

**GC Appendix A****2018 Governing Council Decisions**

*(The following decisions were taken at the Governing Council Meeting at PICES-2018 in Yokohama, Japan November 3 and 4, 2018)*

**2018/A/1: 2017 Auditor's Report**

Council accepted the audited accounts for FY 2017.

**2018/A/2: 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 instructed the F&A Chairman and Executive Secretary to continue reporting on the metrics to characterize the increase in science activities of the Organization.
- iii. Council instructed the Executive Secretary to consult with other organizations on approaches to determine the uptake/impact of science activities, reporting back to the Finance and Administration Committee at PICES-2019.
- iv. Council instructed the Executive Secretary to send letters to all Contracting Parties requesting payment of Annual Fees shortly after the completion of PICES-2018.

**2018/A/3: Budgetary considerations**

- i. Council accepted the estimated accounts for FY2018.
- ii. Council determined that the very large increase in the employer costs for the pension plan in 2018 were unforeseen and that in order to avoid exceeding the budget set for the General Fund, a portion of this increase be paid from the Working Capital Fund in accordance with Financial Rule 6(iv)(a).
- iii. Council approved the FY 2019 budget of \$1,030,000. The amount of \$226,600 will be transferred from the Working Capital Fund to balance the budget, setting the total annual contributions at \$803,400 and the 2019 annual contribution at \$133,900 per Contracting Party.  
*Note: These values were updated by correspondence February 4, 2019 to reflect the final consensus on 2019 Annual Fees.*
- iv. Council approved a transfer from the Working Capital Fund to the Trust Fund to recover the 2018 expenses and restore the Trust Fund to the level of \$110,000.
- v. Council approved expenditure of up to \$30,000 (if required) from the Working Capital Fund as a contribution to the North Pacific Regional Workshop on the UN Decade of Ocean Science for Sustainable Development.

**2018/A/4: Future PICES Annual Meetings and 2019 Inter-sessional Science Board meeting**

- i. Council approved the proposal from Canada to hold the 2019 PICES Annual Meeting from October 16 – 27, 2019 in Victoria.
- ii. Council approved the expenditure of up to \$40,000 from the General Fund to defray the costs of the 2019 Meeting, as requested by Canada.
- iii. Council accepted the offer from China to host the 2020 PICES Annual Meeting at a location and time to be determined and accepted the request for up to \$40,000 from PICES to defray the costs of the 2020 Meeting.
- iv. Council requested Korea to confirm by March 31, 2019 their intention to host the 2021 PICES Annual Meeting in Korea.
- v. Council agreed to a modest increase in the registration fee structure for PICES-2019:

Type of registration fee	CAD \$
Regular	325
Early	250

Student	50
Spousal/guest	50

- vi. Council reviewed the analysis of options on how unexpected revenue from Annual Meetings with high attendance might be re-allocated to the host country to support increased participation at subsequent PICES Annual Meetings and recommends that such options be deferred until the Organization has greater financial stability.
- vii. Council approved an Inter-sessional Science Board meeting to be hosted in April - June 2019 at a location to be determined. Japan indicated their willingness to host such a meeting, subject to confirmation of the meeting size and scope.
- viii. Russia also indicated their willingness to host an intersessional meeting, noting that they require details on the event scope and sufficient lead time to secure funding.
- ix. Council requests that the Secretariat continue to work individually with Contracting Parties to implement approaches for funding annual meetings that are consistent with PICES Financial Regulations.
- x. Council instructed the Executive Secretary to continue to explore the option for a joint ICES/PICES Annual Meeting and to provide an evaluation of the benefits and additional costs for the Organization and Contracting Parties for consideration by the Finance and Administration Committee at PICES-2019.

#### **2018/A/5: PICES Intern Program**

- i. Considering funding currently available for the Intern Program and stated intentions for contributions by Contracting Parties, Council agreed to initiate the process to obtain an intern for the 2019/2020 term. To ensure continuity of the program, an earlier starting date, such as early May was suggested. Following the existing rotation cycle, Korea was requested to nominate an intern by February 28, 2019.
- ii. Council instructed the Executive Secretary to invite Contracting Parties to provide voluntary contributions to the Trust Fund to support the Intern Program in 2019 and beyond.

#### **2018/A/6 Data Management Policy**

Council approved the following Data Policy:

##### **PICES Data Policy**

##### **Principles and Definitions**

As stated in Article III of the Convention for the North Pacific Marine Science Organization (PICES) the Organization is to promote the collection and exchange of information and data related to marine scientific research in the North Pacific Ocean and its adjacent seas.

The PICES strategy on capacity development identifies TCODE as the committee responsible for the development of communication networks for exchange of data and information.

Data gathered as a result of PICES activities will be responsibly managed to guard against loss and to ensure continued accessibility. The management of data using external data management systems is preferred to using internal PICES resources.

For any data provided to PICES, PICES will respect the ownership rights and any restrictions placed on these data by the provider.

- Data include data products and model outputs related to PICES activities. Metadata are data about data.
- End users include a person, organization, group (including PICES expert groups) using data.
- Data providers include a person, organization, group (including PICES expert groups) providing data.
- The data inventory refers to data for which PICES has the primary responsibility to manage.

##### **Roles and Responsibilities:**

##### **The Technical Committee on Data Exchange (TCODE) is responsible to:**

1. Manage the PICES data inventory.
2. Assist Expert Groups to identify data that are to be included in the data inventory.
3. Assist Expert Groups in the development of data management options and strategies.

4. Make recommendations to Science Board on PICES data management and priorities, with particular emphasis on correcting or mitigating any known or anticipated deficiencies.

**The PICES Secretariat is responsible to:**

1. Support TCODE in the maintenance of the data inventory.
2. Support TCODE to correct or mitigate any known or anticipated deficiencies.

**Science Board is responsible to:**

1. Include data management requirements in the Terms of Reference of each PICES expert group.
2. Review the recommendations proposed by TCODE and provide recommendations to Governing Council as necessary.

**Expert Groups are responsible to:**

1. Identify any data developed during the activities of the expert group and inform TCODE and PICES secretariat.
2. Develop, with assistance from TCODE, strategies or options for managing data used by the expert group.

**Data Produced by PICES**

All data produced by PICES are considered to be publicly available unless explicitly specified otherwise. Results, conclusions, or recommendations derived from the data associated with PICES do not imply endorsement from PICES.

Contributions of data from PICES expert groups will adhere to the expert groups' Terms of Reference and be submitted to TCODE for inventory while the group is active.

All data including metadata should be archived using standard codes, formats, and protocols.

**Data Provided to PICES**

The quality assurance of data is the responsibility of the data provider.

In the event that PICES becomes aware there may be quality issues in the data PICES will inform the data providers as soon as possible.

Data providers should inform PICES secretariat of any policies that may place special conditions on their redistribution.

End users are responsible for the proper use of the data and metadata provided.

PICES may reformat data or metadata but will never change the data provider's original record.

Data must be acknowledged, preferably using a formal citation.

**Citation**

Data citations should facilitate giving scholarly credit and normative and legal attribution to all contributors to the data, recognizing that a single style or mechanism of attribution may not be applicable to all data.

Where DOIs (Digital Object Identifiers) exist they should be included in the citation.

**2018/A/7: Election of the Chairman of PICES**

Dr. Chul Park was elected to a second term as Chairman of PICES.

**2018/A/8: Election of Vice-Chairman of PICES**

Dr. Enrique Curchitser (U.S.A.) was elected to a second term as Vice-Chairman of PICES.

**2018/A/9: Appointment of the Chair of the Finance and Administration Committee**

Dr. Carmel Lowe was appointed to a second term as Chair of the Finance and Administration Committee.

**2018/A/10: Intersessional Governing Council Meeting**

- i. Council approved an Intersessional Governing Council Meeting in accordance with Article VII (iv) (e) to review recommendations on the additional funding required to address the pension plan expenses and staffing challenges in the Secretariat.
- ii. If all Contracting Parties are able to confirm (by December 31, 2018) their agreement to increase annual fees by \$25,000 per year, beginning in 2020, this Intersessional Governing Council Meeting becomes unnecessary and will be cancelled.

**2018/A/11: Planning for the Recruitment of the next Executive Secretary**

- i. Council decided to initiate the process to recruit the next Executive Secretary with the objective of have a new Executive Secretary in place by February 2020.
- ii. Council decided to form a Search Committee composed of one Governing Council member from each Contracting Party, the Chairman and the Past Chair.
- iii. Each Contracting Party is to identify their Search Committee member by December 1 2018.
- iv. Council agreed to proceed in accordance with the schedule below:

Date	Activity	Notes
November 2018 - at PICES -2018	GC to identify Search Committee and verify process and schedule.	One representative from each Contracting Party plus Chair and Past Chair?
November-December 2018	Search Committee verifies Statement of Qualifications and announcement/advertisement	2014 Announcement is included as GC Appendix 5.
January 2019 – posting of job opportunity	PICES Secretariat posts job opportunity of PICES website	
January 2019- March 2019	Search Committee distributes information about the announcement/posting, with assistance of Secretariat.	It would be useful to track where /how the announcement has been circulated.
June 15 2019	Closing date for applications	
June 15- July 5 2019	Search Committee reviews applications and creates a “short list” of applicants to be interviewed at PICES-2019. Final determination of interview specifics to be completed.	
July 5 2019	Chair of Search Committee (PICES Chair) send notifications and invitation to an interview at PICES-2019. This could include the specifics of the interview.	
July 2019	Secretariat contacts short-listed applicant and arranges for travel of short-listed applicants to interviews at PICES-2019.	
October 2019 – at PICES-2019	Interviews and selection of candidate by Search Committee	
November 2019	Letter of Offer and negotiation of details of employment	PICES Chair assisted by Chair of F&A and Executive Secretary
January- February 2020	New Executive Secretary arrives at PICES Secretariat.	

**2018/A/12: Memorandum of Understanding with the International Pacific Halibut Commission**  
 Council approved a new Memorandum of Understanding with the International Pacific Halibut Commission.

**2018/S/1: 2019 PICES Annual Meeting**

- i. The following scientific sessions are to be convened at PICES-2019:
  - ¾-day Science Board (SB) Symposium on *Connecting Science and Communities in a Changing North Pacific*;
  - ½ -day Topic Session on *Habitat Restoration of Marine Ecosystems*;
  - 1 - day Topic Session on *Marine heatwaves in the North Pacific: Predictions and impacts in coastal regions*;
  - 1 -day Topic Session on *Coastal ocean modelling in the North Pacific*;
  - ½ - day Topic Session on *The impacts of marine transportation and their cumulative effects on coastal communities and ecosystems*;
  - 1 - day Topic Session on *Trends in ocean and coastal ecosystems and their services and its future*;
  - 1 - day Topic Session on *Identifying thresholds and potential leading indicators of ecosystem change: the role of ecosystem indicators in ecosystem-based management*;
  - 1 - day Topic Session on *Environmental indicators of plastic pollution in the North Pacific*;
  - 1 - day Topic Session on *Creating More Effective Integrated Ecosystem Assessments (IEAs) in PICES Countries*;
  - 1 - day Topic Session on *Coastal Ocean Observing Systems, Essential Biological Variables, and Community based monitoring*;
  - 1 - day Topic Session on *Linking changes in climate, nutrient distribution, phytoplankton ecology, and production of algal exudates in the North Pacific*;
  - 1 - day Topic Session on *Incorporating Climate Variability and Change into Fisheries Management Advice*;
  - 1 - day Topic Session on *Impacts of meso-/submeso- scale processes on heat/material transport and on marine ecosystems*;
  - ½ - day Topic Session on *Implications of prey consumption by marine birds, mammals, and fish in the North Pacific*;
  - 1 - day Topic Session on *Integrating economic and social objectives in marine resource management*;
  - 1 - day Topic Session on *Advances in North Pacific marine ecosystem prediction*;
  - 1 - day Topic Session on *Application of Ecosystem-Based Fisheries Management in the 21st century: progress and challenges in pelagic systems*;
  - ½-day BIO Contributed Paper Session;
  - ½-day FIS Contributed Paper Session;
  - ½-day MEQ Contributed Paper Session;
  - ½-day POC Contributed Paper Session;
  - ½-day HD Contributed Paper Session.
- ii. The following workshops are to be convened at PICES-2019:
  - 1 – day Workshop on *Learn to Effectively Communicate Your Science*;
  - 1-day Workshop on *Integrating biological research, fisheries science and management of Pacific halibut and other widely distributed fish species across the North Pacific in the face of climate and environmental variability*;
  - ½-day Workshop on *Let's Play the GAME! (to achieve sustainable fisheries development in the PICES regions)*;
  - 1 – day Workshop on *Circulation, biogeochemistry, ecosystem, and fisheries of the western North Pacific marginal seas: Past and future of CREAMS (Circulation Research of East Asian Marginal Seas)*;
  - ½-day Workshop on *Celebrating two decades of North Pacific CPR sampling, and future directions*;
  - 1 – day Workshop on *Assessing Marine Ecosystem Services: A Comparative View Across the North Pacific*;

- *½-day Workshop on PICES contribution to Central Arctic Ocean (CAO) ecosystem assessment (Third);*
  - *1 – day Workshop on Synthesis of bio-acoustics programs for monitoring zooplankton and fisheries in the North Pacific;*
  - *1 – day Workshop on Monitoring Non-indigenous Species in PICES Member Countries: Towards Best Practices;*
  - *1 – day Workshop on PICES/ICES collaborative research initiative: Toward regional to global measurements and comparisons of zooplankton production using existing data sets;*
  - *1 – day Workshop on The influence of environmental changes on the potential for species distributional shifts and subsequent consequences for estimating abundance of Pacific saury;*
  - *½-day Workshop on Potential food competition between top predators and fisheries in the North Pacific;*
  - *1 – day Workshop on Common Ecosystem Reference Points;*
  - *1 – day Workshop on New frontiers: the application of molecular approaches in marine ecology and fisheries science;*
  - *1½ -day Workshop on Application of Machine Learning to Ecosystem Change Issues in the North Pacific;*
  - *2-day Workshop on Developing a collaborative, integrated ecosystem survey program to determine climate/ocean mechanisms affecting the productivity and distribution of Salmon and associated pelagic fishes across the North Pacific Ocean;*
  - *1 – day Workshop on Scoping an Integrated Ecosystem Assessment (IEA) of the Northern Bering-Chukchi Seas Large Marine Ecosystem (LME);*
  - *2½ -day Workshop on Economic Effects of HABs: Recommended Practices;*
  - *½-day Workshop on The Impacts of mariculture on coastal ecosystems;*
- iii. The following business meetings are to be held at PICES-2019:
- 3-hour overture meeting, ½-day meeting and a 1-day meeting of Science Board;
  - 1-day FUTURE SSC meeting plus a three hour business meeting;
  - 2-hour overture meetings and ½-day meetings of Standing Committees;
  - ½-day meeting of the Section on *Marine Birds and Mammals* (S-MBM);
  - ½-day meeting of the Section on *Ecology of Harmful Algal Blooms in the North Pacific* (S-HAB);
  - ½-day meeting of the Section on *Carbon and Climate* (S-CC);
  - ½ -day meeting of the joint PICES/ICES Section on *Climate Change Effects on Marine Ecosystems* (S-CCME);
  - ½-day meeting of the Working Group 34 on *Ocean Conditions and the Distribution and Productivity of Highly Migratory Fish*;
  - 1-day meeting of the Working Group 35 on the *Third North Pacific Ecosystem Status Report*;
  - 1-day meeting of the Working Group 36 on *Common Ecosystem Reference Points across PICES Member Countries\**;
  - ½-day meeting of the Working Group 37 on *Zooplankton Production Methodologies, Applications and Measurements in PICES Regions*;
  - ½ -day meeting of the Working Group 38 on *Mesoscale and Submesoscale Processes*;
  - ½ -day meeting of the Working Group 39 on *Joint PICES/ICES/PAME Working Group on an Integrated Ecosystem Assessment for the Central Arctic Ocean*;
  - 1 -day meeting of the Working Group 40 on *Climate and Ecosystem Predictability*;
  - 1 -day meeting of the Working Group 41 on *Marine Ecosystem Services*;
  - 1 -day meeting of the Working Group 42 on *Marine Microplastics*;
  - ½-day meeting of the *Advisory Panel for a CREAMS/PICES Program in East Asian Marginal Seas* (AP-CREAMS);
  - ½-day meeting of the *Advisory Panel on North Pacific Coastal Ocean Observing System* (AP-NPCOOS);
  - 1 -day meeting of the *Advisory Panel on Non-Indigenous Species* (AP-NIS);

- ½-day meeting of the Joint PICES-NPFC Study Group on *Scientific Cooperation in the North Pacific Ocean* (SG-PICES-NPFC);
- 1-day meeting of the Study Group on Impacts of Mariculture on Coastal Ecosystems (SG-IMCE);
- ½-day meeting of the FishGIS Special Project Science Team;
- ½-day meeting of the Marine Turtle Special Project Science Team (subject to final approval by Governing Council).

**2018/S/2: Inter-sessional symposia/session/workshops and meetings**

Council approved the following activities:

Event	Dates	Location	PICES Role	Support Provided
<b>Intersessional Workshops/meeting of PICES Expert Groups</b>				
NPESR3 International Synthesis Workshop	Spring 2019 4 days	TBD-Yokohama? *With ISB-2018, FUTURE, or BOTH; Sinjae Yoo (KOR) and Peter Chandler (CAN), conveners		10 chapter lead authors at \$5K each (= \$50K from NPESR acct.)
FUTURE SSC Mtg	Spring 2019 2.5 days	*With ISB, NPESR, or BOTH; Steven Bograd (USA) and Sukyung Kang (KOR), conveners		Most support from national funds of travelers; some may come from FUTURE acct.
ISB-2019	Spring 2019 2.5 days	*With FUTURE, NPESR, or BOTH, Hiroaki Saito (PICES), Convener		Most support from national funds of travelers; some may come from PICES FUTURE account.
Workshop on “Identifying the existence of thresholds in marine ecosystem driver-response relationships”	Spring 2019 2 days	In conjunction with ISB (if possible); Mary Hunsicker (USA), Xiujuan Shan (CHN), and Jennifer Boldt (CAN), Conveners	WG 36	
Workshop on “Towards an integrated approach to understanding ecosystem predictability in the North Pacific”	Spring 2019; 3 days	In either Boulder, CO (USA) or Princeton, NJ (USA); Ryan Rykaczewski (USA), Antonietta Capotondi (USA), Masami Nonaka (JPN), Myron Peck (Germany/ICES), Enrique Curchitser (USA), Youyu Lu (CAN), and Momme Butenichon (Italy/ICES)	WG 40	Support travel of 1 or 2 scientists (no specific amount)
<b>Co-sponsorship of other Organizations activities</b>				
Global Ocean Acidification Observing	April 15-19, 2019; 3 days	Hangzhou, China	Co-sponsor	1 invited speaker; \$4K

Network workshop				
SOLAS Open Science Conf.	April 21-29, 2019; 9 days	Sapporo, Japan	Co-sponsor	2-3 ECS not to exceed \$6K;
NPAFC-IYS Workshop on salmon ocean ecology	May 18-20, 2019	Portland, OR, USA	Co-sponsor	\$7K for invited speakers/ECS
IMBeR Open Science Meeting	June 17-21, 2019	Co-sponsor	Co-sponsor	Partial travel support for 2-3 ECS; not to exceed \$6K
OceanObs'19 Conference	Sept 16-20, 2019	Honolulu, HI, USA	Co-sponsor	Partial travel support for 2-3 ECS; not to exceed \$6K
Alaska Marine Science Symposium (NPRB)	Jan 28-Feb 1, 2019	Anchorage, AK, USA	Co-sponsor	Partial support for 1-2 ECS to attend; not to exceed \$3K
ICES/NEAFC/NAFO/PICES International Shellfish Symposium “Shellfish-Resources and invaders of the North”	Nov 5-7, 2019	Tromso, Norway	Co-sponsor	\$6K CAD for partial or full support of two ECS to attend; previously approved also travel funding of PICES convener, Gordon Kruse (USA)
2 <sup>nd</sup> Intl Science and Policy Conference on implementation of EAM in the Arctic	~May 2019	Bergen, Norway	Co-sponsor (?)	Not to exceed \$4K
GlobalHAB Meeting	March 25-29, 2019	Paris, France (at IOC)	Co-sponsor	1 PICES participant; Vera Trainer \$3K
WG-SOCIAL/WG-ECON	Spring 2019	East Coast of North America		Criddle to attend; not to exceed \$2K
PACON Conference	July 2019	Vladivostok, RUS	Co-sponsor (?)	2 people not to exceed \$5K
SCOR WG EBUS (Eastern Boundary Upwelling Systems)	3 years	various	Co-sponsor	1 Associate Member representing PICES (Ryan Rycazewski-USA) – no support required

SCOR WG P-OBS (Integration of Plankton Observing Sensor Systems to Existing Global Sampling Programs)	3 years	various	Co-sponsor	Partial support for 1 Associate Member representing PICES (Sonia Batten- Canada).
North Pacific Regional Workshop on the UN Decade of Ocean Science for Sustainable Development	August 2019	Tokyo (?)	Co_sponsor with IOC WESTPAC	TBD
<b>Summer Schools and capacity building</b>				
Pacific Ecology and Evolution Conference (PEEC)	Feb 22-24, 2019	Bamfield, BC, Canada	Co-Sponsor	\$1.5K for logistics
PICES Summer School (Ocean Turbulence: from observing to research)	~August 2019	Qingdao, Shandong, CHN	Primary Sponsor	\$9K
WG37 (Zooplankton Production; Practical Training Phase 2)	Immed. preceding PICES-2019	Victoria, BC, CAN, HAKAI Institute.	Co-Sponsor	\$6K for logistics

#### 2018/S/3: Publications

- i. The following publications are to be produced in or submitted to primary journals in 2018–2019:
  - a. A Special Issue in the ICES Journal of Marine Science resulting from the 4<sup>th</sup> International Symposium on the Effects of Climate Change on the World's Oceans in June 2018.
- ii. The following publications are to be produced in the PICES Scientific Report series in 2018–2019:
  - a. WG 32 - *Biodiversity of Biogenic Habitats* - final report in the PICES Scientific Report Series
  - b. WG 33 - *Joint PICES/ICES Working Group on Climate Change and Biologically-driven Ocean Carbon Sequestration* final report in the PICES Scientific Report Series

#### 2018/S/4: Future of Current Expert Groups

Council approved the following changes to existing Expert Groups:

- i. The Working Group on *Assessment of Marine Environmental Quality of Radiation around the North Pacific* (WG 30) shall be disbanded on completion of their final report.
- ii. The Working Group on *Emerging Topics in Marine Pollution* (WG 31) shall be disbanded on completion of their final report.
- iii. The Working Group on *Biodiversity of Biogenic Habitats* (WG 32) shall be disbanded on completion of their final report.

- iv. The Study Group on *Marine Ecosystem Services* shall be disbanded on completion of their final report.
- v. The PICES-NPFC Study Group on *Scientific Cooperation in the North Pacific Ocean* be extended for one year (until October 2019) to complete its framework.
- vi. The Working Group on *Mesoscale and Sub-mesoscale Processes* (WG 38) be extended for one year (until October 2019) to analyze dataset for a synthesis paper.
- vii. The Joint PICES/ICES/PAME Working Group on an *Integrated Ecosystem Assessment for the Central Arctic Ocean* (WG-39) be extended for three years (until October 2022) to align with the ICES and PAME extensions, and to complete its Phase 1 assessment report within 1 year.
- viii. The Terms of Reference for the Technical Committee in Data Exchange (TCODE) are changed to reflect the new PICES Data Policy.
- ix. The joint PICES/ISC Working Group on *Ocean Conditions and the Distribution and Productivity of Highly Migratory Fish* (WG 34) be extended for one year (until October 2019) to complete its work.

#### **2018/S/5: New Expert Groups**

The following expert groups, with terms of reference as described in GC Appendix B, were established:

- i. Study Group on *Impacts of Mariculture on Coastal Ecosystems* (SG-IMCE)
- ii. Working Group on the Impacts of Marine Plastics (WG 42)

#### **2018/S/6: Chairmanship and membership for Science Board, Standing Committees and expert groups**

- i. Dr. Vera Trainer (U.S.A) was elected Science Board Chair-Elect. Her official term as Science Board Chair will begin following PICES-2019;
- ii. Dr. Guangshui Na (China) was elected Chair of the Marine Environmental Quality Committee, replacing Dr. Chuanlin Huo (China);
- iii. Dr. Andrew Ross (Canada) was elected Vice-Chair of the Marine Environmental Quality Committee, replacing Dr. Thomas Therriault (Canada);
- iv. Dr. Shang (Sunny) Chen (China) and Dr. Dan Lew (U.S.A) were elected as Co-Chairs of WG 41 on *Marine Ecosystem Services*;
- v. Dr. Thomas Therriault (Canada) was elected Chair of the Advisory Panel on Marine Non-indigenous Species;
- vi. Dr. Michael Rust was approved as a potential *ex-officio* member of the Study Group on *Impacts of Mariculture on Coastal Ecosystems* (SG-IMCE) representing ICES.

***GC Appendix B*****Study Group on *Impacts of Mariculture on Coastal Ecosystems* (SG-IMCE)****Reporting to:** Science Board**Term:** November 2018–October 2019**Linkage(s) to previous PICES Expert Groups or activities (if any):**

- Follows from recommendations from Working Group 24 on Environmental Interactions on Marine Aquaculture (<http://meetings.pices.int/publications/scientific-reports/Report44/Rep44.pdf>)

**Linkage(s) to other organizations and programs (if any):**

- As part of the proposed activity, potential linkages to the new ICES activity on mariculture (<http://www.ices.dk/news-and-events/news-archive/news/Examining-the-present-and-future-of-aquaculture-.aspx>) will be explored.

**Linkage/Contributions to the FUTURE program (if any):**

- A contribution to FUTURE program, particularly Research Theme 3: How do human activities affect coastal ecosystems and how are societies affected by changes in these ecosystems?

**Motivation and Goals and/or Background**

Mariculture, especially large-scale mariculture, is an important factor affecting coastal ecosystems. In PICES Scientific Report No. 44, a previous PICES expert group (Working Group 24 on Environmental Interactions on Marine Aquaculture) provided analyses and overviews of:

- Environmental Interactions of Marine Aquaculture
- Marine Aquaculture Legislative Frameworks and Environmental Interactions Research
- Pathogens of Aquatic Animals: Detection, Diagnosis and Risks of Interactions Between Wild and Farmed Population

While this was an important contribution and a sound basis on which to proceed, there is much more research to be done to characterize the effects of pathogenic and harmful organisms derived from or associated with mariculture on coastal marine ecosystems, consistent with FUTURE Research Theme 3. The Study Group will leverage the international expertise within PICES and partner organizations “identify the impacts in coastal ecosystems that arise from regional- and large-scale mariculture”. The rather cautious “Study Group leading to a Working Group” approach was selected in response to previous challenges and recommendations from the Working Group 24, specifically:

- Any future marine aquaculture-related PICES expert group should be more narrowly focused to not only allow for more directed work, but also to increase the likelihood of experts from all PICES member countries being able to participate and contribute.
- As well, it is clear that active participation from all PICES member countries is key to realizing a complete analysis of sustainable marine aquaculture issues

**Terms of Reference:**

1. Review recent research, activities and priorities related to the effects of pathogenic and harmful organisms derived from mariculture on coastal marine ecosystems in PICES nations;
2. Assess the opportunities to partner with other organizations to address the issues identified above;

3. Prepare Terms of Reference for a Working Group to address the issues identified;
4. Where appropriate, identify opportunities for future PICES expert groups to address issues related to the impacts of aquaculture that were not addressed in the Terms of Reference of the proposed Working Group. This is added in anticipation that the range of issues identified may exceed the capacity for a single PICES working group, in keeping with the recommendation from Working Group 24 to keep subsequent Working Groups focused on specific and tractable objectives.
5. Review capacity for forecast/projects on the impacts of Minuti on coastal ecosystems to support Minuti management.

**Working Group 42 on the Impacts of Marine Plastics**

**Reporting to:** Marine Environmental Quality Committee (MEQ)

**Term:** November 2018 – November 2021

**Linkage(s) to previous PICES Expert Groups or activities (if any):**

- SG-MMP Study Group on Marine Microplastics

**Linkage(s) to other organizations and programs (if any):** SCOR, GESAMP, ICES, WESTPAC

**Motivation and Goals and/or Background**

Marine debris is increasingly recognized as a threat to biota in the ocean, and especially North Pacific and its marginal seas are reported as ‘hot spots’ for its abundance. However, organismal and non-organismal indicators, which are consistently available across the North Pacific region, for plastic pollution status and trend and ecological impacts are not established.

**Terms of Reference:**

1. To review micro- and mesoplastic pollution (e.g. abundance, distribution, composition, and potential impacts) in North Pacific and its marginal seas;
2. To identify multiple organismal and non-organismal indicators of plastic pollution and its environmental impacts including associated chemicals in the North Pacific and its marginal seas;
3. To recommend guidelines for monitoring environmental indicators and a target improvement goal for the established indicators;
4. To convene a topic session and/or workshop on environmental indicators and impacts of plastic pollution and coordinate a special issue in an international peer-reviewed journal;
5. Contribute to FUTURE by publishing a final report summarizing results of the Working Group deliberations.

### **Revised Terms of Reference – Technical Committee on Data Exchange (TCODE)**

1. Identify the data management requirements of PICES;
2. Develop strategic plans to meet these requirements;
3. Recommend establishment of expert groups to deal with specific functions of TCODE;
4. Review the progress of expert groups and provide Annual Reports to Science Board on the work of TCODE; and
5. Advise the PICES Secretariat and expert groups on their data exchange activities.
6. Develop, review, and update PICES data policies and data inventory.

***GC Appendix C*****Participants at Governing Council – PICES-2018****Canada**

Carmel Lowe (GC member and F&A Chair)  
 Lesley MacDougall (F&A member and advisor)

**Japan**

Tetsuo Fujii (GC member)  
 Toshiaki Kobayashi (GC member)  
 Tomowo Watanabe (advisor)  
 Chieko Kondo Yamasaki (advisor)  
 Nobuaki Suzuki (advisor)  
 Kazuki Ueda (advisor)

**People's Republic of China**

Antao Wang (GC member)  
 Fangli Qiao (GC member)

**Republic of Korea**

Haengnok Oh (GC and F&A member)  
 Wonjoon Shim (GC member)  
 Hyun-Joo Kang (advisor)  
 Saeseul Kim (advisor)

**Russian Federation**

Oleg Bulatov (GC member)  
 Aleksai Baitaliuk (GC member)  
 Oleg Katugin (advisor)

**United States of America**

Enrique Curchitser (GC member)  
 Francisco Werner (GC member)  
 Michael Seki (F&A member and advisor)  
 Siri Hakala (advisor)

**Other**

Chul Park (PICES Chairman)  
 Laura Richards (PICES Past Chairman)  
 Hiroaki Saito (Science Board Chairman)  
 Robin Brown (Executive Secretary)  
 Harold (Hal) Batchelder (Deputy Executive Secretary)