

**National Research Vessel Task Team
Meeting – 02.27.20**

Last updated: February 18, 2021

Present:

Douglas Bancroft, CSSF
Douglas Wallace, MEOPAR
Rodrigo Menafra, MEOPAR
Bridget Graham, MEOPAR
Richard Dewey, Ocean Networks Canada/University of Victoria
Guillaume St. Onge, RQM
Casey Hubert, University of Calgary
Kent Moore, University of Toronto
Feiyue Wang, University of Manitoba
Philippe Tortell, University of British Columbia
Jennifer Vollrath, DFO
Erin MacNeill, DRDC
Alexandre Forest, Amundsen Science
Clare Reimers, Oregon State University
Tara Mascarenhas, Students on Ice Foundation
Rachel Chang, Dalhousie
Steve Locke, CGS
Greg Cutter, Old Dominion
Liz Boston, NSERC
Anne Devernal, UQAM
Paul Myers, CNC-SCOR
Jay Cullen, University of Victoria
John Jamieson, CCOD and Memorial University of Newfoundland

Absent:

Philippe Archambault, Arctic Net
Mark Hannington, GEOMAR
Erik Lapointe, Reformar
Erin Bertrand, Dalhousie
Melissa Anderson, University of Toronto
Suzanne Carbotte, Colombia University
Adrian Schimnowski, Arctic Research Foundation
Arran McPherson, ORCA
David Moorman, CFI

Welcome: Doug Wallace introduced himself and welcomed everyone. He noted that he (Doug2) and Doug Bancroft (Doug1) were the two co-chairs, and that a third co-chair would be selected soon.

Conflict of Interest: Doug2 asked participants to consider their own interests and the interests of those close to participants. He asked that participants be aware of that and to be mindful of situations where they have direct personal or financial interest.

Recording: This meeting was recorded. Doug2 asked participants for their consent before doing so.

Introductions: Doug2 asked every participant to introduce themselves. He asked them to consider their desires as outcomes, and to think of what they can best contribute to the group. These have been summarised below:

Alexandre Forest from Admunsen Science: Deeply interested in research vessel renewal, looking to renew the fleet.

Tara Mascarenhas from the Students on Ice Foundation: They provide ship-based programming for youth to the Arctic and Antarctic. They are currently exploring other opportunities regarding the Blue Economy, opportunities for Indigenous youth especially in the Arctic, as well as ship related opportunities for youth in technology and conservation. Tara is currently representing Geoff Green, he will be a member of the task force going forward.

Jay Cullen from the University of Victoria: Looking to lobby for more transparent access to research vessels, organization of research vessels dedicated to research.

Clare Reimers from Oregon State University: She is the Chair of Fleet Improvement Committee; she is a project scientist. There are three regional fleet vessels which provide insights into building new research vessels, she is looking to improve collaborative research.

Greg Cutter from Old Dominion University in Virginia – part of the International Geo-traces program, has used all boats, has experience in vessel management and participates on the Fleet Improvement Committee. Greg is the Chair of the Sub-Committee for the scientific mission for next US Global vessel.

Paul Myers from the University of Alberta. Paul is a modeler and he uses the data collected by others. He is part of CNC-SCOR. He understands that this is a major issue for the Canadian community, and he wants to get information out to the community.

Guillaume St. Onge from RQM. Guillaume is a marine geologist at ISMER. He is the President of the Board of Reformar that does research vessel coastal research. There are currently 2 research vessels in Quebec. There are large research networks and lots of momentum in Quebec, with lots of support in maritime and ocean science.

Fei Wang from the University of Manitoba. He is involved with the Ship Time Committee.

John Jameison from CCOD. John is a professor at Memorial University. His work is related to deep sea mining and mapping. His primary interest is on improving access to more funding for ship time and more vessels (for long duration cruises, off-shore / global class vessels, and getting vehicles (ROV/AUV) on-board the ships)

Kent Moore from the University of Toronto. His research includes high latitude sea ice in the Labrador Sea, and vessels with aircrafts.

Rodrigo Menafra is the Managing Director of MEOPAR.

Richard Dewey from ONC. He is also an Oceanographer at the University of Victoria. He has participated on cruises on the Canadian fleet for 35 years. He believes that on the west coast there are issues related to access, funding and scheduling. They do not have the capability at this point to meet the needs,

Anne de Vernal from UQAM. Her research is in the North Atlantic Ocean and Labrador Sea. She discussed the difficulty in accessing ship time.

Jennifer Vollrath from DFO in Ottawa. Jennifer has worked with DFO for 23 years, in enabling science at sea.

Steve Locke from GSC, currently representing Daniel Lebel as an official observer. NRC and BIO are big users of vessels for federal research in relation to economic development and clean energy. They work closely with the Coast Guard in terms of available vessels and are interested in more collaboration. Believes that there should never be an empty berth.

Liz Boston from NSERC. Is serving as an observer on the Task Team. Discussed the Ship Time Program (1 million dollars a year since the late 1990s). Liz mentioned that there is a fine line for federal employees, especially those responsible for funding. Has been liaising with David Moorman from CFI.

Casey Hubert from the University of Calgary. Casey moved back to Canada, around the same time as Doug2. Believe that this is the opportunity for Canada to step it up a little bit more given the issues related to access and funding.

Rachel Chang from Dalhousie University. She teaches in Physics and Atmosphere Science. Her research is related to air and sea interactions. She wishes to find more opportunities for atmospheric measurements.

Erin MacNeil from DRDC. She is involved with Quest, access at sea time.

Doug Wallace is the Scientific Director of MEOPAR. He is a Chemical Oceanographer. He was in Germany for 13 years, and benefited from fleet in Germany. In Germany he went onboard vessels every two years, but there are no opportunities in Canada. He is very frustrated and is still using German and Irish vessels.

Doug Bancroft is the President at CCSF.

Membership: Doug2 presented the NRVTT composition and discussed the rationale for membership. He asked if there were any key gaps in membership and representation?

Doug2 thanked all members of the task team, including the international members and the representatives from the federal family, and funding agencies. Doug2 highlighted a couple of other members who were not able to be present, Erin Bertrand from Microbiology at Dalhousie University, and Melissa Anderson, an Early Career Researcher from the University of Toronto.

Doug2 wondered if we have achieved a breath of representation, including disciplines, diverse interests, regional and gender? Gender was identified as still being an issue.

Feiyue Wang commented on an excellent job, but that there is no one that lives in the Arctic. What is the best way to address this? Is there someone that can speak on behalf of the Northern Communities?

Kent Moore said that the Canadian team is very balanced but that there is a hole, there is no physical oceanography or physics. Doug2 said that we might be able to find someone in the international community to address this, and we could invite someone from the European Marine Board. Clare Reimers said that some European representation would be appropriate. Casey Hubert recommended Pete from Harvard, or Calvin Campbell, Alexandre Normandeau. He has other ideas that he would be willing to share.

Doug2 said that Peter is meant to be on the NRVTT. He is to talk offline with Jennifer and Steve (government representatives) on how to approach that.

Liz Boston said that it might be beneficial to collect input from students (as the next generation) since they will be the beneficiaries of the infrastructure. Perhaps that this could be done through a survey? Jennifer Vollrath said that this should focus on ocean (no studies on the Great Lakes).

Steve Locke recommended some additional university representation including Pippa from the Aurora Research Institute, or David Scott and Alain Leclair from Global Affairs Canada, or Ian Church from the College of Ocean Mapping and Education.

Doug2 has asked that members send their specific suggestions to Doug1, Doug2 and Bridget. Doug2 also mentioned that Observers can definitely contribute.

Third Co-Chair: Doug2 has asked that participants send their recommendations for the third co-chairs to Bridget by email. People can nominate themselves. There could be a rotation in leadership. It would be ideal if the third co-chair was an early career researchers and/or female.

Doug1 reviewed the draft Terms of Reference.

Questionnaire: Doug2 led participants through the questionnaire results which are anonymous and confidential. Doug2 felt as though there was a reason for the NRVTT to exist given the answers that were received. Richard Dewey said that we should capture the unique ideas that would be worth sharing.

Question 9 - List up to 5 issues that we should address – answers included: capacity, funding, availability, existence of infrastructure, access to scientific equipment to use, technical capability, national view, improving dialogue, effectiveness and transparency, planning for the future

Less represented: access to vessels for Indigenous researchers and Indigenous community

Thoughts from participants:

- Richard Dewey: what are the high-level objectives and outcomes? What outcomes that you would like to achieve?
- Clare Reimers: stressed the importance of partnerships

- Feiyue Wang: Recommendations how can we make sure that it will be used for who makes decisions?
- Doug2: MEOPAR has funding assigned to this but this will be a community effort more than a MEOPAR effort. Who is the committee talk, and who makes decisions?
- Doug1: The co-chairs will need to sit with David Moorman, Jennifer Vollrath and Liz Boston to discuss this and is it likely to succeed if we make a recommendation to a minister.
- Steve Locke: Who will benefit from the task team? Currently reads MEOPAR – y, federal, academics, -- reporting to ORCA, federal scientists looking into vessel needs – DFO – NRCAN
- Doug2: It is MEOPAR -y because we needed funds approved by our Board, this is a service for ORCA – contribution to ORCA – ORCA activity – MEOPAR could fund it and do it – opportunity to make it so – should discuss with ORCA
- Feiyue Wang: where do those things go? Will they make a difference – we want to see things change – identify in ToR – mechanism of doing so
- Clare Reimers: US academics come together to strategize about fleet maintenance and renewal – National Science Foundation – support for academic fleet – partnership and information sharing that occurs – community of users and operators – collaborative operation – has worked very well
- Greg Cutter: back-up what Clare says – there are representative to it, representative democracy – members on council, representing you and sub-committees, a little obscure – teaching ECF about its existence – for scientific community – exchange of ship time when there are issues – Arctic Research – Coastal Guard Heely and one other ship – same thing in Antarctica – academic research fleet in the US
- It was discussed that perhaps this is for ORCA if they are open to that?
- Steve Locke: suggest that you look into it – truly attempt to coordinate science research and academia – seems lined up – Arran McPherson – Ocean Science – Council members of ORCA – gaining momentum
- Doug1: If we don't engage minimum – it is a quick way for people to say no to us

Question 10 – answers included:

- Not there to design a ship, not there to prioritize particular regions of science – not trying to advocate for one type of science, don't want to manage the vessels or logistics, not acting in formal advocacy of government, not developing a white paper or developing a report
- Where is the line for advocacy? Direct lobbying of political process
- Philippe Tortell: do think there is a role for advocacy – on the behalf of Canada and Canadians – need information – speak with authority – Marshall messages – important voice for this – engagement with the public – opt eds – ice breakers went out of commission – critical gap in infrastructure
- Jay Cullen: the problem with the ice breakers in 2015 stimulated the more public opt-eds, we don't have an advocate – no one who speaks for oceanographic community, more or less fell on deaf ears – no head to appeal to – to bring our concerns to – instead of white paper – more important to have an organization that speak in a clear and collective voice
- Doug2: Not unrelated to ORCA question – Steve/Jennifer – where does this fit? Are there sensitivities?
- Jennifer : walking a fine line, Arran is her ADM – ORCA is a good group of people coming together, possibility – Chief Science Advisor to the Prime Minister – Mona Nemer – definitely very opinionated – passionate about science – move away from us and them mentality – not about money, government has given a lot of money to build ships, procurement in the

government is very long and difficult – recapitalize the fleet – given birth to two children – one is going to university – these ships are not in service – federal family there is frustration with the process – we are not getting ships, no one is – pre and post merger with the Coast Guard – vessels are coming out of service before the new ones are realized, industries that they support

- Steve Locke: lobbying of government – we could say why we need money, they want to hear it from outside – the old days you could justify you need something – need to hear it from outside -strength in lobbying – federal scientists can't be lobbying federal parties – letter that has was funded by fed
- Importance of lobbying but not from federal representatives – recognize importance of sectors and what they can and can't do, US model, academic fleet paid for by federal government
- Doug2: not so effective now, no outside organization out there, no coordinated institution to do so – coherent pathway forward – nation as a whole – no organization to pull together that vision and planning on national level – from outside advise and lobby – We are missing that outside body that could do that.
- Steve Locke: ORCA isn't a federal government body – bringing everyone together that deals with ocean research, funds secretariat – how do we advance ocean research coordination? Non-government organization that looks into infrastructure

Strong need for advocacy – message is not getting across – urgency of message is not getting across

Jay Cullen and John Jamieson left at this point, Greg Cutter left shortly after.

NRVTT Terms of Reference: Doug2 presented this and described the roles and activities of the NRVTT. Including what should it NOT do.

This includes but is not limited to: advocacy, planning, and allocation of ship time – ship time access – government and academia – very compartmentalized – discuss in the context of ORCA and provinces and university. Alternative models of sharing ocean research infrastructure – modern model for infrastructure – together with ORCA and other groups

Funding agencies – government agencies – having a common approach to large infrastructure – is the time right for that in Canada – could we start exploring that? Could be on our agenda for future meetings

News updates: General status report, issues and concerns arising from different regions and sectors.

Bad news – tipping point of the Hudson – last 2 years – Tully and Amundsen – restored for 5 years – worst to worst on the East coast – National Shipbuilding Strategy – approved by Parliament and funding – unlikely to see anything before 2030 – after that it gets better – how do we deal with the other 5 years?

Arctic and off-shore oil patrol ships – mandate – support to science – didn't see an audible – CBC article with the Admiral – would be doing science with these ships – largely empty hauls – 50 berths empty – bring undergraduates if you choose – and space for containers

Purchase 2 more ships for AOPS ships – likely won't have our hands on them in the next five years – 6 large capable platforms to support science – modular ocean research science (MORI) go anywhere a global ship can go – ray of hope but not for several years

Erin MacNeil: DRDC – a few years until the navy ships are out – ability to put containers on board

Philippe Tortell: Modular design – 1 or 2 national proposals to be shipped across the country

Doug1: International trend and we should explore

Philippe Tortell: Already thinking about a submission – 15 oceanographer - \$150,000 produce these things – modular deployments we are available

Erin MacNeil: DRDC – have reached out to AOPS folks to spec that out in advance

Doug2: Beauty of the task team – people from all sectors and experience who will benefit from knowledge – find their own solutions – find a way to exchange information, plan forward – use of AOPS – they are being built and take advantage of that

MEOPAR is very keen for people to plan together on MORI – possible industry consortium

Philippe Tortell: Getting this on the radar of the navy, getting to this conversation quite early, Doug2, Fei and Philippe and Quebec (Rimouski) to do the leg work

Casey Hubert: CFI funding and scale // specs about small changes that can be made to make it better //

Deck layout for AOPS - Erin will look into sharing those (side handling equipment for AOPs? Deck layout)

Doug2: Winches, used on other vessels – MORI

Doug1: Vessels have dynamic positioning or could be updated to that?

Clare Reimers: Modular over the side handling – ship stability and safety standards – in the planning that has to be considered – more than just bringing a winch

Doug2: Optimism that the ships are being made, decisions are already being made – there was no organization like this to go to

Erin MacNeil: Decisions have been made, what ability to discuss next is unknown

Jennifer Vollrath: AOPs were not modified for scientific, ships for Coast Guards have actively engaged with science sectors for that – ground rules for things that you can and can't change – follow-up after for the group about the changes that have been made – Hudson replacement – Jennifer to follow-up – conversation could be had about these changes

Doug2: allow the community to write proposals to presumably to increase the flexibility of those vessels in a follow-up meeting – Randy is on Jennifer's team – Randy is working on the developments with AOPs

Government science point of view, we continue to want for research vessels – we do not want to this to replace dedicated research vessels

Steve Locke: Hudson Replacement – 2024 OOSV – commence construction – cut steel December 2020 – delivery date 2023- in service by 2024

Feiyue Wang: What is the status of the Diefenbaker?

Jennifer Vollrath: that is a project that with capacity building limitations – Diefenbaker got moved to the right – delivery date – non-combat yard – procurement strategies for that vessel sooner

Future Diefenbaker or not? Yes, looking at options – build in Canada policy for our fleet

Richard Dewey: what we should not do – data and information on the ships all within scope – discussion with data management is outside of our scope – might want CIOOS to do that

Feiyue Wang – discussion with colleague at the University of Winnipeg – very fortunate for the Amundsen – and even the Diefenbaker – near shore and off-shore – Hudson Bay – Arctic Research Foundation – William Kennedy – involved in many research cruises – home port is Summerside, PEI – opportunities for researchers to get onboard – high arctic – operating funds – cost of running ships is very expensive – ship time committee – NSERC ship time fund has been stabilized at \$1 million for the past 10 years – very typically for requests of more than \$2 million – 15% of succession rate is high - already discovery grant holders – they rely on the ship time – big challenge – opening fund / pay for access to ship time

Guillaume St. Onge – Quebec – St. Lawrence Estuary and Gulf – operation of the Coriolis until 2022 – working with ministry and education and science to get funding for the next 5 years so that ship is available for the entire Canadian community – Quebec – first ever national maritime strategy – former government of Quebec to bolster research – needed science – needed to go to see – 25 days per year and 25 days per year – so 50 days total – Coriolis is getting old – sits right in front of Cove in Halifax and repairs needed – coastal vessel strategy needs to be thought about – Coriolis – European research vessels – European researchers look for time on the ship – increase cooperation between European and Canadian researchers // Amundsen – ISMER – launch platform AUV from Laval onboard the Coriolis – beta is amazing – map the sea floor – amount of data is so different than what we usually get // good news we have support bad news ships getting old

Amundsen – St. Lawrence and Gulf – Coast Guard – RQM look at difference processes during the winter – oceanography – sediment transport [...] coast guard ship will still do ice breaking and support – 3rd time that this is done – clever way of doing science – aging fleet of ice-breakers

Doug2: Erin would have reported from OFI – Memorial, UPEI and Dal
Implement OFI - \$100,000 research program – OFI will form partnership with Irish and German ships – 2 cruises on the Celtic Explorer and the Marianne – mooring turnaround

Off-shore work – large teams of scientists – piggy-backing on other ships and ship time for the time being

High restrictions – we are not planning the cruises – we do not propose and lead the cruises, but it works for the time being

Communications/ information sharing:

Doug1 said that we are learning lots of things from lots of people – should this committee to try and find a way to collate this information – do we want to share this information to a broader community – webpage or another way to access this information?

Hearing things second-hand – what is happening from other groups – no national picture of the situation – really good things and useful models that other groups would like to see – should we have a public information sharing component

Feiyue Wang – should like a good thing to do – document about available vessels in Canada – report from Europe – does one exist ? Some kind of report – what we know and have that would be great –

Jennifer Vollrath: publication – use ORCA website to host things // Canadian Ocean Research Portal – page about research vessels about the Canadian Coast guard fleet – not easily accessible – will be on a website once it is finished testing – could discuss with ORCA

News and information could be shared in a different location – two different options

MEOPAR can discuss with ORCA – Karen Donaldson

DFO research vessel coordinator for a couple of years – job was to keep track of the research vessels – what were the berths and routes [...] Canadian version of sea sketch – future cruises – Canadian versions what are the vessels / Canadian and foreign vessels – opportunities for collaborations

First step of collaboration and awareness

Next Meeting: This could potentially be in the summer, and the format would likely be Zoom. Philippe Tortell said that Zoom is effective in the early days, perhaps in a year it will be time to meet in person. It will be important to speak to ORCA to see what their opinion is. The full committee will meet less regularly but smaller teams could meet to work on projects.