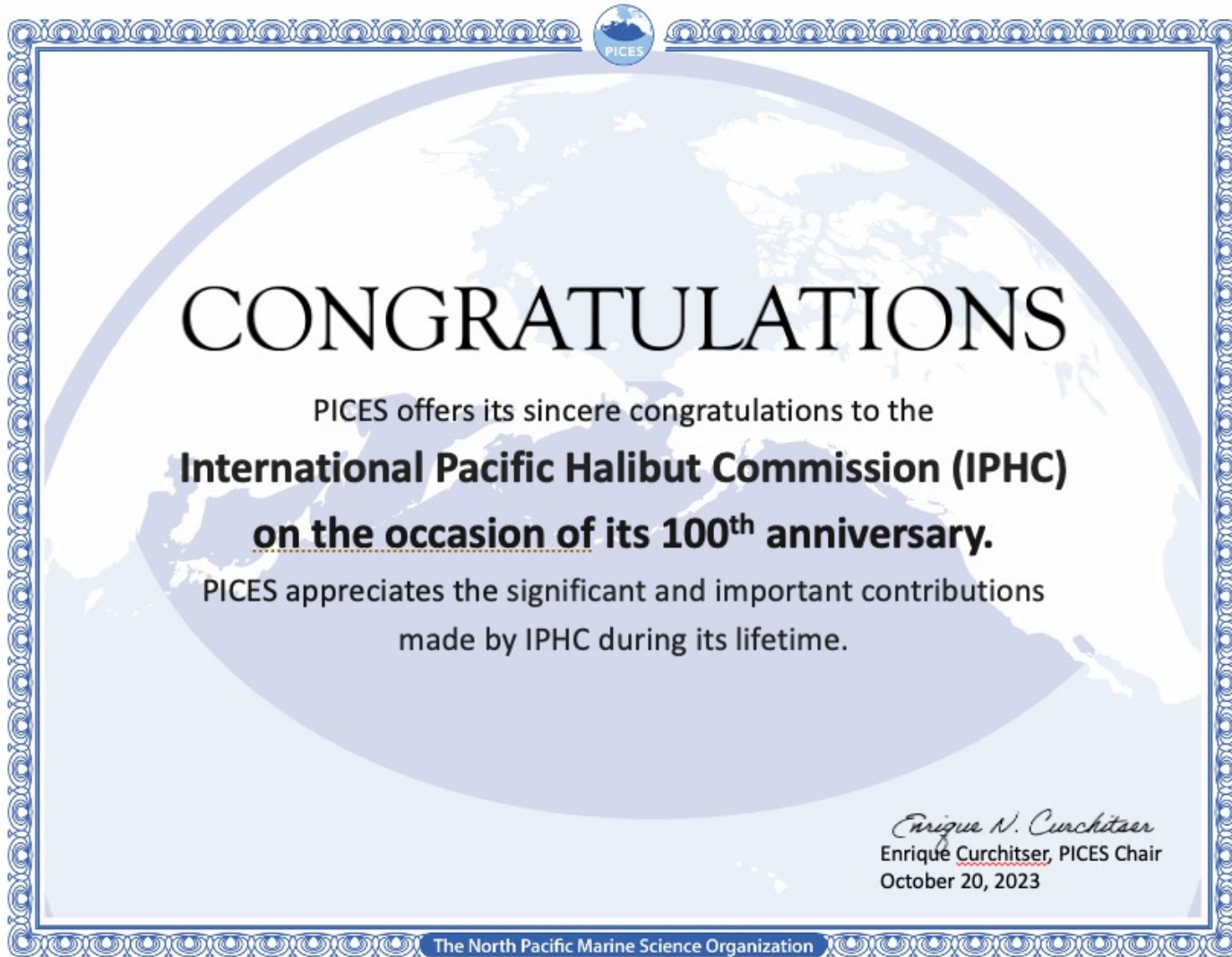
Observer participants from 20 partners at PICES-2023



Established new collaboration framework



Congratulations on the Anniversary



INTERNATIONAL
PACIFIC HALIBUT
COMMISSION

Co-sponsoring the
Special Session (Oct 21)

“The International Pacific Halibut Commission: 100 years of science-based fishery management” with International Pacific Halibut Commission (IPHC)



Congratulations on the Anniversary



CONGRATULATIONS

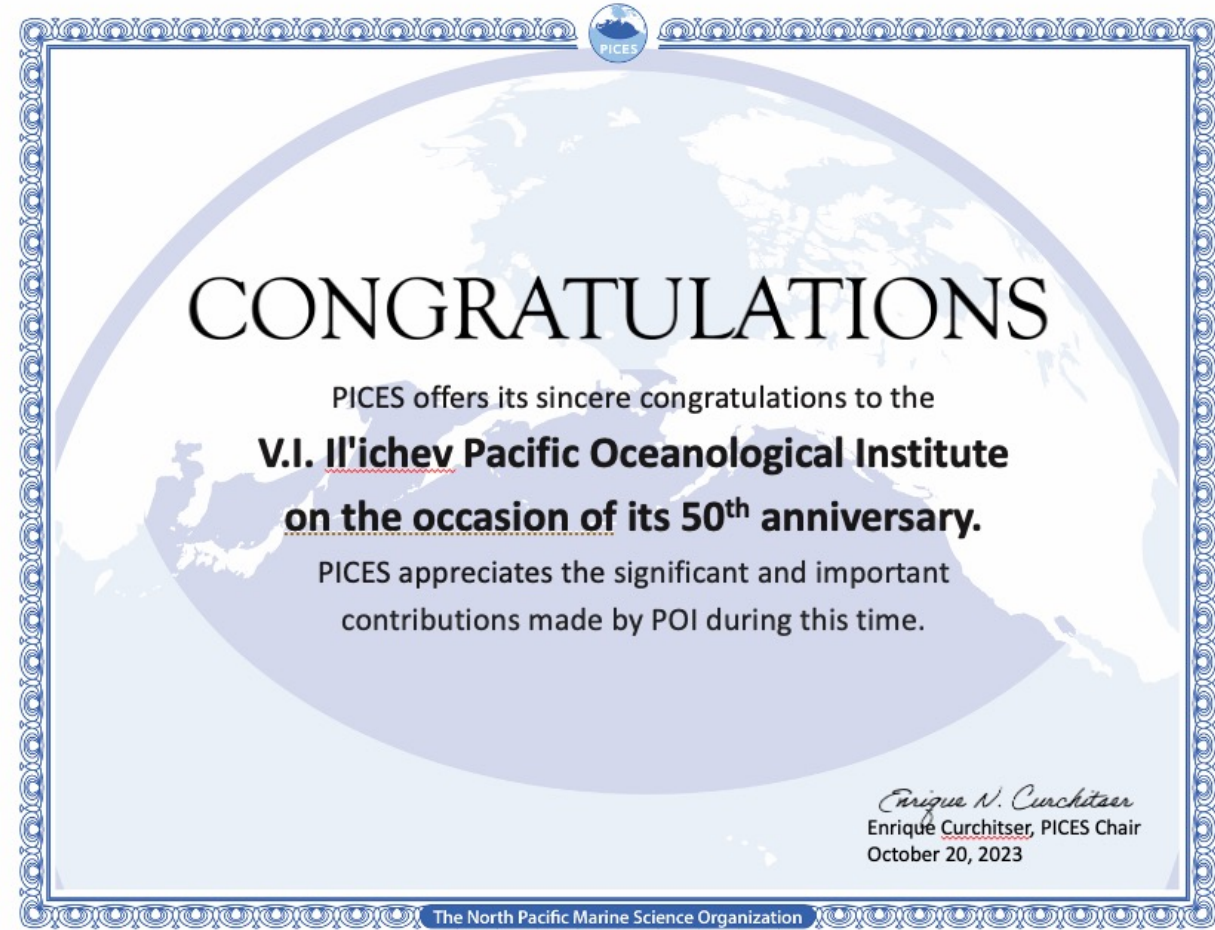
PICES offers its sincere congratulations to the
Korea Institute of Ocean Science & Technology (KIOST)
on the occasion of your 50th anniversary.

PICES appreciates the significant efforts of KIOST toward
the development of important and innovative solutions
in marine science and technology.

Enrique N. Curchitser
Enrique Curchitser, PICES Chair
October 20, 2023

The North Pacific Marine Science Organization





Dr. Vyacheslav Lobanov was awarded the **Sea Star Award** for his achievement in studying the marine waters of Primorye. (Former Chair of POC, Co-Chair of AP-CREAMS and more)

Remembering PICES Friends



Vera Alexander

*Pre-eminent PICES scientist
– 11.05, 2023*

*We are sad to relay that a PICES founder, friend and colleague, **Dr. Vera Alexander**, passed away on May 11th. Vera's career in marine science was lengthy and pioneering; she was the first woman to earn a doctorate at the University of Alaska, in 1965 and served as Dean of the School of Fisheries and Ocean Sciences there for over 20 years. Vera was PICES Vice-Chair from 1998 to 2002 and Chair from 2002 to 2006 and provided leadership and inspiration to many. Our thoughts are with her family at this time.*



Remembering PICES Friends



Igor Shevchenko

Pre-eminent PICES scientist, 22.08.1954 –16.07.2023

It is with great regret that we announce that Dr. Igor Shevchenko passed away on July 16, 2023. He was a highly qualified professional in the field of computer science and mathematics, an intelligent and faithful colleague, and a great friend and husband.

Igor was involved with PICES activities from 1997 to the time of his passing, after being employed by TINRO (now the Pacific Branch of the Russian Federal Institute of Fisheries and Oceanography). He represented Russia in various scientific and administrative expert groups of PICES such as the Technical Committee on Data Exchange (TCODE) where he was Chair from 2001 to 2007, Science Board, Finance and Administrative Committee, as well as serving as an adviser to the Russian National Delegates. We will certainly miss his dedication, enthusiasm and professionalism, which played a significant role in strengthening cooperation among ocean scientists from different countries within the PICES community.



Pre-eminent PICES scientist

Igor Shevchenko



Message from TCODE Committee members

Igor was one of the first PICES members to welcome me to TCODE, and always patiently answered all of my questions. His calm, quiet demeanor will always be remembered fondly, along with his devotion to PICES and his unwavering support for sharing of data management and sharing.

-Jeanette Gann – TCODE Chair





Thank you to everyone who made **PICES-2023 happen!**

PICES-2023 Local Organizing Committee Members

Edward Gorecki (NOAA)
Hannah Lachance (NOAA)
Kym Jacobson (NOAA)
Maggie Costley (UCAR)
Corinne Burns (NOAA)

PICES Secretariat Staff

- Sonia Batten
- Sanae Chiba
- Julia Yazvenko
- Saeseul Kim
- Susan Hannah
- Alexander Bychkov
- Rosalie Rutka
- Robin Brown (Emeritus)
- Shannon Brown
- Lori Waters





PICES-2023



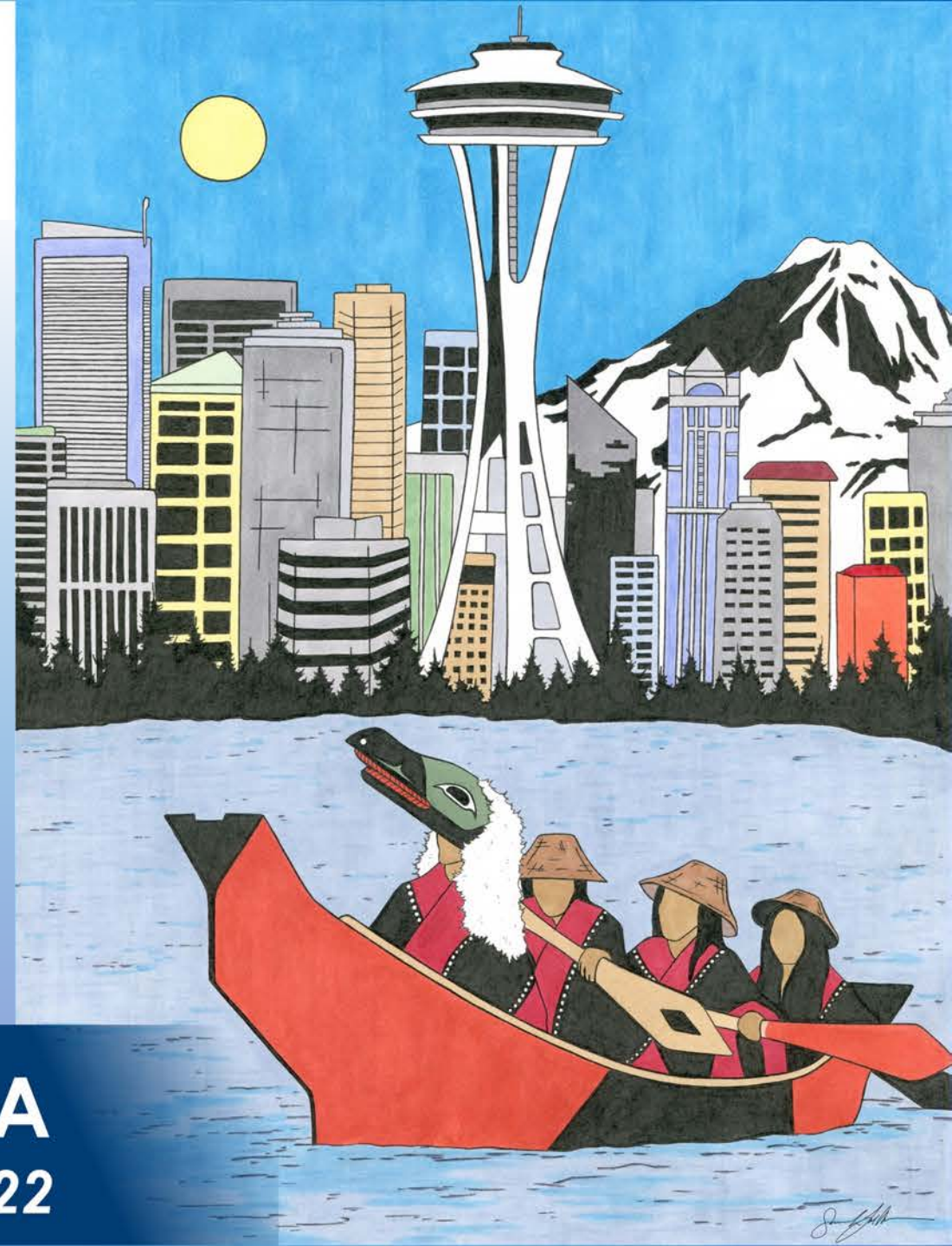
2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

Opening Session Closing Remarks

Dr. Sanae Chiba, PICES Deputy Executive Secretary

*Tips to make your
days easier
at PICES-2023*

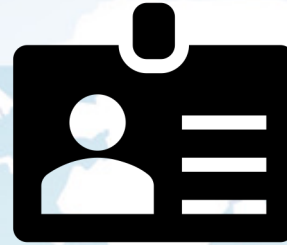
Oct 23–27, 2023 • Seattle, USA
with pre-conference workshops Oct 20–22



Essentials to Survive



Wear your name tag



ECOP

Meeting WiFi Network: Westin Conference
Passcord: PICES2023

Secretariat room: 3F Blakely

Whova helps!



On your Calendar



Oct 23 (Mon) Welcome Reception **18:30 -**
4F Grand Crescent, Fifth Ave and Grand Foyer



Oct 25 (Wed) Sports Event - Mini-Golf
Sign up at the Registration Desk on **Tue (24th)**
Max **100** participants (players & observers)



Oct 26 (Thur) Poster Presentation
Posters are presented from morning Oct 24 (Tue) in **GB3**
Thurs afternoon and running through the Poster session,
4 local artists will be selling ocean themed art products



Oct 27 (Fri) Closing Ceremony, ECOP Presentation Award



Please make sure

Upload your presentation file 1-day before your talk through the link provided by email (Oct 9)

Take candid photos, and post them on Whova and/or X/Twitter (**#PICES2023**)



Keep your eye on the latest schedule on Whova for possible changes

Ready to be flexible and happy!



We are Family



Celebrate diversity
and
Communicate thoughtfully





Coffee Break

10:50

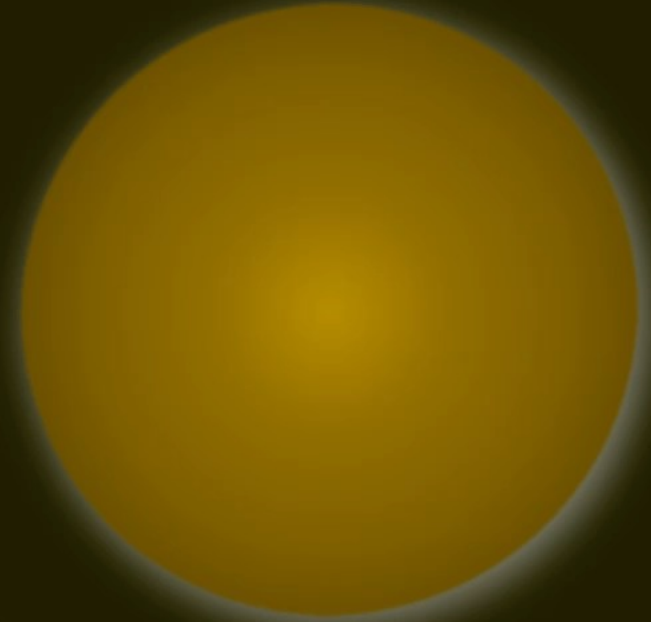
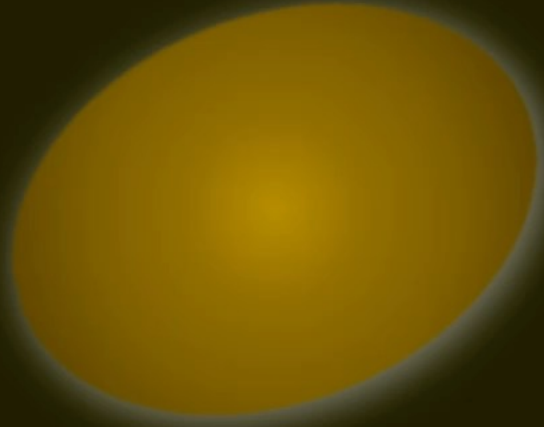
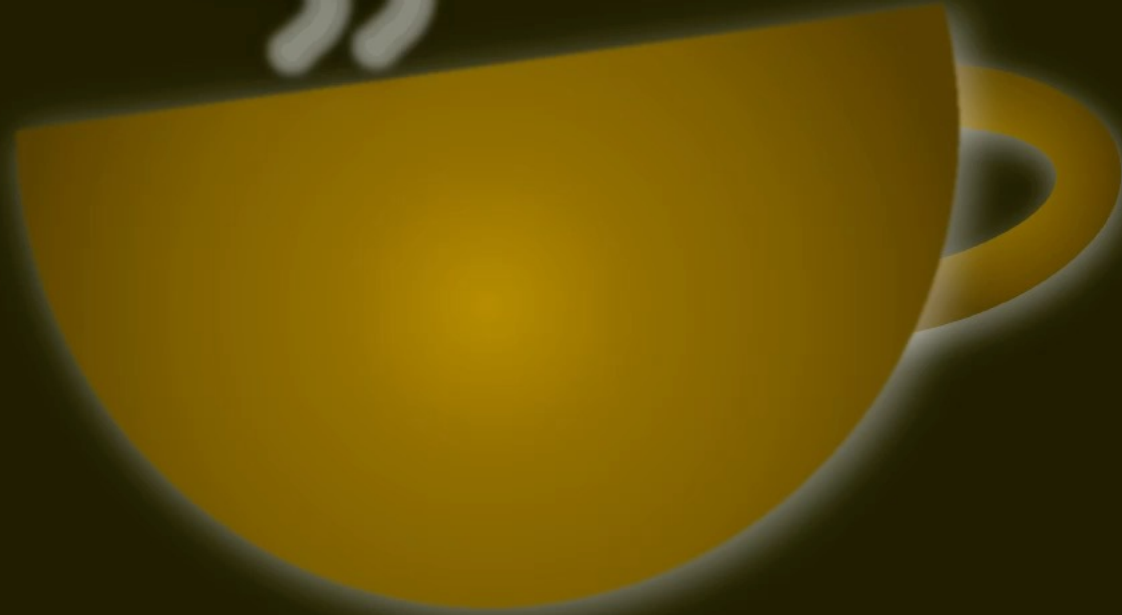
Keynote Speech

11:30

Science Board Symposium (S1)



Coffee Break





PICES-2023

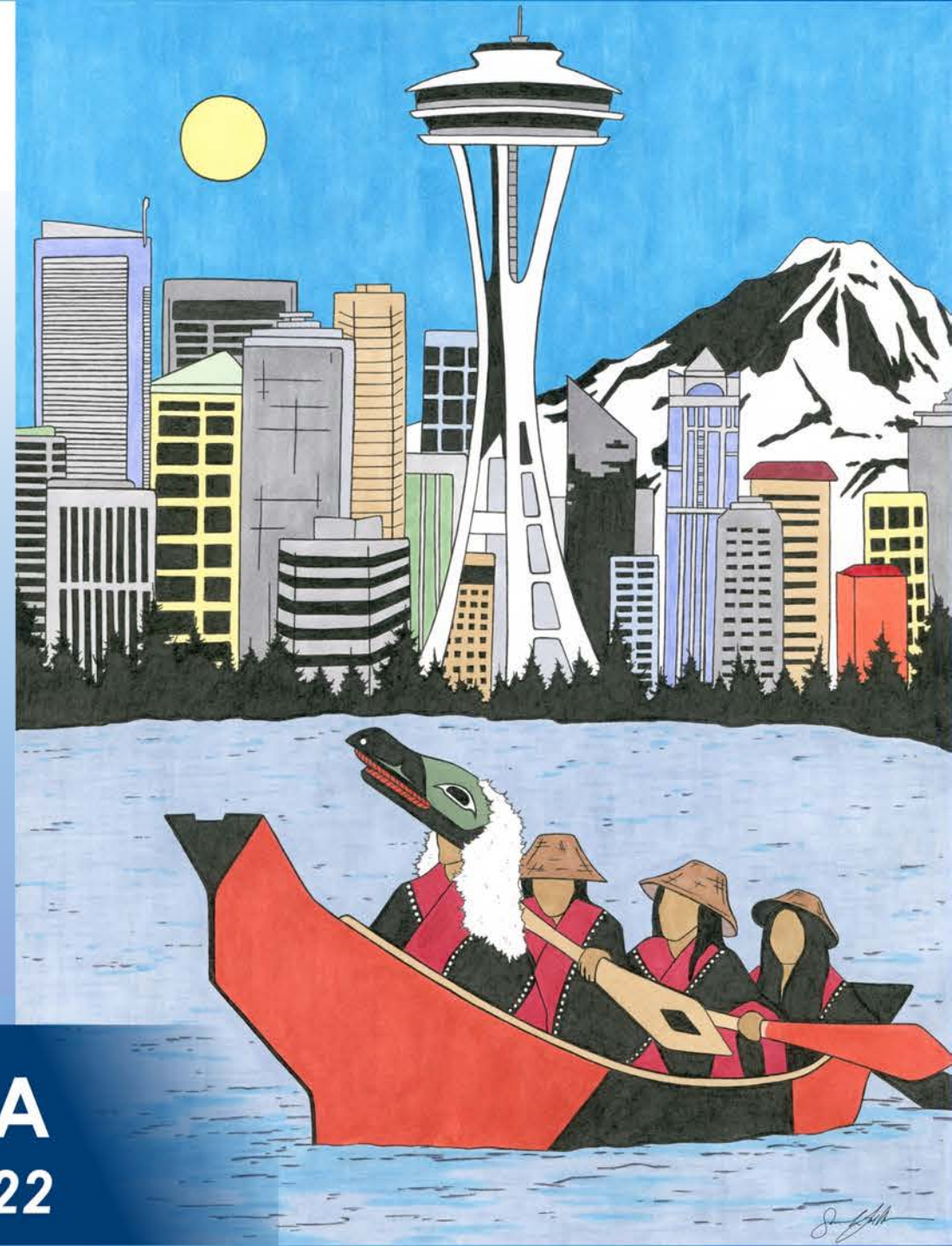


2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

Science Board Symposium (S1) Connecting Science and Communities for Sustainable Seas



Oct 23–27, 2023 • Seattle, USA
with pre-conference workshops Oct 20–22





PICES-2023

Keynote Address

Eric Quaempts

Director, Department of Natural Resources
Confederated Tribes of the Umatilla Indian Reservation

*“Focusing Ecosystem-Based Management
and Human Engagement Through Tribal
First Foods”*

Oct 23–27, 2023 • Seattle, USA
with pre-conference workshops Oct 20–22

- **Professional Experience**
 - Manage a department of natural resources with 8 programs and try to inspire learning and progressive, ecological work on First Foods in the interest of the Umatilla Tribes.
 - The winner of 2023 Regional Policy Award from the Ecological Society of America
- **Education**
 - Bachelor of Science in Wildlife Science from Oregon State University
 - A professional certification in Fire and Land Management with graduate level credits from Colorado State University.
- **Personal**

Eric’s personal interests include family, fly-fishing, photography, biking, traveling, cooking, and dining.



Science Board Symposium (S1) : List of talks



- 11:30 Matthew Savoca** Across the boundary: Internationally coordinated science and action is required to tackle chemical pollution in marine ecosystems
- 11:50 Shoshiro Minobe** Toward regional marine ecological forecasting using global climate model predictions from subseasonal to decadal timescales: bottlenecks and recommendations
- 12:10 Irene D. Alabia** Projected abundances of key fisheries in the Pacific Arctic under future climate: potential biological and economic implications
- 14:00 Vivitskaia J.D. Tulloch** Application of a Social–Ecological–Environmental System Framework to address and manage future climate change impacts on threatened killer whales and their Pacific salmon prey
- 14:20 Nianzhi Jiao** Ocean Negative Carbon Emissions: a regional and global effort to mitigate climate change
- 14:40 Julie E. Keister** Contributions of NOAA’s EcoFOCI program to climate science and ecosystem-based fisheries management
- 15:00 Yunzhou Li** Ocean changes reflected in oyster biological characteristics through comparison of oyster cultured in Japanese coastal waters between 1990 and 2022
- 15:40 Misty Peacock** Pathways to Good Research: Partnerships on Equal Footing
- 16:00 Erin Satterthwaite** Five actionable pillars to engage the next generation of leaders in the co-design of transformative ocean solutions
- 16:20 Taewon Kim** “SEAturtle” PICES special research project (2019-2023): What we learned on sea turtles of Jeju Island for the last 5 years and what we should do in future
- 16:40 Raquel Gilliland** Utilizing cooperative fisheries research to better understand harmful algal blooms along the Oregon coast
- 17:00 Yumeng Pang** Ocean changes reflected in oyster biological characteristics through comparison of oyster cultured in Japanese coastal waters between 1990 and 2022
- 17:20 Kelly Andrews** Representing fisheries’ footprints in marine spatial planning suitability analyses for offshore wind energy development



Matthew Savoca

Research Associate, Hopkins Marine Station, Stanford University, CA, USA

2022 Zhu-Peterson Early Career Scientist Award Winner

“Across the boundary: Internationally coordinated science and action is required to tackle chemical pollution in marine ecosystems”



Vivitskaia J.D. Tulloch

Conservation Decisions Scientist, Banting Postdoctoral Fellow,
University of British Columbia, BC, Canada

2023 FUTURE ECOP Award Winner

“Application of a Social–Ecological–Environmental System Framework to address and manage future climate change impacts on threatened killer whales and their Pacific salmon prey”

FUTURE ECOP Award has been established for Early Career Ocean Professionals (ECOP) whose work employs the Socio-Ecological Environmental System (**SEES**) approach.

