
Submission to Expert Panel of Review Environmental Assessment Processes with a focus on Improving the Contribution of Science and Traditional and Indigenous Knowledge

Introduction

The EAC was founded in 1971 and works on a wide range of issues mostly at the provincial level but also at the national and international level. Science is a strong theme in our work, and based in Halifax, we are lucky to be surrounded by, and to work with many respected scientists and scientific institutions.

We are impressed by the level of engagement in the review and the number of written submissions received including from First Nations. We thank the panel members for taking the time to travel across the country and their support staff for facilitating participation in the review.

We have surveyed the online written submissions from our colleagues across the country, academics who specialize in the field of environmental assessment, and First Nations and find a relatively high level of consistency around recommendations relating to **indigenous rights, public consultation, regional and strategic environmental assessments, climate, and sustainability**. We broadly support the recommendations of our colleagues on these topics and specifically endorse submissions from Bob Gibson and colleagues in *Fulfilling the Promise* and endorse the twelve pillars of a next generation environmental assessment regime developed by West Coast Environmental Law and others. We also draw the Panel's attention to Meinhard Doelle's reflection on his experience as a member of the Lower Churchill Panel and his recommendations on a net sustainability test¹.

Our Experience with Federal EA

Over the years, our organization has participated in many comprehensive studies and panel reviews, many of them marine-based. Our sense that environmental assessment in Canada wasn't working or fulfilling its promise began well before the passage of CEAA 2012. While CEAA 2012 is a clear assault on the integrity of federal EA, our jaundiced view of the process and the outcomes was largely formed through our participation in EAs prior to 2012.

Perhaps because many of our staff have scientific backgrounds, one of our greatest frustrations with the process has been the quality of information, both science and traditional and indigenous knowledge, submitted by proponents in the EA process. Presumably by default rather than by design, Canada has ended up with a process that rewards quantity over quality of information. Prior to the use of CDs and an online registry, the arrival of one or more large boxes of binders was a regular occurrence. The material provided by the proponent is 95% descriptive and often copied and pasted (understandably so) by the consultants from previous EAs. The quality of science in the documents is often low or mundane. The usual conclusion of no significant adverse environmental impact is expected based on the quality of science and the analysis and, of course, the current rules of the game.

¹ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2480368

It is our view that sub-standard EA documents play a big role in determining the tone and dynamics of reviews. Concerned intervenors, because of the poor quality of the EIS and the biased conclusions, feel compelled, if they have the intervenor funding or resources, to address all the failings and omissions and emphasize the negative impacts of the project. Proponent consultants elaborate on and defend the EIS and its conclusions. This creates an adversarial process. The treatment of the impacts of underwater seismic in EIS provides a good example. EIS usually take a restricted view of the science and downplay the potential impacts on marine life. Environmentalists point to the emerging science and the potential risk to marine life from invertebrates to endangered marine mammals. As participants in many EAs, we can conclusively say that we find this dynamic to be very unsatisfying.

We are not suggesting that good science and knowledge will reconcile often deeply opposing views on proposed developments. We are suggesting that an EA founded on rigorous science and respected traditional and indigenous knowledge could help to minimize differences and allow the process to proceed around a commonly accepted body of facts and analysis.

Science and Traditional and Indigenous Knowledge

We have been impressed by the level of attention to science and indigenous knowledge in the oral and written submissions. We were particularly encouraged by the open letter to the Prime Minister and his cabinet ministers from over 1800 early career scientists on the role of science in environmental assessment². It is our impression that recognizing science and other forms of knowledge has emerged as a major, and perhaps unexpected, theme in this review.

The overwhelming message from those who comment on science is that the quality of science in EAs is poor and that increasing scientific rigour would result in much improved outcomes. It is important to note that criticisms are not focused on the consultants and others who currently produce much of the science in EAs, but on the process itself and the lack of incentive for the best science to emerge and be acted upon by decision makers.

A number of submissions including from Wildlife Conservation Society Canada have examined the various points where the EA process and science interact, from the scoping to decision-making, and have provided recommendations. It is our view that the single most important step that could be taken to improve science in the EA process would be to improve the quality of science in EA documents, in particular the environmental impact statement. If the EIS and related documents contain the best available science and traditional and indigenous knowledge, this will elevate the consideration and application of science throughout the process. A process that is built on incomplete and mediocre knowledge is less likely to deliver high quality decisions.

Many of the submissions to the Expert Panel call for much greater use of regional and strategic environmental assessment in EA in Canada. We emphatically support this change. However, these documents and processes will only be good as the science and other knowledge that is fed into them. A REA or SEA that contains poor and incomplete science, isn't peer reviewed, isn't being updated with the latest science and where content is unconnected to recommendations and decisions because of the absence of solid analysis is only going to disappoint.

² <http://www.youngresearchersopenletter.org/>

It is true that other parties, be it government departments, such as DFO, or academics provide comment, but it doesn't remedy the fact that the base document or starting point is fundamentally flawed. It is also argued that it matters less if the EIS is flawed, decision-makers will sift through material provided by the proponent and intervenors and make an informed and appropriate decision, a process akin to a court room with opposing parties presenting before a judge who then makes an informed and fair decision. In our view this is not a rationale for not improving the scientific quality of EIS.

What steps can be taken to improve the quality and usefulness of the EIS? A number of commentators have suggested useful changes without discarding the principle or practice of self-assessment (the proponent is responsible for producing the EIS). Greig and Duinker argue for 'a re-conception of science associated with EIA that includes a rigorous scholarship of application inside EIA and a vigorous scholarship of integration outside it.'³ Justina Ray of WCS Canada in her oral submission to the Expert Panel made several recommendations to improve the quality of EA documents including more outside or independent reviews of EA documents as well as the legislation and the agency setting higher expectations for the level of science produced. We strongly support these recommendations to improve the quality of science. The Panel should also consider including an open and transparent peer review mechanism in the EA process. We have participated in many peer reviews of DFO reports conducted under the direction of the Canadian Science Advisory Secretariat (CSAS) which coordinates the production of peer reviewed science advice for Fisheries and Oceans Canada (DFO)⁴ and have found them to produce credible scientific reports. Key is having the requisite experts present and a mix of scientists from across institutions.

Nonetheless, we are left with the question of whether these changes address the core of the problem: the relationship between the proponent and consultants hired to produce the EIS and related EA documents. In our view the single most important step would be to sever the direct relationship between the proponent and those who produce the EIS and instead ensure that the EIS is produced by scientists and those with traditional and indigenous knowledge, or access to it, who are independent of the proponent, the regulator or other intervenors.

We would encourage the Panel to recommend an independent body of scientists and those with access to indigenous and traditional knowledge funded indirectly by the proponent and participating governments. There may be models or features from other jurisdictions, such as the UK or the Netherlands, that are worth investigating⁵. It may not be a model given its different and more focused role, but there are features of the Committee on the Status of Endangered Wildlife in Canada and its legislated mandate of providing scientific and traditional knowledge advice, that could make it instructive for the Panel. For example, the membership of COSEWIC is interesting:

Members of COSEWIC are academics, independent specialists, Aboriginal knowledge-holders, government biologists, museum staff or independent biologists. Members have considerable experience with wildlife and

³ <http://www.tandfonline.com/doi/pdf/10.3152/146155111X12913679730557?needAccess=true>

⁴ <http://www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm>

⁵ <http://www.pbl.nl/en/aboutpbl>

*biological science including Aboriginal Traditional Knowledge, ecology, genetics, wildlife and fisheries management, systematics and/or risk assessment, coupled with years of field experience.*⁶

There are some obvious reasons why the current practice of self-assessment is attractive namely for funding and logistical reasons. However there are examples with respect to funding from other areas of government that could be instructive, such as Ship-Source Oil Pollution Fund.

We do not have a lot of experience working with indigenous knowledge holders during an EA but have worked with traditional knowledge holders, primarily fishermen, in the production of research reports. The combination of scientific and traditional knowledge was very powerful. We have read a number of the submissions from indigenous presenters and support recommendations on increasing the use of traditional ecological knowledge in all stages of the EA process and in emerging forms of EA such as SEA and REA. As noted by the chiefs of Ontario in their submission the inclusion of TEK in the EA process can be part of the process of reconciliation.

Recommendations

We support the recommendations of WCS Canada and those listed in the letter from Young Researchers on measures that will improve quality of science in EA documents. In particular, we support setting standards and criteria for EA documents and ensuring the involvement of external scientists and holders of traditional and indigenous knowledge in the production or review of EA documents.

The Panel should investigate options to increase the independence of those producing EA documents and if possible, sever the direct financial relationship between the proponent and consultants.

We support the recommendations of the Chiefs of Ontario in their submission regarding the use of traditional ecological knowledge in EA.

Strategic and Regional Environmental Assessments

In our work we encounter issues or areas which are well suited to the application of strategic or regional assessments.

Meinhard Doelle and two colleagues have undertaken a review of strategic environmental assessments conducted by the two Offshore Petroleum Boards⁷ in Atlantic Canada. They commend the Boards for initiating these broader assessments but conclude that they suffer from a number of limitations and have resulted in little change at the decision-making level. We have reviewed a number of the Board's SEAs

⁶ http://www.cosewic.gc.ca/eng/sct8/index_e.cfm#qu03

⁷ Using Strategic Environmental Assessments to Guide Oil and Gas Exploration Decisions: Applying Lessons Learned from Atlantic Canada to the Beaufort Sea, Meinhard Doelle et al., 2013
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2142001

and have found that they suffer from the same limitations as project assessments in terms of the quality of the science and traditional knowledge and the conclusions drawn.

The Ecology Action Centre is based in Nova Scotia and most of Nova Scotia and Atlantic Canada by area, is ocean. Many of the federal assessments in which we have been involved have been marine-based. This is likely to continue. Along with traditional uses of the ocean such as fishing or shipping, there are new uses, particularly in the field of energy. There are experimental tidal projects in the Bay of Fundy and recently a multi-billion dollar wind project has been proposed for offshore Nova Scotia. More scientifically robust regional or strategic and project environmental assessments will contribute to better decisions around ocean use in Atlantic Canada. Of course, environmental assessments need to be acted on⁸ and plug into an effective ocean use planning process founded on sustainability in order to be worthwhile. The Oceans Act (1996) provides for the development integrated management plans⁹ but none has been implemented in Atlantic Canada despite a decade-long effort on the Scotian Shelf off the coast of Nova Scotia.

The Ecology Action Centre has been involved in litigation relating to the assessment and approval of the world's first genetically-engineered animal approved for human consumption. The Centre is calling for a strategic environmental assessment of genetically modified aquatic organisms¹⁰. This is an example of a serious and emerging threat to biodiversity that has not been adequately assessed by regulators.

Recommendation

The panel should recommend that the government start employing strategic and regional assessments in a consistent and dedicated manner. There are lots of opportunities for the application of these tools.

Offshore Petroleum Boards

The Canada-Nova Scotia Offshore Petroleum and the Canada-Newfoundland and Labrador Offshore Petroleum Board are federal-provincial bodies created under Offshore Accord Implementation Acts to regulate the offshore oil and gas industry. The previous federal government was in the process of making them responsible authorities. Luckily this initiative was not realized and we oppose the boards becoming responsible authorities given their conflicting mandates of exploitation and protection.

Recommendation

The CNSOPB and CNLOPB should not become responsible authorities.

⁸ <http://www.oera.ca/wp-content/uploads/2013/06/FINAL-SEA-REPORT.pdf> The Offshore Energy and Environmental Research Association produced a comprehensive and exemplary SEA on tidal power in the Bay of Fundy. Unfortunately many of its recommendations were not implemented.

⁹ <http://laws-lois.justice.gc.ca/eng/acts/o-2.4/page-4.html#h-11>

¹⁰ <https://ecologyaction.ca/press-release/time-strategic-environmental-review-genetically-modified-aquatic-organisms>