

Strategic Initiative Resolutions 2024

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Strategic Initiative for the Integration of Early Career Scientists (SII ECS)

2024/SI/ACOMSCICOM01 The Strategic Initiative for the Integration of Early Career Scientists (SII ECS), chaired by Côme Denechaud (Norway), Marta Ferraro* (Ireland) and Daniel Ottmann* (Spain) will continue to promote ICES to early career scientists (ECS) and ocean professionals (ECOP) and engage them in its activities.

Meeting dates

SII ECS will continue its monthly virtual meetings with core members and will organise specific meetings dedicated to more in depth group workshops and updates around the bi-annual SCICOM meetings.

YEAR	MEETING DATES	VENUE*	REPORTING DETAILS	COMMENTS
2024	September	ASC (hybrid)	Update to SCICOM	Marta Ferraro and Daniel Ottmann replacing Amanda Schadeberg and Alina Madita Wieczorek as chairs.
2025	Spring	Online	Update to SCICOM	Start of the year workshop ahead of SCICOM
	Fall	ASC (hybrid)	Update to SCICOM	Selection of new chair replacing Côme Denechaud,
2026	Spring	Online	Update to SCICOM	Start of the year workshop ahead of SCICOM
	Fall	ASC (hybrid)	Update to SCICOM	
2027	Spring	Online	Update to SCICOM	Start of the year workshop ahead of SCICOM
	Fall	ASC (hybrid)	Update to SCICOM	

ToR Descriptors 2024–2027

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	POTENTIAL DELIVERABLES AND ACTIVITIES
a	Promote ICES and its activities to ECS/ECOP across the global marine science community in an inclusive and equitable way.	Increase the visibility of ICES to ECS/ECOP not already involved, with an active focus on following and contributing to DEI&A reflections to ensure the full spectrum of ECS/ECOP profiles finds value and representation in the organisation.	NA	3 years	<ul style="list-style-type: none"> Perpetuate on-going promotion activities such as SII ECS Digital Open Day, both in person and through ICES social media Promotional video and graphic material (infographics, ICES and SII ECS website page, newsletter) made available on YouTube and other channels, combined

					<ul style="list-style-type: none"> with tangible materials (flyers, etc). Contribute to the activities and planning of the upcoming ICES/PICES ECS conference in 2027. Continue active contributions to DEI&A efforts within ICES by continuously feeding SIIIECS ideas and having a SIIIECS representative in the ICES Gender Equality Plan. Promote Mentorship for Early Career Scientists in the ICES Journal of Marine Sciences
b	Actively assist ICES WGs with involving ECS/ECOP as members and chairs.	Better integration of ECS/ECOP into ICES WGs benefits both parties: ECS/ECOP gain valuable skills and experience within ICES, while consolidating an influx of new WG members and ensuring their continued relevancy and renewal.	NA	3 years	<ul style="list-style-type: none"> Collaborate with WG chairs to develop an ICES Code of Conduct for working with ECS/ECOP, to be worked on at workshops throughout 2025 and be presented at WGCHAIRS 2026. Lead a pilot project with 1 or 2 WGs to map and analyse membership dynamics and perceived challenges to involve ECS/ECOP in their activities. Lead and coordinate the monitoring of SIIIECS and ICES membership data to track how SIIIECS is aiding ICES strategic aims.
c	Produce and develop educational content for ECS/ECOP of all career stages.	The term "ECS/ECOP" encompasses scientists at different early career stages, whose interest and potential involvement within ICES may drastically vary. There is a need not only to promote ICES to ECS/ECOP, but also to ensure they are equipped with the right tools to navigate its activities and develop the required transferable skills.	NA	3 years	<ul style="list-style-type: none"> Provide educational content on navigating supervision, scientific writing, funding applications and presentation skills, in collaboration with SIGE. Develop ICES-focused dissemination and mentoring initiatives such as the SIIIECS Seminar Series. Connect ECS/ECOP mentor/mentee pairs within ICES to provide peer-to-peer mentoring.
e	Foster interdisciplinary skills and	The growing focus on interdisciplinarity to support innovation	NA	3 years	<ul style="list-style-type: none"> Promote interdisciplinary ECS/ECOP-led initiatives (funding proposals, science

	collaborations in the ICES ECS/ECOP network.	and collaboration is highly relevant for the science ICES delivers. ECS/ECOP taking an active role in developing interdisciplinary skills will ensure the coming generation of ICES experts can develop and lead its activities as a leading marine science organisation.			<ul style="list-style-type: none"> articles, Rising Tides submissions, conference sessions, interdisciplinary workshops) through SIIIECS platforms. Hold ICES InterDis summer school (frequency to be determined based on SIIIECS identifying additional sources of funding). This is dedicated to train ECS/ECOP for interdisciplinary collaborations and cutting-edge methodologies. By bringing together scientists from multiple disciplines and nationalities will bring visibility to ICES among the ECS/ECOP community worldwide.
e	Strengthen the presence and promotion of ECS/ECOP within ICES across international events and involve them into UN SDGs and UN Ocean Decade Challenges initiatives.	ICES attends and contributes to multiple international forums or events where ECS/ECOP representation within delegations has become key to ensure the representation and involvement of the future generation of experts. SIIIECS can complement other existing networks (ECOPs, OYSTER, APECS, etc) in providing guidance and official ECS/ECOP representation on behalf of ICES.	NA	3 years	<ul style="list-style-type: none"> Work with the ICES Secretariat to ensure consistent representation of ECS/ECOP delegates joining the official ICES delegation at major international events such as the UN Decade, AAORIA, etc. Continue curating and expanding the existing dialog and collaboration with other ECS/ECOP networks (IMECAN, ECOP, OYSTER, APECS, etc).

Summary of Work Plan

The work plan aims to deliver regular outputs as listed in the ToR. SIIIECS aims to include ECS/ECOP from all ICES-related disciplines and backgrounds. Activities run by SIIIECS will be open to all ECS/ECOP as participants. ECS/ECOPs can become a member of SIIIECS using the following [sign-up link SIIIECS Sign up form \(jisc.ac.uk\)](#). All members are being updated through the newsletter. Members who wish to be more actively involved in the core activities of SIIIECS can express their interest via the sign-up link or SIIIECS email (siiiecs@ices.dk). New members will be invited to fill available roles in core group bi-annually (in April and October). We aim to keep a group structure of roughly 30 core members, of which 3 are co-chairs. All core members are expected to actively contribute to the realisation of the ToR. Membership status is reviewed regularly in relation with activities and availability

On the definition of “early-career scientist”, we take a loose interpretation of the category. All activities run by SIIIECS will be open to anyone who would identify as an ECS/ECOP. SIIIECS welcomes individuals from various backgrounds (e.g. industry, engineering, communication) and the term “scientist” can include everyone with a (scientific) interest in our seas. For the SIIIECS core membership and chair positions, we welcome motivated members who are engaged with the ICES community and consider themselves to be at an early stage of their career. We offer a suggested guideline

for ECS/ECOP as anyone from bachelor students to ~10 years of post-PhD work, but we do not wish to place strict guidelines on participation because we are aware that career breaks and/or career changes can affect trajectories.¹

Supporting Information

Priority	High. Early Career Scientists (ECS) and Early career Ocean Professionals (ECOP) are the next generation of researchers. In order for ICES to continue its mission, to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals, it is essential that ECS/ECOP are central within ICES to promote networking, communication and education
Resource requirements	Standard Secretariat support for events organized by SIIIECS. The Secretariat will consider requests for additional financial support on a case-by-case basis and accordingly endeavour to cover costs for travel and per diem from a separate budget. This includes a SIIIECS representative in the UN Decade Ocean project SmartNet, as agreed with the Secretariat. Support from the communications office for the dissemination and advertisement of SIIIECS activities. Access to Canva through centralised SIIIECS log-in (siiiecs@ices.dk). Five free registrations for SIIIECS to attend the ASC 2025; SIIIECS core group to determine the recipients. In addition, SIIIECS will approach the Secretariat to support further ASC registrations in 2026 and 2027 on an annual basis. Access to the ICES Headquarters facilities to hold the InterDis Summer School, of which SIIIECS is the organiser and coordinator.
Participants	Anyone who identifies as ECS/ECOP1 can be a participant. SIIIECS activities will be mainly undertaken by the core members, a group of around 30 ECS/ECOP that drive the ToR activities and attend the SIIIECS meetings regularly.
Secretariat facilities	See above.
Financial	The budget to support Strategic Initiatives is determined annually by ICES Council. ICES Head of Science Department will communicate with chairs on the budget and chairs are requested to seek reimbursement approval in advance with the Secretariat. The Secretariat will monitor budgets on an annual basis with the possibility to free up additional funds for SIIIECS. Financial support for organising and supporting the summer school in 2025 SIIIECS identifies other sources of co-funding.
Linkages to ACOM and groups under ACOM	ACOM
Linkages to other committees or groups	All WGs
Linkages to other organizations	PICES Study Group on Early Career Ocean Professionals (ECOPs), Orienting Young Scientists of EuroMarine (OYSTER) Network, IMBeR Interdisciplinary Marine Early Career Network (IMECAN), International Conference for YOUNG Marine Researchers (ICYMARE), UN Ocean Decade Early Career Ocean Professionals, Association of Polar Early Career Scientists (APECS), others

¹Note that SIIIECS definition of ECS/ECOP may differ from ICES's formal definition (under 35 years of age and/or have finished a PhD within the past five years). According to ICES, an applicant must be under 35 years of age and/or have finished a PhD within the past five years. This definition is used in situations such as administration of travel funds to the ASC.

Strategic Initiative on Climate Change Impacts on Marine Ecosystems (SICCME)

2024/SI/ACOMSCICOM02 The ICES-PICES Strategic Initiative on Climate Change Impacts on Marine Ecosystems (SICCME), chaired by Kirstin Holsman (USA, PICES), Dongwha Sohn* (Republic of Korea, PICES), Kathy Mills (USA, ICES) and Bryony Townhill * (UK; ICES) will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
2023	March		Update to SCICOM March meeting	
	Sept	ICES ASC	Update to SCICOM Sept. meeting	Side meeting in conjunction with ICES ASC
2024	March		Update to SCICOM March meeting	
	Sept	ICES ASC	Update to SCICOM Sept. meeting	Side meeting in conjunction with ICES ASC
2025	March	-	Update to SCICOM March meeting	Change in chairs
	Sept	ICES ASC	Update to SCICOM Sept. meeting	Side meeting in conjunction with ICES ASC

ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
a	Identify key scientific priorities and knowledge gaps relating to the impact of climate change on marine social-ecological systems by fostering collaborative research activities, including data collection, comparative analyses, and topical syntheses under the ICES/PICES strategic framework for cooperation.	Strategic collaboration between ICES and PICES; Support to achieve Science Plan goals	1.1, 1.3, 2.2, 2.5, 5.2, 6.1, 7.6	3 years	Strong and ongoing interactions between ICES and PICES; Provision of ongoing support for expert groups in delivering Science Plan tasks; collate a list of ongoing climate-related research projects in ICES/PICES regions; liaise with groups such as IPCC, IPBES, OSPAR, HELCOM, Ocean Decade programmes, and others to identify shared interests and needs
b	Communicate and advance our understanding of climate change in marine social-ecological systems by creating information-sharing networks, convening conference theme sessions, developing workshops, and supporting similar activities.	Help coordinate climate-change science within ICES and PICES	2.1 2.5, 5.2, 6.1	3 years	Convening an ICES-PICES Theme Session at the 2023 ICES ASC, and initiation of at least one explicitly SICCME-related theme session in subsequent ICES ASCs and PICES Annual Meetings. Hosting a workshop during the 5 th ECCWO (2023).

c	Synthesize and share knowledge, scientific advances, and science priorities related to climate change and marine social-ecological systems to the ICES and PICES communities, as well as regional and global advisory bodies on climate impacts and adaptation, including IPCC, IPBES, national or regional climate or ecosystem assessments, and other relevant bodies.	Help coordinate climate-change science within ICES and PICES; Support Science Plan goals and activities of advisory bodies	1.1, 2.1, 2.5, 5.2, 6.4, 6.5, 6.6, 7.6	3 years	Provision of ongoing support for expert groups in delivering Science Plan tasks with providing overviews of climate assessments for ICES working groups. Input and exchange of knowledge among science and advisory bodies, including reporting on approaches for incorporating climate information into fisheries management; Elicit and synthesize input from other WGs on climate impacts; Propose a standardized approach for incorporating climate change into Ecosystem Overviews; Annual update to September SCICOM meeting on scientific priorities and relevant development.
d	Develop plan for future directions for SICCM within ICES, including identifying opportunities to support climate change research coordination and to develop and incorporate climate change information into advice products.	Help define future roles and structure of SICCM within ICES	6.2, 6.3, 6.4	1.25 yrs	Convene discussions with former SICCM chairs and current SG chairs, followed by a workshop with broader participants (including SCICOM and ACOM members), to identify climate change information needs, options for developing such information, demonstrations or examples of how the information might be communicated or used in advice products, and gaps and research areas. Results will be synthesized to outline future focus areas, priority activities, and structure of SICCM within ICES, including tighter cooperation between SICCM and relevant SGs and WGs towards achieving ICES' goal of climate-ready advice.

Summary of the Work Plan

SICCM will centre its activities on (1) fostering awareness and strengthening coordination among activities related to understanding climate change impacts on marine social-ecological systems; (2) advancing new scientific activities to contribute to this understanding; and (3) synthesizing and sharing information with ICES, PICES, and other relevant bodies, and as appropriate, integrating information into relevant products. The work plan will deliver regular outputs from collaborative research activities and syntheses (e.g., ToR a, research and synthesis products; ToR b, contributions to conferences; ToR c, reporting to ICES, PICES, and other bodies). In addition, SICCM will contribute to new initiatives as appropriate and as needs or opportunities are realized. In this activity period (2022–2025), some specific planned activities include: (1) reporting on approaches for incorporating climate information into fisheries management; (2) providing overviews of climate assessments for ICES working groups and incorporating climate change information into ICES advice products, such as ecosystem overviews and integrated ecosystem assessments; (3) building an understanding of climate change tipping points in marine ecosystems and fisheries; and (4) advancing a synthesis of climate adaptation in marine fisheries, as adaptation exerts a strong influence on realized impacts. Broadly, SICCM will also liaise with groups such as IPCC, IPBES, OSPAR, HELCOM, Ocean Decade programmes, and others to identify shared interests and needs, and to determine potential roles for SICCM in addressing these needs. As such, SICCM's specific activities will be adapted to address emerging priorities and interests. Annual meetings are key to SICCM's continuity and the development of new initiatives; regular meetings are planned as part of the 2023, 2024 and 2025 ICES ASC. Additional meetings and workshops will be held opportunistically, and as possible in

association with (as side events) ICES-PICES sponsored symposia, such as the 5th Effects of Climate Change on the World's Ocean Symposium (April 2023 in Bergen, Norway). Additionally, intersessional communication will occur via email and online meetings.

In addition to ongoing activities, during the last 1.25 years of the work plan, SICCMME will undertake a scoping and planning process to identify the future role and structure of SICCMME within ICES. The intention is not to alter the role of SICCMME as a joint strategic initiative with PICES but to deepen and expand its contributions to SCICOM and ACOM activities within ICES. This process will start with a broad perspective on how SICCMME might more effectively support coordination of climate change work within Steering Groups and Working Groups, and it will focus more closely on identifying opportunities and approaches for expanding climate change information or incorporating climate change considerations into ICES advice products. Synthesizing insights gained through this process will help establish future focus areas, priorities, activities, and structure of SICCMME within ICES.

Supporting information

Priority	High. ICES has several strategic research plans and documents related to understanding and investigating the impacts of climate change on marine ecosystems and wants to strengthen collaborative ties with PICES. This initiative will address both issues. It will also contribute to ICES capacity to provide a joint ICES-PICES goal of becoming the leading international organization providing science and advice related to the effects of climate change and variability on marine resources and ecosystems. It will also contribute to PICES capacity to provide joint ICES-PICES international collaborations and research which relates to projecting climate change impacts on marine ecosystems and developing strategies for sustaining the delivery of ecosystem goods and services.
Resource requirements	Secretariat support for running theme sessions, workshops, and conferences
Participants	8–10 core members . Up to 75 participants at SICCMME events.
Secretariat facilities	Assistance with organising workshops and with website (increased functionality)
Financial	ICES Council has allocated a limited equity budget to support Strategic Initiatives to help SI chairs engage more actively and widely with the scientific community. SI Chairs are requested to seek reimbursement approval in advance with the ICES Head of Science Department.
Linkages to ACOM and group under ACOM	ACOM
Linkages to other committees or groups	Ecosystem Processes and Dynamics Steering Group (EPDSG) Human Activities, Pressures and Impacts Steering Group (HAPISG) Ecosystem Approaches and Methods Group (EAMSG) Strategic Initiative on Human Dimensions (SIHD) Strategic Initiative on the Integration of Early Career Scientists (SIECS) Working Group on Integrative, Physical-biological and Ecosystem Modelling (WGIPEM) Working Group on Impacts of Warming on Growth Rates and Fisheries Yields (WGGRFY)
Linkages to other organizations	EC, EEA, Regional Seas Conventions, IPCC, IPBES, FAO, IOC, World Bank, large marine science programs (e. g., IMBER, Future Earth, UN Ocean Decade programs)

Strategic Initiative on Graduate Education (SIGE)

2023/SI/ACOMSCICOM03 A Strategic Initiative on Graduate Education (SIGE), chaired by Gavin Fay, USA, and NN, Country*, will work on ToRs and generate deliverables as listed in the table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2023	Fall	hybrid meeting – workshop around ICES annual science conference	Report to SCICOM September meeting	
Year 2024	Spring	Remote full-group meeting	Report to SCICOM March meeting	
Year 2024	Fall	hybrid meeting – workshop around ICES annual science conference	Report to SCICOM September meeting	
Year 2025	Spring	Remote full-group meeting	Report to SCICOM March meeting	
Year 2025	Fall	hybrid meeting – workshop around ICES annual science conference	Report to SCICOM September meeting	
Year 2026	Spring	Remote full-group meeting	Report to SCICOM March meeting	

ToR descriptors

TOR	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
a	Evaluate opportunities for building interdisciplinary, multi-institutional, international graduate/post graduate programs and develop a curriculum which will build capacity to address future ICES advisory needs	Existing graduate programs can accommodate the ICES desired training. Initiatives should indicate the expected working hours to establish correspondence with European, US and Canada credit system.	5.1, 6.6.	3 years	<ul style="list-style-type: none"> a. Identify programs (post-graduate level) that can meet the desired training. b. Sharing courses across institutions (e.g. “open courses”, sharing of teaching materials) c. Create a platform to facilitate all the needs described in ToR across various programs.
b	In coordination with the ICES Training Group and ICES Early Career SI, develop resources and programs for short-term and informal learning opportunities	Specific training, for ICES training needs may involve actions that not integrated in formal degree programs.	5.1, 6.6	3 years	<ul style="list-style-type: none"> a. Identify existing opportunities for summer schools, internships, and short courses and map these to identified ICES core competencies. b. Create resources/platform to facilitate sharing courses across institutions c. Establish pathways for student roles within ICES expert groups d. Identify and apply to funding to support student internships e. Shared mentoring/advising of students (e.g. student exchanges, co-advising)

TOR	DESCRIPTION	BACKGROUND	SCIENCE PLAN		EXPECTED DELIVERABLES
			CODES	DURATION	
c	Incorporate approaches for broadening participation in training and education opportunities including historically marginalized and minoritized groups	Ensure access to and support for training and education across identities including recognizing intersectionality of identities.	5.1, 6.6	3 years	<p>a. Develop resources and metrics to assist training developers to help make trainings open, flexible, and more accessible.</p> <p>b. Prioritize participation from marginalized and minoritized groups in financial support for training opportunities.</p> <p>c. Establish/extend peer-mentoring initiatives as part of SI training programs/opportunities.</p>

Summary of the Work Plan

Cross-cutting activities across all three ToR will include consulting broadly with agencies, universities, early-career professionals, and others to ensure programs and opportunities will be inclusive and address current and future needs. Success of the SI will require coordination with other programs with similar objectives, this provides opportunity to seek synergies and identify linkages, with the overall goal of improving pathways for students to obtain graduate training in the core competencies required for scientists working to develop ICES advice. These partnerships will include institutions involved in scientific research linked to ICES, as well as training institutions, ICES itself, research institutes, government agencies, and eNGOs in the area of conservation and governance. Partnerships with the ability to provide or leverage funding for the SI activities will be developed – it is anticipated that the work of the SI could result in submission of one or more large proposals for funding education initiatives.

The implementation of the activities of the SI will involve coordination among North American and European Universities to develop multi- and trans-disciplinary, multi-institutional coursework, research opportunities and scientific personnel exchanges that will build capacity (through graduate- and post-graduate education) for meeting future ICES science-based advisory needs. The period of the initial ToR duration will last 3 years (2023 to 2026). It is expected that the formal training activities that are part of degree programs (ToR a) could start during the academic year 2025–2026, but this may be dependent on work resulting from subgroup workshops in years 1–2.

Supporting information

Priority	High. This initiative will support long-term capacity building issues in education involving coordination among North American and European Universities to develop multidisciplinary, multi-institutional coursework, research opportunities and scientific personnel exchanges that will build capacity (through graduate- and post-graduate education).
Resource requirements	Secretariat support for running theme sessions, workshops, and conferences.
Participants	SI participants could be drawn from: WKEDU participants. SII ECS steering committee, ICES Training Group, ICES Conference & Training Coordinator, as well as others Specific expertise will be recruited for ToR c).
Secretariat facilities	Assistance with organising workshops and symposia (the latter being dependent on successful symposium resolutions)
Financial	ICES Council has allocated a limited equity budget to support Strategic Initiatives to help SI chairs engage more actively and widely with the scientific community. SI Chairs are requested to seek reimbursement approval in advance with the ICES Head of Science Department.
Linkages to ACOM and group under ACOM	ToR include developing/extending pathways for student participation in expert working groups, including assessment review groups. Coordination with SCICOM-ACOM Steering Committees such as IEASG, FRSG, and HAPISG would seem an initial first step

Linkages to other committees or groups SII ECS, ICES Training Group, SICCME, SIHD, ICES-PICES Ocean Decade/IPOD-SC

Linkages to other organizations PICES, IMBER, DG RTD
