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MEETING OF THE COUNCIL

DOCUMENT 07rev	ADMINISTRATIVE REPORT 2019 – 2020
Submitted by	Secretariat
Action requested	Take note
Background	The document summarises the activities of the Commission and the Secretariat in 2019 and 2020.

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ABBREVIATIONS USED IN THE REPORT

Committees and other bodies

BYCELS: Council Working Group on By-catch, Entanglements and Live Strandings

CHM: Committee on Hunting Methods

CIO: Committee on Inspection and Observation

EG: Expert Group

FAC: Finance and Administration Committee

HoDs: Heads of Delegations

NSP: NAMMCO Scientific Publications Series

PRWG: Council *Ad Hoc* Working Group on Performance Review

RFABs: Regional Fisheries Advisory Bodies

SC: Scientific Committee

WG: Working Group

WS: Workshop

Staff:

BK = Bartal Kamban, Intern

CW = Charlotte Winsnes, Deputy Secretary

FW = Fern Wickson, Scientific Secretary

GD = Geneviève Desportes, General Secretary

MT = Mana Tugend, Intern

SH = Sabine Hansen, Intern

SS = Sam Smith, Intern

SE = Solveig Enoksen, Scientific and Communication Assistant

ADMINISTRATIVE REPORT 2019 – 2020

The Administrative Report provides an overview of the activities of the Commission and the Secretariat over the past year.

This administrative report covers a two-year period (2019 and 2020) because the 28th Annual Meeting of NAMMCO was postponed from March 2020 to March 2021 due to the COVID-19 pandemic.

1. NAMMCO OFFICERS

The officers listed in the table below are those elected at the 27th Annual Meeting on 2–4 April 2019 in Tórshavn, Faroe Islands.

Committee	Chair (Member Country)	Term
Commission	Kate Sanderson (Faroe Islands)	April 2019 – March 2021
Finance and Administration Committee (FAC)	Amalie Jessen (Greenland)	April 2019 – March 2021
Committee on Hunting Methods (CHM)	Kathrine Ryeng (Norway)	April 2019 – March 2021
Committee on Inspection and Observation (CIO)	Guðni M. Eiríksson (Iceland)	April 2019 – March 2021
Scientific Committee (SC)	Bjarni Mikkelsen (Faroe Islands)	April 2019 – March 2021
Council Working Group on By-catch, Entanglements and Live Strandings (BYCELS)	Guðni M. Eiríksson (Iceland)	April 2019 – March 2021
Council Ad Hoc Working Group on Performance Review (PRWG)	Kate Sanderson (Faroe Islands)	April 2019 – March 2021

2. FOCAL ACTIVITIES 2019 – 2020

2.1 COMMITTEES

A summary of the focal activities in the NAMMCO Committees during 2019 and 2020 is presented below. Further information is also available in the list of meetings under item 5. *NAMMCO Meetings*.

One task performed by all committees has been to respond to the requests of the Performance Review Working Group and propose ways forward for following up on relevant recommendations.

Committee on Hunting Methods: The CHM advanced on the Planning of an Expert Group meeting on killing methods that the FAC had decided in October 2020 to postpone, as the necessary data would not become available in time. It reviewed its recommendations to and responses from Member Countries since 1999 to determine their current status (active, completed, not endorsed). It progressed with a quality control of the content regarding the CHM and its sphere of work on the NAMMCO website and worked on the requirements for the database to improve reporting on hunting effort.

Committee on Inspection and Observation: The CIO reviewed Section A of the former Joint Control Scheme and addressed outstanding issues relating to the observation scheme, such as reviewing the

“old” guidelines to Section B and developing new guidelines for adoption, and clarifying issues on safety, insurance, and health certificates. It also developed proposals for the scope of the 2020 and 2021 observation activities and initiated the process of reviewing Member Country compliance with the recommendations from NAMMCO. The committee also progressed with quality controlling the relevant sections of the NAMMCO website and identified ways of improving the reporting on hunting effort. Finally, it organised and held a training course for observer candidates in Iceland in February 2020.

Council Working Group BYCELS: BYCELS progressed with quality controlling the content of the NAMMCO website relevant to its work. It assessed the applicability and usefulness of the current data requirements for annual reporting from Member Countries. It also progressed with defining guidelines for a) euthanasia of stranded cetaceans, b) the development of national stranding response networks, and c) disentanglement in Arctic conditions.

Scientific Committee: An SC meeting was held in 2019, which discussed the status of all requests for advice and received available updates on all pinniped and cetacean species. At this meeting, the SC also reviewed the reports of all Working Group meetings held that year. This included WGs on harbour porpoise (HPWG), harp and hooded seals (WGHARP), narwhal in East Greenland (NEGWG) and abundance estimates (AEWG). In 2020, online meetings of the WG on by-catch (BYCWG) and the NAMMCO-JCNB Joint Working Group on narwhal and beluga (JWG) were held and final reports circulated. A joint NAMMCO/ICES workshop on seal modelling was also organized and conducted, with a final report in preparation for publication in the NAMMCO Scientific Publications series.

Council Ad Hoc Working Group on Performance Review: The PRWG held two face to face meetings. It discussed the cross-cutting and overarching aspects of the Performance Review’s conclusions and recommendations. It considered each recommendation and forwarded them to the relevant committee(s) and requested that the committees present their view on the relevance of the recommendations and possible ways forward (when appropriate). After reviewing the responses from the committees, the PRWG formulated recommendations to the Council with a set of identified follow up actions.

Finance and Administration Committee: The FAC held one face to face and two online meetings. It focussed on finding an acceptable solution to an issue regarding the pension scheme for employees, developing guidelines for the submission of documents and reports to the meetings of NAMMCO bodies, prioritising the workload of the Secretariat well as considering draft budgets for the Commission. It also defined best practice procedures for quality controlling and maintaining the website content.

2.2 SECRETARIAT

The emphasis of activities within the NAMMCO Secretariat in 2019 and 2020 has been on:

Updating the species pages on the NAMMCO website, including finalising pages for those species that had not yet been included, adding recent catch data and assessment information, updating descriptions of ongoing research projects in Member Countries, standardising reference lists, and English proofing. The harbour seal page was fully updated, following a recent species review Desportes was a collaborator on, see also section 11.3 *Publication in Scientific Journals*.

Compiling an overview of all NASS cetacean abundance estimates that have appeared in NAMMCO reports over the years. This included a record of their current status (e.g., valid/superseded), name of endorsing WG/SC, and reference details. From this overview, what are considered by the SC to be the best available abundance estimates for all cetacean species/areas/surveys were published in table form in Volume 11 of the NAMMCO Scientific Publications “[Estimates of Cetacean Abundance in the North Atlantic of Relevance to NAMMCO](#)” (See also *Appendix G. Publications in Other Scientific Journals*).

A similar compilation is in preparation for narwhals and belugas, as well as for seals and walrus.

Preparing and executing the transition from a P-drive and paper archive to a digital archive on Sharepoint following the decision of FAC to go ahead with this (March 2020). This included cleaning the existing p-drive (e.g., going through all folders and removing out of date draft files and files no longer of relevance), digitalising important documents from the paper archive, as well as designing a logical folder structure. The work also included sorting, cataloguing, and referencing the photo library (including use rights) as well as transferring all scientific articles into Zotero to create a searchable online library that all staff can access.

Finalising the publication of Volume 11 of the NAMMCO Scientific Publications series: “Sightings Surveys in the North Atlantic: 30 years of counting whales”. This included co-authoring and editing select articles, and copy-editing and formatting all articles for publication. Twelve research articles, as well as two technical notes, were edited (7 with GD as a co-editor), formatted and published. A Preface (by Desportes and Wickson) and an Introduction (by Desportes, Hansen and Pike) were also published. The author guidelines for the series were also further developed and refined, as well as the descriptions of the journal on the website (See under 10.2 Scientific Publication). Meetings were also held between the Secretariat and the publisher to discuss the journal’s data policy and the possibilities for open data archiving.

3. SECRETARIAT STAFF

In the period 2019 – 2020, the Secretariat was comprised of the following employees and interns:

General Secretary	Geneviève Desportes (GD)
Deputy Secretary	Charlotte Winsnes (CW)
Scientific Secretary	Fern Wickson (FW)
Scientific and Communication Assistant	Solveig Enoksen (SE): 01/10/2018 – 31/09/2019
Interns	Sam Smith, UK (SS): 17/09/2018 – 16/05/2019
	Sabine S. Hansen, DK (SH): 01/05/2019 – 01/05/2020
	Bartal T. Kamban, FO (BK): 06/09 – 15/12/2019
	Mana Tugend, FR (MT): 14/04/2020 – 31/01/2021

The temporary employment of Solveig Enoksen was supported 50% by NAMMCO and 50% by the Norwegian Labour and Welfare Administration (NAV).

4. COVID-19 PANDEMIC

The global coronavirus (COVID-19) pandemic impacted the operations of NAMMCO in 2020, with all meetings in the spring (including the 28th Annual Meeting) being postponed to the autumn and some to the winter. The decisions necessary for the continuation of NAMMCO’s work were taken in a restricted Council meeting (Heads of Delegations, advisers, Secretariat only), which was convened in March 2020 directly following a meeting of the Finance and Administration Committee. Other matters were decided later by correspondence. The activities under the NAMMCO Observation Scheme were cancelled in 2020.

Since the restricted Council meeting in March 2020, multiple committee meetings were moved to online formats. Due to time constraints, the meetings proceeded with prioritised agendas. The initial wave of meeting postponements, followed by the reorganisation from face-to-face meetings to online formats, has been time-consuming and challenging at times.

Taking advantage of the COVID-19 situation and the extensive use of online meetings, the Secretariat has participated in a range of external meetings and events that it would not likely have participated

in in person due to the time demands and travel costs required and/or only a single staff member would have taken part. These events are shaded light grey in *section 6.1 National and IGO events attended in 2019 and 2020 by the Secretariat on behalf of NAMMCO*.

The Secretariat also followed several virtual defenses of Master's ad PhD theses at the University of Tromsø that were related to species under the purview of NAMMCO, such as killer whales and humpbacks whales in the Barents and Norwegian seas.

5. NAMMCO MEETINGS

The tables below present a chronological overview of the NAMMCO meetings in 2019 and 2020. The staff attending each meeting is also specified, as well as the date that the report was circulated. A link is provided to the reports that are publicly available on the NAMMCO website.

5.1 NAMMCO MEETINGS 2019

Dates	Meetings	Venue	Staff	Output
January				
29	HoDs	Online	GD	
February				
6	Marine Mammal Student Symposium	UIT Tromsø, NO	FW, SE, SS	
5-6	CIO	Copenhagen, DK	CW, GD	Report adopted on 14.03.19
7	CHM	Copenhagen, DK	CW	Report adopted on 15.03.19
28	HODs + Japan	Copenhagen, DK	GD	
March				
15	CIO/CHM/BYCELLS	Online	CW, GD	
19-22	Harbour Porpoise WG	Copenhagen, DK	FW	Report adopted on 29.03.2019
31	Preparatory meetings to AM	Tórshavn, FO	GD, CW, FW	
April				
1	FAC // HoDs	Tórshavn, FO	GD, CW, FW // GD	Report adopted on 02.04.19
2 & 4	Management Committees	Tórshavn, FO	GD, CW, FW; SE	Report adopted 28.06.19
3-4	Council Meeting	Tórshavn, FO	GD, CW, FW, SE	Report adopted on 11.06.19
4	HoDs + Japan	Tórshavn, FO	GD	
May				
21	CIO	Online	CW	Report adopted on 21.07.19
June				
12-13	Performance Review WG	Copenhagen, DK	GD	Report adopted on 22.08.19
September				
2-6	ICES-NAFO-NAMMCO Harp and Hooded Seals WG	Tromsø, NO	FW, SH (GD part)	ICES-NAMMCO Report
24-27	WG on Narwhal in East Greenland	Copenhagen, DK	FW, GD	Report adopted on 07.10.19
October				
1-2	CIO	Copenhagen, DK	CW	Report adopted on 25.11.19
3	CHM	Copenhagen, DK	CW, BK	Report adopted on 02.12.19
4	BYCELS	Copenhagen, DK	CW, BK	Report adopted on 25.11.19
8-10	AEWG	Tromsø, NO	FW, SH, GD	Report adopted on 24.10.19
29-01	SC	Tórshavn, FO	FW, GD, SH	Report adopted on 15.11.19
November				
19-20	FAC	Nuuk, GL	GD, CW	Report adopted on 06.01.20
20-21	PRWG // HOD	Nuuk, GL	GD, CW // none	

5.2 NAMMCO MEETINGS 2020

Dates	Meetings	Venue	Staff	Output
January				
16	CIO	Online	CW	Minutes circulated on 07.08.20
22	CW // FW appraisal meetings	Secretariat	CW, GD // FW, GD	
February				
5	NAMMCO Student Symposium	Tromsø, NO	SH, FW, GD	
5-7	CIO/Observer training course	Reykjavík, IS	CW	Reported via 18 February CIO report
8	CIO			Report adopted on 28.02.20
9	CHM			Report adopted on 28.02.20
18	CIO	Online	CW	Report adopted on 28.02.20
March				
13	HoDs	Online	GD, CW, FW	Summary circulated on 17.03.20
20	FAC	Online	GD, CW, FW, SH	Report adopted on 26.03.20
26	COUNCIL-HoDs	Online	GD, CW, FW	Report adopted on 27.04.20
26	HoDs	Online	GD	
April				
3	CIO	Online	CW	Report adopted 15.04.20
May				
28	By-Catch WG	Online	FW, GD, MT	Report released after review by SC27
June				
11	CHM	Online	CW, MT	Report adopted 25.06.20
22	BYCELS	Online	CW, MT	Report adopted 13.07.20
23	GD appraisal meeting	Online	KS, GD	
July				
3	BYCELS	Online	CW, MT	Report adopted 13.07.20
September				
10	HoDs	Online	GD	
October				
6-8	CIO	Online	CW, MT	Report adopted 8.10.20
14-15	CHM	Online	CW, MT	Report adopted 6.11.20
16	FAC	Online	GD, CW, FW, MT	Report adopted 13.11.20
20	HoDs	Online	GD	
26-30	NAMMCO-JCNB Joint WG	Online	FW	Report adopted 16.11.20, awaiting JCNB
November				
4-6	NAMMCO-ICES Seal Modelling WS	Online	FW	Full draft circulated 25.02.21
13	HoDs + Japan	Online	GD	
25	HoDs	Online	GD	
26	CIO	Online	CW, MT	Report adopted 9.12.20
December				
16	HoDs	Online	GD	

6. EXTERNAL RELATIONS

NAMMCO maintains relationships with a number of governmental and inter-governmental organisations working on marine management. The tables below present a chronological overview of the events organised by governmental or inter-governmental organisations that were attended by the Secretariat or representatives of Member Countries on behalf of NAMMCO during 2019 and 2020. The staff that attended the meeting has been specified, as well as their contribution. Reference to observer reports, (available in *Appendix A. Secretariat Observer Reports – Member Country and IGO Events attended in 2019* and *Appendix B. Secretariat Observer Reports – Member and IGO Events attended in 2020*), is provided when relevant.

OSPAR: NAMMCO Member Countries have been considering a possible Memorandum of Understanding with OSPAR. A draft MOU between NAMMCO and OSPAR was developed and forwarded to the OSPAR Secretariat in June 2020.

NAMMCO provided OSPAR (15/01/2020) with comments on its draft nomination proforma for a “North Atlantic Current and Evlanov Seamount” (NACES) marine protected area (MPA) in the OSPAR Maritime Area. The comments addressed only its implications for the conservation and management of marine mammals and especially cetaceans in the North Atlantic. They were informed by an assessment from the NAMMCO Scientific Committee ([NAMMCO 2019](#)).

Arctic Council: In reference to Annex 2 of the Arctic Council Rules of Procedure, every two years Observers who are not under review are asked to submit to the Chairmanship up-to-date information about their relevant activities and contributions to the work of the Arctic Council. The Secretariat provided the Arctic Council (December 2020) with an update on NAMMCO-Arctic Council related activities for the period June 2018–December 2020.

CAFF-CBMP / Marine Mammal Expert Network (MMEN): The MMEN, to which NAMMCO is member, was asked by the CAFF-CBMP to update the findings of the State of the Arctic Marine Biodiversity Report (SAMBR) from 2017 (to which NAMMCO contributed). NAMMCO contributed to this update, in particular by preparing the draft text for the walrus.

6.1 MEMBER COUNTRY AND IGO EVENTS ATTENDED BY THE SECRETARIAT

6.1.1 2019

Short reports from NAMMCO staff attending these meetings can be found in *Appendix A. Secretariat Observer Reports – Member Country and IGO Events attended in 2019*.

Date	Meetings	Location	Staff	Contribution	Doc No. in App. A
28-29/05	5 th meeting of the (NEAFC-OSPAR) Collective Arrangement (CollAr)	Gothenburg, SE	GD	Interventions	1
05-07/06	NASCO 36 th Annual Meeting	Tromsø, NO	GD, CW	Opening Statement	2
19-20/06	Norwegian Workshop on Marine Mammal By-catch Monitoring and Mitigation	Ålesund, NO	GD	Interventions	3
11-12/07	Sustainable Use of Aquatic Living Resources	Tokyo, JP	GD invited	Presentation “ <i>Impact of food choices</i> ”	4
17-19/09	FAO By-Catch Workshop	Rome, IT	GD	Interventions	5
24-25/01	Sjøpattedyrutvalget [Norwegian marine mammal advisory board]	Tromsø, NO	CW, FW invited	Presentation on animal welfare issues in NAMMCO	6
27/11	3 rd meeting of the reference group for UN negotiations towards a new agreement on Biodiversity Beyond National Jurisdictions (BBNJ)	Tromsø, NO	CW, SH, BK	Opening and closing remarks	7

6.1.2 2020

Short reports from NAMMCO staff attending these meetings can be found in *Appendix B. Secretariat Observer Reports – Member and IGO Events attended in 2020*.

Date	Meetings	Location	Staff	Contribution	Doc No. in App. B
29/01	UN Decade of Ocean Science for Sustainable Development 2021-2030 & Arctic Frontiers - Arctic Ocean	Tromsø, NO	GD, FW	Interventions	1

	Decade Workshop: Policy-Business-Science-Dialogue				
20-23/04	AMAP - Climate Expert Group	Online	FW	Observation	2
12-24/05	IWC - 66b SC meeting (To relevant sessions)	Online	GD, FW	Interventions	3
09/07	CBD and Friends for Ocean Action – webinar on Protecting the Ocean’s Most Important Places	Online	GD	Observation	4
15-17/07	FAO - COFI-34 Virtual dialogues on the Path to the 34th Session of COFI (To relevant sessions)	Online	GD, CW	Observation	5
07-11/07	ASCOBANS - 9th MOP (To relevant agenda points)	Online	GD, FW, MT	Opening Statement and interventions	6
14/09	NO - BBNJ Intersessional Work	Online	MT	Followed discussions	7
14-15/09	CAFF - Workshop on the Action Plan for Biodiversity 2021	Online	GD, MT	Interventions	8
16-17/09	CAFF - Board Meeting - plenary	Online	GD, MT	Observation	8
29-31/09	IWC - Conservation Committee (To relevant sessions)	Online	CW	Observation	9
06-08/10	AMAP - 34 th WG meeting	Online	FW	Observation	10
22-23/10	NO - Sjøpattedyrutvalget [Norwegian Marine Mammal Advisory Board]	Tromsø, NO	GD, CW, FW, MT	Interventions	11
3 & 5/11	CAFF - CBMP Marine	Online	GD	Interventions	12
04/11	CAFF - Marine Mammal Expert Network	Online	GD	Interventions	13
17/11	ASCOBANS - Intersessional Working Group on Beaked Whales	Online	FW	Shared Abundance estimates from NSP Vol. 11	14

6.2 IGO MEETINGS ATTENDED BY MEMBER COUNTRIES ON BEHALF OF NAMMCO

Year // Date	Meeting	Location	Observer
2019 // 5-7/06	NASCO - 36 th Annual Meeting	Online	Faroe Islands
2019 // 23-27/09	NAFO - 41 st Annual Meeting	Bordeaux, FR	Iceland
2019 // 12-14/11	NEAFC - 38 th Annual Meeting	London, UK	Norway
2020 // 26/05-04/06	NASCO - 37 th Annual Meeting	Online	Faroe Islands
2020 // 21-25/09	NAFO - 42 nd Annual Meeting	Online	Iceland
2020 // 10-13/11	NEAFC - 39 th Annual Meeting	Online	Norway

6.3 CONTACT WITH IGO SECRETARIATS, PARLIAMENTS, INSTITUTES

6.3.1 Meetings

Year // Date	Meeting	Location	Staff	Comments / Subject
2019 // 31/01	Firms Secretariat	Online	GD, CW, FW	Presentation of FIRMS to NAMMCO, including benefits and opportunities. Presentation of NAMMCO and its eventual needs and expectations.
2019 // 15/03	IWC Secretariat	Online	GD, CW, FW	Walk-through the NAMMCO annual meeting agendas and identification of opportunities for cooperation between the 2 Commissions
2019 // 09/04	MPs A. C. Larsen, R. Nordqvist, M. Lidegaard	Copenhagen, DK	GD	With activists A. Peter; M. Rasmussen, and film producer L. Aluna. EU seal legislation & food choices in GL
2020 // 29/07	Ass. Prof. De Lucia from the Norwegian Centre for the Law of the Sea	NAMMCO	GD, FW, MT	At NAMMCO's initiative. Discussion of future opportunities for collaboration and cooperation, including joint organisation of the Marine Mammal Student Symposium.
2021 // 14/01	AMAP Secretariat	Online	GD, FW	At NAMMCO's initiative. Establishing contact and discussing options for collaboration.

6.3.2 Regional Fishery Body (RFB) Secretariats' Network

NAMMCO has actively contributed to the [Magazine](#) edited by the RSN since 2011 by submitting material for publication that describes the importance of its work on the conservation and management of marine mammals and highlighting ongoing priorities.

The February 2019 issue had a special focus on celebrating twenty years of working together in the context of the RFB network. The issue sought to reflect on the lessons learned, the experiences gained, and the goals achieved since the first meeting of FAO and Non-FAO Regional Fishery Bodies in 1999. NAMMCO contributed a piece that described the history of the organisation's establishment and prerequisites for its key successes.

For the June 2020 issue, NAMMCO submitted a short article on its creative approaches to facilitating conversations on controversial topics, using the experience arising from Fern Wickson's involvement with *Homeward Bound* (see *Appendix D. Reports from Outreach Events organised or attended by the Secretariat in 2019*, report 7).

7. EXTERNAL RESEARCH PROJECTS WITH PARTICIPATION FROM NAMMCO

7.1.1 ARISE (February 2017 - July 2021)

[Initial project completion date was early 2021, but an extension was granted until July 2021]
This project is funded by the Changing Arctic Ocean programme of the Natural Environment Research Council of the UK and is led by Prof. Claire Mahaffey from the University of Liverpool. The project examines how environmental change affects Arctic food webs using novel biological markers present in phytoplankton and zooplankton at the base of the food chain and Arctic seals (ringed and hooded seals) at the top of the food chain. The project has partners from various UK universities. International collaborators include Fisheries and Oceans (CA), Akvaplan-niva, Institute of Marine Research and Polar Institute (NO), ICES, CAFF and NAMMCO.

Results from the project were reported to the ICES/NAFO/NAMMCO WG on Harp and Hooded seals in September 2019 and to the NAMMCO-ICES Seal Modelling Workshop in November 2020.

7.1.2 Nordic Seals (2021 – launched in December 2020)

This research and networking project is funded by the Nordic Council of Ministers Working Group for Fisheries (AG-Fisk), and is coordinated by Mátis in Iceland (Jónas Viðarsson). The objective is to identify, discuss and analyse the challenges associated with the moratorium on seal hunting and to explore alternatives for how to address seal management in the future. Specifically, it aims to a) collate information on seal populations and distribution in the North Atlantic, b) examine the impacts of seal populations on the Nordic seafood industry, c) identify means of controlling seal populations (including sustainable harvesting) and d) identify potential products and markets for seal products, whilst also considering barriers such as animal welfare concerns and pollutant loads. The project has partners from Iceland, the Faroe Islands, Canada and Denmark. NAMMCO is an “associated partner”.

The expectation is that NAMMCO will facilitate access to data on seal abundance and other relevant information regarding their role in the ecosystem.

8. COMMUNICATION AND OUTREACH

Outreach efforts to communicate the work of NAMMCO to a wide variety of audiences is important to ensure that the organisation is visible and accessible to diverse groups, that it maintains strong international networks, and that it fulfils its desire to be transparent. The outreach activities conducted by NAMMCO in 2019 and 2020 included: maintenance of an up to date and engaging website, presentations and stands at international conferences/workshops/symposia, facilitation of organised events and training programs, publications in academic journals and edited books, and engagement with social media platforms.

This section of the report provides an overview of the outreach activities conducted by the Secretariat and/or supported by NAMMCO in 2019 and 2020. It is divided into four sections: 1) Website, 2) Overview of presentations made at different fora in 2019 and 2020; 3) Overview of Publications; and 4) Summary of Activities on Social Media and the NAMMCO website.

8.1 WEBSITE

NAMMCO 27 noted that the website nammco.org remains the most important information platform for the organisation, and the hub and umbrella of all internal communication activities. Top priority was therefore granted to its completion (i.e., completing all the relevant species pages) and the

provision of continual updates regarding the work of NAMMCO committees, and taking search engine optimisation (SEO) into account. Although the Secretariat has not yet maximised SEO for the website, new posts and updates have been done with this in mind.

8.1.1 Improvements

8.1.1.1 Species information

Work to include more species pages, and to update all of existing pages with new abundance estimates and assessments results, has been an important focus in 2019 and 2020. At the end of 2020, all abundance estimates and assessment data were up to date for all species. Research in NAMMCO Member Countries was also updated with the information provided in 2020 in the National Progress Reports. One species (harbour seal) has been fully reviewed with all the general information also updated.

Three new pages on marine mammal species/genus were published in 2019 and seven in 2020:

- 2019: [Sperm whale](#) (June), [Blue whale](#) (August), [Sei whale](#) (September)
- 2020: [Striped dolphin](#) (February), [Risso's dolphin](#) (April), [Beaked whales](#) (March– May, including one [general genus information](#) page and four species page: [Cuvier's beaked whale](#), [Blainville's beaked whale](#), [Sowerby's beaked whale](#), [True's beaked whale](#))

Newly uploaded information includes:

- [North Atlantic Abundance Estimates of Relevance to NAMMCO // All cetacean species - All surveys](#): An overview of all cetacean abundance estimates that have been endorsed and used in NAMMCO assessments over the years, together with a record of their current status (active, superseded, published).
- [Best abundance estimates for cetaceans in the NAMMCO area](#) for each cetacean species, areas and surveys.
- [Management areas](#): the list of management areas and sub-areas used by NAMMCO in its assessment and monitoring work.

8.1.1.2 Other information

The [catch database](#) is also now available in a searchable format for all species, countries, and years.

A new page on [laws and regulations](#) has been added, with translations or summaries in English.

8.1.1.3 Website News/Blogs

News posts on the website included announcements of new articles published in Volume 11 of the NSP, new species pages and new interns. A summary of the inputs NAMMCO received from students attending the NMBU conference on interdisciplinarity, sustainability and expert disagreement (see *Appendix E. Reports from Outreach Events organised or attended by the Secretariat in 2020*) was also published on the website. A total of 37 news items presenting new publications, the release of reports, and information on the marine mammal student symposium were published on the website in 2019 and 23 in 2020. Blog posts were also made on intern experiences and the student symposium. A series of four blog posts was also made on FW's involvement in the Homeward Bound program (see *Appendix D. Reports from Outreach Events organised or attended by the Secretariat in 2019*).

8.1.2 Website Content Quality Review

Based on recommendations from the Committees, the Council endorsed a [process](#) for reviewing the content quality of the NAMMCO website at its last meeting in 2020.

This work has now started in the different committees. For example, at its 2021 meeting, the SC will review and provide comments on the information provided for four species: long-finned pilot whale,

minke whale, harbour seal and walrus. The CHM, CIO and BYCELS will have finalised their processes in February 2021.

8.1.3 Activities on nammco.org in 2019–2020

A summary of the visitor activity on the NAMMCO website in 2019–2020 is presented in Appendix C. Statistics of activities on the NAMMCO Website and Social Media for 2019-2020.

The [NAMMCO website](#) has had 19,747 users between 1 January 2019 and 1 January 2020 and 16,410 between 1 January 2020 and 1 January 2021, 89% of which were new users. The decrease in users might be, at least partly, related to a COVID-19 pandemic effect.

Most users find the website through an organic search, while 17% navigate to the site directly. It is worth mentioning that the number of visitors arriving at the site from an organic search has increased significantly since the last report from 2018, from 56.4% to 68% of all site visitors. Facebook and Twitter referred just above 10% of users. Other referring sites included the Chinese search engine baidu.com with 183 referrals, natur.gl with 115 referrals, and Wikipedia with 104 referrals.

Computers remain the main tool used to access the website, but in 2020 there was a slight increase in mobile users compared to the previous year.

The top countries visiting the website for 2019 and 2020 are the USA, followed by the UK, Norway and Canada. Interestingly, Germany became 8th on the list, well above Greenland, Iceland and the Faroe Islands.

As in previous years, the distribution of gender is relatively equal among the website users and most visitors were in the age class 25–34.

Some of the most popular pages, apart from the landing page, were the ‘About NAMMCO’ page, individual species pages, as well as the library and meeting pages. This suggests that, besides utilisation by the NAMMCO community, the website is used as a general source of information on marine mammals and that people outside the NAMMCO community use it to learn about the organisation. It is also worth noting that the Atlantic Walrus species site was the third most visited page on the website from 2019–2020.

8.2 EXTERNAL EVENTS

The tables below present an overview of the different fora where NAMMCO gave presentations in 2019 and 2020. Each of the events is described in more detail in *Appendix D. Reports from Outreach Events organised or attended by the Secretariat in 2019* and *Appendix E. Reports from Outreach Events organised or attended by the Secretariat in 2020*.

8.2.1 2019

Reports from the activities listed in the table below can be found in *Appendix D. Reports from Outreach Events organised or attended by the Secretariat in 2019*.

Date	Conference or Meeting // Contribution	Venue	Staff	Doc No. in App. E
06/02	Student Symposium [organised by NAMMCO] Facilitation of an interactive session by NAMMCO/FW Presentations by NAMMCO SE: “Contaminants in North Atlantic marine mammals – a review” SS: “Reporting on hunting methods: a review of welfare assessment parameters in marine and terrestrial mammals”	Tromsø, NO	FW (Chair), SE, SS	1
12-14/03	2nd International Workshop on Beluga Whale Research and Conservation Presentation by NAMMCO/Reeves “Global Review of Monodontids”	Mystic, USA	[R. Reeves]	2

25-27/06	2nd International Science and Policy Conference on Implementation of Ecosystem Approach to Management in the Arctic Presentation by NAMMCO/FW <i>"Integrating the scales of interest in different knowledge systems for ecosystem management"</i>	Bergen, NO	FW	3
03-05/07	International Symposium on the Politics of Uncertainty: Practical challenges for transformative action Presentation by NAMMCO/FW <i>"Ambiguity as a form of uncertainty in environmental governance"</i>	Brighton, UK	FW (invited)	4
07-12/07	Conference of the International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) Presentation by NAMMCO/WS <i>"Lessons learned from waterfleas, whales and bees: A journey into environmental controversies in the search for sustainable food"</i>	Oslo, NO	FW (invited)	5
13/09	UiT Masters Top Predator Course Lecture by NAMMCO/GD <i>"Management bodies and science-based management advice in NAMMCO-IWC-ICES"</i>	Tromsø, NO	GD, SH	6
22/11-11/12	Homeward Bound Global Leadership Initiative Lead Facilitation for all 3 weeks by NAMMCO/CW Lecture & Interactive Workshop by NAMMCO/CW <i>"Science Meets Ethics and Politics"</i>	Hebridean Sky, Antarctica	FW	7
05-06/12	Bi-annual meeting of the Norwegian Small Whalers Union Presentation by NAMMCO/CW <i>"Sjøpattedyr som matvareressurs"</i>	Svolvær, NO	CW	8
07-08/12	WMMC (see below) associated Workshops at (see below) * Harmonising global strandings response (GD) * The effects of climate change on marine mammals (SH) * Incentivising consistent data collection and transparent reporting of marine mammal by-catch in fisheries (GD) * Art as a tool for communication (SH)	Barcelona, SP	GD, SH	9
09-11/12	World Marine Mammal Conference (WMMC) Presentation by NAMMCO/GD <i>"Outreach on the case of Arctic Sealing: opening up for a reframing of the sustainability discourse?"</i> Booth operated by NAMMCO together with B. Þorgilsson (Pi technology, IS) Information on the geometer designed for NASS 2015, posters on abundance of marine mammals vs. removals in NAMMCO area.	Barcelona, SP	GD, SH	10

8.2.2 2020

Reports from the activities listed in the table below can be found in *Appendix E. Reports from Outreach Events organised or attended by the Secretariat in 2020.*

Date	Conference or Meeting // Contribution	Venue	Staff	Doc No. in App. F
05/02	Student Symposium [organised by NAMMCO] Facilitation of an interactive session by NAMMCO/FW Presentation by NAMMCO SH: <i>"Vagrant species in the NAMMCO Management Area"</i> GD: <i>"Challenges & Opportunities facing Science for Policy in a Changing Arctic"</i>	Tromsø, NO	FW (Chair), SH, GD	1
09/06	Lunch Seminar (University of Oslo) Presentation by NAMMCO/FW <i>"Diverse ways of knowing in environmental decision-making"</i>	Online	FW (invited)	2
10/06	Virtual Conference on Interdisciplinarity, Sustainability and Expert Disagreement (Norwegian University of Life Sciences) Presentation by NAMMCO/FW	Online	FW (invited)	3

	<i>"Science, ethics and politics in the sustainable management of narwhal in East Greenland"</i>			
06/11	Danish Marine Mammal Society Annual Symposium Presentation by NAMMCO/FW <i>"Challenges facing marine mammal management in the new millennium"</i>	Online	FW (invited)	4

8.3 SOCIAL MEDIA

An extended summary of the activity on the NAMMCO Facebook and Twitter pages 2019–2020 is summarised in *Appendix E. Reports from Outreach Events organised or attended by the Secretariat in 2020*.

8.3.1 Facebook

Posts on Facebook during 2019 and 2020 have included the weekly "Fun-fact Friday" posts, announcements of new species pages and news on the website, new articles published in the NSP, dissemination of scientific articles with NAMMCO scientists as co-authors, as well as scientific articles relevant to NAMMCO's work (with all posts cross-linking to the NAMMCO website).

As of 1 January 2021, the NAMMCO Facebook account had 1,983 page likes and 1,951 followers. This means that the account received 729 new followers in 2020, and 786 new likes. The top three Facebook posts of 2020 (measured in terms of how many people were reached by the post) ranged between 27,641 and 107,518 users. This included marine mammal facts and the announcement of the publications of an article within Volume 11 of the NAMMCO Scientific Publications. The most liked post was a Fun Fact Friday post on humpback whales inspired wind turbines prototypes, which received more than 2,100 likes and was shared over 500 times.

8.3.2 Twitter

Although NAMMCO has a Twitter account, activities on this platform are not prioritised and receive less time and attention than Facebook. Tweets included announcements of new articles in the NSP, dissemination of articles with NAMMCO scientists as co-authors, announcement of website news, retweets of relevant information and activities of organisations with whom NAMMCO fosters external relations.

The highest number of re-tweets on a NAMMCO post (on marine mammal research) was 14. The number of followers and engagements with NAMMCO through its Twitter account have increased in 2020. As of 1st January 2021, the [NAMMCO sec](#) Twitter account had 412 followers (an increase of 122 new followers from 2019).

9. CATCH DATABASE

The database was updated in in 2020 with the data received from Member Countries in their National Progress Reports 2019. Data from the 2020 reports will be updated when all National Progress Reports 2020 have been received.

10. INFORMATION REQUESTS

Throughout the year, various informal requests are made to the Secretariat to provide information by students, educational institutes, RFMOs, Member Country representatives or other organizations, as well as the media. These requests are answered to the best of the ability of the Secretariat, or when relevant, forwarded to representatives from the Member Countries.

IUCN requested available abundance estimates for bottlenose whales to inform the IUCN Red List assessors and reviewers. The Secretariat forwarded the latest published estimates from the NASS surveys.

Responding to requests from the **FAO Regional Secretariats Network**, NAMMCO has contributed to two (April and November) RFABs surveys on the impacts of COVID-19 on fisheries and aquaculture.

Responding to a request from **FAO**, NAMMCO provided an update of the [information about NAMMCO](#) contained on the FAO [Regional Fishery Bodies website](#).

11. PUBLICATIONS

11.1 NAMMCO REPORTS

A link to the NAMMCO reports that have been published in 2019 and 2020 can be found in the two tables under point 3.1. *NAMMCO Meetings*.

11.2 NAMMCO SCIENTIFIC PUBLICATIONS

Volume 11 of the NAMMCO Scientific Publications series, with the first scientific article published in November 2018, was finalised in December 2020:

G. Desportes, R. Guldborg Hansen and **D. G. Pike**. **Sightings Surveys in the North Atlantic: 30 years of counting whales**. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.11>

Volume 11 deals with the results of NASS 2007 and 2015, the associated Norwegian mosaic surveys 2002–2007, 2008–2013, 2014–2018, and the Canadian High Arctic Cetacean Survey 2013. This volume provides survey specific results as well as 30-year trends of abundance for several cetacean species. The publication of this volume means that all sightings data of the 1987–2015 NASS series have now been analysed and published. This is indeed a milestone, rounding up 30 years of counting whales, and the publication of this volume marks the end of an era.

Besides a Preface and an Introduction, Volume 11 includes 12 research articles, as well as two technical notes—one providing the overview of what are considered to be the best estimates for each species/area/survey year. Members of (or affiliated to) the Secretariat were co-authors in 10 of the 15 publications of Volume 11. The list of these publications is provided in *Appendix F. Publications from NAMMCO Authors in NSP Volume 11*.

11.3 PUBLICATION IN SCIENTIFIC JOURNALS

The NAMMCO Secretariat and scientists affiliated with NAMMCO have authored and co-authored a number of scientific articles in 2019 and 2020. Additional articles have also been submitted for publication and are currently undergoing peer-review or are in press. The titles and references of these published or submitted articles are provided in *Appendix G. Publications in Other Scientific Journals*.

12. NAMMCO INTERNSHIP PROGRAMME

The NAMMCO internship program started in November 2017. It has proven to be a very positive and useful experience for the Secretariat and the selected candidates. It has provided the Secretariat with substantial additional human resources and expertise, e.g., in technical and legal domains, and helped to alleviate the demanding workload for the permanent staff. Having interns that are able to carry out various administrative or technical duties in the daily work of the organisation (e.g., uploading documents, formatting articles etc), creates more time for the permanent staff to focus on tasks requiring higher levels of expertise. Bringing new people into the organisation on a regular basis, has also brought new life, ideas, energy, motivation, and creative input to the otherwise small Secretariat.

Since 2020, the ability to have an overlap in the time periods of the interns has supported continuity in the handover of their duties, with minimal input from the Secretariat, as outgoing interns instruct those incoming in some of the more technical aspects of their work (e.g. website editing). Although the interns remain under supervision of the permanent staff during their whole internship, this overlap

increases the level of technical support in the Secretariat, while reducing the time used by permanent staff on induction and orientation processes.

All interns contribute to the day-to-day work of the Secretariat, in particular helping to prepare for any meetings of the Commission. They have also been given responsibility for public outreach activities on social media, by creating posts for the Facebook and Twitter sites of NAMMCO, including the *Fun Fact Friday* posts. This is carried out under the supervision of the Scientific Secretary and has proven to be very beneficial for growing the NAMMCO community and the audience for our activities. The Facebook posts have often been complimented, including by senior scientists, for their diverse and interesting content. The posts are also regularly shared by other organisations working with marine mammals. Interns have also created species pages for the website under the supervision of the General Secretary.

The interns that have served at NAMMCO during 2019 and 2020 are:

Sam D.G. Smith (UK): MSc in Marine Biology and Zoology, Bangor University (UK)

Sam focused on hunting methods and conducted a review and comparison of welfare assessment parameters in marine and terrestrial species. He was involved in the organisation of the 1st Marine Mammal Student Symposium. He created the [sperm whale](#) species page and conducted a demographic study of the Scientific Committee and its working groups.

Sabine S. Hansen (DK): Cand. Scient. in Ecology and Evolution, Copenhagen University (DK)

During her internship, Sabine reviewed the distribution of lesser-known species in NAMMCO waters (in particular through analysing strandings) and created several pages for uncommon species (beaked whales (general [genus information](#), and four species pages), [striped dolphins](#) and [Risso's dolphins](#)). She updated the catch and strandings database. She was involved in the preparation of the material for the NAMMCO booth at the World Marine Mammal Conference (December 2019) and participated at the conference. She co-organised the 2nd Marine Mammal Student Symposium.

Bartal T. Kamban (FO): Master in European Ethnology, Copenhagen University (DK)

Bartal focused on different tasks related to the meetings of the BYCELS, CHM and CIO Committees. He translated documents across Norwegian, Danish, Faroese and English languages and created a new website page on [laws and regulations](#), with translations where available or summaries in English.

Mana Tugend (FR): LL.M. in Polar Law, University of Akureyri (IS)

Due to the COVID-19 situation, Mana's internship started with virtual interactions. She moved to Tromsø on 16 July 2020. During her internship, Mana has been heavily involved with copy-editing and formatting [Volume 11](#) of the NAMMCO Scientific Publications, including the preface, the introduction, 9 articles and 2 notes. She prepared a review of legal policies focusing on marine plastic pollution in the North Atlantic and updated the website on [Pollution](#), specifically updating the site on [Marine Debris](#) and [Microplastics](#). She also helped updating species pages, notably the [harbour seal](#). She is involved with the organisation of the 3rd Marine Mammal Student Symposium that will be held in April of 2021.

13. FIRST PERFORMANCE REVIEW OF NAMMCO

NAMMCO Council 27 (2019) was presented with the report and the conclusions and recommendations of the Independent Panel that carried out the first Performance Review of the organisation.

Council 27 established an *ad hoc* Working Group (PRWG) led by the Chair of Council to review the recommendations in the Performance Review Report. The PRWG has responsibility to discuss the cross-cutting and overarching aspects of the conclusions and recommendations and propose to the Council relevant follow up actions. To inform its work, the PRWG has sought the views of NAMMCO Committees and working groups on the recommendations specific to their areas of work.

The PRWG met for the first time in June 2019 and formulated specific requests to the Committees and BYCELS, which considered these requests at their meetings in 2019 and provided responses to the PRWG. The Management Committees, which did not meet in March 2020, considered the PRWG request at a dedicated meeting in February 2021. The PRWG has considered the responses provided by the Committees and consolidated its response and advice to the Council. The response of the PRWG will be considered by the Council at its annual meeting in March 2021.

14. FINANCIAL STATUS UPDATE

The audited accounts for 2019 closed with a surplus of NOK 7,798 instead of the deficit of NOK 1,024,055 foreseen in the budget adopted by the Council at NAMMCO 26. This was largely due to the carrying over to 2020 of the cost of transferring the pension scheme. The general reserve increased to NOK 1,181,312 compared to the budgeted NOK 149,459. The Council approved the 2019 audited accounts, (available [here](#)) at the Council-HoDs meeting on 26 March 2020.

The 2020 fiscal year has been a challenging one due to the COVID-19 pandemic. With all non-essential travel being cancelled, for the health and safety of its staff and members, in person meetings hosted, supported and attended by the NAMMCO Secretariat have been either cancelled or held virtually. The NAMMCO budget for 2020 was set at NOK 5,004,972 with expenditures projected to NOK 5,016,770, and an operating balance of NOK -11,798 (see Budget 2020 as adopted by the Council at NAMMCO 27 in *Appendix H. Budgets and Accounts 2019 and 2020*).

The audited accounts for 2020 closed with a surplus of NOK 900, instead of the deficit of NOK 11,798 foreseen in the budget adopted at NAMMCO 27. The general reserve increased to NOK 1,182,214 compared to the budgeted NOK 137,661. Although the cost of transferring the pension scheme was carried over from 2019 to 2020 and should have impacted the results, the savings due to COVID-19 balanced the cost of the transfer (see Accounts 2020 in *Appendix H. Budgets and Accounts 2019 and 2020*).

The 2020 Audited Accounts and Financial Statements can be found in document NAMMCO/28/05.

APPENDIX A. SECRETARIAT OBSERVER REPORTS – MEMBER COUNTRY AND IGO EVENTS ATTENDED IN 2019

1. Report of NAMMCO Observer (SEC) to the 5th meeting under the Collective Arrangement

The fifth CollAr meeting was held 28–29 May 2019 in Gothenburg, Sweden, at the invitation of the Swedish Ministry of Environment. It was attended by representatives of OSPAR and NEAFC Contracting Parties and Secretariats. Representatives of FAO, HELCOM, ICCAT, ICES, NAMMCO and UNEP participated as observers and to present their scope of work.

Desportes attended on behalf of NAMMCO. This was the second time that NAMMCO was represented at a meeting under the '**Collective Arrangement between competent international organisations on cooperation and coordination regarding selected areas in areas beyond national jurisdiction in the North-East Atlantic (CollAr)**', which is a formal agreement between legally competent authorities managing human activities in the areas beyond national jurisdiction in the North-East Atlantic.

The foremost objective of the CollAr is to facilitate cooperation and coordination on area-based management between legally competent authorities, promoting the exchange of information on each other's activities and achievements and taking into consideration all conservation and management measures adopted in relation to the North-East Atlantic. It also contributes to delivering an ecosystem approach to the management of all relevant human activities in the marine environment.

Information regarding initiatives of relevance to the CollAr were shared by OSPAR and NEAFC, as well as the other organisations participating in the meeting. These updates concerned (among other things): the promotion of the CollAr arrangement (discussed at length by OSPAR, NEAFC, FAO and UNEP –more details below); the ongoing negotiations on an international legally binding instrument on biodiversity beyond national jurisdictions (BBNJ) (including information on the STRONG High Seas Project); activities related to marine litter and derelict gear; vulnerable marine ecosystems and a review of related fisheries closures by NEAFC; development in the nomination proforma for the 'North Atlantic Current and Evlanov Seamount Marine Protected Area' (NACES MPA) by OSPAR together with a presentation of the critical review by ICES and updates related to specific groups of species.

The CollAr is extensively showcased and promoted by OSPAR and NEAFC as well as FAO and UNEP. It is highlighted as a regional arrangement that is successful in establishing effective collaboration between Regional Seas Agreements and regional fishery bodies/regional fisheries management organisations (RFBs/RFMOs) and thus supporting a cross sector dialogue between the fisheries/use and environmental/conservation sides of marine management.

Under **Item 2.4 Developments on the expansion of the collective arrangement to other competent organisations**, NAMMCO made an intervention to underline that NAMMCO Member Countries believe in and strongly support regional cooperation and management. They therefore positively viewed the possibility of establishing a Memorandum of Understanding with OSPAR and joining the Collective Arrangement, however more time was needed for further internal consultations. The interventions are reported as point 2.26 and 2.27 in the Aide Memoire of the 5th Meeting under the CollAr.

The summary record of the meeting, aide memoire and key actions resulting from the meeting, as well as the list of participants and agenda, can all be found [here](#).

2. Report of NAMMCO Observer (SEC) to the 36th Annual Meeting of NASCO

Desportes and Winsnes attended the 36th Annual Meeting of the North Atlantic Salmon Conservation Organization (NASCO), held in Tromsø, Norway 5–7 June 2019.

Parties highlighted ongoing work to assess the health of wild Atlantic salmon stocks and better understand the threats and pressures they face.

The meeting was particularly significant given that 2019 was the focal year of the International Year of the Salmon (IYS) initiative. IYS's aim was to bring people together to share and develop knowledge more effectively, raise awareness and take action to establish the conditions necessary to ensure the resilience of salmon and people throughout the Northern Hemisphere. Highlights from the [State of Salmon report](#) were presented. The report is a key IYS outreach and education tool for several audiences.

The annual meeting was preceded by a two-day multi-disciplinary Symposium featuring a series of talks and discussions related to 'Managing the Atlantic salmon in a Rapidly Changing Environment – Management Challenges and Possible Responses'. This symposium, not attended by Desportes or Winsnes, went beyond a typical series of scientific presentations by incorporating various perspectives on the value of Atlantic salmon and opportunities to raise awareness and increase the resiliency of populations throughout their range. Presenters challenged participants to incorporate new approaches and ideas as they moved forward with conservation, management and science initiatives. The Symposium Steering Committee presented a set of recommendations to NASCO related to how the organization and its members can work to ensure salmon and their habitats are conserved and restored.

NASCO continues to look for ways to improve implementation of its agreements on fisheries management, habitat protection, and the impacts of aquaculture on wild Atlantic salmon.

3. Report of NAMMCO Observer (SEC) to the Norwegian Workshop on Marine Mammal Bycatch Monitoring and Mitigation

Desportes attended this workshop on behalf of NAMMCO. The workshop was interesting in the way that it uniquely gathered a wide range of by-catch stakeholders, including scientists, statisticians, modellers, fishers, managers and gear and pinger manufacturers.

The workshop provided a review of the state in the art in Norway regarding by-catch of harbour porpoises, in terms of by-catch monitoring, estimation and mitigation efforts. Scientists from the US, UK and Denmark all shared their experience in these domains. The group provided advice to Norway on by-catch estimation and modelling, as well as optimisation of sampling design and effort, and pinger deployment design, modelling and mitigations.

4. Report of NAMMCO Observer (SEC) to the Meeting on Sustainable Use (SU) of Aquatic Living Resources

Desportes attended this meeting on behalf of NAMMCO. She was invited with the specific aim of presenting and putting in perspective the results of the pilot life cycle analysis (LCA) study initiated by NAMMCO and presented at Council 27 "*Local seal or imported meat? Sustainability evaluation of food choices in Greenland, based on Life Cycle Assessment*". Her presentation "**Impact of food choices**" was well received and generated many questions, as well as requests for more information from several countries.

Over 45 countries and several fisheries organisations were represented at the two-day closed meeting. The meeting reviewed the current situation regarding sustainable use of aquatic resources and the developments occurring on a regional and global basis in terms of use, conservation, regulations and restrictions, and campaigns. The primary focus of the meeting was, however, Japan's withdrawal from ICRW/IWC (effective from 1 July 2019) and the resumption of commercial whaling activities in its waters. The future actions of Japan and other countries supporting sustainable use, as well as the consequences of different options for the IWC itself, were discussed at length. Japan underlined its willingness to continue its cooperation and contribution to the scientific work of the IWC. The development of the newly established Japanese catch limit (CL) was succinctly presented (although neither the report of the Japanese CL group nor the report of the external review group were made available to the participants).

The meeting reaffirmed the sustainable use of aquatic living resources based on scientific evidence as a universal principle. Recommendations from the meeting were agreed upon and provided to ministers and fisheries management bodies of sustainable use countries.

5. Report of NAMMCO Observer (SEC) to the FAO By-Catch Workshop

Following the organisation of the *Expert Workshop (EWS) on Means and Methods for Reducing Marine Mammal Mortality in Fishing and Aquaculture Operations* in March 2018, the FAO convened the *Expert Meeting (EM) to Develop Technical Guidelines to Reduce Bycatch of Marine Mammals in Fisheries* in September 2019, to which the NAMMCO Secretariat was invited. Desportes attended this workshop on behalf of NAMMCO.

The principal output expected from the EM was an agreed draft of the provisional “**FAO Technical Guidelines for Responsible Fisheries: guideline to reduce bycatch of marine mammals in capture fisheries**” requested by the FAO. These technical guidelines should support the implementation of the FAO 1995 Code of Conduct for Responsible Fisheries.

Prior to the meeting, draft guidelines had been distributed to the participants. Under the agenda point “General discussion on the draft Technical Guidelines”, Desportes conveyed NAMMCO’s general evaluation of the draft guidelines, with the main criticisms relating to a) the use of partial and subjective vocabulary (particularly in the introduction) for defining removals and some mitigation methods, and b) the length of the document, and particularly the amount of text that had little direct relevance for by-catch mitigation and was rather focused on conservation/protection of marine mammals (e.g. a lengthy review of national instruments in some countries). These features made the draft far from an impartial instrument and was lacking focus for being technical guidelines. These same points were raised by several other participants. (see points 10 & 11 of the meeting report). During the meeting, Desportes also made numerous additional interventions related to specific points and participated in the ad hoc group tasked with revising the draft decision-making tool produced by the 2018 Expert Workshop. The meeting report (with the draft technical guidelines in Appendix C) was published as FAO Fisheries and Aquaculture Report No. 1289 and is available [online](#).

The technical guidelines, which took two years to produce, became available on January 2021 under the FAO series on Technical Guidelines for Responsible Fisheries, with the title *Fishing Operations. 4. Guidelines to prevent and reduce bycatch of marine mammals in capture fisheries* <http://www.fao.org/documents/card/en/c/cb2887en>. These guidelines were presented to the 34th Session of COFI.

6. Report of NAMMCO Observer (SEC) to the meeting of the Sjøpattedyrutvalget

Wickson and Winsnes attended this meeting on behalf of NAMMCO. This is an annual meeting for all Norwegian actors dealing with marine mammals. Information on all research and management issues are given and discussed, and the meeting provides recommendations to national authorities. It is attended by representatives from the ministry, Directorate for Fisheries, and relevant research institutes. Although this is a national forum, NAMMCO has been invited to participate in recent years.

Winsnes gave a presentation on “Hvilke aspekter ved dyrevelferd knyttet til fangst og bifangst blir behandlet i NAMMCO og hvordan er arbeidet organisert”.

7. Report of NAMMCO Observer (SEC) to the Norwegian meeting of the BBNJ

The meeting, organised by the Norwegian delegation involved in the BBNJ process, was held in collaboration with the faculty of the Law of the Sea at UiT the Arctic University of Norway on 27th November 2019. Hansen, Kamban and Winsnes attended the meeting on behalf of NAMMCO.

The objective of the meeting was to sought input and inspiration prior to the third and final UN negotiation meeting planned for March 2020 in New York. In addition to the negotiating team and representatives of the Ministry of Foreign affairs, participants also included representatives from academia, the Fridtjof Nansen Institute, the Norwegian Shipowners’ Association and Greenpeace.

APPENDIX B. SECRETARIAT OBSERVER REPORTS – MEMBER AND IGO EVENTS ATTENDED IN 2020

1. Report of NAMMCO Observer (SEC) to the RCN-Arctic Ocean Decade Workshop

The Workshop was held in parallel with the Arctic Frontiers Conference on 29 January 2020 in Tromsø, Norway. Desportes and Wickson attended the workshop on behalf of NAMMCO and each participated in the plenary and in two different sub-sessions.

The UN Decade of Ocean Science for Sustainable Development 2021–2030 presents a unique opportunity to deliver scientific knowledge and ensure that ocean science can support countries' actions to sustainably manage the ocean and achieve the 2030 Agenda for Sustainable Development. As part of a global consultation process in preparation of the UN Decade, two Arctic workshops will be held to provide opportunities to further discuss, prioritise and formulate proposals for Arctic initiatives to be framed under the UN Decade. The report from the workshop is available [here](#).

2. Report of NAMMCO Observer (SEC) to the AMAP Climate Expert Group

The meeting was held online on 20–23 April 2020. Wickson participated on behalf of NAMMCO.

The first day of the meeting focused on presentations and discussion of each of the draft chapters of the 2021 climate update report. There was then a break of one day to allow time for potential discussions among authors and contributors to the chapters, after which the second day, was devoted to cross-chapter discussions and identification of the key messages, etc. On the third day, the meeting reviewed the development of future work for the Climate Expert Group, beginning with a discussion of a planned joint assessment on climate change impacts on Arctic ecosystems with CAFF and an assessment of societal implications of climate change in the Arctic.

3. Report of NAMMCO Observer (SEC) to the 66b IWC Scientific Committee Meeting

The meeting was held online on 12–24 May 2020. Desportes and Wickson participated on behalf of NAMMCO. They followed the sub-committees and agenda points, of relevance to NAMMCO work.

Desportes and Wickson participated in the meetings of the following sub-committees and standing working groups: Sub-committee on Aboriginal Subsistence Whaling; Non-deliberate Human-Induced Mortality of Cetaceans, Environmental Concerns, Small Cetaceans, Conservation Management Plans; Databases and Related Issues; Standing Working Group on Abundance estimates, stock status and international cruises, Ad hoc Working Group on Databases and related issues.

4. Report of NAMMCO Observer (SEC) to the Friends of Ocean Action & CBD Meeting

The Friends of Ocean Action and the Convention on Biological Diversity (CBD) organised a webinar on *Protecting the Ocean's Most Important Places - Progress towards conserving 10% of the ocean by 2020 and what comes next?* online on 9 July 2020.

The webinar provided an update on progress towards achieving the 10% target of Sustainable Development Goal (SDG) 14 and opportunities to fill remaining gaps. It stimulated a discussion on an ambition for a new global target for ocean protection for 2030. The webinar provided a critical and timely opportunity to discuss global targets and goals for area-based conservation, including through marine protected areas (MPAs) and other effective area-based conservation measures (OECMs), as well as how to ensure that nature and the ocean remain high on the global agenda as essential to ensuring a safer and more resilient future for the planet and people.

5. Report of NAMMCO Observer (SEC) to COFI 34 Virtual Dialogues

FAO hosted a series of [virtual dialogues](#) examining **Fisheries and Aquaculture Governance and Development** on 15–17 July 2020: *Virtual Dialogues on the Path to the 34th Session of the FAO Committee on Fisheries*. Desportes and Winsnes attended the following sessions.

- * [What does the Post 2020 Global Biodiversity Framework mean for Fisheries and Aquaculture?](#) (15 July, GD & CW)
- * [Fisheries and aquaculture sustainability: lessons from SOFIA 2020](#) (16 July, GD & CW)
- * [Illuminating Hidden Harvests: The Contributions of Small-Scale Fisheries to Sustainable Development](#) (17 July, GD)
- * [Impacts of COVID-19 on fisheries and aquaculture: Effects, good practices and recommendations](#) (17 July, CW)

6. Report of NAMMCO Observer (SEC) to the 9th MOP of ASCOBANS

The meeting was held online on 7–11 September 2020. Desportes, Wickson and Tugend participated in different sessions on behalf of NAMMCO, following agenda items of direct relevance to NAMMCO.

Desportes presented the key points contained in the [Opening Statement](#) from NAMMCO, which underlined the work carried out by NAMMCO, including the joint NAMMCO/Institute of Marine Research workshop on the status of the Harbour Porpoise in the North Atlantic (report available to the meeting), the evaluation of harbour porpoises by-catch, a review of the killer whales in the North Atlantic, and an account of 30 years of sighting surveys, which appeared in Volume 11 of NAMMCO Scientific Publications, as well as the first Performance Review of the Organisation by an independent panel, of which the report and conclusions were available online.

One of the sessions of most interest to NAMMCO was that on the three ***Conservation Plans related to harbour porpoises*** (Baltic; Western Baltic, Belt Sea and Kattegat; North Sea). The NAMMCO/IMR workshop was mentioned multiple times during this session. During the presentation by workshop participant Peter Evans on the Conservation Plan for the North Sea, the map of proposed management areas and the population assessment from the workshop were also shown.

Of potential interest to NAMMCO was that ***Resolution 8.5 on the monitoring and mitigation of small cetacean by-catch*** was revised to specifically request parties and non-party range states to work nationally and regionally to improve the quality and reliability of fishing effort data and monitoring programs for vessels *irrespective of size* to allow for more accurate determination of by-catch mortality. It was also added that *socio-economic information* should be collected alongside monitoring and mitigation actions to ensure that the solutions proposed and implemented take social and economic considerations into account.

There was also a relevant session on ***small cetacean stranding response***, which presented a new reference document with best practice approaches to stranding investigation across European networks (specifically for post-mortem investigation and tissue sampling). The document emphasises harmonisation of data and provides a starting up guide. Next steps on this topic for ASCOBANS include the development of an online repository of specialist techniques, reference centres and expert contacts, as well as linking to parallel initiatives, such as those of the IWC and the Global Stranding Network.

NAMMCO voiced its interest to follow the work of the Intersessional WG on Beaked Whales.

7. Report of NAMMCO Observer (SEC) to the BBNJ Intersessional Work

On 14th September 2020, Tugend attended the virtual briefing connected to the Intersessional Work on the negotiations of an agreement for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction (BBNJ). The process connected to the Intersessional Work occurred online on the Teams platform and consisted of discussions targeting the different topics to be addressed by the BBNJ instrument, namely:

- Marine genetic resources
- Area-based management tools
- Capacity building and technology transfer
- Environmental impact assessment

8. Report of NAMMCO Observer (SEC) to the CAFF Workshop and Board Meeting

Desportes and Tugend attended the CAFF Workshop and Board Meeting held online, 14–17 September 2020. The Workshop was held in preparation of the Board Meeting and to assess the current situation with respect to actions taken for biodiversity in the Arctic. The achievements of the Actions for Arctic Biodiversity (AAB) 2013–2021 and the steps following the completion of the AAB were discussed. The workshop's goal was to receive guidance, input and content for the upcoming action plan.

The Board Meeting included presentations connected to the achievement of the AAB and discussions about future avenues for the conservation of Arctic fauna and flora.

9. Report of NAMMCO Observer (SEC) to the IWC Conservation Committee (CC)

The meeting was held online on 28 September-1 October 2020 and addressed issues that needed attention to progress or for which decisions were required before the end of 2020. Winsnes attended the items relevant to NAMMCO.

The meeting focused on the Committee's Strategic Plan, the conservation management plans (with the development of Handbook and Strategic plans for each), identification of anthropogenic stressors (marine debris, climate change, chemical pollution), the by-catch mitigation initiative and ship strikes.

The meeting also discussed climate change, chemical pollution, cetaceans and ecosystem functioning, the SC initiative for small cetacean's conservation research and the need for a taskforce team focusing on providing effective advice when populations are in danger of significant decline that may eventually lead to extinction. The group agreed to establish a small WG to review how to improve the IWC response where populations are in decline for small, threatened populations. The Online Whale Watching Handbook <https://wwhandbook.iwc.int/en/>, currently available in three languages (English, French, Spanish), was presented.

The CC ambitions are high with corresponding comprehensive demands for both financial and human resources. Concerns were expressed that the voluntary contribution fund was not meeting the financial demands. It was noted that the implementation of some of the activities will have implications for the Secretariat staff resources and that this must be considered when designing or developing work plans and looking for funding.

NAMMCO could consider taking inspiration from the database of recommendations (DoR) which is under development to be used when reviewing the implementation of the IWC's own recommendations.

15 Report of NAMMCO Observer (SEC) to the 34th AMAP Working Group Meeting

The 34th AMAP WG meeting was held online 6–8 October 2020. Wickson attended from the Secretariat.

Following the opening and welcome, the second session focused on presenting the status of deliverables in development. Document drafts (drafts of summaries for policy makers) were presented by the expert groups on persistent organic pollutants (PoPs) and climate change, Mercury, Methane, Human health, Climate, Litter and Microplastics. Work plans for the coming years from groups working on contaminants (including radioactivity and connections to wildlife and human health), climate (including collaboration with CAFF on ecosystem impacts and planned work on societal implications), and litter and microplastics were also presented and discussed. The final sessions of the meeting focused on AMAP's work on how to best enhance engagement with observers and the permanent participants contributing local and indigenous knowledges.

The work being done on mercury has particular relevance to marine mammals. A draft summary for policy makers on this topic was available to the meeting but it still going through peer review and the recommendations in very preliminary form. A full draft will not be available before 2021.

An interesting proposal was tabled, that in addition to summaries for policy makers, summaries for society (e.g., of around 2 pages) be produced for all assessment reports. It will be further discussed and considered. This might also be a relevant initiative for NAMMCO.

16 Report of NAMMCO Observer (SEC) to the meeting of the Sjøpattedyrutvalget

The meeting of the Norwegian Marine Mammal Advisory Board was held 22–23 October 2020 at the Framcenteret in Tromsø, Norway. The NAMMCO Secretariat participated, as this meeting provides up to date information on the issues of marine mammal management in Norway. Although this is a national forum, NAMMCO has been invited to participate in recent years.

This is an annual meeting attended by representatives from the ministry, directorate for fisheries, and relevant research institutes dealing with marine mammals. Information on all research and management issues are shared and discussed, and the meeting provides recommendations to national authorities.

From this meeting, various clarifications regarding how the Norwegian quota are set and used were provided, which could be relevant information to include on the NAMMCO website.

Other information noted as absent from the NAMMCO website is an explanation of the processes (beyond NAMMCO management advice) leading to the national management regulations or recommendations (including advisory boards, public hearings, final decisions, etc).

Information was provided at the meeting on new Norwegian research results and publications. It was noted that there is a need to find better avenues to ensure that the Secretariat, and through this, the NAMMCO website is continuously updated with new research from Members Countries.

17 Report of NAMMCO Observer (SEC) to the CAFF CBMP – Marine

Desportes attended the meeting held online on 3 & 5 November 2020.

The purpose of the meeting was to assess the current situation with respect to actions taken for biodiversity in the Arctic and to develop a new work plan for CBMP-Marine to be forwarded to the CAFF Board Meeting for its February 2021 meeting, given the achievements of the Actions for Arctic Biodiversity (AAB) 2013–2021.

The work plan included the update of the SAMBR report. The best ways to produce these updates for the different Expert Groups were discussed based on the update developed during summer 2020 by the Bird Expert and the Marine Mammal Networks. NAMMCO had provided input to the latter. The CBMP Strategic Plan was discussed and the advances made considered. Collaboration with other Arctic Council Working Groups was discussed.

18 Report of NAMMCO Observer (SEC) to the CAFF Marine Mammal Expert Network

Desportes attended the meeting of the CAFF Marine Mammal Expert Network, held online on 4 November 2020.

The group was asked to summarise its efforts and plans for contributing to the assessment of the achievements accomplished during 2013–2021. It should also propose its action plan for the next period. The Marine Mammal Expert Group notably expressed its interest in the plans of NAMMCO to conduct a review, if not an assessment, of bearded and ringed seals no later than 2022. It expressed its interest in a pan-Arctic review and to convene in cooperation with NAMMCO a genetic review of the two species, which was considered to be very much needed and timely.

19 Report of NAMMCO Observer (SEC) to the ASCOBANS Intersessional Working Group on Beaked Whales (IWGBW)

The first meeting of the IWGBW was held online on 17 November 2020 and Wickson participated.

The group discussed the ToRs for the group, which was created to look at the relationship between noise disturbance and mass strandings of beaked whales. It was noted that the number of strandings

had increased in recent years across Europe. One of the challenges for getting a reliable view of the situation and the possible impacts of noise was the secrecy around naval activities, which made it impossible to have a full overview of activities and potential impacts and correlations with mass stranding events. The group considered it important to make navies aware of the concern, and to bring the issue to the attention of a broader audience.

Wickson brought to the attention of the group the new beaked whale abundance estimates and information published in Volume 11 of the NAMMCO Scientific Publications. There were new abundance estimates for both the Iceland-Faroes and the Norwegian areas, as well as information on areas where beaked whales are present, but too few data points for generating an abundance estimate.

APPENDIX C. STATISTICS OF ACTIVITIES ON THE NAMMCO WEBSITE AND SOCIAL MEDIA FOR 2019-2020

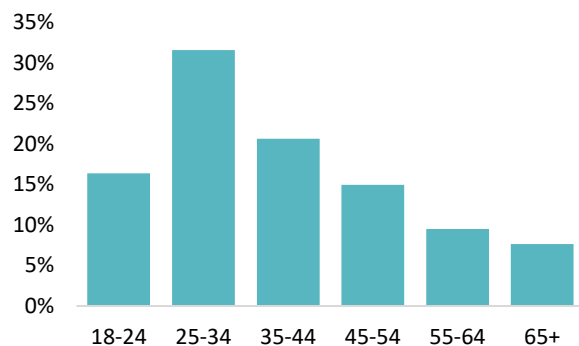
Unique users:

2018: (1 Jan – 31 Dec)	9 597
2019: (1 Jan – 31 Dec)	19 747
2020: (1 Jan – 31 Dec)	16 410

Men: 48.6 %

Women: 51.4 %

Age Distribution



Most popular pages:

Front page	15 461
About us	5 285
Atlantic Walrus	3 607
Narwhal	3 216
Council	2 508
Library	2 374
Pilot whale	2 360
Marine Mammals	2 194
Blue whale	2 154
Fin whale	2 107

Web users by country:

US	29.2 %
UK	9.8 %
Norway	7.3 %
Canada	6.8 %
Denmark	3.2 %
Australia	2.9 %
Japan	2.4 %
Germany	2.3 %
Iceland	1.7 %
Greenland	1.5 %
Faroe Islands	1.4 %

How did they find NAMMCO?

Organic search	68.2 %
Direct	17.3 %
Social media	10.3 %
Referral	4.2 %

Which devices?

Computer	62.3 %
Mobile	32.0 %
Tablet	5.7 %

1. NAMMCO Website

2. Facebook

	Likes	867
2019	Followers	843
	Likes	1 197
2020	Followers	1 222
	Likes	1 983
2021	Followers	1 951

Men: 45 %
Women: 53 %

Top 10 page likes by country:

Faroe Islands	243	Greenland	114
Norway	170	Spain	97
Denmark	156	France	82
USA	141	Canada	76
UK	126	Mexico	70

Top 3 posts (in terms of reach) between January 2019 and January 2021:

23/10/20	Same as most liked post. See below.	107 518 reached (organic) 3,562 Reactions 8,178 Post clicks 502 Shares
03/07/20	Did you know that thousands of beluga whales were once rescued by classical music and an icebreaker?! In 1984, a large group of belugas were trapped for several months in the ice of Senyavin Strait in the Bering Sea. The white whales had followed a shoal of fish into the strait when it was open but as the conditions changed and closed in around them, found themselves trapped in ice too thick to breach and too vast to negotiate with a single breath. In an unusual effort to save them, an ice-breaker was summoned to clear a path through the ice. However, the whales were so exhausted and weakened from their months of entrapment, and frightened by the noise of the icebreaker, that they refused to follow the ship before the ice closed up behind it again. One crew member then had the bright idea to try playing different types of music to them. To the crew's delight, the pod of belugas responded to the classical music and began to slowly follow the ship out to sea and back to freedom as it was playing.	31 210 reached (organic) 1,901 Reactions 2,047 Post clicks 238 Shares
27/05/20	We are happy to announce the early online publication of a fourth article in Volume 11 of the NAMMCO Scientific Publications! "Oceanic Drivers of Sei Whale Distribution in the North Atlantic" by Lucy Houghton, Nadya Ramirez-Martinez, Bjarni Mikkelsen, Gísli Víkingsson, Thorvaldur Gunnlaugsson, Nils Øien and Philip Hammond. This article investigated the oceanic drivers of sei whale distribution in the central and eastern North Atlantic and explored how distribution may have changed over almost three decades. The models used could help us understand the possible future distribution of sei whales under the environmental conditions predicted by climate change models. The article predicts the highest densities of sei whales in the Irminger Sea and over the Charles-Gibbs Fracture Zone; a pattern driven by large negative sea surface height, deep water (>1500m) and polar-temperate SST (5-12°C). There was some inter-annual variability in the predicted distribution, with an apparent northward expansion in distribution consistent with prey species responding to ocean warming.	27 641 reached (boosted) 264 Reactions 487 Post clicks 13 Shares

Most liked post between January 2019 and January 2021:

#FunFactFriday

Did you know that humpback whales have inspired new wind turbine technology?

The humpback whale is a giant in the sea, yet it manages tighter turns than any other baleen whale. This is due to the tubercles (bumps) on the leading edges of its flippers.

Research found that humpback whale flippers have an angle of attack up to 40 percent steeper than that of a smooth flipper before stall (loss of lift) occurs. Tubercles change the distribution of pressure on the flippers so that some parts stall before others. Therefore, different parts of the flipper stall at different angles of attack, which gives the whale more freedom to attack at higher angles.

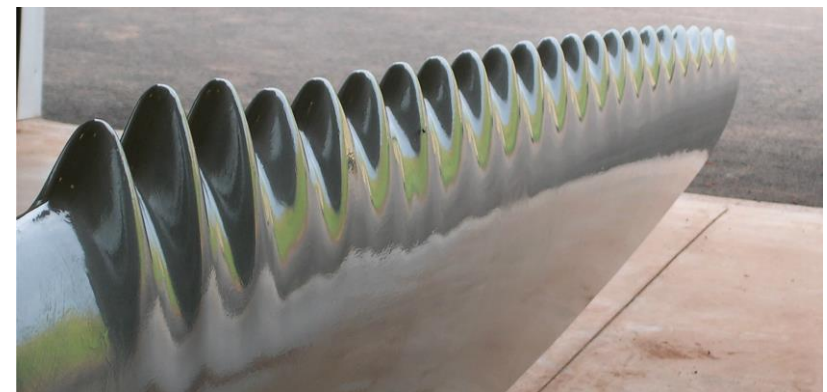
Prototypes of wind turbine blades mimicking humpback whales' pectoral fins have been created. Tests show that the turbines with tubercles generate the same amount of power at 16 km per hour that conventional turbines generate at 27 km per hour. Tubercles on the blade's leading edge enable it to capture more energy from the wind, but also reduce noise and increase its stability.

You can read more about this interesting biomimetic research & technology development here: <https://doi.org/10.1093/icb/icr016>

Are you eager to learn more about the fascinating humpback whale? Visit our species page: <https://nammco.no/topics/humpback-whale/>



Tubercles on a humpback flipper © thara58/Pixabay



Tubercle technology on a wind turbine blade © WhalePower

3. Twitter

2019	(Re)Tweets	102	Men:	41 %	Users by Country:	
	Followers	60			UK	23.5 %
	Likes	9			US	20.3 %
2020	(Re)Tweets	156	Women:	59 %	Canada	6.3 %
	Followers	290			Ireland & Norway	each 4.8 %
	Likes	434			Australia	4.6%
2021	(Re)Tweets	44				
	Followers	412				
	Likes	98				

Top 3 tweets

03/09/20	What do you get when you cross a Blue whale with a Fin whale? Interesting new research done on samples collected in #Iceland shows that you can sometimes get a #hybrid capable of reproductive success! https://onlinelibrary.wiley.com/doi/full/10.1111/eva.13091 #bluewhale #finwhale	3 008 impressions	83 total engagements 14 retweets 4 link clicks
11/03/20	“Population structure of bycaught harbour porpoise (Phocoena phocoena) in Norway”. An interesting article from our colleagues at the Institute of Marine Research (IMR). https://tandfonline.com/doi/full/10.1080/17451000.2020.1729992 #harbourporpoise #newresearch #bycatch #marinemammalscience #populationstructure	1 787 impressions	33 total engagements 2 retweets 0 link clicks
29/05/20	New Article: Distribution and Abundance of Cetaceans in Icelandic Waters over 30 Years of Aerial Surveys. Includes previously unpublished abundance estimates as well as how distribution has changed over the 30-year period. https://septentrio.uit.no/index.php/NAMMCOSP/article/view/4805 #Iceland #cetaceans #abundance	1 346 impressions	103 total engagements 5 retweets 39 link click

APPENDIX D. REPORTS FROM OUTREACH EVENTS ORGANISED OR ATTENDED BY THE SECRETARIAT IN 2019

1. Marine Mammal Student Symposium 2019

There are several institutions in Tromsø involved in marine mammal research, which are dispersed throughout the city (e.g. the Department of Arctic Biology, Norwegian College for Fishery Science and K.G. Jebsen Centre for the Law of the Sea at UiT, the Institute of Marine Research, the Norwegian Polar Institute, and various Masters programs). Masters and PhD students conducting marine mammal related projects are typically spread across these different institutes and have very little contact with one another.

In 2019, NAMMCO therefore took the initiative to arrange a Marine Mammal Student Symposium, where postgraduate students and other early career scholars working on marine mammals (including the interns at the Secretariat) could learn more about NAMMCO and its work, share their research, discuss common issues, make connections and network for future collaborations. The Symposium was co-arranged with UiT the Arctic University of Norway.

This one-day Symposium was held on 6th February 2019 and attracted over 60 attendees. A total of 15 students presented their work, including two participants from Oslo and Bergen. The presentations were divided into sessions on: Threats, Welfare/Diet, Physiology and Movement/Abundance, and Law of the Sea. After the student presentations, a world café exercise was run to facilitate group discussions and networking. The following topics were used to structure the exercise: “What are the biggest challenges connected to your work?”, “From all the talks given today, do you see any overlapping issues and/or potential for collaboration?” and “What do you imagine doing when you finish your current project/studies?”. The day closed with three invited guest lectures from experienced researchers. These were: “NAMMCO and International Law: What makes an organisation ‘appropriate’ for the conservation and management of marine mammals?” by Cardiff University’s Richard Caddell, “Responsible whale watching?” by UiT’s Anniken Førde, and “Ongoing research on walrus, beluga and bowhead whales” by the Norwegian Polar Institute’s Christian Lydersen.

The participating students were very satisfied with the Symposium (as indicated through a feedback survey) and thought that it should become an annual event. The student symposium was therefore run again (in a similar format with student presentations, facilitated interactive activities, and guest lectures) on 5th February 2020 with same success. A full report of the second symposium will be provided to Council next year as part of the overview of outreach activities taking place in 2020.

2. 2nd International Workshop on Beluga Whale Research and Conservation

The [2nd International Workshop on Beluga Whale Research and Conservation](#) was a follow-up to the first beluga workshop held in Valencia, Spain 10 years ago. This conference brought together indigenous peoples, scientists, wildlife managers and policy makers to bridge the gap between traditional knowledge, scientific research, aquarium husbandry, and wildlife management with the ultimate goal of developing a cohesive plan to promote beluga research and conservation.

NAMMCO was asked if they would be interested in sponsoring the event and chose to do so at the ‘Arctic Tern’ level, requesting in exchange that the results of the Global Review of Monodontids (GROM) (assembled by NAMMCO in March 2017) be circulated to all participants. In the end, the presentation of the GROM findings and conclusions on the conservation status of all beluga whales and narwhals throughout the Arctic became the [opening talk of the conference](#). The presentation was prepared in cooperation between the GROM Chair, R. Hodds, R. Reeves (participant to the GROM and also to the conference), and Desportes. The talk was given by R. Reeves as the Secretariat was not attending the conference.

3. 2nd International Science and Policy Conference on Implementation of an Ecosystem Approach to Management in the Arctic

The second International Science and Policy Conference on the Implementation of an Ecosystem Approach to Management in the Arctic had a specific focus on the integration of information at different scales in the ecosystem approach (EA). The co-convenors of the meeting were the [IMR](#), [ICES](#), [PICES](#), [NOAA](#), [PAME](#), [CAFF](#), [AMAP](#) and the [Arctic Council](#). The conference contained presentations addressing [all stages of EA](#) including ecosystem identification, description, monitoring, assessment, valuation and management. There were dedicated sessions on the implementation of the EA on national levels as well as within the large marine ecosystems of the Arctic; the development of marine protected areas in different parts of the Arctic, and; the integration of western science and indigenous, traditional and local knowledge in EA. Monitoring and addressing growing anthropogenic impacts from climate change, shipping, noise, and oil and gas exploration were also topics of discussion.

In NAMMCO's presentation on "Integrating the Scales of Interest in Different Knowledge Systems for Ecosystem Management" emphasis was placed on how to achieve effective integration of the diverse knowledge systems of scientists, local communities, and policy-makers in EA. One of the key challenges associated with this was highlighted as being that these different stakeholders often operate not only with different worldviews, terminologies, cultures and positions, but that their knowledge systems can also be focused on very different scales of interest (geographical as well as temporal).

A breakout session was held during the conference to specifically discuss how to advance the integration of different knowledge systems in EA and following this session, it was agreed that it was important to engage indigenous/local knowledge early and often in the process and not leave this until the final management phase. It was also noted that there was a need to invest in relationship building and capacity building, as well as to work to build trust & respect over time, and legitimately share decision-making responsibilities. This included not only management decisions but also decisions about the research questions, priorities and processes for science. It was noted that [best practice recommendations](#) for Arctic environmental impact assessment and meaningful engagement with local communities were available from the sustainable development working group of the Arctic Council.

The lessons learned from the event for NAMMCO to effectively implement EA included: Adopt a clear definition & framework for implementing ecosystem-based management; Develop clearly stated ecosystem management objectives; Enhance the use of research on social, economic and cultural factors; Improve efforts to integrate science and user knowledge early and often; Articulate the key elements of a precautionary approach within NAMMCO; Decide on level of priority given to participating in working groups of the Arctic Council.

4. International Symposium on the Politics of Uncertainty: Practical Challenges for Transformative Action

The aim of this international symposium was to bring together people working in diverse domains (including finance, environmental management, migration, disease, innovation, infrastructure, and security) to explore the diverse ways uncertainty is understood and responded to in their respective fields. This was to develop richer and more nuanced understandings of uncertainty and to help enable more robust actions, strategies and governance in times of instability and change.

Wickson was invited to participate in the symposium and gave a short talk on ambiguity as a form of uncertainty in environmental management. She spoke specifically about the important ways ambiguity manifests in the science, philosophy and politics of environmental harm. This includes the way diverse values can shape understandings of what constitutes environmental harm, how diverse frames and assumptions can shape the scientific research done to understand environmental harm, and the way various interests and available options can shape management decisions to minimise environmental harm. She also emphasised that environmental management cannot hope to eliminate ambiguity as a form of uncertainty, but rather has to find ways to navigate it with transparency and sensitivity.

After several rounds of exchanging information, theoretical frameworks and practical experiences across the range of diverse domains present, the following emerged as key take home messages: 1) There are many different types of uncertainty (only some of which can be reduced or quantified); 2) It

is useful to try and specify the types of uncertainties in play in certain cases and contexts; 3) In the face of deep uncertainties, important coping mechanisms can include humility regarding the state of the knowledge, diversity in the policy options pursued (to enhance flexibility), and a focus on supporting capacities for reversibility and responsiveness in policy choices; 4) Policy advice under conditions of scientific uncertainty should be plural and conditional – i.e. offering a range of decision options available according to different values and assumptions; and 5) Since certain choices can become ‘sticky’, i.e. create path dependencies and lock in certain developmental trajectories, it is important to open up policy debates to a range of options before closing down into particular decisions.

5. Conference of the International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)

In 2019, Wickson was invited to be a plenary keynote speaker at the biennial conference of the International Society for the History, Philosophy and Social Studies of Science (ISHPSSB). The conference was held in Oslo 7–12 July. Her talk was open to all members of the public as well as conference participants.

The title of the talk was “Lessons Learned from Waterfleas, Whales and Bees: A journey into environmental controversies in the search for sustainable food”. The talk presented lessons learned about how ethics and politics are entangled in the science of environmental harm and debates about what constitutes sustainability in our food systems. It explored these lessons through analysing two socio-political controversies around sustainable food: genetically modified organisms (GMOs) in agriculture and the hunting of whales and seals in the North Atlantic.

As part of the talk, Wickson used a framework of care ethics and politics (developed in her previous work), to illustrate the wide range of relevant issues to consider in the debate about whether marine mammals can be part of sustainable food systems. This included asking questions about: 1) The networks of *relationships* between whales and humans, including all of the anthropogenic activities that impact them; 2) The difference between the historical *context* when the commercial moratorium on whaling was decided by the International Whaling Commission and the current situation today; 3) The distribution of *power* in terms of who gets to decide what is permissible and whose knowledge and experience counts in decision-making; 4) The *dependence* that some coastal and indigenous communities have on whaling for their cultural identity and livelihood; 5) The role that *emotion* currently plays in this debate; and 6) The cultural *narratives* that frame environmental value and the impact of different human activities.

Giving a public talk in the centre of Oslo as a plenary for a conference focused on social science and humanities perspectives on biology provided an excellent opportunity to present the work of NAMMCO to new audiences and several attendees said afterwards that through the talk, they had been encouraged to think about whaling and sealing in new ways.

6. UiT Masters Top Predator Course

Desportes was asked by the organiser of the Top Predator Master Course (Bio3506) at UiT the Arctic University of Norway, U. Lindstrøm, to give a 2-hour lecture on “Management bodies and science-based management in NAMMCO-IWC-ICES”. The lecture, attended by ca. 30 students (DK, DR, FR, MO, NO, SE, US, UK) presented the regulatory landscape framing the management of marine resources and top predators, described the role of NAMMCO in this framework, and explained the role and specificity of the three organisations. It also addressed the issue of whaling and sealing from an ecosystem and global sustainability perspective, for inspiring the students in considering these two activities from an untraditional standpoint. The lecture was followed by a longer exchange on the last topic presented.

7. Homeward Bound Global Leadership Initiative

In 2019, Wickson was offered the role of Lead Facilitator for the 4th cohort of Homeward Bound (HB). NAMMCO agreed that she could accept this role and supported her involvement by continuing to pay

her salary for 3 of the 4 weeks she was required to be away from the office (NB: all HB faculty work on a volunteer basis and are dependent on support from their home institutions or organisations).

[Homeward Bound](#) is a global leadership initiative for women with a background in STEMM (science, technology, engineering, mathematics and medicine) and provides training in collaborative and inclusive styles of leadership to enable women to influence decision-making for the greater good. The selected participants receive 12 months of leadership training, where they learn about topics such as how to: think and act strategically; manage teams and have difficult conversations; communicate science and enhance visibility; and influence policy and decision-making. The initiative has an aim to train 1000 women over a 10-year period. The 4th cohort included women from over 30 countries, 25 disciplines, and spanning an age range from 23-73. The 12 months of leadership training culminates in a three-week voyage to Antarctica. This year, the group was the largest all female expedition to Antarctica ever, with 100 participants + 12 faculty involved.

Being the [Lead Facilitator was a multidimensional role](#) involving several layers of responsibility. This included: being the daily face of the program for the participants; managing relationships within and between the various groups involved in the Antarctic voyage; coordinating the daily schedule; reading and responding to the energies of the group; and role modelling collaborative, inclusive and legacy-minded leadership. In addition to serving in the role as Lead Facilitator, Wickson also ran a 2.5 hour session on the topic of "Science Meets Ethics and Politics". This included a presentation and interactive session on environmental ethics, as well as running a coordinated role play exercise.

The role play exercise was collaboratively developed by the NAMMCO Secretariat. It was designed to provide an insight into the complexities NAMMCO deals with as a body providing environmental management advice at an international level, as well as to encourage participants to reflect on (and potentially reconsider) whether they think the harvest of marine mammals can be part of a sustainable food system. The scene for the role play was a meeting of the 'Global Sustainability Council' (a hypothetical body charged by the UN to decide overarching directions for good environmental policy). The question open for debate at the meeting was: *Can the harvest of marine mammals be part of a sustainable food system? Why/why not? Under what conditions?*

The 100 participants were divided into different actor groups for the role play - three groups represented the position that marine mammals could be sustainably harvested (the Union of Commercial Hunters, the Association for Communal Hunting, and the Indigenous Communities Coalition); three groups argued against this position (the Federation for Animal Rights, the Alliance Against the Hunting of Marine Mammals and the Society for Environmental Preservation); and three groups had a position that could go either way depending on the conditions (the Alliance Supporting Sustainable Use, the Environmental Conservation Collective, the Advisory Group of Scientific Experts). There were also three people assigned to the position of Councillors to take a decision at the end of the meeting, as well as five Storyharvesters who were asked to observe the debate through particular analytical lens (e.g. leadership, power, emotion) and report their findings back to the group.

Each actor group was given a summary factsheet prepared by the Secretariat with information about the history and current context of marine mammal harvesting (including abundance estimates, catch quotas and trends for the different NAMMCO target species), as well as a sheet with more information about the particularities of their group's position (e.g. their beliefs/opinions on certain matters). All the groups were given time to discuss their position and prepare opening statements. The role play ran for an hour and a more detailed elaboration of the process and results can be read on this [blog](#).

The role play exercise was a powerful way to introduce people to the work of NAMMCO and to encourage them to reflect more deeply on their own assumptions and beliefs regarding the sustainable harvest of marine mammals. It also opened up the potential for perspectives to shift. The outcome led to reconsideration of their existing views and they engaged with the issue in new ways.

Furthermore, having Wickson serve in the role as Lead Facilitator for the Homeward Bound program enhanced the visibility of NAMMCO to 100 emerging female leaders in science from around the globe,

allowed NAMMCO to join this international network, and enabled the organisation to be [recognised as a sponsor of the program](#).

8. Bi-Annual Meeting of the Norwegian Small Whalers Union

NAMMCO was, as usual, invited to attend the biannual meeting of the Norwegian Small Whalers Union in 2019. Winsnes attended on behalf of NAMMCO and gave a presentation on “Sjøpattedyr som matvareressurs”. The presentation described the pilot study carried out by NAMMCO in collaboration with the Research Institute of Sweden, which evaluated the sustainability of food choices in Greenland using Life Cycle Assessment.

The discussion that followed the presentation centred on how the findings of the study could help market whale meat by pointing to its environmental superiority when compared to farmed terrestrial animals. The participants at the meeting also expressed an interest in taking part in a possible future project through collection and reporting of necessary data.

Other agenda items for the meeting were: assessment of the 2019 season, review of the work undertaken by Norsk Hval to promote whale meat, and a presentation on the process of exporting to Japan.

9. The WMMC Workshops Attended by the Secretariat

[“Harmonising global strandings response”](#)

The overarching aim of this workshop was to harmonise international marine mammal stranding responses and investigations to enhance data and sample collection and information sharing. Both countries with established networks, as well as countries with minimal or no current capacity for stranding response but interested in the development of such capacities, participated in the workshop. To follow up on the workshop, the [“Global Stranding Network”](#) was created. This network will provide a forum for collaboration between those responding to strandings around the world and enhance responses to stranded marine mammals globally.

Organisations such as the IWC and ACCOBAMS are members of this Global Stranding Network and NAMMCO may therefore consider whether to also become a partner.

[“The effects of climate change on marine mammals”](#)

The new research presented at this workshop showed a global shift in distribution for marine species. Topics such as the potential increase in shipping traffic in Arctic waters and new stressors like algae blooms - both issues of future importance for the sustainable management of marine mammals in the NAMMCO area - were debated. The use of local knowledge as a resource to ensure the best solutions for addressing climate change issues was also discussed.

[“‘Arts’ as a tool for communicating marine mammal science”](#)

This workshop gave an interesting overview of different forms of outreach that are available, including the use of visual arts to create sculptural models or composing musical pieces to communicate scientific information to non-specialist audiences. An interesting example that was given was the use of pop culture movie analogies to explain complex structures such as the Arctic marine ecosystem. NAMMCO could, for example, consider the types of analogies that may be able to be used to describe its role as manager of the Arctic environment to an audience uninitiated in science.

[“Incentivising consistent data collection and transparent reporting of marine mammal by-catch in fisheries”](#)

This workshop was organised by the Marine Stewardship Council (MSC). The MSC wanted to explore how to incentivise data-sharing and reward transparency so that the true extent of fisheries impacts can be understood and mitigated where necessary. It included discussions on best practice data collection, consistent data standards, risk-based approaches and behavioural incentives. The particular

interest for NAMMCO in this workshop was to make more visible the attention given to by-catch in the NAMMCO framework and the work accomplished within the organisation and at the national level.

10. World Marine Mammal Conference (WMMC)

The [WMMC](#) was the second joint meeting organised between the European Cetacean Society and the Society for Marine Mammalogy. It attracted 2731 attendees from more than 95 different countries, who offered 1636 presentations and 45 pre-conference workshops. The overall theme for the conference was *Together for Science and Conservation* with the goal of bringing “together scientists, managers, policymakers, educators, and students from across the globe”. There were two days of workshops on the weekend, followed by four days of conference. Desportes and Hansen were present throughout both the weekend of workshops and the week of the conference.

The conference represented a significant opportunity to enhance the visibility of NAMMCO as a science-based management organisation and to encourage new ways of thinking about the use of marine mammal resources. Through their attendance, the Secretariat pursued this in three ways:

1) Participating and contributing to four different workshops organised ahead of the main conference “Harmonising global strandings response” (GD participated on the behalf of the Working Group on BYCELS), “The effects of climate change on marine mammals” (SH), “Incentivising consistent data collection and transparent reporting of marine mammal by-catch in fisheries” (GD) and “‘Arts’ as a tool for communicating marine mammal science” (SH).

2) Hosting and manning a stand in the exhibition hall throughout the entire conference. The theme of the stand was the abundance of marine mammals versus removals in the NAMMCO core area and this was illustrated through two posters, one for pinnipeds and one for cetaceans. NAMMCO also invited B. Þorgilsson, who developed the geometer for NASS 2015 (at the initiative of the MFRI (IS) and NAMMCO), to join its stand. The geometer is a unique device that allows for a precise measurement and automatic recording of angles to sightings for aerial surveys. The device has since been further developed and used in many other aerial surveys.

The combination of having NAMMCO staff and the geometer designer manning the stand was very successful. The designer attracted survey scientists from all over the world, for whom the main interest may not have been NAMMCO as a management organisation but who then also showed interest in NAMMCO and its survey coordination work. Likewise, those visitors to the stand who came due to their interest in NAMMCO and its management of marine mammals also had an opportunity to learn more about our survey coordination work and support for technological innovation in the field.

3) NAMMCO (Desportes) gave a talk on Thursday December 12th titled “*Outreach on the case of Arctic sealing: Opening up for a reframing of the sustainability discourse?*”. This talk was held in the session of the conference organised on Education and Outreach. The talk presented the Greenlandic use of seal meat and products in the context of global sustainability and true environmental costs, advocating for assessing the sustainability of resources in a global perspective. This talk was provocative in this forum, but was surprisingly well received by many, including people from Conservation NGOs and traditionally anti-sealing countries (e.g. from BE, DE, FR, IT, NL, SP, UK, USA) who thanked NAMMCO for presenting sealing from this standpoint and raising interesting food for thought regarding the interplay between “moral concerns and measures” and sustainability. It also generated a flow of people to the NAMMCO booth interested in discussing further the perspectives presented and asking for more information.

APPENDIX E. REPORTS FROM OUTREACH EVENTS ORGANISED OR ATTENDED BY THE SECRETARIAT IN 2020

1. Marine Mammal Student Symposium 2020

Lacking a marine mammal research institute, the Master and PhD students conducting marine mammal related projects in Tromsø are divided and dispersed at different departments and throughout town (Department of Arctic Biology, Norwegian College for fishery science and K.G. Jebsen Centre for the Law of the Sea at UiT, the Institute of Marine Research, the Norwegian Polar Institute, various master programs). With little contact between the different departments NAMMCO arranged for a second Marine Mammal Student Symposium, where marine mammal students and the intern at the Secretariat share their work and issues, as well as make new connections. The symposium was co-arranged with the university.

The one-day symposium was held 5 February 2020 and attracted around 30 attendees, including one student from Trondheim. A total of 7 students presented their work. The presentations were from various Norwegian biological research institutes, as well as the Norwegian Centre for Law of the Sea. After the student presentations, there was an interactive session, aiming to help students and junior scientists to build the skills necessary for achieving enhanced cooperation and interdisciplinarity and make a difference as a scientist in a changing Arctic.

The day ended with three plenary invited talks “The new agreement on marine biodiversity in areas beyond national jurisdiction” presented by Dr. Vito De Lucia, Associate Professor at the Norwegian Centre for the Law of the Sea, “Going far and beyond with autonomous systems” by Dr. Sofia Aniceto, VISTA postdoc. at the Norwegian College of Fishery Science department and “Environmental DNA in Marine Mammal Research” by Prof. Kim Præbel, Professor from the Norwegian College of Fishery Science. These inspiring talks captured the complexity of performing research in the Arctic and the Northern European Seas.

The students were very satisfied with the recurring symposium, confirmed by feedback on the day and the survey sent out afterwards. In addition, professors from the Norwegian Centre for the Law of the Sea and the Norwegian College of Fishery Science both expressed interest in cooperating with NAMMCO in organising future symposia.

2. Lunchtime Seminar of the Oslo School of Environmental Humanities

During semesters, the Oslo School of Environmental Humanities (OSEH) holds a series of lunchtime seminars in which invited speakers are asked to give short provocative talks, which are then followed by a longer period of interactive discussion. While these seminars are normally held in person at the University of Oslo, in 2020 they were moved to an online format. This online format actually enhanced the audience able to participate in the seminars as there was no longer any requirement to physically be in Oslo to attend. The seminars therefore expanded to an international audience interested in and working across the field of environmental humanities.

NAMMCO Scientific Secretary, Fern Wickson, was invited to give a presentation in this seminar series and selected the topic “Diverse Ways of Knowing in Environmental Decision-making”. This presentation was given online on 10 June 2020 to an international audience of around 50 people. The talk was focused on the question of how diverse ways of knowing (including indigenous and local knowledges, as well as the humanities and arts) may be more influential in the environmental decision-making that shapes our world. Fern talked about both the value of and challenges involved in inter- and transdisciplinary approaches to research, using examples from her previous work as a research team leader, as well as her current role within NAMMCO.

The discussion that followed highlighted that despite there being a number of interesting and valid ways of experiencing and understanding the world, the knowledge arising from structured scientific investigation was clearly most often favoured in formal processes of environmental management and decision-making. The participants expressed their challenges in having other ways of knowing being

granted legitimacy in advisory and decision-making processes and shared some examples of processes that had made progress in this area. The importance of engaging different types of knowing, including social science, humanities, the arts, and local knowledge early in processes of assessment and advice generation was emphasised, as well as the need to be willing to invest the time and energy required to create spaces where different types of knowledge holders could meet, share their views, and work to build understanding and trust across their differences. It was emphasised that environmental decision-making becomes more resilient, robust, trustworthy and flexible if it is able to take diverse approaches into account.

3. Virtual Conference on Interdisciplinarity, Sustainability and Expert Disagreement

In June 2020, NAMMCO participated in the conference [Interdisciplinarity, Sustainability and Expert Disagreement: Uncovering philosophical biases in scientific controversies](#). This conference was hosted by the Norwegian University of Life Sciences (NMBU) and organised by Rani Lill Anjum and Elena Rocca from the Center for Applied Philosophy of Science (NMBU CAPS). It was offered as part of a course on interdisciplinarity and expert disagreement in sustainability research. The aim of the event was to demonstrate and discuss how scientific controversies concerning sustainability often involve different philosophical biases and positions concerning scientific theory, methods, models and norms. This was achieved through presentations on a range of real-life case studies.

NAMMCO's Scientific Secretary Fern Wickson gave an invited presentation on the complexities of providing advice for sustainable management of narwhals in East Greenland. The presentation was based on recent work on the topic within the Ad hoc Working Group on Narwhal in East Greenland and the NAMMCO Scientific Committee. The talk particularly highlighted the challenges in this case of navigating disagreements between scientists and indigenous communities and balancing the environmental, social and economic aspects of sustainability.

Although this was initially planned as a face-to-face event, in the wake of the global pandemic, the conference and all the presentations and discussions were moved online. This means that the presentation, as well as all the comments from and discussion with the students on the day, are also available online and can be found [here](#).

Several of the students actively engaged in the discussion following the presentation and a select group (from Norway, Russia and the Netherlands, taking degrees in International Environment and Development Studies, Innovation Management, and Agroecology) followed up by writing and sending a submission to NAMMCO. This submission summarised the group's ideas for how NAMMCO could approach some of the challenges associated with this and similar cases. Several of these ideas proposed interesting new ways of working that might be used as inspiration for the organisation as it continues to explore the best way to bring together science and user knowledge. Their submission was sent to the HoDs for information.

The submission from the students began by highlighting that they saw NAMMCO as a "builder of bridges between stakeholders". They also emphasised the importance of challenging the prevailing perception that scientific knowledge was the ultimate authority and other types of knowledge were supplementary. Going on to argue that the case in question demonstrated how different epistemologies (theories of knowledge) influence how data is collected and interpreted, they outlined some alternative ways for NAMMCO to consider how to approach knowledge generation, sustainability assessment and decision-making. A selection of their ideas deemed most pertinent for NAMMCO are outlined in a news item available [here](#). The possibility to present NAMMCO to a new audience and to receive feedback on our approach to providing management advice from people with a younger age profile and a different set of backgrounds than are typically involved in the advisory processes, offered interesting and inspiring new ideas to consider.

4. Danish Marine Mammal Society Annual Symposium

The 16th Danish Marine Mammal Symposium was held on 6 November 2020 on the theme "Marine Mammal Science for the Next Decade of Management". The Symposium is an annual event convened

by the Danish Marine Mammal Society to facilitate knowledge sharing among the network of researchers, students and managers working with scientific aspects of marine mammals in Denmark. Although the symposium was originally planned as a two-day event with both a scientific and a social/networking program, the pandemic meant that it was rescheduled as a one-day online meeting. The program involved 17 different presentations, organised under 4 sessions on *Management in Arctic Regions*, *Ecology of Arctic Species*, *Genetics*, and *Acoustics*.

NAMMCO Scientific Secretary Fern Wickson was invited to give a 45-minute plenary keynote presentation to open the symposium. The title of the presentation was “Challenges facing management of marine mammals in the new millennium”. This talk provided background information about NAMMCO and outlined some of the major differences between the historical practices of whaling and sealing and the modern-day status. It then focused on describing three key challenges facing marine mammal management in the new millennium: Complexity, Uncertainty and Transdisciplinarity. Under complexity, the challenges associated with moving from focusing on single species and the impacts of hunting, to developing ecosystem-based approaches to management, as well as handling diverse environmental values and the triple bottom line of sustainability. Under uncertainty, focus was placed on describing different types of uncertainty that need to be handled, including both reducible and irreducible forms, and the politics of knowledge generation. For transdisciplinarity, emphasis was placed on challenges associated with disciplinary specialisation and terminology, as well as how to effectively engage stakeholders and users.

During the discussion that followed the presentation, Fern was able to emphasise that the NAMMCO Secretariat welcomes being informed about new publications and knowledge of relevance to marine mammal management. A number of newly published articles were then emailed to her after the presentation. A question was asked by an audience member whether NAMMCO had conducted any form of dialogue forum between scientists, users and managers as a way to enhance transdisciplinarity. It was noted that a series of such forums had been run in Denmark for fisheries and had been highly successful at building trust, understanding and more productive relationships between the different actors. Learning more about how these forums have been carried out could be relevant for strengthening user engagement in NAMMCO’s advisory process.

APPENDIX F. PUBLICATIONS FROM NAMMCO AUTHORS IN NSP VOLUME 11

This list provides an overview of the publications included in the Volume 11 of the NAMMCO Scientific Publications that have been authored or co-authored by NAMMCO staff or affiliated scientists.

The names of the authors affiliated to NAMMCO are indicated in bold.

- G. Desportes**, R. Guldborg Hansen and **D. G. Pike**. Sightings Surveys in the North Atlantic: 30 years of counting whales. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.11>
- G. Desportes** and **F. Wickson**. 2020. Preface. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.5613>
- G. Desportes**, R.G. Hansen and **D.G. Pike**. 2020. Introduction. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.5670>
- D.G. Pike**, T. Gunnlaugsson², B. Mikkelsen, S.D. Halldórsson, G.A. Víkingsson, **M. Acquarone** and **G. Desportes**. 2019. Estimate of the abundance of cetaceans in the central North Atlantic from the T-NASS Icelandic and Faroese ship surveys conducted in 2007. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.4941>
- D.G. Pike**, T. Gunnlaugsson, **G. Desportes**, B. Mikkelsen and G. Víkingsson and D. Bloch. 2019. Estimates of the relative abundance of long-finned pilot whales (*Globicephala melas*) in the Northeast Atlantic from 1987 to 2015 indicate no long-term trends. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.4643>
- D.G. Pike**, T. Gunnlaugsson, B. Mikkelsen, S.D. Halldórsson and G. Víkingsson. 2019. Estimates of the abundance of cetaceans in the central North Atlantic based on the NASS Icelandic and Faroese shipboard surveys conducted in 2015. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.4941>
- D.M. Leonard** and N.I. Øien. 2020. Estimated abundance of cetacean species in the Northeast Atlantic based on ship surveys conducted between 2002-2007 and 2008-2013. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.4695>
- D.M. Leonard** and N.I. Øien. 2020. Cetacean species in the Northeast Atlantic based on ship surveys conducted in 2014-2018. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.4694>
- D.G. Pike**, Th. Gunnlaugsson, B. Mikkelsen, G. Víkingsson and **G. Desportes**. 2020. Distribution and Abundance of Killer Whales in the Central North Atlantic, 1987-2015. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.5579>
- R.G. Hansen, **D.G. Pike**, B. Thorgilsson, Th. Gunnlaugsson and J. Lawson. 2020. The Geometer: A New Device for Recording Angles in Visual Surveys. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.5585>
- NAMMCO**. 2020. Estimates of Cetacean Abundance in the North Atlantic of Relevance to NAMMCO. *NAMMCO Scientific Publications*, 11. <https://doi.org/10.7557/3.5732>

APPENDIX G. PUBLICATIONS IN OTHER SCIENTIFIC JOURNALS

Only the name of the first author and the names of authors belonging to the NAMMCO communities are provided. The name of authors affiliated to NAMMCO are indicated in bold.

Published or in Press:

Conservation Status of Monodontids Stocks - *Special Issue, Marine Fisheries Review*. 2019. [In fact only online in August 2020]

All the articles generated from the GROM workshop in 2017 were published, at the initiative of NAMMCO, in a [special issue of MFR](#). The special issue includes a preface written by **R. Hobbs** (NAMMCO GROM Chair), **J. Prewitt**, R. Reeves and **G. Desportes**, describing the historical context of the GROM and the management of monodontids, as well as the role of NAMMCO in those. It also includes the published form of the report of the Global Review of the Conservation Status of Monodontid Stocks, with Hobbs, Prewitt and Desportes as co-authors under the banner of NAMMCO.

North Atlantic killer whale *Orcinus orca* populations: a review of current knowledge and threats to conservation. E. Jourdain, F. Ugarte, G. Víkingsson, ... **G. Desportes**. *Mammal Review* 2019, 49, 4, 384-400. <https://doi.org/10.1111/mam.12168>

Haematology and clinical blood chemistry in harbour porpoises (*Phocoena phocoena*) from the inner Danish waters. U. Siebert, ... and **G. Desportes**. *Environment International* 2020, 143. <https://doi.org/10.1016/j.envint.2020.105937>

Harbour seals: Population structure, Status, and Threats in a Rapidly Changing Environment. M.A. Blanchet, ... and **G. Desportes**. *Oceans* 2021, 2, 41-63. <https://doi.org/10.3390/oceans2010003>

Atlantic Walrus Management, Regulation and Conservation. F. Wickson. *The Atlantic Walrus*, Weber. In press.

Submitted:

Long-finned pilot whale *Globicephala melas* (Trail 1809). P. Verborgh and **G. Desportes**. *Handbook of the Mammals of Europe*. Springer. Submitted.

Local seal or imported meat? Sustainability evaluation of food choices in Greenland, based on Life Cycle Assessment. F. Ziegler, ..., N. Levermann, M. Dorph, ... , **G. Desportes**. *MDPI/Foods - Special Issue "The Role of Aquatic Food in Nutrition-Sensitive Sustainable Food Systems"*. Submitted.

Growth rate and intra-seasonal variations in the body mass for harbour porpoises (*Phocoena phocoena*). E.N. Stepien, ... **G. Desportes** ... *Royal Open Society Open Science*. Submitted.

2021 State of the Arctic Marine Biodiversity Report (SAMBR) Update: Marine Mammals. K. M. Kovacs (Leader), R. Guldborg Hansen, **G. Desportes**, ... F. Ugarte, ... Submitted to the CAFF Senior Arctic Officials (SAO) meeting. Developed by the Marine Mammals Expert Network of CBMP-Marine

APPENDIX H. BUDGETS AND ACCOUNTS 2019 AND 2020

	Council 27 Adopted Budget 2019	Accounts 2019	Council 27 Adopted Budget 2020	Accounts 2020
Income				
Contributions Faroes	580,480	580,480	592,090	592,090
Contributions Greenland	580,480	580,480	592,090	592,040
Contributions Iceland	1,160,960	1,160,910	1,184,180	1,184,180
Contributions Norway	2,325,110	2,325,110	2,371,612	2,371,612
Employer's tax covered by Norway	265,000	295,942		
NASS	166,073	128,151		
MMFR	25,621			
HP	24,059			
Financial revenue		11,927		8,549
Total income	5,127,783	5,083,000	4,739,972	4,748,471
Expenditure				
Staff related costs	3,992,850	3,284,825	2,951,770	3,699,887
Internship	150,000	142,583	150,000	112,026
Staff travel and subsistence	303,316	363,662	210,000	28,454
Meetings	84,020	98,059	120,000	31,503
Office rent	241,800	232,443	260,000	277,751
Office supply	90,000	98,591	80,000	127,099
Communication and outreach	112,631	97,114	150,000	59,432
Accounts and auditing	180,000	179,384	190,000	199,127
Observation Scheme	143,000	-	150,000	115,920
Committee for Hunting Methods	10,000	-	100,000	-
Committee for Inspection and Observation	-	-	-	-
Working Group on BYCELS	-	-	-	-
Scientific Committee	228,127	100,981	295,000	99,989
Capacity building	15,000	19,230	20,000	-
Other expenses	120,000	42,291	70,000	7,349
NASS 2015	166,073	128,151		-
Marine Mammals Food Resource (MMFR)	25,621	-		-
Monodontis symposium (GROM)	15,000	15,300		-
Performance review	269,400	267,223		
Financial costs	5,000	5,365	5,000	4,260
Previous years "avstemming"				-15,226
Total expenditure	6,151,838	5,075,202	4,751,770	4,747,571
Yearly Balance	- 1,024,055	7,798	- 11,798	900
Total Reserve	1,173,514	1,173,514	149,459	1,181,312
Transfer to/from general reserve	- 1,024,055	7,798	- 11,798	900
New Total Reserve 31.12	149,459	1,181,312	137,661	1,182,212
Earmarked Reserve	149,459	600,000	137,661	600,000
General Reserve	-	581,312	-	582,212
GENERAL NOTES				
Starting with the audits 2020 employer's tax reimbursed by Norway is no longer listed under Income but deducted under Expenditure and Staff related costs.				