

2023 Governing Council Report and Decisions

Governing Council (hereafter GC or Council) met from 10:00-17:00 on October 28 and 12:00-17:00 on October 29, 2023 at the Westin Hotel, Seattle, USA, under the Chairmanship of Enrique Curchitser as the conclusion to the PICES-2023 Annual Meeting.

Decisions taken by Council are indicated in **bold** text below.

GC Agenda Item 1. Welcome and opening remarks. All member countries were represented at the meeting (GC Endnote 1) and made opening remarks (GC Endnote 2).

GC Agenda Item 2. Adoption of agenda and meeting procedures. An additional item was added under Other Business and the modified agenda (GC Endnote 3) was approved.

GC Agenda Item 3. Reports from strategic partners.

The ICES President (William Karp) and General Secretary (Alan Haynie) provided an in-person report. The IOC Executive Secretary provided a video report. Reports from SCOR, NPFC, NPAFC, IPHC, APN and the PSC were provided in writing as appendices to the Briefing Book and reviewed.

The presentations and reports prompted a discussion within GC on the rapidity of changes in the ocean, whether emerging science can predict, or even keep pace with, these changes, and how PICES can be responsive to member countries' short-term needs for solution-based approaches that are still based on science. Specific topics discussed included offshore renewables and the Central Arctic Ocean as well as more general needs of communities that look to PICES for information. Organizations such as PICES need to be adaptive but the rapidity of change may challenge our existing structure and procedures.

GC also requested metrics, or a description of tangible outcomes, to determine how successful the relationship with strategic partners has been. The Executive Secretary agreed to look into this and report back.

GC Agenda Item 4. Introduction to the Review Panel. Members of the Review Panel were introduced (Eileen Hofmann, Chair; Jörn Schmidt, David Checkley, Sinjae Yoo, Fangli Qiao) and the Panel Chair posed questions to GC that the Panel is seeking feedback on, and invited a discussion. There was a general agreement that the Convention would be challenging to revise but is broad enough to encompass any redirection the Panel may propose. Items discussed for potential focus included data sharing (e.g., platforms, repository and types of knowledge products, use of AI, data policies), impacts of climate change, new areas for Science Board/Working Group focus (e.g., offshore renewables, aquaculture) and working with industry. Science-based solutions, rather than management advice, was promoted.

It was emphasised that GC members should follow up with a page or so on national priorities and needs from PICES for the Review Panel, prior to their next in-person meeting at the Secretariat early in 2024 and the Executive Secretary offered to coordinate.

GC Agenda Item 5. Report on administration for 2022–2023. The Executive Secretary provided a report to Council on the following sub-headings:

- a. Managing the budget of the Organization (PICES)
- b. Implementation of GC Decisions
- c. Administering the Secretariat office and personnel

GC Decision 2023/A/4. Staff Rules. Council approved a change in wording to Staff Rule 17d from the current: “the Organization will pay the members of the staff twice a month, the reference days as a pay day being the fifteenth (15th) day and the last day of each month” to: “the Organization will pay the members of the staff once per month with a pay day being the fifteenth (15th) day of each month. Staff may also request payment twice per month, with the reference days as a pay day being the fifteenth (15th) day and the last day of each month”.

- d. Planning and organizing meetings of the Organization
- e. Providing support services to meetings approved by Council
- f. Coordinating the publication program of the Organization. Concern was expressed at the apparent reduction in primary publications over the last few years, likely an impact of the pandemic, and GC noted that it warrants close scrutiny.
- g. Relationships with key organizations. There was discussion about the recent high-level global agreements and whether there are directions that could be suggested that would help member countries implement them (Kunming-Montreal Framework, BBNJ Agreement). This reiterated the need for a seat at the UN table, and that the plan for UN Observer status should be re-energized.

GC Agenda Item 6. PICES participation in UNDOS

- a. The BECI Project
- b. SmartNet Program

Progress and activities in the UNDOS, including the two main ~~actions~~ UNDOS-endorsed activities above, were reviewed. The BECI project has made progress in acquiring funding to support personnel to develop the science and implementation plans in full. Council requested sufficient time for review of these plans to provide the appropriate guidance for a Special Project request.

SmartNet is also undertaking a range of activities but requires resources to adequately connect activities within PICES, ICES and national and regional UNDOS offices. Further information was expected from Science Board on Day 2.

GC Agenda Item 7. Reports on previous GC Decisions:

Progress on each of the following was reviewed but further Decisions were deferred until the Finance and Administration report later in the day.

- a. Report on GC Decision 2021/A/6: Future PICES Annual and Intersessional Meetings
- b. Report on GC Decision 2021/A/9, 2022/A/7: Seeking UN Observer status for PICES
- c. Report on GC Decision 2020/A/7: Tracking the activity of the Secretariat
- d. Report on GC Decision 2021/A/10, 2022/A/8, 2023/A/1: External Review of the Organization
- e. Report on GC Decision 2020/A/11, 2022/A/6: Science Products

GC Agenda Item 8. PICES Chair Award. Recipients of this award to date were reviewed and GC were reminded that nominations for 2024 are open until July 30, 2024.

GC Agenda Item 9. Report and recommendations of the Finance and Administration Committee.

The F&A Committee interim Chair presented the recommendations of the Committee for Council to consider. The following Decisions were approved.

- a. Budget and financial considerations.

GC Decision 2023/A/5. Auditor's Report and Letter.

- i. **Council accepted the audited accounts for FY 2022.**
- ii. **Council instructs the Executive Secretary to engage the firm of Hughesman, Morris and Liversedge for a Financial Statements Compilation for Financial Year 2023.**
- iii. **Council further instructs the Executive Secretary to compile a report on the audit process for other similar intergovernmental organizations headquartered in Canada, for a review by the F&A Committee at PICES-2024, at which time the Committee shall recommend to Council the frequency of Audits going forward.**
- iv. **Council accepted the recommendation from the F&A Committee that the following changes be made to the Financial Regulations, as follows, to allow for less frequent full audits:**

That Financial Regulation 11 be modified as indicated below:

11 i. The Executive Secretary shall submit to the external Chartered Professional Accountant or auditor (referred to in Regulation 13), not later than ninety days immediately following the end of the fiscal year, and

11 ii. These financial statements shall be prepared in a form approved by the Council after consultation with the external Chartered Professional Accountant;

That Financial Regulation 13 be modified as indicated below:

13 i. The Council shall appoint an external auditor from a reputable auditing firm to conduct a regular audit with a frequency to be determined by Council. Financial

Statements are to be prepared by a Chartered Professional Accountant annually. The auditor may be consulted on the introduction or amendment of any financial regulations and procedures and on detailed accounting methods, on all matters affecting auditing procedures and methods, and on any other financial matter affecting the Organization.

And, that Rule 19 iv of the Rules of Procedure be modified as indicated below:

19 iv. at an Annual Meeting of the Organization, the Finance and Administration Committee shall examine: a. the Financial Statements and/or audited accounts of the Council for the preceding financial year;

GC Decision 2023/A/6. Annual Contributions.

- i. Council re-iterated the importance for all Contracting Parties to pay the Annual Fee by the January 1 deadline and confirmed that, for planning of their funding requests for annual contributions, Contracting Parties should continue to use the guideline generally accepted at PICES-1999 (Decision 1999/A/2(ii)), which states that the annual contributions will increase at the rate of inflation in Canada.**
- ii. Council instructs the Executive Secretary to provide the Russian Federation with information on the PICES US\$ bank account in the hope that this can facilitate the transfer of 2023 Annual Fees and to remain in communication with other Secretariats regarding this issue.**
- iii. Council instructs the Executive Secretary to send letters to all Contracting Parties requesting payments of Annual Fees as soon as practical following the Annual Meeting.**

GC Decision 2023/A/7. Budgetary Considerations

- i. Council approved the FY 2024 budget of \$1,180,000 and set the Annual Fees at \$157,000 per contracting party for a total of \$942,000.**
- ii. Council approved a transfer of \$238,000 from the Working Capital Fund to the General Fund at the beginning of 2024 to balance the budget.**
- iii. Council approved a transfer from the Working Capital Fund to the Trust Fund on December 31, 2023, if required, to restore the Trust Fund to the level of \$110,000.**
- iv. Council approved the closure of the Chairman's Travel Fund, now at \$0.**

GC Decision 2023/A/8. Voluntary Contributions for the Intern Program and Capacity Development.

- i. Council approved an increase to the Intern Stipend to \$3,750 per month effective immediately, with an annual increase for inflation in Canada on Jan 1 each year, beginning in 2025.**
- ii. Council instructs the Executive Secretary to invite Contracting Parties to provide voluntary contributions to the Trust Fund to support the Intern Program and capacity development activities in 2024 and beyond. Council notes the increased burden on the Trust Fund because of the Stipend increase and requests Contracting Parties to take this into consideration when making voluntary contributions.**

GC Decision 2023/A/9. Pension Fund Liability.

- i. Council was pleased to note that, based on the most recent actuarial valuation, Extraordinary Contributions are no longer needed and are paused until the results of the next valuation are known in spring 2026. At that time the F&A Committee will provide a recommendation for any FY2027 Extraordinary Contributions and it is expected that Parties would then confirm their intention to provide this contribution.
 - ii. Council instructs the Executive Secretary to provide an annual update to the F&A Committee on any deficit liability information presented by the Pension Plan management company (currently Mercer) to the International Fisheries Commissions Pension Society at their annual meeting, to keep apprised of the situation in-between the actuarial reports received every three years.
- b. Schedule, structure and financing of future Annual Meetings.

GC Decision A/10. Future PICES meetings.

- i. Council approved the proposal by Japan to hold the PICES-2025 Annual Meeting from November 7-16, 2025 in Yokohama.
- ii. Council requested Canada to explore the possibility of hosting the 2026 Annual Meeting, and to inform the Secretariat on this matter by March 31, 2024.
- iii. Council approved amending the fee structure for PICES-2024 to include an additional \$100 on Early and Regular Fees only. The additional funds will help the Secretariat meet the costs of hosting PICES-2024. The following fee structure will apply:

Type of registration fee	CDN \$
Regular	450
Early	350
Student	50
Spousal/guest	50
Absentee Presenter	75

- iv. Council instructs the Executive Secretary to write to Contracting Parties requesting that the unused 2023 Extraordinary Contributions be put towards the costs of PICES-2024 as a voluntary contribution, that additional voluntary contributions may be made, and to request that they approach external parties and organizations for potential sponsorship of PICES-2024 to reduce the impact on the Reserve Fund. Any external party offers of sponsorship will be shared with Council for consultation before acceptance.
- v. Council determined that virtual Intersessional Science Board meetings be held each year with no need for the F&A Committee to make further recommendations on this matter.

GC Agenda Item 10. Elections. Council noted that the Chair and Vice-Chair will end their second two-year terms at PICES-2024. Nominations for these positions are therefore due, in writing from national delegates, to the Executive Secretary 60 days prior to the start of the meeting. Due date is, therefore, August 29, 2024. Elections will occur at the GC meeting at PICES-2024.

a. Appointment of F&A Chair

GC Decision 2023/A/11. Appointment of the F&A Chair. Council appointed Ms Kristen Koch as F&A Chair for a first two-year term beginning at the conclusion of PICES-2023.

GC Agenda Item 11. Other Business. The USA added an item to discuss PICES science direction, including a post-FUTURE science program and the Review Panel outcomes. The discussion was deferred to the end of Day 2, after the Science Board report, to provide a fuller picture of current science priorities.

At that time, the discussion resumed and picked up on thoughts expressed over both days and acknowledged that the opening remarks provided by each country (Endnote 2) were very eloquent and pointed to the challenges faced by our community, including the need to build resilience and to direct the science in ways that can help.

Specific suggestions included that; the next edition of the North Pacific Ecosystem Status Report is due to be initiated, however, there is concern that the approach to data needs to be revised to make the product more relevant. “Big data”, changes in the way that data are used for forecasting should be considered. It was noted that the BECI project is proposing such an approach. The need to provide early warnings, rather than policy advice may be a valid approach for PICES to take. Member countries could ask PICES for a report on a specific issue, such as offshore-energy, which would be a science report rather than advice (this has been done in the past).

With the Review Panel’s ongoing activities over the next few months, their report will be a timely opportunity to sharpen and re-shape PICES focus and the questions member countries pose to the Organization. Council will have a large task to consider the panel’s recommendations and how to address them. It is not certain what the best mechanism for this will be, perhaps a workshop but other mechanisms can be proposed, including a Panel discussion now slated as part of PICES-2024.

GC Agenda Item 12. Report on PICES Special Projects. Council noted the progress made by SEATurtle and Ciguatera, despite COVID challenges, that both these projects will end in 2023 and that FishPhyTO began its activities in July 2023.

GC Agenda Item 13. Report and recommendations of the Science Board. Council reviewed the election results and approved the following appointments. Council requested that Science Board consider, inter-

sessionally, a way to encourage the inclusion of mid-career scientists in the Committees and report back to GC on this matter. Science Board requested the nomination of a member from Russia.

GC Decision 2023/S/10. Chair and membership changes for Science Board, Standing Committees and Expert Groups. Council approved the following elections for Standing Committees:

- i. **Jeanette Gann (USA) was elected as Science Board Vice-Chair for a second one-year term.**
- ii. **Toru Kobari (Japan) was elected as the new Vice-Chair of BIO Committee for a first three-year term.**
- iii. **Jackie King (Canada) was elected as the new Chair of FIS Committee for a first three-year term.**
- iv. **Dr. Naoki Tojo (Japan) was elected as the new Vice Chair of FIS Committee for a first three-year term.**
- v. **Dr. Thomas Therriault (Canada) was elected as the new Chair of MEQ Committee for a first three-year term.**
- vi. **Dr. Takafumi Yoshida (Japan) was elected as the new Vice Chair of MEQ Committee for a first three-year term.**

Council approved the appointment of the following expert group Chairs:

- vii. **Jennifer Jackson (Canada) was elected as the Chair of AP-NPCOOS, replacing Kim Juniper.**

Council discussed the requested expert group extensions. It was determined that the SG-GREEN extension could be deferred and reviewed at the intersessional Science Board meeting, since they have not yet reached the end of the current term and may still complete the terms of reference.

GC Decision 2023/S/11. Extensions to Expert Groups.

- i. **Council approved a one-year extension for WG48 to PICES-2024.**
- ii. **Council approved an extension for SG-ARC until the Intersessional SB meeting.**

Council discussed the proposed changes to the Terms of Reference for WG47 but while they understood the issue GC did not think it appropriate to retroactively change these ToRs, instead recommending that it would be more transparent to include details in the final report indicating where goals could not be met, and identifying the reasons such as lack of capacity, or data. Such information will be useful in guiding next steps.

Council reviewed the requests for intersessional workshop and travel support requests and the rankings provided by Science Board and approved the following, noting the SB priority:

GC Decision 2023/S/12. Intersessional symposia/sessions/workshops and meetings.

International studies of North East Asian Marginal Seas: from circulation and biogeochemistry to socio-economic research. 30 th Anniversary of the CREAMS program. 2~3 days in July 2024 Expected participants No: 80	Hosted by Seoul National University, Korea	Partial travel support for 4 participants (3 students or ECOPs and 1 invited speaker) up to CA\$7,000. SB 4 th priority
UN Ocean Decade Conference 10-12 April 2024, Barcelona, Spain. Invited by IOC to host the side event on an AP-UNDOS related project. ECOP to attend side-events.	AP-UNDOS Chair (1) ECOP (1)	Travel support up to CA\$ 6,000 SB 2 nd priority
	ECOP (2) in ECOP-SmartNet side events	Travel support up to CA\$6-7,000 SB 1 st priority
ICES ASC 2024, PICES-cosponsored theme session, "Evaluating ecosystem-based management performance: examples of success" Gateshead UK, Sept 9-12	BIO member: Xuelei Zhang ECOP (1)	Partial travel support up to CA\$ 6000 SB 3 rd priority
S-HAB intersessional meeting, Seattle, mid-Feb (3 days), 2024	Member from Western NP (1) or ECOP (1)	Up to CA\$ 3,500 SB 5 th priority

Council reviewed the requests for additional expert groups and determined that SG-ARC be extended until ISB-2024 (see Decision 2023/S/11/ii) to allow time to communicate with National Delegates, to refine the proposed terms of reference and to provide the rationale why an Advisory Panel is requested rather than a Section.

GC recommended the establishment of WG-DATA but encourages the full inclusion of western Pacific members.

GC Decision 2023/S/13. New Expert Groups. Council approved the establishment of WG52 (Working Group on Data Management, or WG-DATA) under the Technical Committee on Data Exchange (TCODE) with terms of reference as provided in the report from Science Board.

Council reviewed and discussed the UNDOS Coordinator proposal. It was agreed that voluntary financial contributions, or in-kind contributions of staff time, would be equally useful in filling this role and members were encouraged to investigate possible options.

Council reviewed the proposed workshops, sessions and draft schedule for PICES-2024. There was discussion on balancing the length of the annual meeting (and associated travel burden for member countries) while allowing sufficient time for the discussion and development of emerging ideas. Council proposed a modified schedule of session/workshop proposals to be trialed in 2024 and adjusted the schedule of PICES-2024 to reflect this, and requested a slot for a Panel to discuss future science priorities for PICES.

GC Decision 2023/S/14. Annual meeting session and workshop planning. Council approved a new process for 2024 whereby the Session and Workshop proposal deadline be set two weeks after the end of the PICES annual meeting. Committees will work inter-sessionally/by correspondence to review, rank and report to Science Board by the end of November. Science Board will review and provide to GC in early December for approval before year end.

GC Decision 2023/S/15. PICES-2024 schedule.

i. **The following draft schedule was approved:**

Date	Session/WS	Business Meetings
Oct 26 (Sat)	Parallel Workshops x 3	Day: EG meetings Evening: CMT meetings
Oct 27 (Sun)	Parallel Workshops x 3	Day: EG meetings Evening: CMT meetings
Oct 28 (Mon)	Opening Ceremony FUTURE Symposium	
Oct 29 (Tue)	Parallel Topic Sessions x 3	EG meetings, F&A meetings?
Oct 30 (Wed)	Parallel Topic Sessions x 3	EG meetings F&A meetings?
Oct 31 (Thur)	Parallel Topic Sessions x 3 Evening: Poster Session	EG meetings
Nov 1 (Fri)	Panel on future of FUTURE/PICES next decade Awards Closing Session	Afternoon SB Day 1
Nov 2 (Sat)		SB Day 2, GC Day 1
Nov 3 (Sun)		GC Day2

ii. **The following Workshops will be convened at PICES-2024**

	Title	Relevant PICES EG	Corresponding convenor	Duration (day)	Sponser CMT	Potential Cosponsors
W1	North Pacific Plankton Time Series Data Analyses and Synthesis	AP-NPCOOS	Akash Sastri	1.0	FUTURE, BIO, MONITOR, TCODE	
W2	Applying social-ecological frameworks to explore actionable solutions for climate extreme events across the North Pacific => make clear the difference with Session proposal	WG49	Karen Hunter	0.5	FUTURE, HD, MONITOR	CLIVAR
W3	Exploring Human Networks to Power Sustainability in North Pacific Ocean	WG51, AP-UNDOS	Shion Takemura	1.0	FUTURE, HD, TCODE	
W4	Contrasting the occurrence of toxic Alexandrium blooms in the eastern and western north Pacific	S-HAB	Mark L. Wells	1.0	MEQ,	GlobalHAB, IOC UNESCO, ICES WGHABD, NOWPAP, ISSHA
W5	Exploring international knowledge co-production: Lessons learned from international marine science organizations at the science-policy interface	AP-UNDOS, AP-ECOP, AP-UNDOS	Erin Satterthwaite	1.0	FUTURE,	ICES, SmartNet
W6	Co-creating a shared framework for ocean data management: Finding common ground on terminology	SG-DATA, AP-ECOP, AP-UNDOS	Erin Satterthwaite	0.5	MONITOR, TCODE	DCC for the Northeast Pacific
W7	Integrating biological research, fisheries science and management of flatfish species in the North Pacific Ocean in the face of climate and environmental	(FIS)	Josep Planas	0.5	FIS, MONITOR	IPHC
W8	'Science Jam' - Bridging the gap between science and social media to communicate PICES accomplishments with the world	AP-SciCom	Natsuko Nakayama	3-days Lunchtime Events	FUTURE, TCODE	
W9	Puffin diet samples as indicators of forage nekton availability and community structure in the Aleutian marine ecosystem	S-MBM	William Sydeman	0.5	BIO	NPRB, Audubon, NFWF, Pew

iii. The following Sessions will be convened at PICES-2024:

	Title	Relevant PICES EG	Corresponding convenor	Duration (day)	Sponser	Potential Cosponsors
S2	Climate Extremes and Coastal Impacts in the Pacific	WG49	Chan Joo Jang, Antonietta Capotondi	1	FUTURE, HD, POC	CLIVAR
S3	S-CCME/SICCME session on innovation in using integrated approaches to detect and manage for the effects of climate change tipping points and critical thresholds in marine ecosystems.	S-CCME	Kirstin Holsman	1	FUTURE, BIO, FIS, HD, POC	ICES
S4	Advanced tools to monitor, observe, and assess small pelagic fish populations in support of ecosystem based fisheries management and maintaining ecosystem services	G43	Jennifer Boldt	1	FUTURE, FIS, HD, MONITOR	
S5	Observational frontier and new studies for understanding of ocean and ecosystem	AP-NPCOOS	Sung Yong Kim	1	FUTURE, BIO, MONITOR, TCODE	
S6	Ocean Negative Carbon Emissions: Blue Technology Innovation for Promoting Global Sustainable Development	WG46	Nianzhi Jiao	0.5	POC, TCODE	Global ONCE ICES, SOLAS IMBeR
S7	Past, Present and Future of CREAMS program: 30 years of international research in North East Asian Marginal Seas	AP-CREAMS	Vyacheslav Lobanov	1	FUTURE, MONITOR, TCODE	
S8	Social, economic and ecological implications of recoveries, range expansions and shifting distributions of marine birds, mammals and fish	S-MBM	Andrew Trites	1	BIO, HD	
S9	Changing ocean carbon cycle and its consequences for the ocean environment: Detection, prediction and mitigation	S-CC	Tsuneo Ono	0.5	BIO, POC	
S10	Recent advances in plastic pollution research in the North Pacific	WG42, AP-UNDOS	Matthew Savoca	0.5	MEQ	
S11	East Meets West and West Meets East: Past, Current and Future Implications of Non-indigenous Species (NIS) in the North Pacific	AP-NIS	Thomas Therriault	1	MEQ	NOWPAP ICES, US National Invasive Species Council etc.
S12	Impacts of warming-induced changes in body sizes on marine fish ecology and their consequences for ecosystems and associated fisheries	G45 (AP-ECOP, S-CCME)	Shinichi Ito	0.5	FIS	ICES
S13	The Changes in Distribution of Harmful Algal Blooms (HABs) in the North Pacific Region	S-HAB	Mark L. Wells	0.5	MEQ	GlobalHAB, IOC, ICES, NOWPAP ISSHA
S14	Rapid Plankton Assessment for Ecosystem Assessment	WG48	Hongsheng Bi	0.5	BIO	ICES

GC Decision 2023/S/16. Publications. Council approved the following publications:

i. Journal publications

EG	Citation
WG45	<p>Lindmark et al. (2023) Larger but younger fish when growth outpaces mortality in heated ecosystem. eLife, 12:e82996.</p> <p>Lindmark et al. (2023) Evaluating drivers of spatiotemporal variability in individual condition of a bottom-associated marine fish, Atlantic cod (<i>Gadus morhua</i>) ICES Journal of Marine Science, 80, 1539–1550,</p> <p>Campana et al. (2023) Growth portfolios buffer climate-linked environmental change in marine systems. Ecology, 104, e3918.</p> <p>Jenkins et al. (2022) Environmental drivers of fish population dynamics in an estuarine ecosystem of south-eastern Australia. Fisheries Management and Ecology, 29, 693-707.</p> <p>Woods et al (2022) Integrative approaches to understanding organismal responses to aquatic deoxygenation. The Biological Bulletin, 243, 85-103.</p> <p>Audzionyte et al. (2022) Mechanistic temperature-size rule explanation should reconcile physiological and mortality responses to temperature. The Biological Bulletin, 243, 220-238.</p> <p>Lindmark et al. (2022) Temperature impacts on fish physiology and resource abundance lead to faster growth but smaller fish sizes and yields under warming. <i>Global change biology</i>, 28, 6239-6253. https://doi.org/10.1111/gcb.16341^[1]_{SEP}</p> <p>Wootton et al. (2022) Smaller adult fish size in warmer water is not explained by elevated metabolism. <i>Ecology Letters</i> 25:1177-1188. https://doi.org/10.1111/ele.13989</p> <p>van der Sleen et al. (2022) Interannual temperature variability is a principal driver of low-frequency fluctuations in marine fish populations. <i>Communications Biology</i> 5, 28. https://doi.org/10.1038/s42003-021-02960-y</p> <p>Morrongiello et al. (2021) Synergistic effects of harvest and climate drive synchronous somatic growth within key New Zealand fisheries. <i>Global Change Biology</i>, 27,1470-1484. https://doi.org/10.1111/gcb.15490</p> <p>Wootton et al. (2021) Multigenerational exposure to warming and fishing causes recruitment collapse, but size diversity and periodic cooling can aid recovery. <i>Proceedings of the National Academy of Sciences</i>, 118, e2100300118. https://doi.org/10.1073/pnas.2100300118^[1]_{SEP}</p>
WG44	<p>Kodryan K.V., Kivva K.K., Zubarevich V.L., Pedchenko A.P. (2023) Water masses in the western Chukchi Sea in August 2019 and their hydrochemical features. <i>Oceanology</i>, Vol. 63, No. 3, pp. 314–324. DOI: 10.1134/S0001437023020078</p>
AP-	<p>Boyer et al. (2023). Effects of the Pandemic on Observing the Global Ocean. <i>Bulleting of the</i></p>

NPCOOS	American Meteorological Society. 104: E389-E410. https://doi.org/10.1175/BAMS-D-21-0210.1
S-MBM	Sydeman et al. 2023. Effects of currents and temperature on ecosystem productivity in Unimak Pass, Alaska, a premier seabird and biodiversity hotspot, Progress in Oceanography, Volume 216,103082, ISSN 0079-6611, https://doi.org/10.1016/j.pocean.2023.103082 .

- ii. **The following final reports were reviewed and accepted, and these expert groups are to be disbanded:**

EG	Type of publication & Title	Stages
SG-DATA (TCODE)	PICES Technical Report Satterthwaite, E., Garcia, H., Gann, J., et al. Towards a Data Management & Data Sharing Plan for the North Pacific Marine Science Organization (PICES) (SG-DATA Final Report)	Endorsed by TCODE, submitted to Secretariat
WG41 (FUTURE, HD)	PICES Science Report Marine Ecosystem Services in the North Pacific (WG41 Final Report)	Endorsed by FUTURE and HD, submitted to Secretariat

GC Endnote 1

Delegation list of participants for the 2023 Governing Council meeting

<u>Canada</u> Andrew Thomson Bernard Vigneault (R) Day 1	<u>Russian Federation</u> Vladimir Radchenko (Alternate)(R) Oleg Katugin (Advisor) (R)
<u>Japan</u> Katsutoshi Ishikawa Tetsuo Fujii Yutaka Hiroe (Advisor, F&A member) Tatsuki Oshima (Advisor, F&A member) Hitomi Kawahara (Advisor) (R)	<u>USA</u> Jack Barth Cisco Werner Ed Gorecki (Advisor) Day 1
<u>People's Republic of China</u> Pengbin Wang (Alternate) Zheng Wei (Alternate)	<u>Other</u> Enrique Curchitser (PICES Chair) Chul Park (PICES Past Chair) Kristen Koch (F&A Chair) Day 1 (R) Sukyung Kang (Science Board Chair) Day 2 Sonia Batten (Executive Secretary) Sanae Chiba (Deputy Executive Secretary) Day 2 Review Panel (Day 1): Eileen Hofmann David Checkley Jörn Schmidt
<u>Republic of Korea</u> Se-Jong Ju Jun Hyung Kim (Advisor) Joongho Moon (Advisor) Yong Soon Choi (Advisor)	

(R) Attending Remotely

GC Endnote 2

Opening Remarks from National Delegates

Andrew Thomson, Canada

Mr. Chair, Executive Secretary and Fellow Governing Council Members,

Canada would like to thank and commend the PICES Secretariat and our host, the United States of America and the National Oceanographic and Atmospheric Administration for organizing an enormously successful and well attended meeting the year in the beautiful city of Seattle, *on the traditional land of the first people of Seattle, the Duwamish People*.

The theme of this year's annual meeting, Connecting Science and Communities for Sustainable Seas resonates with Canada as we grapple with the very real challenges and impacts of climate change on local communities and particularly on indigenous communities who have a literal and spiritual connection to their traditional territories. Canada is progressing on the implementation of the United Nations Declaration Act, legislation passed in 2021, with the recently released United Nations Declaration on the Rights of Indigenous Peoples Act Action Plan which outlines a whole of government roadmap for advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, government-to-government, and Inuit-Crown relationship based on recognition of rights, respect, cooperation, and partnership as the foundation for transformative change. In Fisheries and Oceans Canada, and with the recognition that we have a long journey ahead, I think it's also appropriate to celebrate successes in how far we have already come, as an example this past year we published a study of Haida Gwaii that we co-authored with the Haida Nation and included Haida Nation language throughout the document in both of the major Haida dialects. This is just one example of the continuing efforts to develop more collaborative science with our indigenous government partners and incorporate indigenous knowledge into those studies.

Canada is also proud of the agreement in December 2022 on the Kunming-Montréal Global Biodiversity Framework, an historic global framework to safeguard nature and halt and reverse biodiversity loss, putting nature on a path to recovery by 2050. Canada is developing its implementation plan for 2023 which will draw from international collaborations such as PICES to use marine science to advance the ambitious goals related to safeguarding our shared oceans. This will include notably planning for the implementation of an ecosystem approach to fisheries management to support adaptation in the context of our changing climate and oceans.

This past year the Government of Canada announced the launch of the Indo-Pacific Strategy, a whole of government approach to strengthening Canada's science, technology and innovation partnerships, our ties within the region and support Canada's overarching priority to be an active, engaged and reliable partner in the Indo-Pacific. Canada's role within PICES is well aligned with this new approach and we expect to build on the strong working relationships that PICES and other organizations have fostered to better understand our shared environment and tackle the ever-present issues of climate change that affect us all.

It was encouraging to see the presentations and posters presented here at PICES-2023, the variety of the topics being studied and the collaboration that is being demonstrated by all the participants in PICES and especially by the cohort of Early Career Scientists at this meeting. Surely engagement with these scientists and giving them the opportunity to describe their work is the high point for anyone who attends a PICES meeting.

It is obvious that all of us are very well served by the PICES Executive Secretary and Secretariat staff. The organization and management of such a large event is a complex and challenging endeavor and they have once again exceeded expectations. Canada wants to express its sincere appreciation to the Secretariat for their hard work in the organization of PICES 2023 and on behalf of all Canadian members of PICES, I extend our thanks and sincere appreciation to all those who participated and collaborated over the past week to make this meeting such a success and we look forward to the next annual meeting, being hosted by the Secretariat in Honolulu, HI.

Thank-you

ISHIKAWA Katsutoshi, Japan

Dear Mr. Chairman,

Distinguished Governing Council members,

It is my great pleasure to attend the PICES Governing Council Meeting here in Seattle. On behalf of the Japanese delegation, I would like to express my sincere gratitude to the Secretariat and the US delegation for their efforts in preparing this annual meeting. I am certain that under the chairman's able leadership, this session will be successful and fruitful.

Japan highly values PICES' role in enhancing international scientific cooperation as well as its engagement in the field of ocean science.

As a maritime country, Japan recognizes that ocean science has become more important than ever and that decision-making based on scientific evidence is essential to achieving sustainable development in the oceans. As such, Japan's national committee for the UN Ocean Decade has regularly held liaison meetings since its establishment, and it held its fourth meeting this year in February to share information and exchange opinions on both domestic and international trends related to the UN Ocean Decade. Within the UN Ocean Decade framework, 37 national committees have been established to date, 6 of them being PICES member countries. Japan looks to the networking among these committees to further promote the UN Ocean Decade and to achieve its mission of providing transformative ocean science solutions for sustainable development.

I hope that the PICES will continue to lead research activities with the aim of addressing long-term global challenges and further contribute to sustainable development in coordination with like-minded countries and relevant organizations.

I would also like to take this opportunity to briefly present Japan's recent situation as well as our contributions towards PICES' activities.

As for the situation surrounding Japan's fisheries, there have been improvements in fish stocks of some species, such as bluefin tuna, thanks to appropriate management, while fish stocks of other species, such as saury and salmon, are in decline. In addition, Japan has seen changes in target fish species and fishing grounds that are supposedly affected by changes in the marine environment due to

climate change in recent years. Japan has also seen major damages to the aquaculture industry due to the large-scale occurrence of red tides.

We have great expectations for the progress of marine research at PICES to better understand the mechanisms behind such changes in ocean environments and to ensure sustainable use of marine resources.

Japan has also continuously contributed to capacity-building through the PICES framework. As for the PICES Special Project, funded by the Japanese government, we completed the Ciguatera project last year, and its achievement is now inherited into a new three-year-long project started this year. The project is called “Creating a phytoplankton-fishery observing program for sustaining local communities in Indonesian coastal waters” and is also known as FishPhytO. The overall objective of this project is to establish a phytoplankton-fishery observing program, in collaboration with local fishers, research institutes, and universities. It is expected that the results of this project, which takes a citizen participatory approach, will be utilized not only in Indonesia but also in PICES member countries.

Last but not least, I hope today and tomorrow's discussions further promote mutual understanding on enhancing various processes to ensure the activities of PICES and further promote future cooperation among our members.

Thank you very much.

Zheng Wei, China

Distinguished Chair of PICES, Members of the GC and colleagues,

Good morning,

I am Zheng Wei from China, from the First Institute of Oceanography, Ministry of Natural Resource of China. It is my great pleasure, as the alternate representative of China to attend the Governing Council Meeting of the PICES 2023 Annual Meeting. First of all, please allow me to thank United States and PICES secretariat for organizing this meeting on behalf of the delegation from China.

As we know, oceans are our common home and are vital to the survival and development of humankind. The impact of human activities on the oceans is increasing day by day, but human knowledge of the oceans is still very limited. Science and technology are the basis for our exploration of the oceans and their sustainable use and conservation. As stated in the vision and mission statement of the United Nations Ocean Decade----- “the science we need for the ocean we want.” “To catalyze transformative ocean science solutions for sustainable development, connecting people and our ocean.”

In recent years, China have increased our investment in marine science, improved research conditions, and strengthened external cooperation and exchanges. We have formulated a number of plans, such as the 14th Five-Year Plan for the Strategic Development of the Marine Economy and the Construction Plan for Major Projects for Ecological Restoration and Rehabilitation of Coastal Zones, all of which propose upgrading the level of marine science and technology, and strengthening the cultivation of research in marine science and of talents in marine science.

At the same time, taking into account the distinctive characteristics of marine science as a large science, the complexity of marine problems cannot be solved through the research of a single discipline, but requires in-depth crossover and fusion among multiple disciplines. We promote interdisciplinary research in marine ecology, marine physics, marine observation, etc., pay attention to ocean acidification, sea level rise and other marine disaster problems, and the synergistic development of marine science and technology with marine economy, marine ecological conservation and restoration.

We also actively engage with relevant countries and international organizations, and constantly promote the participation and initiation of Chinese scientists in various scientific programs and projects, so as to contribute to marine science and sustainable development. For example, in response to the Ocean Decade initiative, China has carried out Five endorsed Decade programme and six projects. Just last month, the kick-off conference of the Decade Collaborative Centre on Ocean-Climate Nexus and Coordination amongst Decade Implementing Partners in P. R. China (DCC-OCC) was successfully held in Qingdao.

As an inter-regional marine science organization, PICES can give full play to its strengths, promote interdisciplinary research in the field of oceanography, and take joint actions to promote the sustainable development of the oceans. We hope that PICES can give full play to its advantages as a regional scientific organization, and that member countries will deepen their exchanges and cooperation through the platform of PICES, and jointly promote marine scientific cooperation among marine scientists and managers in the North Pacific region, as well as work together to build a better PICES.

Last but not least, I wish you a very successful meeting.

Thank you.

Se-Jong Ju, Korea

Greetings, members of the Governing Council at PICES.

Korea would like to begin with the expression of our deepest condolences on the passing of Dr. Vera Alexander and Dr. Igor Shevchenko. Both have worked with PICES for many years, and their passion and dedication have been an inspiration to all of us. While their passing is a great loss to us, at the same time their legacy is something we will all continue to pursue and develop. We will remember them and move forward by honoring their achievements. I offer my sincere condolences to the families and friends.

Korea is experiencing yet another year of repeated natural disasters caused by climate change. Droughts, forest fires, as well as floods, immersions, and landslides arising from heavy and intermittent rainfalls lead to human loss and severe property damage. Abnormal weather continues at a level that is difficult for us to control, not only in Korea but around the world. In order to strategically respond to climate change and, by extension, the climate crisis, the answer must be found in the ocean more than anything else. There is a growing need to observe ocean climate

change closely, and to establish a systematic groundwork to make accurate prediction. Therefore, I hope that through PICES, we will be able to understand the ocean's response to climate change and human activities, develop predictive capabilities, and support decision-making process within PICES member states as well as the international community.

The 2023 PICES Annual Meeting gathers around the title of "Connecting Science and Communities for Sustainable Seas" to review the performance of PICES during UN Ocean Decade, discuss priorities of the remaining years, and encourage the participation of new partners, including local community. We continue to support emphasis made by PICES on recruiting and investing in ECOPs. we are also sponsoring such domestic groups and encouraging these groups to participate in international organizations and programs, including PICES. I sincerely hope that more young scientists will participate in PICES in the future.

Lastly, on behalf of the Republic of Korea and the entire Korean delegation participating at the annual meeting this year, I would like to express our sincere gratitude to the U.S. government and the PICES Secretariat for their non-stopping effort in successfully concluding the 2023 PICES Annual Meeting here in Seattle, USA.

Thank you

Vladimir Radchenko, Russia

Dear Mr. Chairman, national delegates, colleagues, guests, ladies, and gentlemen!

On behalf of the Russian party I would like to greet you all and express deepest gratitude for successful organization and hosting the PICES-2023 Annual Meeting in Seattle in a hybrid format. This meeting is a success due to hard and highly professional work of the PICES Secretariat staff under the leadership of Executive Secretary.

Eventful PICES-2023 Annual Meeting Program included traditionally large number of science and business meetings in the last few days, and right now, at the beginning of the Governing Council meeting, it is clear to all participants that the 32nd PICES Annual Meeting was highly productive. Lectures and papers, which were delivered in the frame of scientific program of this Annual Meeting show the will and drive of PICES community to expand and use

our multidisciplinary knowledge of changes in marine ecosystems and their impact on biological resources for practical purposes of their conservation and sustainable use by fisheries.

PICES becomes more and more involved in the UN Decade of Ocean Science for Sustainable Development (UNDOS), which is oriented towards wide exchange of data and technologies by creation of digital ecosystem. Apart from implementation of Working Groups within the UNDOS framework, PICES continues to work intensively on several UNDOS endorsed programs. At least two of them are worth mentioning in the context of PICES collaboration with related multi-national fisheries organizations:

- PICES/NPAFC cooperation in development of the “Basin-scale Events to Coastal Impacts: An ocean intelligence system for fish and people (BECI)”
- PICES/ICES Joint program “SmartNet”.

Project named FishPhyto (“A phytoplankton-fishery observing program for sustaining local communities in Indonesian coastal waters”) shows great progress and even greater potential in collecting and effective use of small-scale or artisanal fisheries data in different languages and possible implementation of the application by all Members of PICES.

At the same time, PICES is facing many important tasks in the fields of climate change impact and sustainable fisheries management. The problem of significant fluctuations of schooling forage fish stocks in lower latitudes has not been solved. Now we witness negative trends in mackerel stocks, and mechanisms for the observed stock fluctuations of pelagic fish remain poorly understood. Borealization of Arctic fish and zooplankton communities is another example. The reasons underlying changes in their abundance are unclear. Therefore, we are unable to plan our conservation and management actions. Causes for the Bering Sea walleye pollock distribution into the Chukchi Sea and a decline in Pacific cod stock are also questionable. There is no consensus among scientists on Pacific salmon stock dynamics: some authors predict that the period of high stocks will continue, others predict that it will end soon.

Despite the fact that numerous ocean science issues are yet to be resolved and comprehended, PICES nowadays stands as a promising and successfully functioning international scientific organization in the North Pacific. I believe that Member states will

continue to do all the best for further successful cooperation within PICES for the benefit of human communities and the Ocean they are living with!

Francisco Werner, USA

Good morning, PICES Chair, Madam Executive Secretary and fellow Governing Council members.

We begin by expressing our sincere appreciation to PICES' Chair, Prof. Enrique Curchitser, Dr. Sonia Batten (PICES Executive Secretary), Dr. Sanae Chiba (PICES Deputy Executive Secretary) and everyone at the PICES Secretariat for their leadership in yet another successful PICES Annual Meeting. We also would like to thank Ed Gorecki and Hannah LaChance from NOAA Fisheries' Office of Science & Technology for all they did over almost two years of planning and painstaking attention to detail, including expertly addressing last minute issues of which most of us were unaware. We are honored to have been able to host you all in Seattle for this year's PICES annual meeting and we hope you enjoyed the venue, the city, and the meeting.

The large turn-out at this year's meeting added to the meeting's vibrant discussions, reconnecting with colleagues we had not seen in years, meeting new colleagues, in-person celebration of the PICES award winners, and the networking that is vital to the development of our science. We further acknowledge and applaud the tremendous job that the PICES Secretariat did this past year, exemplified by the organization of the ECCWO (Effects of Climate Change on the World's Oceans) meeting in Bergen, the virtual intersessional Science Board, numerous Working Group and Committee meetings, virtual summer schools, among others.

The United States reiterates its commitment to furtherance of open exchange of ideas within the international science and technology community. In coordination with our partners, we will uphold our commitments to ensuring the sustainment of international scientific and technical fora dedicated to fostering international collaboration.

We know this a critical time to address the climate crisis. PICES has many roles, including increasing understanding of climate change impacts to inform our management decisions and helping our stakeholders and constituents take informed action. We acknowledge we have to keep up our pace in view of another year of sobering facts, including:

- September 2023 was Earth's hottest September in NOAA's 174-year climate record.
- Last year ranked as the sixth-warmest year on record since 1880.
- The ten warmest years on record have all occurred since 2010.
- The 2022 annual Antarctic sea-ice coverage was at a near-record low.

Warming oceans, flooding, drought, sea level rise – all present challenges for our ecosystems, industry and infrastructure that we must confront together.

Addressing climate change impacts on society remains among the top priorities of the current United States national leadership. Recently passed legislation in the United States contributes significant financial resources – of over US \$1.2 Billion – to priorities including Climate-Ready Fisheries, Tribal Fish Hatcheries, Habitat Restoration and Fish Passage, and Arctic Research. These investments also include development and implementation of advanced technologies, modern data systems, and related infrastructure. We will increase the number and types of observations we can make and expand our observing systems, all of which will move us toward the greater sampling required to manage our oceans and ecosystems.

Scientists across the United States are focusing efforts on monitoring, prediction, and mitigation in the oceans and on coastal communities. The United States is investing heavily in the development of operational ocean modeling and decision support systems needed to reduce impacts, increase resilience, and help adapt to changing ocean conditions. We see PICES as well-positioned to be a critical partner in advancing the climate change charge and we are committed to investing in PICES to achieve shared goals. Expert groups such as the Section on Climate Change Effects on Marine Ecosystems (SICCE) continue to be strong collaboration centers for these important topics.

The United States affirms its participation in the UN Decade of Ocean Science for Sustainable Development, through our work on PICES' Advisory Panel on UNDOS. We are happy to see SmartNet has continued to build a network, convened workshops at PICES 2023 and ECCWO, and has endorsed project(s) underneath their umbrella. While the Ocean Decade is still young, PICES has already begun to address cross-cutting themes of ocean literacy and early career support. We look forward to PICES' continued leadership in these efforts, including renewed energy behind a PICES-wide scientific program, and will continue to assist in any way we can.

The efforts of the PICES Advisory Panel on Early Career Ocean Professionals (ECOP) continue to be impressive. The importance of PICES' investment in the next generation of scientists cannot be overstated. We also recognize the important progress of the PICES Advisory Panel on Scientific Communications (SciCom) including the "Fact Sheet Workshop" held at this year's conference. These efforts will help disseminate PICES' work better and more broadly. We also note the survey developed by the Study Group on Generating Recommendations to Encourage Environmentally-Responsible Networking (SG-GREEN) to gather input from PICES members. The United States is proud to support these expert group efforts.

While the United States is not the host of next year's meeting, we welcome you to Hawaii for the 2024 PICES Annual Meeting. We thank the PICES Secretariat for taking on the role of host next year, and we will remain on standby to offer assistance as needed. On behalf of the entire United States delegation, we again thank the Secretariat for their resilience and dedication to our shared vision for PICES. We look forward to a most productive 2024.

Thank you, and once more, it was an honor to host you at the 2023 PICES Annual Meeting,

GC Endnote 3**Adopted Agenda****Day 1 (October 28th)**

1. Welcome and opening remarks by representatives of Contracting Parties and the Chair of PICES
2. Adoption of agenda and meeting procedures
3. Reports from strategic partners (may be in-person or written):
 - a. ICES – in person
 - b. Others – in writing/video
4. Introduction to the Review Panel
5. Report on administration for 2022–2023
 - a. Managing the budget of the Organization
 - b. Implementation of GC Decisions
 - c. Administering the Secretariat office and personnel
 - d. Planning and organizing meetings of the Organization
 - e. Coordinating the publication program of the Organization
 - f. Relationships with key organizations
6. PICES participation in UNDOS
 - a. The BECI Project
 - b. SmartNet
7. Reports on previous GC Decisions:
 - a. Report on GC Decision 2021/A/6: Future PICES Annual and Intersessional Meetings
 - b. Report on GC Decision 2021/A/9, 2022/A/7: Seeking UN Observer status for PICES
 - c. Report on GC Decision 2020/A/7: Tracking the activity of the Secretariat
 - d. Report on GC Decision 2021/A/10, 2022/A/8, 2023/A/1: External Review of the Organization
 - e. Report on GC Decision 2020/A/11, 2022/A/6: Science Products
8. PICES Chair Award
9. Report and recommendations of the Finance and Administration Committee
 - a. Budget and financial considerations
 - b. Schedule, structure and financing of future Annual Meetings
10. Elections
 - a. Appointment of F&A Chair
11. Other business - USA proposed a discussion on PICES science direction including post-FUTURE science program and review panel outcomes.

Day 2 (October 29th)

12. Report on PICES Special Projects
 - a. SEATurtle
 - b. Ciguatera
 - c. FishPhytO
13. Report and recommendations of the Science Board