



## OTN Canada Scientific Advisory Committee (SAC) Fifth Annual Meeting Tuesday and Wednesday, 2-3 December 2014, Halifax, NS

Location: Room 2-22, Steele Ocean Sciences Building, Dalhousie University (1355 Oxford St.)

Attendees:

- In person: Steve Cooke (*Chair*), Chris Barnes, Aaron Fisk, Ian Fleming, Michelle Heupel, Scott Hinch, Mike Stokesbury, Alain Vezina, Dale Webber; *ex officio:* Sara Iverson (*Scientific Director*), Nikki Beauchamp, Kes Morton, Tracy Rounds, Amy Ryan, Alison Janidlo (*NSERC*)
- By teleconference: Fred Whoriskey (Afternoon, Day 1)
- Regrets: Svein Vagle, Fred Whoriskey

### Action Items

**ACTION 1:** Connect with Teri Chopin and follow-up with Ian Fleming regarding contacts in Chile (**K. Morton; p. 3**).

**ACTION 2:** Engage with Mike Donaldson (NRC Press) on communications front (**N. Beauchamp; p. 4**).

**ACTION 3:** Engage the French Press, as they are very active in science (**N. Beauchamp; p. 4**).

**ACTION 4:** As had been agreed upon previously by Martha Crago and Janet Walden (acting NSERC president), Alison Janidlo should be invited to all OTN Council meetings (**K. Morton and T. Rounds; p. 6**).

**ACTION 5:** Official response letters (Project Criteria forms) from the SAC to be sent to PIs (**S. Iverson and A. Ryan; p. 7**).

**ACTION 6:** For this year and all future years, PIs will be required to submit revisions to reports directly on the Project Criteria Form for easier review by the SAC (**A. Ryan; p. 7**).

**ACTION 7:** Follow up with Communications Strategy (**N. Beauchamp; p. 8**).

**ACTION 8:** Talk to DFO Council about OTN and CSAS. Follow-up with the SAC after Dec 10<sup>th</sup> with the results of the DFO Council meeting. If there is interest, engage key DFO science partners to move forward with the CSAS process (**A. Vezina; p. 9**).

**ACTION 9:** Follow-up with PIs and prepare revised financial reports for Year 5 (2014) and Year 6 (2015) (**S. Iverson and A. Ryan; p. 9**).

**ACTION 10:** Official response letter from the SAC to be sent to Claudio Aporta (**S. Iverson and A. Ryan; p. 10**).

**ACTION 11:** Circulate revised financial report among the SAC to for approval of the social science project and send official response letter to PIs (**S. Iverson and A. Ryan; p. 11**).

**ACTION 12:** Look into other people in addition to Lucia Fanning that could help integrate First Nations and the Inuit (**A. Ryan; p. 12**).

**ACTION 13:** Schedule first teleconference with the “Futures Working Group” (**N. Beauchamp; p. 12**).

**ACTION 14:** Prepare a list of current DFO PIs and collaborators (**A. Ryan; p. 13**).

**ACTION 15:** Contact key DFO science partners involved with OTN Canada about travel permission (**A Vezina; p. 14**).

**ACTION 16:** Send survey to PIs to determine whether or not they are getting the Secretariat support they need and solicit them for suggested areas of improvement (**A. Ryan; p. 14**).

**ACTION 17:** Send Doodle poll to SAC members to schedule a January or February teleconference (**A. Ryan; p. 14**).

## Minutes

### **1) Welcome, Introductions, Agenda Approval**

Chris Barnes was nominated as interim chair for the day because Steve Cooke was out sick.

Sara Iverson welcomed everyone with round table introductions. The SAC welcomed its newest member, Mike Stokesbury, and introduced Amy Ryan, who stepped in as Interim Network Manager for Kyle McKenzie. This was followed by an in-camera session (OTN staff asked to step out) that provided the SAC with details on K. McKenzie’s leave.

### **2) Review of the minutes and action items from previous SAC meeting (S. Iverson and N. Beauchamp):**

The action items from the SAC teleconference in February (2014) were discussed briefly. There were five items, which have all been addressed and are complete.

### **3) Updates on Network developments (S. Iverson, N. Beauchamp, K. Morton):**

#### OTN Brazil

Brazil colleagues, in collaboration with Fred Whoriskey and S. Iverson, received a small seed proposal to develop OTN Brazil. Concurrently, S. Iverson became a visiting research fellow for Brazil through the Science without Borders program and undertook her first brief residence there last winter. Also during that visit, Dale Webber (Vemco) gave a workshop to introduce people to telemetry and spark collaborations. While there, a series of visits and seminars at a number of institutions revealed pockets of researchers who were unaware of each other, but were already involved, or getting involved in, telemetry work.

As a result of the efforts from this outreach, OTN is poised to extend up the coast of Brazil and into the Amazon. To further extend OTN's coverage OTN collaborated with Brazil, France and the United States to put Vemco/OTN equipment on the PIRATA buoys. OTN went from having no coverage in South America to an explosion of coverage with the OTN Brazil node. Stemming from this relationship with Brazil is an OTN Special Symposium at the 2015 Brazilian Ichthyology Conference in Recife to be held the first week of February (see number 8).

OTN Secretariat met with an embassy delegation from Chile to discuss expanding coverage even further in South America. There has been a top down push from the Embassy to make this happen. They recognize the lack of telemetry work going on in Chile and are interested in getting involved. Ian Fleming mentioned that he knows several of the researchers working on salmon farm issues in Chile and could connect them with OTN. It was suggested that OTN also connect with Terry Chopin at UNB on this. Some of these people may attend the Brazilian conference, thus S. Iverson and F. Whoriskey will be discussing the ICFT while in Brazil to try and promote conference attendance and support.

#### Meetings, conferences, workshops

A delegation from Dal led by VPR Martha Crago and including S. Iverson, met in Boston with heads of the Woods Hole Oceanographic Institute (WHOI), Lamont-Dougherty Earth Observatory and GEOMAR to discuss the Canada First Research Excellence Fund (CFREF). This is a tri-council program offering \$350M in funding for ~3-5 institutions over 7 years with a large focus on funding salaries. Dalhousie would be applying as the Ocean Frontier Institute that would act as the centre of the alliance with direct partnerships with WHOI, Lamont Dougherty and GEOMAR. The LOI is due in February with a full proposal due 2 March 2015. In the meantime OTN is in discussions with GEOMAR, the Oceans institute in Germany, collaborating on a multi-national structure for this.

OTN received an NSERC Partnership grant for \$25K to host a workshop to bring together academia, industry, and government to better collaborate on oceans issues. The workshop entitled "An Ocean of Opportunity: Mutual goals, shared resources, effective outcomes", successfully took place on June 6<sup>th</sup> in Ottawa. Following this, CFI announced a specific call for a Cyberinfrastructure initiative, a five-year funding mechanism (2016 – 2021) that we propose could bring together all of the big oceans research networks. It is meant to be a merging of data streams into one federated data centre. The funding decision is March 2016. Stan Matwin (director of the big data centre at Dalhousie) and Lenore Bajona travelled to Victoria (Dec 2014) to follow up on this.

An important outcome of the 25K workshop was to bring the communications officers of the various national networks together. Since then, OTN, ONC (Ocean Networks Canada), ArcticNet and MEOPAR (Marine Environmental Observation Prediction and Response Network) engage regularly by teleconference to discuss network updates, best practices, and opportunities for collaboration. The group recently discussed a special session at the May Canadian Science Writer's Association AGM (May 2015) in Saskatoon, for which a spot has been reserved to attend. The goal would be to promote networks as a one-stop-shop for oceans research.

It was mentioned that OTN HQP Mike Donaldson just accepted a position with NRC press, for which he is the science liaison between NRC and the editors of their journals. It was advised that N. Beauchamp engage with Mike on the communications front.

A. Janidlo suggested that OTN begin to address the French media and start posting French material on the website, as the French press is far more active in science than the English press. It was mentioned that F. Whoriskey and Gilbert Begin (Radio Canada) communicate frequently.

3<sup>rd</sup> ICFT 2015: Planning is underway for the 3<sup>rd</sup> ICFT to be hosted by OTN in Halifax July 13-17. The OTN Canada Symposium will be held concurrently with this conference. The registration and sponsorship packages are complete and we are expecting to launch by December 15, 2014.

#### Other OTN Canada and Global Issues

Led by N. Beauchamp with the help of a co-op student hired with funding from the Nova Scotia Government, the OTN website went through a major iteration. The website was completely redesigned and migrated to a new content management system. So far the analytics are very promising, with the number of users ever increasing. Any feedback can be forwarded to N. Beauchamp.

Ocean 180°: Damian Lidgard, a research associate (RA) working on the bioprobe project, worked with a WWF (World Wildlife Fund) photographer/videographer to film a video for the Ocean 180° video challenge. The video has been submitted, and the final version will be posted on the OTN website.

Science Pages: In August PAGSE invited OTN to prepare a briefing note on ocean issues that led the September issue of *SciencePages*. The document entitled "Mapping Animal Distribution and Changes in the Ocean," which featured three OTN case studies, was distributed to Canadian MPs and Senators, and presented at a Parliamentary science-policy briefing event. The document was well received and sits on both the OTN and PAGSE websites.

Rick Mercer: Dalhousie communications and marketing approached N. Beauchamp to prepare a pitch about OTN for the Rick Mercer show. The blue shark tagging project was immediately flagged. The program aired on 21 October 2014, and generated a great deal of very positive publicity for OTN. It can be accessed on-line at:

<https://fileshare.dal.ca/public.php?service=files&t=4b65a6eb62e3dcbcd027b84228bd54e0>.

OTN website traffic quadrupled after the program aired.

Public Annual Report: N. Beauchamp provided a quick snapshot of the next public annual report, which will be released in the New Year. This will from now on coincide with obtaining the annual reports from the OTN Canada Network.

Science Review: Nigel Hussey and Steve Kessel (RAs of Aaron Fisk) took the lead on a solicited review in *Science* that was co-authored by a select group of members: OTN's ISAC (Nigel Hussey, Steve Kessel, Kim Aarestrup, Steve Cooke, Pawl Cowley, Aaron Fisk, Rob Harcourt, Kim Holland, Sara Iverson, John Kocik, Joann Mills Flemming, and Fred Whoriskey), and submitted September 23, 2014. The focus of the review is on how acoustic and satellite telemetry are providing unprecedented insights into animal movements, and that its true potential lies in a global network. Thus, this is a tremendous vehicle to get OTN's message out. The review is officially pending revisions, and the manuscript will hopefully be resubmitted, by mid- to late- January.

Field Metadata App: A prototype for a metadata mobile application that HQP can use to record their data in the field was developed with the help of a co-op student and input from Colin Buhariwalla and Laura Logan-Chesney (Acadia U). The goal of this easy-to-use app, which has yet to be published, is to reduce the workload in the field by streamlining the procedure. The tags have a bar code that can easily be used to pull all of their information and the app will pre- and batch-fill fields (date/time, location, species), subsequently minimizing human error. The data automatically loads to a private Google spreadsheet that only Susan Dufault has access to. The app could potentially be operational next year.

Wave Glider: OTN's Wave Glider offloaded 184 VR4 stations from the Halifax line and Sable (November 2014). There are still 73 inshore VR3s to be offloaded, but full offloads should be complete by August 2015. This is a great success for OTN, as this is the first autonomous vehicle to accomplish this and therefore, a major proof of concept. It is certainly a breakthrough in remote offload capability: the glider can operate year-round, there is a significant day-rate cost reduction compared to ship time (\$3,200 Wave Glider (HFX) versus \$9,600 ship time (HFX)), and offloading is done more quickly than a ship would because there is no acoustic interference. N. Beauchamp is following up with the Globe and Mail to communicate this major accomplishment for OTN.

#### Overview of the presentation to OTN Council (K. Morton)

- Bob Branton retired, and Lenore Bajona came on as OTN Director of Data Management.
- In the absence of progress with our Gibraltar partners, the equipment originally purchased from this line has been reallocated to the Pacific Salmon Foundation. Those receivers are pending the peer review process by the Deployment Committee.
- The renewed collaboration agreement and modifications to the data management plan with Western Australia Fisheries has been signed by all parties and is now in force. The shark cull in Western Australia has been stopped following a ruling from the Australian Environmental Protection Authority. OTN's submission by F. Whoriskey to the Australian government in opposition to the cull was an important argument used by the international scientists, which included OTN members.
- Tasmania has been challenging, as upon recovery of the receivers for the first part of the line, the releases had a 100% failure. The recovery mission planned for 4 June 2014 to recover these receivers was unsuccessful due to poor winter weather. OTN is now working with the manufacturer to recover them. At this point we are looking at an ROV recovery.
- The vessel employed to retrieve the Maxwell Bay equipment arrived at the site too late in the season, and was unable to reach the line due to ice formation. We believe that the release batteries will still have enough power to bring the units to the surface next

- summer, as they tend to outperform the manufacturer's specs. There are now regular meetings for the "53° North Rescue Mission," and we are attempting to line up ship time support for a rescue mission in 2015. After that, the units will not likely be recoverable.
- In addition to the Wave Glider success, the Slocum gliders have been performing well. The echosounder on Slocum 201 has been tested, deployed, and data is coming back. Both Slocum glider 200 (runs the Halifax line) and 201 have VMTs on them, and there hasn't been any interference yet that we know of.
  - Since the release of the annual report, there has been a new collaboration in the Bahamas to mount VMTs on their gliders, which will be potentially important to the eel project.
  - In terms of the expansion of the network, Europe is a big potential partner with the preparation of a Northern Periphery Program proposal – led by F. Whoriskey on this end - that will monitor wild and farmed Atlantic salmon (the grant request is \$2-3M Euros), and the Horizon 2020 funding. OTN is included in the AtlanOS BG-8 submission to Horizon 2020, through Pedro Almeida in Portugal, to lead the development of the European Telemetry Network. OTN continues to work with NASCO (North Atlantic Salmon Conservation Organization), and is exploring the possibility of two additional deployments of equipment in association with tidal power development, and offshore wind power sites, in northern Scotland.
  - There is a lot of expansion into Brazil right now. OTN also completed the deployment of 18 receivers on the PIRATA buoys.
  - The RAMA network of weather warning buoys deployed in the East Indian Ocean is getting 10 acoustic telemetry receivers.
  - The cabled VR2C at Catalina Sea Ranch Inc. has been deployed.
  - Both F. Whoriskey and L. Bajona (data management support) have been working with the Gulf of Mexico region to build an acoustic telemetry network.
  - Mid-Atlantic Bight: OTN's commitment to the Atlantic Cooperative Telemetry Network's (ACT's) Cape Hatteras line (Roger Rulifson, PI) is being used as a match for a request for funding for a new coastal research vessel.
  - U. Washington has a proposal to look at a line of oceanographic buoys across the Davis Strait. OTN is possibly providing VR4s for that.
  - Additional receivers have been deployed in the Strait of Belle Isle to support the Maritime Fixed Link cable project with Emera, to see how it affects snow crab movements.
  - OTN just successfully deployed a line of receivers at Tiger Beach in the Bahamas, collaboration with Disney.
  - Triton/TAO buoy networks are in progress.
  - In the fall, OTN offloaded the Halifax, Minas Passage, and west coast lines. The west coast lines were completed last week. However, Minas Passage was not. The VR4 box didn't work on the west coast, but David Welch loaned a VR4 deck box. In spring we will be out there again doing the Halifax offshore pods, and the Cabot Strait in August.

It was noted that A. Janidlo had been mistakenly removed from the Council attendance list.

#### **4) Review and approval of Year 5 (2014) annual scientific progress reports and financials, and Year 6 (2015) budget proposals:**

The SAC reviewed the Year 5 scientific progress and financial reports and the Year 6 (2015) budget proposals. S. Iverson provided a copy of the budgets on the screen as each project was discussed. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

##### Global Comments and Recommendations for all projects and future reports

- In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid, or in part, from OTN.
- Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
- Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

##### Specific comments and requirements for individual projects

*Note: The PIs from projects 4.2, 4.4, 4.5, 4.6, and 4.7 were contacted to provide feedback on the level of integration of project 4.1. See attached letter and PI responses (Appendix 1).*

See attached letters to PIs (Appendix 2).

##### Review of Networking, HQP Exchange, and Social Science Component

Sara Iverson reviewed Project 4.16 (Networking, HQP Exchange and Social Science Components) with the SAC.

##### SAC Comments:

###### *Year 5 science report discussion:*

- There was a suggestion that as we are running down to the end of the project and want to get cross linkages between groups, there may be an argument for arena workshops for each arena, rather than an annual symposium, that are then pulled together for a bigger workshop less frequently for full integration.
- The Pacific group noted that they have always had an arena workshop that is open to OTN members.
- However, members of the SAC argued that the symposia promote integration and have been extremely successful for networking and HQP exchange within the entire network.

- A. Janidlo reminded the SAC that during the review of Phase II it was recommended to hold an annual symposium.
- More information about David VanderZwaarg (re: the ARC application) was requested.
  - S. Iverson explained that the research proposal submitted to the Australian Research Council (ARC) was not successful, but was currently being resurrected. It is going to be another evaluation of species at risk but in Polar Regions.

*The SAC made no specific comments or revisions for either the Year 5 scientific and financial report, nor the Year 6 budget proposal and justification.*

## **5) Discussion for Network completion by 2017:**

### Final outcomes and Phase II wrap-up

The completion of the network by 2017 was discussed including advice and recommendations for wrapping up phase II, expected outcomes or products, and future funding opportunities.

The SAC agreed that it would be important to consider OTNs' history, reputation and credibility, how to improve outreach so that the granting agencies understand the value and quality of the work generated by OTN and its members, and what the plan is for OTN moving forward. This will help determine the desired type of future funding, and put OTN in a better position to apply for such funding.

### *PR Escalation*

The SAC agreed that public relations (PR) escalation will be important going forward as OTN seeks out new funding opportunities. To demonstrate what OTN has accomplished, it will be first necessary to consider what type of output OTN would benefit from the most (e.g., a movie, an overview book, three specialized or arena-based books, a final report, all of the scientific papers, a special issue of a journal), any of which could be leverage for additional funding. The drafting of a high profile scientific synthesis paper was recommended, for which key research associates could be targeted to help carry some of this forward. It was suggested that some of the 2016 budget go toward this.

S. Cooke mentioned that while a number of special issues currently exist that involve OTN science, there is nothing exclusively OTN other than the special issue that the social scientists put together in *the Journal of International Wildlife Law and Policy*. Potential journals suggested by members of the SAC that might be appropriate and accessible included AFS (American Fisheries Society), Marine and Freshwater Research, Fisheries Research, Animal Biotelemetry, Canadian Journal of Fisheries and Aquatic Sciences, and Environmental Biology of Fishes. The organizing committee for the ICFT is considering publishing conference proceedings in a special issue of the Journal of Environmental Biology of Fishes, as it encompasses both marine and freshwater issues. The output from the ICFT presentations should determine the journal selected.

N. Beauchamp has already mentioned to F. Whoriskey that this is an appropriate time to redo the Communications Strategy, and suggested that revisions include an emphasis on PR of cross cutting activities and data synthesis.



### *Publications Library*

Another way to demonstrate OTN's productivity is to build a library of publications. Tracy Rounds and A. Ryan are working to build a library of publications related to the OTN and acoustic telemetry research using an existing online reference manager. Not only will it provide a way for OTN researchers and collaborators to easily access all network publications, it will also allow us to generate information on our research outputs and collaborations, consequently contributing to the efficiency of the reporting process.

### *CSAS*

The Canadian Science Advisory Secretariat (CSAS), a science-led peer-review process within DFO that helps push science into management decisions, was suggested as another avenue for PR escalation and a way to push management uptake and knowledge mobilization. To capture OTN's vision, it was suggested that OTN create a CSAS report that either explains the specific benefit of using telemetry science, or how to integrate all of the different telemetry techniques into a management strategy or framework.

As the CSAS reports are typically requested by managers or scientists, Alain Vezina advised that in order for OTN to present to the steering committee a DFO science lead would be required to help coordinate the meeting. Some of our key DFO science leads include Kevin Hedges (Arctic), John Neilson (swordfish), Dave Gillis, and Trevor Swerdfager (DFO past and present executive leads).

There is limited funding for DFO science to organize the meeting and all of the requests must be received by January 1<sup>st</sup> for the following April (January 1 deadline for April 2016). OTN would need to put in a request, but Alain said he would bring this up at the science executive committee meeting next week attended by all of the directors.

### Reporting and 2016 budgets

The budgets and reporting for 2016 (Year 7) were discussed and S. Iverson advised that the budget review by the SAC would be complicated next year. Keeping in line with the idea of synthesizing outcomes of the network, it will be important to revisit what needs to be accomplished and think about investing more into integration and cross-cutting activities within the network. It will be crucial to give all project leaders ample time to start wrapping things up, and it was suggested that when we approve 2016 budgets we tie the funding to deliverables.

A significant reduction in the 2016 budgets was noted. This value is determined by the remaining funds after 2015, and it currently appears that we may be over-budget for Year 7. Consequently, everyone was asked to not put in substantial requests for fieldwork in their proposals because they should be thinking about wrapping up and more importantly about writing up. Once the 2015 budgets are finalized, the budget available for 2016 can be determined. Of that allotment and commensurate with CFI funded staff, we would like the OTN Secretariat salaries to be covered until at least March 2017 to wrap up or apply for new funding. Anything leftover after secretariat and synthesis needs are finalized, would then consider the original budget requests.

Going forward: science program and future funding*Presentation of the Atlas Project (C. Aporta and M. Reid)*

Claudio Aporta, with the marine affairs program at Dalhousie, and his student Mike Reid, presented their version of the OTN Atlas Project. Claudio described the atlas as a way to mobilize OTN research through geovisualization. The atlas is a web-based and user-friendly program that integrates various types (audio, visual, text) of geo-spatially-linked data for communication to outside stakeholders. The purpose of the atlas is to use it as a tool to help improve communication and collaboration within OTN, and facilitate the communication of science between scientists and policy makers. Thus, the atlas could help OTN achieve the goals of Theme 5 (ocean governance) and Cross Cutting Activity 4 (pushing management uptake, and cooperation of natural and social scientists). The idea for the OTN Atlas project stems from Claudio's previous work creating atlases (e.g., historical use of the NW Passage).

A budget for the project was not provided to the SAC to make a completely informed decision. Claudio said that the cost of previous Atlases he developed was \$40K, which covered the salaries of one programmer and one Geographic Information Systems (GIS) expert. The timescale for building the Atlas would depend on the desired complexity and output, as well as available funding.

## SAC Comments:

- This was a good presentation, but was not enough to make a decision on.
- The more sophisticated concept is worth exploring.
- The value in this concept is the potential to integrate the natural and social science data in a seamless manner.
- However, there are more efficient, cost effective, and less complex avenues to explore to present this information to multiple audiences such as, bringing in a Computer Science co-op student to use OTN's database to create visualizations for the OTN website that could be presented in a really simple format to use for education and outreach.
- The SAC is quite concerned that the proponents are underestimating the amount of time, work, and money that this type of project will take.

The SAC determined that while this is a good idea, due to the fact that the focus for Years 6 and 7 will be on synthesizing information in preparation to wrap-up by 2017, the level of funding and time needed to complete this type of project is beyond the scope of what we can do with regards to budget and timeline.

## N. Beauchamp presented the SAC with a few alternative approaches for the Atlas project:

1. Work with James Boxall, head of GIS at Dalhousie University, who has many students that could be hired as co-op students or programmers in this capacity.
2. OTN could hire a co-op student and have that person liaise with Nikki and Claudio, or another social scientist.
3. Hold a "Hackathon": a one-weekend pizza party with programmers to pilot a framework for OTN to build on.

It was suggested by members of the SAC that Jon Pye, OTN Portal Manager, connect with Joanna Mills Flemming to determine what OTN can do with these types of data visualization tools. *(Since the SAC meeting, it was discovered that the sole interest of J. Mills Flemming is data modeling, which, specific to this pilot project, is outside the scope of what OTN is looking for).*

*Review of the social science research proposal: "Mobilizing New Science for Fisheries Policy and Management: The Case of Biotelemetry and Pacific Salmon Species in Canada"*

See attached proposal (Appendix 3).

As Year 7 (2016) is set to be a wrap-up year with a large focus on integrative activities, the SAC agreed that the proposed social science project is a potential candidate. It is in line with the goals of Theme 5 and Cross Cutting Activity 4, and thus, approval for this project is pending the release of the revised 2015 budgets sometime in January at which time we will have a better estimate of what remains.

#### Future Funding

The discussion of wrap-up led to the discussion of sustainability, and thus future funding opportunities for OTN. The funding cycles of the two granting agencies that support OTN do not match with CFI funding set to continue through to March 2017. However, the assumption is that something will be coming forward to fill in that gap. OTN is now being recognized as an MSI (Major Science Initiative), which bodes well for future funding of which there are multiple sources, and discussed below. Thus, it is fully expected that OTN will be sustainable long-term.

#### *NCE*

Applying for a Networks of Centres of Excellence (NCE) was discussed. S. Iverson said that Janet Walden (former acting President of NSERC) suggested that an NCE is the next logical step for OTN, as we would have outgrown a Strategic Network Grant (SNG). A call is expected in 2017, with funds to flow in 2018. Concern was expressed over whether or not one institution can hold two NCEs, as MEOPAR would be up for renewal at the same time that OTN would be applying. In OTN's favour, the network could start an NCE fully prepared, as we already have a network with research protocols, students, and industrial partners. The leading factor of one versus two NCEs would be associated with the level of potential support and willingness from Dalhousie (as host) to apply for two in such a limited time period.

If OTN is looking to expand, members of the SAC suggested that instead of competing with MEOPAR for an NCE when they are up for renewal, we could potentially merge into something newer and bigger. An NCE that truly merged a strategy that was Canada-wide could be significant, particularly because the Canadian Consortium of Ocean Universities (CCORU) is looking at coming up with a Canadian strategy for oceans science at a grassroots level. While it will be important for OTN to maintain brand recognition, MEOPAR is about observation so there seems to be a natural link to explore. An alternative would be to have two separate applications, but show linkages similar to the Galway and Horizon 2020 funding. For example, OTN would continue as a single network, but a component of the budget and a component of the budget of the linking network would be dedicated to integration, but not merging.

In preparation to apply for an NCE, we must have a clear sense of how OTN, and its network of researchers, has impacted both science and policy in Canada, and advanced Canada as a leader in ocean science. OTN's goal is to affect change and moving forward we must get managers to recognize and use the knowledge generated by OTN to manage the oceans. With an increasing shift in fisheries management being done by user groups, it is no longer relevant to only have scientists leading this discussion. Therefore, members of the SAC suggested that OTN to engage user groups and agencies like DFO to assess the top priorities within each arena that telemetry could address.

Additionally, keeping in mind that there must be activity in two out of three of the granting councils, OTN must have a social science component. Thus, it will be necessary to continue to engage people like Nathan Young and Lucia Fanning. However, the SAC agreed that the social scientist does not have to be a Dalhousie faculty member; the benefit of engaging Lucia is that she holds a large SHHRC grant, as head of Fishwiks, with a strong connection to First Nations and the Inuit.

The timeline for NCE funding means a gap for OTN staff, thus opportunities to bridge that funding gap must be considered. Applying for another NSERC Partnership Workshops grant was suggested, partnering with the Great Lakes. Alison reminded the SAC that the purpose of the workshop grant is commercial and industry partnerships.

Regardless, S. Iverson mentioned that she is meeting with people at GLATOS at MSU mid-December to present a seminar on OTN, including freshwater linkages and how important they are. It is likely they will want to talk about the value of becoming directly partnered with OTN. If OTN could form a partnership we would be making the best use of sharing infrastructure and expertise.

#### *Futures Working Group*

S. Iverson suggested the immediate formation of a think tank committee to start brainstorming on the future of OTN and what needs to happen in order to wrap up. The group would meet via Skype or teleconference to think about what the big questions and vision are, what to do with the remaining funding, and generate ideas on how we're going to get publicity going, synthesize data, push knowledge into management, and the personnel that we need to make all of this happen. Discussions should also revolve around the impact we want to be making by beginning of 2016, what we need to do differently, and what we need to do to make an NCE happen.

The SAC formed a "Futures Working Group" that included Peter Harrison, Sara Iverson, Fred Whoriskey, Aaron Fisk, Steve Cooke, Scott Hinch, Nikki Beauchamp, Amy Ryan, and Natalie Sopinka. A futures panel discussion is scheduled during the ICFT in July, but in the meantime, the committee will attempt to meet via Skype or teleconference at least once per month.

#### **6) Plans for integrating Annual OTN Canada Symposium with July 2015 ICFT (S. Iverson, N. Beauchamp, K. Morton)**

Led by the co-chairs K. Morton and N. Beauchamp, planning for the 2015 ICFT is underway. As it will be an unprecedented opportunity for the OTN national and international students to interact with each other, the fifth annual OTN Canada Symposium will be fully integrated into the ICFT. OTN Canada HQP presentations will be merged into the overall science sessions such

that everyone will be required to compete for a spot. Everyone would get an opportunity to present at least a poster. Posters will remain up for the whole conference and speed talks will be scattered throughout the week. For OTN Canada to maintain a presence in spite of this integration, it was suggested that OTN Canada HQP have a logo on their posters.

Workshops (i.e., Vemco, MEOPAR, Wildlife Computers) and meetings are set to kick off the week beginning Saturday July 11. The fieldtrip is scheduled for Wednesday, as well as the OTN Council meeting. A futures panel is scheduled early in the week with the broader OTN community to discuss the future of OTN. Following this at the end of the week will be a whiteboard session with just the “Futures Working Group.”

Three hundred delegates and about 20-30 exhibitors for the trade show are expected, including NSERC, CFI, and Vemco. Alain asked for a current list of DFO scientists that are involved either directly with the network, or are collaborators on projects, so he could communicate the importance of attending this conference.

The cost of registration is \$200 for students and \$450 for everyone else. Costs for OTN Canada HQP registration, travel, and accommodation in dormitory style residences will be covered by the OTN Canada symposium and HQP travel budget. The travel and accommodation costs for PIs will also be covered, but they would have to pay the registration fee.

#### **Potential Compass (media training for scientists); MED-A3 workshop (K. Morton)**

Two potential workshops scheduled for the ICFT Compass and MED-A3, required discussion, as they are both expensive to host, and require funding approval from the SAC. The Compass workshop is media training for scientists and the MED-A3 is a certificate-training program in marine emergency duties.

A full day of Compass training costs \$20K. Four media personnel are brought in with registration capped at 20. A. Janidlo said that this would be NSERC eligible. However, considering the cost, and registration being limited to 20, hosting this workshop in-house could be a better alternative, as all of the students would benefit from this training. Suggestions for potential workshop hosts included Linda Panosso, Peter Hume, and Peter Calamai.

There could also be an opportunity to coordinate a MED-A3 course. The challenge is that registration is limited to four people. The benefit of the course is that the certificate does not expire. Some of the PIs that serve on the SAC advised that many of the graduate students already have this training. Therefore, the SAC decided that this workshop is not necessary.

#### **7) Brazil-Canada OTN Workshop (special funding; S. Iverson)**

S. Iverson discussed the Brazil – Canada OTN workshop to be held Feb 2015 during the Brazilian Ichthyology Conference, the biggest scientific conference in Brazil. Many Canadians are involved, including industry partners like Vemco. S. Cooke, Mike Power, and Eduardo Martins (OTN Canada HQP) were planning to attend and participate in this special OTN symposium, to talk about how to coordinate, share equipment, strategies and tag information, and to ultimately be a part of OTN and build the Brazilian node, with Canada leading the way. The symposium will be supported in part by the Ichthyology conference, but OTN will seek support from the Brazilian Embassy. Eduardo has already successfully applied to the HQP travel fund,

and Steve said that he has a pot of money for Mike (Canadian-Latin America Fund, \$50K). The Brazilian government covers the travel of S. Iverson and F. Whoriskey. This will be an important conference for OTN Canada PI's and HQP. Consequently, S. Iverson asked the SAC if, although travel funding for all of OTN Canada has been replaced with an HQP travel fund, it would be possible to have PIs apply to the HQP travel fund just this once for some assistance due to the importance of this conference. *(Since the SAC meeting: only E. Martins will require travel support.)*

### **8) Future Issues, miscellaneous items**

#### Possible inclusion of a social scientist on the SAC going forward

Due to an inability to acquire travel approval, Svein Vagle felt the need to step down from the SAC. A. Vezina was going to try to clarify this with DFO. In the meantime it was suggested that a social scientist replace Svein on the SAC. S. Cooke suggested that it would be more prudent to have a social scientist on the "Futures Working Group." Everyone agreed that if Svein's travel could be approved through DFO and he was willing to stay on the SAC, that we would have him come back.

#### Miscellaneous

S. Iverson agreed to delay her sabbatical for another two years, as she does not see a way that she could take one until 2017. The Dean and the Department Chair will officially write a letter asking her to delay.

S. Cooke offered a huge thank you to M. Heupel, along with everyone else, for taking the time to travel to Halifax from Australia, and to the staff support and leadership for all of their efforts. He ended by thanking everyone for a great meeting, and with that the meeting was adjourned.

### **9) Follow-up and Future meetings**

The priority for S. Iverson and A. Ryan is the budget, and they will be following up with the PIs to clarify this year and next year's financials and budget justifications. Additionally, it will be critical to tally the budgets through to 2015 to determine what is remaining for 2016. This information, along with the meeting minutes, will be circulated among the SAC for final review and approval in preparation for a late January or early February teleconference that A. Ryan will organize. Beyond this teleconference, the SAC will likely all be together for the ICFT in July.



**OTN Canada Scientific Advisory Committee (SAC) Fifth Annual Meeting  
Tuesday and Wednesday, 2-3 December 2014, Halifax, NS**

**Appendix 1:**

Letters to, and responses of, Principal Investigators  
(Projects 4.2, 4.4, 4.5, 4.6, and 4.7)  
requesting feedback on the integration of Project 4.1

Dear OTN Canada PI's,

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress reports and financials for Year 5 (2014) and Year 6 (2015) proposals. The SAC is requesting feedback from contributing groups on the level of integration of Project 4.1 (K. Fennel and J. Sheng – *Coupled Physical Biogeochemical Ocean Modeling and Assimilation*) before it can approve final budgets. This project was established to link oceanographic modeling and expertise to inform animal movement and migration patterns; i.e. one of the mandates of OTN and Framework Question 1 (“How do oceanographic and environmental features [both physical and biological] affect animal habitat use, movement and migrations?”). As of Year 5 (2014), your projects have been listed as directly being contributed to by/collaborating with Project 4.1. We would like to get your feedback on this project, and especially: what you are gaining from this collaboration and how your project is dependent on the deliverables of Project 4.1. We are trying to get a sense of the amount of collaboration and integration that is derived from this project. Your responses need not be lengthy but will be important to assessing and approving budgets, so please take the time to respond to this as soon as possible (**no later than December 12**). We appreciate your discretion and cooperation with this matter.

Kind regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)

## PI Responses

**4.4 (G. Crossin):** although I appreciate the need for this type of integration within the OTN, and in telemetry studies more generally, this project has no real connection to either of my two projects (4.4 and 4.14). I am not anticipating, nor do I depend, on any deliverables, from 4.1.

**4.2 (D. Hebert):** Collaboration efforts between projects number 4.1 and 4.2 take many forms. All observational datasets processed and analyzed by Mathieu Dever have been extensively used by Shiliang Shan (Dr Sheng's group) to validate the newly developed, 5-level nested model of the inshore Halifax Line. Laura Bianucci and Katie Brennan have also used these data for the validation of the physical component of their bio-physical coupled model.

Once Shiliang Shan and Mathieu Dever are done with the model validation, they will use the nested-model to investigate important features of the Nova Scotia Current that have been observed in the *in-situ* measurements but are not properly resolved in the



datasets. Process studies will be conducted to investigate reversal events and coastal detachment of the current. These studies will then be used in Mathieu's work to link the coastal circulation to Atlantic Salmon migration patterns over the Scotian Shelf.

**4.7 (Don Bowen):** There has been no meaningful ongoing collaboration between 4.1 and the grey seal bioprobe project. There was an initial collaboration with a MSc student who analyzed the grey seal collected light-level data, but that ended a year or two ago. There appears to be little interest in further collaboration with the grey seal project.

**Project 4.5. (Julian Dodson):** Our collaboration with project 4.1 started during OTN phase I and has continued ever since, more intensively with the move of Dr Mélanie Béguer-Pon (PDF) to the department of physical oceanography (Halifax), in September 2013. That collaboration is undeniably very useful for our project at several levels as described below.

Two biophysical particle-tracking models have been developed and represent useful tools that complement ongoing field tracking experiments for better understanding the behaviour of migrating eels, quantifying the role of ocean circulation on eel migration, and ultimately providing projections for climate change impacts on eels. Both models rely on results from physical ocean circulation models, either directly developed by people from project 4.1 (DalCoast, developed by Dr Kyoko Ohashi and Dr Jinyu Sheng) or well-known by them (NEMO). These physical models would be hardly accessible for us as biologists. In both models, the movement of virtual eels is simulated by implementing various horizontal and vertical swimming behaviours. This programming was done by the physical oceanographers who made it accessible for us so we can run the simulations.

One of the models is about the migration of eels from the St. Lawrence Estuary to the exit of the Gulf (Cabot Strait). In addition to allow us for testing the required behaviours necessary for eels to escape the Gulf within the time window observed from the acoustic tracking (that has been conducted in this area since OTN phase I), the model provide useful indications about where we should focus our efforts for detecting eels. It also allows us highlighting that certain detected tags were most likely in the stomach of predators, considering the too high swimming speed values required for reproducing the observed transit time between the estuary and the exit of the Gulf. A paper about this collaborative work is currently under preparation and should be submitted in early 2015. The other model is about the oceanic migration of both American and European eels. So far, field experiments have failed to reveal the oceanic migratory routes and the exact location of the spawning sites. In this model, the effect of oceanic circulation on several plausible migratory paths, the environmental conditions experienced along the way and energy consumption are evaluated. A paper about this work entitled "Exploring the role of the physical marine environment on silver eel migration using a biophysical particle-tracking model" was submitted at the ICES Journal Marine Science in early December 2014.

As more observations will be collected from our field experiments, these models will help to refine our definition of the migratory behaviour of eels and to reveal the impact of the physical marine environment (currents, temperature and salinity) on eel migratory behaviour.

Another important gain for our project from collaboration with project 4.1 is regarding our satellite tracking experiments. Firstly, in many cases, the satellite tags that were attached to eels reached the surface and drifted for several hours or days before transmitting their data. Performing backward particle-tracking allows us evaluating the location of the tags before the surface drift (i.e. when they detached from the fish). This represents very important information regarding the eels' trajectories. The backward particle-tracking is programmed by the physical oceanographers who also provide the realistic physical background. Secondly, physical models and programming skills from project 4.1 help us to infer the daily location of eels from the archival data recorded by the satellite tags. Temperatures at specific depths recorded by the tags are used to estimate the location at sea. Considering that the traditional geolocation methods used for estimating fish position while underwater cannot be applied for eels (absence of light data) we completely rely on the other physical data recorded by the tags.

Our last satellite tag experiments occurred last fall 2014. We will thus have new data in 2015 and collaboration with project 4.1 will help us to analyse and improve the inferred results.

*Note: While a response letter was not received from members of Project 4.6, there is clear indication of collaboration and integration with Project 4.1 outlined in the annual scientific progress report.*



**OTN Canada Scientific Advisory Committee (SAC) Fifth Annual Meeting  
Tuesday and Wednesday, 2-3 December 2014, Halifax, NS**

**Appendix 2:**

Letters to Principal Investigators in response to  
their Year 5 scientific and financial annual reports and Year 6 budget proposals



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.1*

*Send to Jinyu Sheng (Dalhousie), Katja Fennel (Dalhousie),*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates this group on the improved productivity (e.g. submitted, accepted, and published journal articles, and external conference presentations) of the group as a whole.
- The integration of physical oceanographic modeling with (4.2, 4.5, 4.6) is a successful accomplishment, and this continued cross-project integration is important. The oceanographic work that is supported by OTN Canada must be providing context to animal movements.
- Nevertheless the SAC remains deeply concerned about the publication rate of the two RAs that have been there since 2010, particularly with the high budget of their salaries.

*Year 5 financial report:*

- Basically expenditures were according to approved plans.

*Year 6 budget and justification:*

- 2015 and especially 2016 have to be about cross-project integration and synthesis of research results; therefore, it is imperative to know how the data generated under the auspices of this project are going to get disseminated.

- The SAC does not feel that bringing on a new RA replacement for Laura Bianucci will be efficient as Phase II is wrapping up, unless it will make a significant difference in terms of dissemination. However, this seems unlikely with a brand new person coming on board.
- In order to approve the continuation of funding, the SAC must get a sense of what the dissemination plans are going to be by the two RA's for which funding has been requested in 2015. Therefore, the SAC is requesting a milestone table of activities and publications, with planned submission dates.

Revisions for the 2014 report:

- Research associates (RA) should not be listed as PDFs in the budget report. Please revise.
- Please provide the above requested milestone table of publications: develop a plan for products that are to be produced from the research, including number of papers and presentations to be submitted/presented by each HQP, targeted journals/conferences, and timeline and descriptions of other kinds of products to be produced.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what "no significant deviations" means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year's SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form absolutely as soon as possible in order for the SAC to make a decision on continued funding for RAs beyond the 3 months approved for 2015. We will incorporate the revisions into the reports. Thank you again for your efforts. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.2*

*Send to Dave Hebert (DFO-Bedford Inst, Dalhousie U), Tetjana Ross (Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates the glider group on the productivity of their students, and their forecasted rapid expansion with the installation of the echosounder and success of the Wave glider, as well as participation in Gliderpalooza.
- Going forward the glider program is critical to the OTN.
- Congratulations to Matt Dever for his exceptional work that brings together oceanography and biology through telemetry, which is truly what the OTN is all about.
- The SAC notes that Matt Beck has been with the group for a long time as a master's student, with few publications, and remains at 25% funding. The SAC is requesting clarification on this.
- The SAC noticed that some co-op students were listed as RAs. The acronym "RA" is for research associates only (personnel who have been funded at the postdoctoral level more than 2 years) - not research assistants. It is also very important to identify undergraduate (co-op) or any other students in their own category, as more credit is given for hiring students.

*Year 5 financial report:*

- High spending on technical support.
- However, expenditures are forecasted to be within budget with no significant deviations.

- There is no indication of Matt Beck's salary within the expenditure justification.

*Year 6 budget and justification:*

- Essentially this group is asking for what was originally requested, with the largest portion for qualified personnel to operate the Wave glider.

Revisions for the 2014 report:

- Indicate which students have been identified incorrectly as "RAs" that are actually undergraduate students, and specify whether they are co-op, honours, or research assistants.
- Justify/clarify Matt Beck's status, particularly within the financial report.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what "no significant deviations" means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year's SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.3*

*Send to Christopher Taggart (Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates you on the success of this project, especially the spin-off company that has come out of this, and wishes you continued success.
- While the SAC hopes for improved productivity (e.g. submitted, accepted, and published journal articles, and external conference presentations), it was agreed that from an industrial point of view this project is of benefit to OTN, and the SAC commends your collaborative efforts.

*Year 5 financial report:*

- **NSERC rules are as follows:** The OTN NSERC account is not to be borrowed from, or contributed to, other than for OTN related work. The only reporting to be listed as budget expenditures is that which came solely out of the funds given to you by OTN. In other words, you are to report on only the funds spent that you were given out of the OTN NSERC account. All other sources must be listed separately as in-kind support. This can be in a table within the report, or however you choose to list it, as long as it is listed separately from your OTN NSERC account.



*Year 6 budget and justification:*

- Overall appropriate.
- Approval pending new budget justifications.

Revisions for the 2014 report:

- The SAC would like more information on productivity; therefore, please provide a milestone table of what the plan is for disseminating publications: develop a plan for products that are to be produced from the research, including number of papers and presentations to be submitted/presented by each HQP, targeted journals/conferences, and timeline and descriptions of other kinds of products to be produced.
- Please resubmit your budget and justifications for money spent solely out of your OTN account provided. List other sources of funding as in-kind contributions.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.4*

*Send to Glenn Crossin (Dalhousie U), Bruce Hatcher (CBU), Jinyu Sheng (Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- Although the start-up of this project was delayed, everything looks to be going forward.
- The SAC would like to see more information about the biology and the significance of this project in the report.

*Year 5 financial report:*

- Much of the budget has not been spent due to the delay in start-up.
- CBU is \$5.6K overspent.
- Clarification on the total budget required for fieldwork.
- **NSERC rules are as follows:** The OTN NSERC account is not to be borrowed from, or contributed to, other than for OTN related work. The only reporting to be listed as budget expenditures is that which came solely out of the funds given to you by OTN. In other words, you are to report on only the funds spent that you were given out of the OTN NSERC account. All other sources must be listed separately as in-kind support. This can be in a table within the report, or however you choose to list it, as long as it is listed separately from your OTN NSERC account.

*Year 6 budget and justification:*

- More funds are being requested this year than what were approved due to the array expansion. Perhaps there is money available from CFI to contribute to this.
- It is possible some of the fieldwork budget has been duplicated between Glenn and Bruce.

Revisions for the 2014 report:

- Please resubmit your budget and justifications for money spent solely out of your OTN account provided. List other sources of funding as in-kind contributions.
- An indication of the total budget needed for fieldwork going forward for this year and next (communication between Glenn and Bruce) is required. Confirm whether or not CFI has funds available to contribute towards the increased servicing costs.
- Write a paragraph about the biology and the importance of study to be included in the final report.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.5*

*Send to Julian Dodson (U Laval), Martin Castonguay (DFO-Institut Maurice-Lamontagne, U Laval)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates you on your continued productivity (e.g. submitted, accepted, and published journal articles, and external conference presentations), and commends you on your presentations of this excellent work at conferences.

*Year 5 financial report:*

- The budget is on track.
- There was a question of who the five people are for whom travel and accommodations were covered. Only two of the five are eligible. NSERC cannot fund travel for individuals employed by DFO, including postdocs assigned to DFO PIs.

*Year 6 budget and justification:*

- There were no issues surrounding this request.

Revisions for the 2014 report:

- Please clarify the portion of the budget spent on travel. Of the five individuals for whom

travel and accommodations were provided, only two were eligible. Therefore correct how this is worded in the budget justification.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.6*

*Send to Mike Stokesbury (Acadia U), Michael Dadswell (Acadia U), Matthew Litvak (Mount Alison U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- “What’s not to like?”
- The SAC was very impressed at how much this group has been able to accomplish with very junior students, and the ability to spread funds so far.
- It was suggested that this group might consider aiming for some higher impact journals, but this is a minor comment.

*Year 5 financial report:*

- This group has always worked with a small budget.

*Year 6 budget and justification:*

- There were no deviations in the proposed expenditures.

Revisions for the 2014 report:

No specific requirements were stated.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.7*

*Send to Sara Iverson (Dalhousie U), Don Bowen (DFO-Bedford Inst, Dalhousie U), Joanna Mills Flemming (Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates this group on their productivity (e.g. submitted, accepted, and published journal articles, and external conference presentations), and acknowledges the great work being done.

*Year 5 financial report:*

- Spending is on track with no significant deviations.

*Year 6 budget and justification:*

- There were no deviations from the proposed expenditures.

Revisions for the 2014 report:

No specific requirements were stated.



Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.8*

*Send to Joanna Mills Flemming (Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates you on the work coming out of this project.
- The SAC would like to see the data visualization workshop fully described in the report.

*Year 5 financial report:*

- Funds have been spent accordingly.
- I. Jonsen's salary came out of Bioprobe account so some funds do not match.

*Year 6 budget and justification:*

- There are no deviations to the proposed expenditures.

Revisions for the 2014 report:

- Please add to the report the data visualization workshop that was held (dates, all who attended, etc).

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
4. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
5. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.9*

*Send to Ian Fleming (Memorial U), Michael Power (U Waterloo), Ross Tallman (DFO-Arctic, U Manitoba), Aaron Fisk (U Windsor)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- Congratulations on completion of Year 5.
- The SAC understands that this project just started in January so there has not been much in the area of output.

*Year 5 financial report:*

- There is an issue with money going to DFO, as NSERC cannot pay for DFO postdocs. Travel funding for individuals employed by DFO, or supervised by an individual that is not an adjunct professor must come out of that individual's budget, not the OTN NSERC account.
- NSERC funds can only be used toward students and student costs.
- It is important to clearly state in the budget justifications that the funds are for student analyses, and that the costs for materials and field research are for students.

*Year 6 budget and justification:*

- There were no exact descriptions given for 2015 expenses.
- There are no deviations from the proposed budget.

- All are proposing to carry forward their money except R. Tallman who has no money to carry forward.

Revisions for the 2014 report:

- Revise the budget justification (Year 5) to indicate that the money is for student analyses, and is not going to DFO.
- Also submit a justification for student expenditures (R. Tallman).
- Submit a revised budget justification (Year 6) that is detailed, but clear (please see enclosed example).

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.10*

*Send to Aaron Fisk (U Windsor), Svein Vagle (DFO-Arctic, U Victoria), Steve Ferguson (DFO Arctic, U Manitoba)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- Congratulations on completing Year 5.
- Since no cod or seals could be found, the SAC wondered, how this might impact the project's objectives.

*Year 5 financial report:*

- We will need a better text justification. Just looking at the project overall, it would help a lot to have some of the in-kind listed and discussed.

*Year 6 budget and justification:*

- Deviations were explained and the budget is balanced.

Revisions for the 2014 report:

- Please describe how the inability to find cod or seals impacts the objectives of this project.

- Please revise and submit budget justifications for this year (Year 5; see enclosed example).

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.11*

*Send to Aaron Fisk (U Windsor), Kevin Hedges (DFO-Arctic, U Manitoba), Svein Vagle (DFO-Arctic, U Victoria), Steve Ferguson (DFO-Arctic, U Manitoba), Daniel Heath (U Windsor)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates you on all of the work coming out of this project.
- The SAC would like to have seen mentioned in the report a follow-up to the 2012 issues experienced, and the fact that you were invited back into Cumberland Sound, as this demonstrates the impact of OTN on First Nations and the acceptance by them of OTN activities.

•

*Year 5 financial report:*

- There needs to be a clearer breakdown and justification of the expenditures (what is being spent on what or on whom).

*Year 6 budget and justification:*

- There was a significant deviation in the proposed budget, however this was justified.
- The SAC commends you on your plan to support more students.



Revisions for the 2014 report:

- Please revise and submit budget justifications for this year (Year 5) that provide a clearer breakdown of what was spent on what and whom (see enclosed example).
- Be sure that the travel budget is spent on student travel. NSERC cannot fund travel for DFO employees.
- Interaction with Pangnirtung: please include within the report a follow-up describing how you were invited back (address resolution to 2012 issues).

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.
3. Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



Ocean Tracking Network Canada  
 Dalhousie University  
 1355 Oxford Street, PO Box 15000  
 Halifax, Nova Scotia, B3H 4R2

*Project 4.12 – 4.15*

*Send to Scott Hinch (4.12, 4.15; UBC), Steve Cooke (4.13; Carleton U), Glenn Crossin (4.14; Dalhousie U)*

Dear OTN Canada PIs:

The OTN Canada Scientific Advisory Committee (SAC) met on December 2-3, 2014 in Halifax to review the annual scientific progress report and financial reports for Year 5 (2014) and Year 6 (2015) proposals. To comply with conflict of interest procedures, all principal investigators that serve on the SAC were asked to leave the room when their projects were discussed.

Report Approved:  Yes  No  Conditional

Budget Approved:  Yes  No  Conditional

**Specific recommendations/considerations for your project (Please address the requested revisions to the 2014 report ON THIS FORM and resubmit to us by January 6, 2015):**

SAC Comments:

*Year 5 science report:*

- The SAC congratulates you on the productivity, output, and success of each of these projects.
- The interaction of these groups with the OTN community was acknowledged and commended.
- The SAC was pleased with the quantity of publications, as well as presentations and outreach. The presentation by Vivian Nguyen was particularly noted.
- The SAC requires clarification on the HQP start and end dates (particularly end dates).
- As well, it would be useful to describe where support is coming from for the people that are listed as 0% funded by OTN NSERC.
- It would be useful to see the publications listed separately by project so the SAC can more easily monitor productivity.
- Generally, the SAC is happy with each of these projects going forward.

*Year 5 financial report:*

- All of these projects are managing their budgets well.
- However, we need to see a detailed and clear description of the budget expenditures for each project.

*Year 6 budget and justification:*

- Reprofile RA salary (from \$40,000 to \$45,000), as this is standard across all other project budgets.

Revisions for the 2014 report:

- Please submit a clearer and more detailed budget justification for each of these projects (see attached sample).
- When submitting the new budget go ahead and reprofile \$45K for RA salary.
- Please clarify the start and end dates (particularly end dates) to the best of your ability. Rough estimates are just fine.
- Please indicate where the support comes from for HQP that are listed as being 0% funded by OTN NSERC (section 5a).
- Next year, please list publications separately by project.

Global Comments and Recommendations for all projects (for future reports):

The SAC made the following general comments on this year's annual reports and recommendations for subsequent annual reports:

1. In the future please submit clearer and more detailed budget justifications. Going forward we will include examples for you to follow as a guideline. It is not appropriate to ask the SAC to go back to your original proposal budget and its justification in order to understand what “no significant deviations” means; please simply describe what you spent on what, including the names of all people whose salaries were paid from OTN.
2. Proposed publication expenditures for all projects were removed following last year’s SAC meetings. These expenditures were centralized and require application to the Secretariat (i.e., Amy Ryan) to be approved on a case-by-case basis.  
Please ensure that OTN is acknowledged in any and all publications generated with the support of OTN Canada/NSERC, and especially when the research may appear somewhat peripheral to OTN Canada work. Only publications acknowledging OTN support may be listed in annual reports.

Please submit any revisions on, or in addition to, this form. We will incorporate any revisions into the reports. Thank you again for your effort with the reports. If you have any questions or require additional information, please do not hesitate to contact us.

Best Regards,

Sara Iverson, Scientific Director  
Amy Ryan, Network Manager (acting)  
on behalf of the OTN Canada Scientific Advisory Committee



**OTN Canada Scientific Advisory Committee (SAC) Fifth Annual Meeting  
Tuesday and Wednesday, 2-3 December 2014, Halifax, NS**

**Appendix 3:**  
Social Science Proposal

**Title:** *Mobilizing New Science for Fisheries Policy and Management: The Case of Biotelemetry and Pacific Salmon Species in Canada*

**Overview:** The proposed research will investigate potential avenues for translating new scientific knowledge in the field of biotelemetry into real-world fisheries policy and management strategies, using Pacific salmon species in Canada as a case study. The proposed research is an extension of an NSERC-funded study currently underway (Scott Hinch, PI)<sup>1</sup> examining the knowledge needs and knowledge management strategies of regulators (primarily the Department of Fisheries and Oceans and the bi-national Pacific Salmon Commission) and stakeholder groups (First Nations, conservation groups, commercial and recreational fishers). Preliminary findings suggest that interest in new scientific findings from biotelemetry is high among both regulators and stakeholders, but that significant barriers to adoption and implementation remain. Among these barriers is lingering confusion about how biotelemetry findings “fit” with existing policies, regulatory decision-making processes, and stakeholder interests. The proposed research will address this uncertainty by investigating the potential impact and integration of biotelemetry findings with existing fisheries policy and management practices. The primary tool for this research will be collaborative scenario-building, wherein key informants are invited to develop a series of policy and regulatory options in which biotelemetry plays several possible roles (peripheral, moderate, and central). Although research will be focused in the Pacific Arena, this model can be exported to the other arenas in the future and will be useful in identifying future research needs and opportunities of broad relevance to OTN as a whole (e.g., when the Networks of Centres of Excellence proposal is developed).

**Research Plan:** Research described here is embedded within the Pacific Arena OTN research program and involves direct and continual collaboration between Young, Hinch, Cooke, Miller, Farrell, and Patterson. The proposed research will build on interviews currently being conducted as part of the Hinch et al. study (N ~ 50-60) in the Pacific Arena. Potential participants for scenario-building will be identified from this pool. Scenario-building is a multi-step activity that first involves individual semi-structured interviews with a total of ~ 20-30 well-informed participants representing both government and stakeholder groups. These interviews are then followed on a later date by collaborative focus group or workshop-style interviews. For the group interviews, participants will be randomly assigned to one of ~ 3-4 groups (with the option of sample adjustment if groups are overly homogeneous). The individual and group interviews will be recorded and subject to content analysis, with particular attention to both consensus and dissension.

**Outcomes:** The proposed research will produce plausible and well-refined scenarios under which biotelemetry findings, technologies, and conclusions may be integrated into various aspects of fisheries management and policy. It will also generate substantial data on the objections, hesitations, qualifications, and concerns of regulators and stakeholders regarding biotelemetry research and technologies (as generated from the individual and group interviews). Both outcomes will be valuable to biotelemetry researchers, stakeholder groups, and the broader fisheries management community. Findings will be published in scholarly journals and lay-

---

<sup>1</sup> *Climate warming, pathogen expression, and capture locale: recent and emerging challenges for managing Pacific salmon fisheries.* Scott Hinch, PI. Co-Investigators: Steven J. Cooke, Anthony Farrell, Kristi Miller, Nathan Young. NSERC Strategic Grant.

language research reports. In addition, findings will be shared with the OTN community via the annual reports and the OTN annual meetings.

### Timeline

Instrument design and population building: June-September 2014

Application for approval from University of Ottawa's Ethical Review Board: September-October 2014

Individual interviews with participants: October-December 2014

Group interviews with participants: January-March 2015

Data analysis: April-August 2015

Writing (reports and scholarly articles): August-December 2015

### Budget

Item	Funds requested
One graduate level research assistant (8 months)	\$11,000
Travel for Nathan Young, Ottawa-Vancouver (3 trips x 1 week)	\$4,500
Travel for research assistant, Ottawa-Vancouver (2 trip x 1 week)	\$2,200
Transcription services, individual & group interviews	\$1,300
Supplies (software, photocopying, telephone charges)	\$1,000
Item	\$20,000 (over two years) \$10,000/year (2014 & 2015)

**Budget Justification:** The research merits one graduate-level research assistant to aid with preparation of the interview instruments, scheduling of interviews, conducting of interviews, and data analysis. Performing the research will require a minimum of 3 trips by Young and 2 trips by the research assistant to perform individual and group interviews. Transcription services will be required to process the large amount of data generated.