

PAME II-2019

SEPTEMBER 9-12 REYKJAVIK - ICELAND

WORKING GROUP MEETING REPORT





PAME II-2019 MEETING REPORT

10-12 September, Reykjavík, Iceland, 2019 University of Iceland – Viðey Island

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PAME I-2019 Summary Report

PAME's 2nd biannual meeting of 2019 (PAME II-2019) was held at the University of Iceland, and the island of Viðey, from 9-12 September. Monday 9 September was dedicated to pre-meetings of PAME's five thematic expert groups (shipping, marine protected areas, ecosystem approach, marine litter, and resource exploration and development).

Marine Protected Areas (MPAs): Canada presented on the main outcomes from the 4th MPA workshop on Exploring ways to support Indigenous/Local involvement in, and Indigenous/Local led, marine protection in the circumpolar Arctic Ocean held 19-21 March in Cambridge Bay, Nunavut. PAME will continue to discuss how to integrate the findings from the workshop into ongoing PAME work, which may include the MPA Network Toolbox and the Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) Handbook project. The workshop report will be circulated before PAME I-2020

Sweden provided an update on the *Modelling Arctic* oceanographic connectivity to further develop PAME's MPA Network Toolbox project. A call for nominations of experts to serve in a scientific reference group for this project has been sent out to Arctic Council members and all working groups (WGs). PAME recognizes the importance of collaboration with CAFF on this project.

The two co-leads, Finland and USA, gave an update on the project developing Factsheets related to MPAs and Indigenous Peoples' Lives Under Change. A call for nominated experts to serve in a reference group advising on this project has been sent out to PAME members and all WGs. PAME notes the importance of collaboration with other Arctic Council WGs to this project and a project expert group meeting is under preparations with the aim to advance this project.

Invasive Species: Discussion between the CAFF and PAME Chairs are ongoing with the aim to reach an agreement on proposed next steps in the implementation of the Arctic Invasive Alien Species strategy (ARIAS). Status and next steps will be provided to PAME I-2020.

Arctic Marine Shipping: PAME and its Shipping Expert Group continue to advance several projects and initiatives to promote safe and sustainable navigation in the Arctic.

The 3rd annual Arctic Shipping Best Practice Information Forum meeting took place 3-4 June 2019 in London, UK.

Iceland currently chairs the Forum. PAME's Forum Coordinating Committee prepared an Information (INF) Paper about the Forum submitted by all Arctic States to the 101st Session of the IMO's Maritime Safety Committee (5-12 June 2019). The Coordinating Committee has initiated preparations for the 4th Forum meeting which is anticipated to be convened 9-10 May 2020 in London, UK.

A workshop for more systematically engaging Observers in PAME's shipping related work was held on 4 June 2019 with further information and the meeting summary report here. The project co-leads USA, Poland, Republic of Korea, Italy, and Northern Forum will submit an update of further work at PAME I-2020.

PAME has approved in principal a non-binding Memorandum of Understanding (MOU) with the Arctic Regional Hydrographic Commission to enable more collaboration between our organizations. The draft MOU now awaits SAO approval.

PAME has invited IMO and ICES to submit information on topics and developments of relevance to PAMEs shipping-related work.

Norway has created a template and invited each Arctic State and each Observer State to submit information on how it understands and applies in practice the IMO Polar Code.

PAME continues work on Heavy Fuel Oil (HFO) including the project collecting and reporting about On-Shore use by Indigenous Peoples and Local Communities of HFO. AIA has prepared a final field survey report and PAME members are invited to submit any additional information they may have. USA has submitted a literature review on this topic. PAME will continue to coordinate with SDWG as appropriate. PAME continues to communicate with IMO on mitigating the risks associated with the the use and carriage of HFO by ships in Arctic waters.

Finland and Iceland will provide an update of the project titled "Black carbon emissions concerning shipping activity in the Arctic and technology development for their reduction", taking into account relevant developments at IMOs Sub-Committee on Pollution Prevention and Response (PPR) 6th Session and IMOs Sub-Committee on Marine Environment Protection Committee (MEPC) 74th Session.

Canada, Iceland and AIA submitted the final report titled "An Overview of Low-Impact Shipping Corridors and other Shipping Management Schemes in the

Circumpolar Arctic". The report will be transmitted to EPPR for any appropriate additional follow-up.

Canada, Iceland and UK, provided a status report on the Arctic Marine Tourism Project including the compilation of data on tourism vessel statistics in the Arctic using the Arctic Ship Traffic Data (ASTD) database to better understand recent developments and trends and identify gaps in data.

Canada and WWF have prepared a draft Statement of Work for "Developing Acoustic Intensity Maps for Shipping in the Circumpolar Arctic" and will submit an update to PAME I-2020.

PAME is in the process of adding new data layers to the Arctic Shipping Traffic Database (ASTD) System and will send out a survey to Arctic Council WGs and subsidiary bodies on their data (?) needs. PAME recognizes the need to explore opportunities to inform the SAOs and other Arctic Council WGs and subsidiary bodies on ASTD developments.

Topic ideas are being explored for the Arctic Shipping Status Report (ASSR) Project and a test report will be submitted to the PAME I-2020.

Arctic Offshore Resource Exploration and

Development: The co-leads reported on progress on development of a "Handbook" or reference tool(s) for Indigenous Peoples and Local Communities based on the MEMA Part II Report (2019) and the MEMA database. The co-leads consider this to be a communications exercise and have engaged a communication specialist to scope out user needs such that the tool(s) are designed to meet those needs. Their first meeting was in Reykjavik on 8 September 2019. The co-leads will explore possible linkages between MEMA and MPA and EA work..

The project on developing an update/status report on current offshore oil and gas activities by Arctic States will collect relevant information on post 2010 legislation, regulations, and practices. Arctic states have been asked to submit this information based on the survey already circulated. This will be compiled into a report or white paper and a possible fact sheet and for possible inclusion in the ASTD System.

Ecosystem Approach to Management (EA): The EAexpert group reported from the Second International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic in Bergen, Norway, 25-27 June 2019 (further information here). The conference report will form the basis for a status report on EA implementation in the Arctic to be prepared by the end of the current work plan period.

Planning of a 7th EA workshop in 2020 on element No. 5 of the EA framework, 'Value the cultural, social, and economic goods and services produced by the

ecosystems', has started and a draft workshop prospectus developed.

The plan to prepare the "Report on development in defining or setting Ecological Objectives" is underway and a first draft will be prepared with input from PAME members and the EA expert group in 2020.

<u>Development of a Regional Action Plan on Marine</u>
<u>Litter in the Arctic (ML-RAP):</u> A draft outline has been prepared as a general guide to begin the development of a ML-RAP. A ML expert group has been established with nominations from PAME Members and other Arctic Council WGs. A call has been sent out for submission of relevant source documents.

The marine litter communication and outreach activities as implemented by the Secretariat are ongoing, and Iceland's Minister for the Environment and Natural Resources launched the 1st GPS tracking "message in a bottle" on 12 September (live map here).

Collaboration and coordination with other working groups: PAME works towards strengthening the coordination and collaboration with other WGs by inviting them to nominate experts in PAME's expert groups working on activities of mutual relevance. Furthermore, PAME makes an effort to participate in meetings of other WGs, e.g., through its HoDs for coordination purposes, and shares work in progress to seek input, as relevant.

PAME liaises with CAFF on MPA and invasive species work. PAME continues to coordinate its work with EPPR, noting in particular the project on "Compendium of Arctic Ship Accidents (CASA)". SDWG co-leads with PAME on a project to collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO. Input from all WGs will be sought for the RAP-ML and access to the ASTD System is open for the WGs as well.

Observers at the PAME II-2019 Working Group

Meeting: PAME continues to strengthen its engagement with Observers in PAME's shipping-related activities by inviting one representative for each meeting to give a presentation on its Arctic interest and activities. The Netherlands has been invited to give such a presentation at PAME I-2020. PAME II-2019 was attended by 86 participants, of which 25 were Observers, 10 representing Observer States: France, Germany, The Netherlands, Japan, People's Republic of China, Republic of Koream United Kingdom, and Spain, and 15 representing Observer Organizations: WWF, IASC, Oceana, Northern Forum, Arctic Institute of North America, UNEP, CCU, IMO and NEFCO.

<u>PAME Next Meeting:</u> The next PAME meeting (PAME 1-2020) will take place 3-7 February 2020 in Oslo, Norway at the Norwegian Environmental Agency.

Annex I - List of Participants

PAME II-2019 September 9-12, Reykjavík, Iceland

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PAME II-2019 Working Group Meeting University of Iceland, Reykjavik 9-12 September 2019 Annex II - Final Agenda

PAME II-2019 Main Agenda Items: 9-12 September 2019

- Item 1: Opening of the Meeting
- Item 2: Introduction and Adoption of the Agenda
- Item 3: Information from the Chair and the Secretariat
- Item 4: Pan-Arctic Network of Marine Protected Areas (MPAs)
- **Item 5:** Protection from Invasive Species
- **Item 6:** Arctic Marine Shipping activities (various leads)
- **Item 7**: Arctic Offshore Resource Exploration and Development
- **Item 8:** Ecosystem-based Approach to Management
- **Item 9:** Marine pollution:
 - 9.1: Regional Action Plan on Marine Litter in the Arctic
 - 9.2: Development of AMSP Implementation Status Report 2019-2021
- Item 10: Summary of Meeting Decisions and Follow up Actions (Chair & Secretariat)
- **Item 11:** Any other business and closing of the Meeting

End of PAME II-2019 Meeting at 17:00

All PAME II-2019 meeting documents will be posted on the PAME password protected area of the homepage: http://www.pame.is and login information will be provided to confirmed participants.

PAME I-2019: Pre-Meetings

MONDAY, September 9

The pre-meetings will take place at the facilities of at the facilities of the Ministry for the Environment and Natural Resources, Skuggasund 1-3 at the facilities of the Ministry for the Environment and Natural Resources (details and map included in the meeting logistics document).

Following is a list of the times of the pre-meetings:

Breakout room: Háhyrna Skuggasundi 3 (4th floor) (ca. 30-35 persons)	Breakout room: Skúti, Skuggasundi 1 (1st floor) (ca. 20-25 persons)
10:00-17:00 (whole day)	09:00-11:00
Shipping Experts Group (SEG) The agenda has been posted on the PAME II-2019 password protected site	Resource Exploration and Development Expert Group (REDEG) The agenda will be the items under Agenda Item 7.
	11:00-13:00
	Ecosystem Approach Expert Group
	The agenda will be the items under Agenda Item 8.
	13:00-15:00
	MPA Expert Group
	The agenda will be the items under Agenda Item 4.
	15:00-17:00
	Marine Litter Expert Group
	The agenda will be the items under Agenda Item 9.

PAME II-2019 Working Group Meeting 10-12 Sep the main building of University of Iceland Reykjavik, Iceland

Documentation

All PAME II-2019 meeting documents will be posted on the PAME password protected area of the homepage: http://www.pame.is and login information will be provided to confirmed participants.

Participants are urged to bring their own copies of the PAME-related documents for this meeting in an effort to minimize printing during the meeting!

Coffee breaks: 10:00-10:15 and 15:00-15:15 - Lunch breaks: Tue 10 Sep from 13:00-14:00; Wed 11 Sep from 12:00-13:00 and Thu 12 Sep from 13:00-14:00

	TUESDAY, September 10	
Timeline	Agenda items	Note/Leads
08:30-09:00	Registration of PAME meeting participants	
09:00-10:30	Item 1: Opening of the Meeting	
	Welcoming remarks by Dr. Jón Atli Benediktsson, Rector of the University of Iceland	
	Welcoming remarks by Einar Gunnarsson, SAO Chair	
	 Welcoming remarks by Helga Jónsdóttir, Head of Delegation, Iceland 	
	Item 2: Introduction and Adoption of the Agenda	
	Item 3: Information and various updates	
	3.1 Outcomes from Arctic Council Ministerial Meeting (May 2019)	PAME Chair
	3.2 Outcomes from other Arctic Council and international meetings of relevance.	Various
	3.3 Presentation on the MOSAiC expedition (Multidisciplinary drifting Observatory for the Study of Arctic Climate) by Germany.	Dieter Piepenburg
	3.4 Iceland's 2019-2021 Chairmanship program and priorities of relevance to PAMEs work, including proposed Arctic Ocean Ministers meeting.	Iceland
10:30-11:00	Item 4: Pan-Arctic Network of Marine Protected Areas (MPAs)	
	4.1 Outcomes from the 4th MPA Workshop (19-21 March in Canada).	Canada
	4.2 Update on the project on Modelling Arctic oceanographic connectivity to further develop PAME's MPA toolbox.	Sweden
	4.3 Update on the project to develop factsheet on Arctic Marine Climate Change Impact and MPAs.	Finland/USA
	4.4 Summary of follow-up activities based on:	

	a) the MPA Toolbox and MPA workshops;		
	b) Joint PAME and CAFF collaboration with UNEP-WCMC	USA	
	on Arctic PA Indicator Report	PAME Sec	
11:00-11:30	Item 5: Protection from Invasive Species		
	5.1 Update on the status of the implementation process of the Arctic Invasive Alien Species Strategy and Action Plan (ARIAS) Strategy and Action Plan Joint CAFF/PAME coordination group.	PAME Sec Canada/USA	
11:30-17:00	Item 6: Arctic Marine Shipping Assessment activities—status and updates (various leads)		
	Refer to the PAME Shipping Expert Group pre-meeting agenda		
11:30-12:00	Summary from the Shipping Experts Group pre-meeting	SEG Co-chairs	
12:00-15:00	Theme I: Enhanced Arctic Maritime Safety		
	6.1 Linking with International Organizations (I(A))		
	a) Arctic Shipping Best Practice Information Forum	Canada/Iceland/	
	i. Outcome of the 3rd annual Forum meeting (3-4 June 2019, London)	USA	
	ii. Discussions and next steps.		
	b) Status of the development of a MoU with the Arctic Regional Hydrographic Commission (ARHC)	Canada/USA	
	6.2 IMO Measures for Arctic Shipping (I(B))		
	a) HFO Phase IV(b) – Update on information compiled on- shore use by Indigenous and Local Community Reliance Upon Heavy Fuel Oil (HFO) project.	USA/AIA/CCU	
	b) Update on the project: Black Carbon emissions from shipping activity in the Arctic and technology developments for their reduction	Iceland/Finland	
	c) Update and status of the project proposal on Fuel spills in Arctic waters: Environmental Toxicity of light and intermediate fuel oils when spilt on a cold water surface.	Norway	
	d) Update on the development of an overview of Arctic States' and Observer States' interpretation of the Polar Code.	Norway	
	6.3 Uniformity of Arctic Shipping Governance (I(C))		
	Update/staus of the Safe and Low Impact Shipping Corridors project	Canada/Iceland/ AIA	
	6.4 Strengthening Passenger Ship Safety in Arctic Waters <i>I(D)</i>		
	Status and next steps on the project on Arctic Marine Tourism: Development in the Arctic and enabling real change	Canada/Iceland	
15:15-15:45	Theme II: Protecting Arctic People and the Environment		
	6.5 Addressing Impacts on Marine Mammals (II(G))		

	a) Update on the project: <i>Underwater Noise in the Arctic – Understanding Impacts and Defining Management Solutions - Phase I</i>	Canada/WWF
	b) Summary of papers submitted by PAME members to submit on research reports and related information on grey water discharges from vessels in the Arctic.	SEG co-chairs
15:45-17:00	Theme III: Building the Arctic Marine Infrastructure	
	6.6 Addressing the Inrastructure Deficit (III(A)) Brief update on the MEPC 74 submission on the concept of regional reception facilities.	Russia
	 6.7 Arctic Marine Traffic Systems (III(B)) a) Update on the Arctic Ship Traffic Data (ASTD) project. b) Update on the Arctic Shipping Status Reports (ASSR) Project c) Update on the joint PAME/EPPR Compendium of Arctic Ship Accidents (CASA) project. 6.8 Engagement of Observer States PAME's shipping-related activities Outcome and next steps based on the 4 June 2019 workshop with the aim to discuss options for more systematically engaging Observers in PAME's shipping related work. 6.9 Update on PAME's shipping priorities and recommendations Status and next steps on the AMSA update/refresh project matrix (updating the recommendations contained in the 2009 AMSA Report 	Norway/USA USA/PAME Sec USA USA/Italy/ Korea/Poland/ Northern Forum Canada/USA
17:30-19:00	RECEPTION: hosted by the Ministry for the Environment and Natural LOCATION: Messinn, Granda, Grandagarður 8, 101 RVK (http://mess	
	WEDNESDAY, September 11	
Timeline	Agenda items	Note/Leads
Timeline 09:00-10:00	Item 7: Arctic Offshore Resource Exploration and Development 7.1 Update / status report on the development of an Information Handbook or Reference Guide on Engagement of Indigenous Peoples in Marine Activities.	Note/Leads Canada/USA/ PPs
	Item 7: Arctic Offshore Resource Exploration and Development 7.1 Update / status report on the development of an Information Handbook or Reference Guide on Engagement of Indigenous	Canada/USA/

	c) Report on development in definious objectives.	ng or setting Ecological	
	d) Other EA-relevant activities		
	8.2 Update on PAME/ICES Working Group on Integrated Ecosystem Assessment in the Central Arctic Ocean (WGICA).		Norway/USA
11:00-12:00	12:00 Item 9: Arctic Marine Pollution: Marine Litter, including Microplastics 9.1 Plastic coordination in the Arctic Council (Magnús Jóhannesson, 10 min)		Kingdom of Denmark/ Norway/USA
	9.2 Regional Action Plan on Marine Litter in the Arctic.		
	9.3 Development of AMSP Implementation Status Report 2019- 2021		PAME Sec
13:00-17:00	:00 PAME Breakout sessions: The aim is to finalize relevant documents and prepare RoDs for further discussion and agreement under Agenda Item 10.		and prepare draft
	Breakout room A Breakout room E		3
	Shipping expert group 13:00-17:00 Marine litter expert group 14:00		13:00-
		REDEG group 14:00-15:0	0
		EA expert group 15:00-16	:00
	MPA expert group 16:00-		17:00

Respective leads to provide draft RoDs to the PAME Secretary by end of the day/midnight

THURSDAY, September 12

Timeline	Agenda items	Note/Leads
	Meeting Location: Videy/Videyjarstofa	
09:00-10:00	Transportation to Videy: Buses pick-up at 9am sharp at the University of Iceland, main building to transport participants to the ferry. 09:30-Ferry to Viŏey NOTE: Please be advised to bring sensible/warm clothers as there will be a guided walking tour around the island. Further information: https://visitreykjavik.is/videy-island	
10:00-13:30	Outstanding issues from previous days and overview of way forward/next steps (as per outcomes from the breakout sessions) Item 10: Records of Decisions and Next Meeting 10.1 Summary of Meeting Decisions and Follow up Actions 10.2 Upcoming meetings of relevance to PAMEs work 10.3 Next PAME Meeting, any other business and closing of the Meeting	Various Chair All Chair/All
13:00-14:00	Lunch	

14:00-15:00	Guided tour around the island	
15:00- 15:30/16:00	Ferry back and transportation to the University of Iceland, main building	
End of PAME II-2019 Meeting at 16:00		



PAME II-2019: List of Documents University of Iceland, Reykjavik

9-12 September 2019 Annex III – List of Documents

ACCESS TO MEETING DOCUMENTS:

Access to all relevant documents and background information is on the PAME password protected area at: www.pame.is and login information will be provided to confirmed participants.

Participants are urged to bring their own copies of PAME-related documents for this meeting in an effort to minimize printing during the meeting!

Pre-meetings Monday the 9th of September – Skuggasund 1 – 3, 101 Reykjavík

Following is a list of the times of the pre-meetings (details on the agendas to be provided).

Breakout room: Háhyrna Skuggasundi 3 (4th floor) (ca. 30-35 persons)	Breakout room: Skúti, Skuggasundi 1 (1st floor) (ca. 20-25 persons)
10:00-17:00 (whole day)	09:00-11:00
Shipping Experts Group (SEG) Agenda posted	Resource Exploration and Development Expert Group (REDEG)
	The agenda will be the items under Agenda Item 7.
	11:00-13:00
	Ecosystem Approach Expert Group
	The agenda will be the items under Agenda Item 8.
	13:00-15:00
	MPA Expert Group
	The agenda will be the items under Agenda Item 4.
	Agenda posted

15:00-17:00	
Marine Litter Expert G	Group
Agenda posted.	
Agenda posted.	

Agenda items for the pre-meeting sessions as relevant

Registrations for the Monday 9 Sep pre-meetings

ML-EG pre-meeting agenda

MPA pre-meeting agenda

SEG pre-meeting:

- ✓ Pre-meeting agenda for the Shipping Expert Group (SEG) on Monday 9 September (revised version 6 Sep)
- ✓ Finnish INF document on the Polar Code implementation project- ParisMoU decision (also agenda 6.2/background)

Grey water documents:

- ✓ MEPC: Expanding the scope of the existing output 1.26 to include a revision of MARPOL Annex IV (Norway)
- ✓ MEPC: Draft action plan to address marine plastic litter from ships (Chile, Cook Islands, Fiji, Ghana, Iceland, Jamaica, Kiribati, Marshall Islands, Monaco, Norway, Palau, Solomon Islands, Tuvalu, Vanuatu and SPREP)
- ✓ MEPC: Vessel grey water concerns (FOEI, Greenpeace, WWF, CSC and Pacific Environment
- ✓ Cruise Ship Discharge Assessment Report
- ✓ Discharge Permit Alaska
- ✓ EPA: Greywater Discharges from Vessels
- ✓ Ocean Conservacy-WWF-Canada: Bilateral Workshop report Grey Water Discharges from Vessels
- ✓ Quantifying and mitigating three major vessel waste streams in the northern Bering Sea
- ✓ WWF Canada Greywater Generation Estimates for the BC Coast
- ✓ Canadian Arctic Greywater Report: Estimates, Forecasts, and Treatment Technologies

AGENDA 2 – Introduction and Adoption of the Agenda

Draft agenda with timeline (version 2 Sep 2019)

AGENDA 3 – Information from the Chair and Secretariat

Background documents:

PAME I-2019 Meeting Report

PAME I-2019 RoDs

SAO Report, Mar. 2019

PAME 2019-2021 Work Plan

PAME Achievements Report 2017-2019

SAO Report to Ministers (May 2019)

2019 Rovaniem Joint Ministerial Statement

2019 Rovaniemi Statement from the Finnish Chair of the Arctic Council

Iceland Chairmanship Program 2019-2021

Common Operating Guidelines for Working Groups

Arctic Council Observer Manual

Arctic Council Rules of Procedures

Arctic Council Guidelines for Relationships with Outside Bodies

Arctic Council Communication Strategy (2018)

Arctic Council Communications and Outreach Guidelines (2016)

AGENDA 4 – Pan-Arctic Network of Marine Protected Areas (MPAs)

Agenda 4.2: Modelling Arctic oceanographic connectivity to further develop PAME's MPA toolbox

Background Documents:

MPA Networks Action Table by USA (version 28 Aug 2018)

PAME MPA-network toolbox: Area-based conservation measures and ecological connectivity.

CAFF/PAME Indicator Report on Arctic Protected Areas.

Framework for a Pan-Arctic Network of Marine Protected Areas (April 2015)

1st MPA Workshop Report

2nd MPA workshop Report

3rd MPA Workshop Report

4th MPA Workshop meeting site

AGENDA 5 – Protection from Invasive Species

Agenda 5.1: Joint CAFF/PAME ARIAS memo

Background documents:

- ✓ CAFF/PAME Arctic Invasive Alien Species Strategy and Action Plan (ARIAS).
- ✓ Invasive Species on PAME.is

AGENDA 6 - Arctic Marine Shipping Assessment follow-up activities

Agenda 6.1(a): 3rd annual meeting of the Shipping Forum meeting-summary and next steps Background Documents:

- ✓ 3rd Forum summary report
- ✓ Circular Letter No.4009 Arctic Shipping Best Practice Information Forum
- ✓ Press release for the 3rd Shipping Forum Meeting 3-4 June 2019
- ✓ 3rd Forum meeting website on PAME.is

Agenda 6.1(b): Draft ARHC MOU by USA and Canada

Agenda 6.2

Agenda 6.2(a):

- ✓ HFO Survey Report by AIA, USA, CCU, Canada
- ✓ Arctic HFO Literature Review Memo by USA
- ✓ Arctic HFO Bibliography updated

Agenda 6.2(b): Black Carbon emissions from shipping activity in the Arctic and technology developments for their reduction, *Status Report*

Background document:

✓ Finnish INF document on the Polar Code implementation project- ParisMoU decision

Agenda 6.3: Overview of Low Impact Shipping Corridors project by Canada, Iceland & AIA

Agenda 6.4: Arctic Marine Tourism project status and next steps

Agenda 6.5(a):

- ✓ Underwater Noise in the Arctic-DRAFT Statement of Work (Canada and WWF)
- ✓ Annotation

Background document:

✓ Underwater noise in the Arctic: A State of Knowledge report.

Agenda 6.5(b): Grey Water Discharges - Developing a PAME Project Proposal by WWF

Agenda 6.6: Regional Reception Facilities Submitted by Russian Federation and United States

Agenda 6.7:

- ✓ Agenda 6.7(a): ASTD status and next steps
- ✓ Agenda 6.7(b): Arctic Shipping Status Reports Paper
- ✓ Agenda 6.7(c):
 - o CASA Ship Accident Report by USA
 - o CASA data: Master document Arctic Vessel Accident Data 2005-2017

Agenda 6.8: Observer Engagement update with Annexes I-III

Agenda 6.9:

- ✓ AMSA Project Refresh by US and Canada
- ✓ Background: AMSA Recommendations Update Matrix (from PAME I-2019)

Background documents: (Agenda 6):

- ✓ AMSA Final Report (2009)
- ✓ 4th AMSA Implementation Progress Report for the period 2015-2017
- ✓ Arctic Ocean Review (AOR) Final Report (2013)

AGENDA 7 – Arctic Offshore Resource Exploration and Development

Annotations to agenda items 7.1 & 7.2

Agenda 7.1:

Background documents:

- ✓ Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities (MEMA) Part II Report.
- ✓ Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities (MEMA) Part I Report.
- ✓ MEMA Workshop Report.

AGENDA ITEM 8 – Ecosystem-based Approach to Management

Annotations to agenda items 8.1 and 8.2

Agenda 8.1(b): 2nd EA Conference report and website

https://www.pame.is/index.php/projects/ecosystem-approach/ea-conferences/second-ea-international-conference-2019

Background documents:

- ✓ The 2017 2019 Progress Report of the Joint Ecosystem Approach Expert Group (EA-EG).
- ✓ Guidelines for Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems (May 2019).
- ✓ Status of Implementation of the Ecosystem Approach to Management in the Arctic.

AGENDA ITEM 9 – Marine Litter, including Microplastics

Agenda 9.2: draft ML-RAP annotated outline by co-leads

Background document

- ✓ Desktop study on Marine Litter, including microplastics, in the Arctic (May 2019)
- ✓ ML-RAP Expert Group nominations (Aug 2019)

✓ MEPC 74-WP.10 - Report of the Working Group on Marine Plastic Litter

Agenda 9.3:

Background documents:

AMSP Implementation Progress Report 2017-2019

AMSP 2015-2025

AMSP Implementation Plan

AGENDA ITEM 10 - Records of Decisions and Next meeting

Additional Information

PAME II-2019 logistics and hotel information – 20 August update

List of nominated experts (version Feb. 2019)

List of Participants (version 2 Sep)



RECORD OF DECISIONS AND FOLLOW-UP ACTIONS

PAME II-2019 (10-12 September 2019)

Reykjavik, Iceland

Opening of the Meeting

PAME thanks Iceland for hosting PAME-II 2019 and notes with appreciation the welcoming remarks from Dr. Jón Atli Benedikssson, Rector of the University of Iceland; Ambassador. Einar Gunnarsson, Chair of the Senior Arctic Officials; and Helga Jónsdóttir, PAME Head of Delegation for Iceland.

Information and various updates (Agenda Item 3)

PAME takes note of:

- ✓ Outcomes from the Arctic Council Ministerial meeting, 6-7 May 2019;
- ✓ The upcoming Circumpolar Biodiversity Monitoring Program (CBMP) workshop, 5-7 November 2019, in Nuuk and significant opportunity for collaboration with many PAME projects;
- ✓ The update on the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean (CAO Fishing Agreement);
- ✓ The summary of Iceland's 2019-2021 Chairmanship program and priorities of relevance to PAME's work, including the International Symposium on Plastics in the Arctic and Sub-Arctic Region, 21-23 April 2020, in Reykjavik (www.arcticplastics2020.is) and the proposed Arctic Ocean Ministers meeting; and
- ✓ Our Ocean Conference, 23-24 October 2019, in Oslo, Norway and a side event by Iceland's Chairmanship on Marine Litter/Plastics on 23 October 2019.

PAME thanks the representative of Germany, Anja Sommerfeld, for her presentation on the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC expedition).

PAME thanks Associate Professor Ingibjörg Jónsdóttir of the University of Iceland for her presentation on the changing sea-ice conditions off Iceland.

PAME thanks the representative of the Nordic Environmental Finance Corporation (NEFCO), Annukka Valkeapää, for her update on the Arctic Council Project Support Instrument (PSI) and will explore potential funding opportunities for PAME projects based on PSI priorities.

PAME thanks Dr. William D. Halliday, Wildlife Conservation Society, Canada, for his presentation on "Mapping Underwater Noise Footprints for Ship Traffic in the Canadian Arctic".

Framework for a Pan-Arctic Network of Marine Protected Areas (MPAs) (Agenda item 4)

PAME thanks Canada for a summary of the 4th MPA workshop on "Exploring ways to support Indigenous/Local involvement in, and Indigenous/Local led, marine protection in the circumpolar Arctic Ocean", 19-21 March 2019, in Cambridge Bay, Nunavut, Canada. PAME looks forward to the Workshop Report, to be circulated prior to PAME I-2020, and invites members to provide feedback on best ways to utilize the outcomes from this workshop and integrate these findings into ongoing PAME work, which may include the MPA Network Toolbox and the MEMA Handbook.

PAME thanks Sweden for the update on the project, "Modelling Arctic oceanographic connectivity to further develop PAME's MPA Network Toolbox" and requests the Secretariat issue a call for nominated experts to serve in a scientific reference group advising on this project by 27 September. PAME notes Sweden will provide guidance on needed expertise for the scientific reference group and requests PAME members to respond to the Secretariat's call for experts with nominations by 11 October. PAME recognizes the importance of collaboration with CAFF on this project. Project leads will present preliminary results at PAME I-2020.

PAME welcomes the update from the co-leads (Finland and USA) on developing Factsheets related to MPAs and Indigenous Peoples' Lives in a changing climate. PAME requests the Secretariat to issue a call for nominated experts to serve in a reference group advising on this project by 27 September. PAME requests its members and welcomes members from relevant Arctic Council working groups to respond to the call for experts with nominations provided to the Secretariat by 11 October. Project leads will submit a first draft of the first Factsheet for review prior to PAME I-2020.

PAME takes note of unforeseen delays in the PAME and CAFF Secretariats' work with UN Environment Programme WCMC to update the Arctic Protected Areas Indicator Report and looks forward to receiving an update on progress at PAME I-2020.

Protection from Invasive Species (Agenda item 5)

PAME welcomes and encourages a discussion between the CAFF and PAME Chairs on next steps for the implementation of the Arctic Invasive Alien Species (ARIAS) action plan and will inform PAME I-2020 on any results.

Arctic Marine Shipping Assessment (Agenda Item 6)

Theme I: Enhanced Arctic Maritime Safety

Linking with International Organizations (I(A))

PAME welcomes the successful outcomes of the 3rd Annual meeting of the Arctic Shipping Best Practice Information Forum (the Forum) and acknowledges the contributions made by its participants to the effective implementation of the IMO Polar Code.

- ✓ PAME invites the Forum Coordinating Committee to begin planning for the 4th annual meeting, tentatively scheduled for 9-10 May 2020, immediately preceding the 102nd Session of the IMO's Maritime Safety Committee;
- ✓ PAME invites the Forum Coordinating Committee to prepare a draft Information Paper about the Forum for possible submission by one or more Arctic States to the 75th Session of the IMO's Marine Environment Protection Committee (30 March-3 April 2020);
- ✓ PAME thanks the Forum participants who responded to the survey on how to improve the efficiency of the Forum and welcomes continued engagement by all Forum participants.

PAME approves in principle the draft PAME-Arctic Regional Hydrographic Commission (ARHC) MoU (Appendix A to PAME (II)/19/6.1/b) and instructs the USA and Canada to inform the ARHC of such approval. PAME invites the ARHC to inform the project co-leads if it proposes any further changes to the draft MoU. If there are no further changes, PAME invites the project co-leads to inform the SAOs at the first opportunity and obtain their concurrence with the aim of signing and finalizing the MoU thereafter. If the ARHC proposes further changes, the projects co-leads are requested to circulate them intercessionally to PAME member governments and to seek approval of those changes.

PAME invites the IMO Secretariat to submit to PAME I-2020 information on IMO issues and developments of interest to PAME.

PAME invites the International Council for the Exploration of the Sea (ICES) to submit information as soon as practicable on its 'Working Group on Shipping Impacts in the Marine Environment (WGSHIP)', including with respect to potential linkages with the Arctic Council and PAME's shipping-related work.

PAME invites the Netherlands to make a presentation at PAME I-2020 on its Arctic interests, including shipping.

AMSA I (B) - IMO Measures for Arctic Shipping

HFO Phase IV (b) — Collect, Report and/or Review Information about On-Shore use by Indigenous Peoples and Local Communities of HFO — PAME welcomes the final field survey report prepared by AIA. PAME invites its members to submit as soon as practicable and no later than PAME I-2020 any additional information they may have on the reliance by Arctic indigenous peoples and local communities on HFO, particularly any evidence that these groups do in fact rely on HFO and if so in what manner. PAME instructs the project co-leads to continue to coordinate with SDWG on this joint project as necessary and appropriate.

PAME members are reminded of the invitation by the IMO for impact assessments on the use and carriage of heavy fuel oil as fuel by ships in Arctic waters to be submitted to the 7th session of IMO's Sub-committee on Pollution Prevention and Response (PPR 7)(17-21 February 2020) and welcomes circulation of their submission to PAME I-2020 for information in connection with the above mentioned HFO PAME project.

PAME acknowledges the submission by the USA of a literature review (PAME(II)/19/6.2/a) concerning reliance by Indigenous Peoples and Local Communities on HFO. PAME invites members to review this document and inform the USA of any significant errors or omissions by 15 December 2019.

PAME invites Finland and Iceland to submit to PAME I-2020 an update of the project titled "Black carbon emissions concerning shipping activity in the Arctic and technology development for their reduction", taking into account relevant developments at PPR 6 and MEPC 74. PAME invites its members by 15 October 2019 to identify relevant experts to participate in the project.

PAME invites those Arctic and Observer States that have not yet submitted information to Norway on how they interpret the Polar Code to do so by 1 December 2019 using the template created by Norway. PAME invites Norway to provide a status report and preliminary summary of information received to PAME I-2020.

PAME invites each Arctic State and Observer State to submit to PAME I-2020 information on Polar Ship Certificates that have been issued by or on behalf of their maritime administrations. Such information is to include if possible, the type of ship, gross registered tonnage and ice class.

PAME thanks the Russian Federation for its presentation on "Polar Code Compliance: Concentration Inspection Campaigns (CIC) vs. Harmonized Verification Programs (HAVEP)." in which advantages of HAVEP in Arctic waters due to more flexible and pragmatic approach were emphasized.

PAME invites the Kingdom of Denmark, the Russian Federation and Finland to provide information to PAME I-2020 on the Paris MoU Polar Code Inspection Campaign developments as a basis for further discussion on how PAME could support the potential campaign. PAME takes note of the proposal of the Russian Federation to support a similar campaign under the Tokyo MoU by interested Arctic States.

PAME welcomes the decision by Finland to begin the process to ratify the Cape Town Agreement related to the safety of fishing vessels, and notes the convening of the "Ministerial Conference on Fishing Vessel Safety and IUU Fishing" to be held at Torremolinos, Spain, 21-23 October 2019.

Uniformity of Arctic Shipping Governance (I(C))

PAME welcomes the final report by Canada, Iceland, and AIA titled "An Overview of Low-Impact Shipping Corridors and other Shipping Management Schemes in the Circumpolar Arctic" and notes that the report will be transmitted to EPPR for any appropriate additional follow-up.

Strengthening Passenger Ship Safety in Arctic Waters I(D)

PAME notes the status report submitted by Canada, Iceland, and the United Kingdom (PAME(II)/19/6.4) on the project "Arctic Marine Tourism Project: Development in the Arctic and enabling real change" and invites by 15 October 2019 the identification of relevant experts to participate in the project. PAME also invites:

- ✓ the project co-leads to submit a status report to PAME I-2020; and
- ✓ its members to submit to PAME I-2020 any information on site-specific guidelines for marine-based tourism in the Arctic region.

Theme II: Protecting Arctic People and the Environment

Addressing Impacts on Marine Mammals (II(G))

- ✓ PAME notes with appreciation the draft Statement of Work for 'Developing Acoustic Intensity Maps for Shipping in the Circumpolar Arctic' prepared by the project co-leads (Canada and WWF). PAME invites the co-leads to submit an update to PAME I-2020 on the project.
- ✓ PAME invites one or more Arctic States to serve as co-lead with WWF on a proposed project concerning greywater discharges by vessels in the Arctic that could be approved intercessionally or as part of PAME's 2021-2023 work plan. PAME invites a presentation at PAME I-2020 by a relevant expert and the submission of any additional information on the topic.

Theme III: Building the Arctic Marine Infrastructure

Addressing the Infrastructure Deficit (III(A))

PAME notes the Port Reception Facilities Project Status Report submitted by the Russian Federation and the USA (PAME(II)/19/6.6). PAME invites the IMO contact points from each Arctic State to continue to work collectively and within their national IMO delegations, intersessionally by correspondence, to draft such submissions related to the amendment to MARPOL and draft action plan, in accordance with IMO's organization of work and to update PAME as necessary.

Arctic Marine Traffic Systems (III(B))

PAME notes with appreciation the presentation made by the Arctic Shipping Traffic Data (ASTD) expert group on developments since the launch of the ASTD System in February 2019.

- ✓ PAME invites the Secretariat in coordination with the project co-leads and the ASTD expert group to circulate a survey requesting suggestions for new ASTD data layers to PAME members and all other Arctic Council subsidiary bodies;
- ✓ PAME decides to review the ASTD Framework Agreement according to its paragraph 6.6 at PAME I-2020 and recommends that the ASTD expert group and project co-leads suggest any appropriate or necessary amendments;
- ✓ PAME invites the project's co-leads and ASTD expert group to explore opportunities for informing the SAOs and other Working Groups of the ASTD System;
- ✓ PAME invites the project's co-leads and the ASTD expert group to develop a simple "How to use the ASTD System" or "Frequently Asked Questions" with the goal of facilitating wider use of the System; and
- ✓ PAME invites the ASTD expert group to compile all suggestions for additions to the ASTD System, including new data layers and to develop budget cost estimates for these proposed additions. The ASTD expert group will submit a summary to PAME I-2020.

PAME invites the Arctic Shipping Status Report (ASSR) Project co-leads (USA and PAME Secretariat) to collect potential report topic ideas from the PAME Shipping Expert Group by 15 October 2019, develop a test report using the process set forth in PAME (II)/19/6.7/b, and circulate the test report for consideration and approval at PAME I-2020.

PAME invites its members to inform the USA by 15 December 2019 of any errors or omissions in the data spreadsheet attached to the Compendium of Arctic Ship Accidents (CASA) Report (PAME (II)19/6.7/c). PAME requests that the USA continue to coordinate with EPPR on this joint project as necessary and appropriate and invites the USA to submit an update to PAME I-2020.

Engagement of Observer States PAME's Shipping-Related Activities

PAME notes with appreciation the workshop summary report for the 'Systematic Engagement with Observers Project' (PAME (II)/19/6.8) and the progress made on the project. With an eye towards developing a draft framework for more systematically engaging with Observers, PAME invites the project co-leads (USA, Poland, Republic of Korea, Italy, Northern Forum) to:

- ✓ divide and rank by feasibility the catalogue of ideas, suggestions, and recommendations into those that may feasibly be pursued by PAME member governments, and those that may feasibly be pursued by Observers;
- ✓ identify the catalogued items by feasibility and develop a summary with an explanatory notation on how each selected item could be pursued;
- ✓ explore the development of a "PAME 101 for Observers"; and
- ✓ submit a status report to PAME I-2020.

Update on PAME's Shipping Priorities and Recommendations

With the objective of securing SAO and Ministerial approval in 2021 of updates to the 2009 AMSA Report Recommendations (the AMSA refresh project), PAME invites:

- ✓ the project's co-leads (USA and Canada) to prepare a short project summary;
- ✓ the Secretariat to distribute that summary along with the draft matrix to all Arctic Council subsidiary bodies and to PAME members for final review and comment by 15 March 2020;
- ✓ the project's co-leads to submit a summary of comments received along with an updated matrix to PAME II-2020.

Resource Exploration and Development (Agenda item 7)

Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) follow-up

- ✓ Co-leads include Canada, USA, ICC, AIA, Saami Council and Northern Forum.
- ✓ PAME notes the work to develop a "Handbook" or reference tool(s) for Indigenous Peoples and local communities. The "Handbook" is to be based on the MEMA database and Part II report. Co-leads consider this to be a communications exercise and have engaged a communication specialist to scope out user needs such that the tool(s) are designed to meet those needs. PAME notes two meetings were held on 8-9 September 2019 to engage with PPs and others from PAME and SDWG on potential users and their needs. Next steps will be informed by the meeting outcomes, with work to continue intersessionally.

- ✓ Co-leads will explore possible linkages with MPA and EA work on meaningful engagement in marine areas with Indigenous Peoples and Local Communities.
- ✓ PAME welcomes the information provided by Finland that the Arctic Council received the Global Award of the International Association for Impact Assessment (IAIA) at their annual conference in Brisbane Australia at the end of April. The award was given for promoting cooperation and the coordination on issues of sustainable development and environmental protection in the Arctic.

Oil and gas activities

PAME notes the work to collect information on current oil and gas activities and relevant post 2010 legislation, regulations and practices. States are encouraged (again) to submit this information based on the survey circulated as soon as possible. This will be compiled into a report or white paper and a possible fact sheet.

PAME requests REDEG to explore the possibility of identifying offshore oil and gas fields for inclusion in the ASTD System in conjunction with the ASTD expert group.

Other

PAME requests the Secretariat to reach out to EPPR on their work related to floating nuclear power plants.

Ecosystem Approach to Management (Agenda item 8)

PAME welcomes the report from the Second International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic - 'The Ecosystem Approach to Management of Arctic Marine Ecosystems: Integrating information at different scales in the framework of EA implementation' - held in Bergen, Norway, 25-27 June 2019. The conference was attended by 55 participants, with good representation by members of indigenous communities and organizations. PAME notes that the conference report will form the basis for a status report on EA implementation in the Arctic to be prepared by the end of the current work plan period.

PAME welcomes the initial planning of a 7th EA workshop in 2020 on element No. 5 of the EA framework, 'Value the cultural, social, and economic goods and services produced by the ecosystems', and notes the objectives and scope as outlined in the draft workshop prospectus (Annex I). Venue and time are still to be determined.

PAME welcomes the plan to prepare the 'Report on development in defining or setting Ecological Objectives' with two main parts: concepts related to ecological objectives, and experiences gained from practical application of ecological objectives. An extended outline will be prepared by the EA co-leads by 15 December 2019, and a first draft will be prepared with input from PAME members and the EA expert group in 2020. EA co-leads plan to prepare a final draft for approval by PAME I-2021 as a potential deliverable for the 2021 Ministerial.

PAME welcomes the information on the work of the joint ICES/PICES/PAME Working Group for Integrated Ecosystem Assessment of the Central Arctic Ocean (WGICA) and notes that the first IEA report will be shared with PAME prior to being published as a Cooperative Research Report following peer review and technical editing by ICES. PAME also notes the plan to

produce a second version IEA report with more emphasis on impacts of human activities on the CAO ecosystem to be completed in 2021.

PAME notes the upcoming meeting of the Provisional Scientific Coordinating Group under the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean and opportunities for collaboration.

PAME welcomes efforts to strengthen the communication between the EA expert group co-chairs and the relevant working groups by attending their respective working group meetings to conduct outreach, to inform about progress/status, and to seek inputs, as relevant.

Arctic Marine Pollution (Agenda item 9)

PAME thanks Magnús Jóhannesson for his overview on his role as a Coordinator on Marine Litter and Plastics during the Iceland's chairmanship with the aim to coordinate and facilitate work on this topic within the Arctic Council including the planning of the "International Symposium on Plastics in the Arctic and Sub-Arctic Region" 21-23 April 2020 in Reykjavik, Iceland.

PAME welcomes the draft outline as a general guide to begin the development of a Regional Action Plan (RAP) on Marine Litter in the Arctic, co-led by Canada, the Kingdom of Denmark, Finland, Iceland, Norway, Sweden, USA, AIA, and OSPAR, and invites PAME members to submit source documents for draft RAP development by 27 September.

Project leads will circulate a first draft of the RAP for review on 15 December to all PAME members and the Marine Litter-RAP Expert Group, and requests Expert Group comments prior to PAME I-2020.

PAME notes that the Marine Litter-RAP Expert Group plans to meet for one full day directly prior to PAME I-2020.

PAME notes with appreciation the marine litter communication and outreach activities implemented by its Secretariat, in particular the launching of the 1_{st} GPS tracking "message in a bottle" which will take place on 12 September by the Iceland's Minister for the Environment and Natural Resources in collaboration with the Icelandic Coast Guard and Verkís engineering firm.

PAME thanks Wouter Jan Strietman, the Netherlands, for his presentation on the Arctic Marine Litter Project "Knowing the sources to find solutions".

PAME thanks the Secretariat for leading the development of an AMSP Implementation Status Report for 2019- 2021. The PAME Secretariat will circulate the 1st draft for review at PAME I-2020.

PAME Administration and Next Meeting

PAME thanks Elizabeth McLanahan, PAME Vice-Chair, for Chairing this meeting and welcomes Paula Kankaanpää from Finland as the new PAME Chair.

PAME requests its Chair/Vice-Chair to contribute to the upcoming SAO meeting (19-21 November 2019 in Hveragerði, Iceland) in addition to submitting a two-page PAME progress report as requested by the Arctic Council Chairmanship.

PAME invites its delegations to include experts on shipping, oil and gas/resource exploration and development, ecosystem approach, MPA, marine litter and invasive species in their delegations to the PAME I-2020 meeting.

The PAME Chair will inform HoDs and PPs on requests to present on PAME's work in other for a and make best efforts to share the presentations in advance to allow an opportunity for comments/input.

PAME notes the proposal by Canada on the following two issues: rotation of hosting of PAME Working Group meetings and Chairing/Vice-Chairing PAME. The PAME Secretariat will circulate PAME's historical information on hosting/chairing and the practices of other Arctic Council working groups in this regard, with the aim to take a decision at PAME I-2020.

PAME will further consult on hosting PAME I-2020. Suggested dates for delegations to consider for PAME I-2020 are the 1st or 2nd week of February to meet the 30 day deadline prior to the SAO meeting (24-26 March 2020).

ANNEX I-draft 7th EA Workshop Prospectus

Joint Ecosystem Approach Expert Group - PAME, AMAP, CAFF, SDWG

7 EA Workshop on Values and valuation of the cultural, social and economic goods and services produced by the ecosystem

Venue and time (TBD):

Workshop objectives:

- 1. Explore the relation between the fundament of cultural and social values and the issue of valuation of ecosystem goods and services in the Arctic.
- 2. Consider the compatibility and approaches to deal with monetary and other non-monetary values (e.g. cultural and spiritual).
- 3. Identify next steps for work on the element of valuation as one of the six elements in the Ecosystem Approach framework.

Background:

The Joint Ecosystem Approach (EA) Expert Group (EA-EG) has held 6 workshops in 2011-2018 on various aspects of development of EA to the management of Arctic marine ecosystems and two international conferences on EA implementation in the Arctic (Fairbanks, Alaska, August 2016, and Bergen, Norway, June 2019). To guide the development and implementation of the EA to Arctic marine ecosystems, the joint EA-EG prepared an EA framework that was used as a basis for the report 'Status of Implementation of the Ecosystem Approach to Management in the Arctic' in 2017, and 'Guidelines for Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems' that were welcomed by Arctic Council ministers in Rovaniemi in May 2019.

'Value the cultural, social and economic goods and services produced by the ecosystem' is one of the six elements of the EA framework. There has been limited work done so far by the EA-EG on this element. Taking the full economic picture of human developments into account, including the downside in the form of costs associated with environmental degradation and loss of biodiversity, is an important part of what has been called 'greening of the economy'. On the other hand, there are spiritual (religious) and cultural values that perhaps should not be equated with money, but which nevertheless need to be brought into the 'equation' when options for future development are considered.

The basic value systems may differ substantially between Indigenous Peoples and 'western' societies, which needs to be recognized up front. There is a relation between the basic values one holds as a society, and the way one goes about valuing the ecosystem. If the ecosystem is one's 'home' or 'garden', and if one depends on it through subsistence harvest for nutritional, cultural, and spiritual well-being, one is likely to value 'ecosystem goods and services' in a different manner from those who regard nature as a commodity to be used for economic development.

At the workshop we aim to explore the relationship between value systems and the issue of valuation to provide a better understanding of the fundament for the further work on this element. We will explore options for valuation of ecosystem goods and services by examining approaches and methods that have been proposed or used elsewhere, both nationally and internationally. Based on this, the workshop will consider next steps regarding this element to strengthen the effective implementation of EA in the Arctic.



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