Cumulative cultural effects and reasonably foreseeable future developments in the Upper Thelon Basin, Canada

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Four environmental assessments of small uranium exploration projects in Canada's Northwest Territories resulted in recommendations to reject the projects. This result was based on potential cultural impacts of a cumulative nature, due largely to the spiritual significance of the setting in which the projects were proposed. A broad weighing of evidence with respect to reasonably foreseeable future developments played a role in these rejections. Four lessons of broad applicability to EIA practitioners are offered. One of these is: It is the scale of the issues, not the scale of the project, which may matter most.

Keywords: adaptive cumulative effects, cultural impacts, rejection, Upper Thelon, reasonably foreseeable, RFFD, spiritual impacts, project scale

T IS A COMMON CRITICISM of Environmental Impact Assessment (EIA) in Canada that Leven projects that merit rejection are rarely rejected. One may counter that the presence of an EIA system prevents the worst projects from being proposed, or that projects are often changed and improved during the process. Recently, however, the Mackenzie Valley Environmental Impact Review Board (Review Board) rejected four developments. These assessments are illustrative of principles that may be valuable to other EIA practitioners. This paper briefly describes the Review Board, the projects and setting. It examines the key considerations that led to these rejections, focusing particularly on cultural cumulative effects and the consideration of reasonably foreseeable future developments in reaching these decisions. Finally, it offers four lessons of broader applicability derived from the study of these four assessments.

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The Mackenzie Valley Environmental Impact Review Board

The Review Board is responsible for conducting environmental assessments and environmental impact reviews throughout most of Canada's Northwest Territories. It is a quasi-judicial tribunal that follows court-like processes, considers procedural fairness, and is evidence driven. The Review Board is an independent co-management body composed of appointees from Aboriginal and non-Aboriginal (i.e. the federal and territorial) governments in equal numbers, plus a chairperson.

The Review Board was created by the Mackenzie Valley Resource Management Act (MVRMA), a federal act that supersedes Canada's national EIA legislation, the Canadian Environmental Assessment Act (CEAA, Government of Canada, 1992). The MVRMA requires the Review Board to consider environmental impacts in the broad sense, including biophysical, socio-economic and cultural effects (Government of Canada, 1998). The Review Board's consideration of impacts on people includes both direct and indirect impacts (MVEIRB, 2003: 17).

August 2006	October 2007	August 2007	September 2008
Ur-Energy Screech Lake EA	→ Rejected	Uravan Boomerang North EA	→ Rejected
		Uravan Boomerang South EA	→ Rejected
		Bayswater El Lake EA	→ Rejected
		Bayswater Crab Lake EA	Approved with conditions

Figure 1. Chronology of environmental assessments for Upper Thelon uranium projects

The proposed developments

This paper examines the environmental assessments (EAs) of four different proposed projects. EA is the second of three possible levels of EIA under the Mackenzie Valley Resource Management Act. The five EAs examined here are:

- Ur-Energy Inc. Screech Lake Uranium Exploration Project EA (EA 0607-003);
- Uravan Inc. South Boomerang Lake Mineral Exploration Project EA (EA 0708-002);
- Uravan Inc. North Boomerang Lake Mineral Exploration Project EA (EA 0708-003);
- Bayswater Uranium Corp. El Lake Mineral Exploration Project EA (EA 0607-004); and
- Bayswater Uranium Corp. Crab Lake Mineral Exploration Project EA (EA 0607-005).

Although some details of each project were different, several important elements were common to all. These common elements were relevant to the EIA decisions reached. Each project was a relatively small uranium exploration development. Each proposed a maximum of 20 drill holes using heliportable drills and helicopter access. Each proposal involved temporary camps for less than 30 people (MVEIRB, 2007, 2008a, b, c, d).

The EIAs of these projects occurred over two periods (Figure 1). The first was the Ur-Energy Screech Lake EA, which was referred to the Review Board in August 2006, and recommended for rejection in May 2007.² The rest of the projects were referred to the Review Board in August 2007. The Bayswater Crab Lake project, located in a different watershed with different cultural values, was approved with stringent measures to protect heritage resources and caribou in September 2008. The remaining three projects were recommended for rejection in September 2008.

The federal government, in conjunction with the territorial government, makes final decisions regarding project approval or rejection. For the Ur-Energy Screech Lake EA, this rejection was recommended by the Review Board in May of 2007, and officially accepted by the federal government in October of 2007. The other four projects were referred to environmental assessment after that time, and the Review Board recommended the rejection of three of them in September of 2008. In May and June of 2009, both companies withdrew their applications

for each of these projects, prior to any final decision from the federal government.

The Upper Thelon River Basin

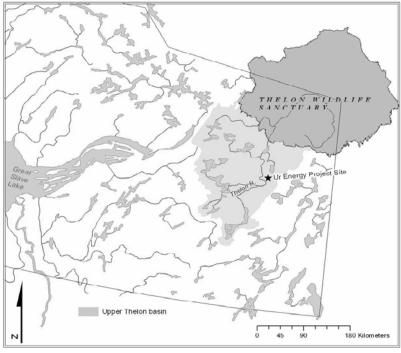
Many of the issues that arose in these EAs were related to the proposed locations of the developments. All were proposed for the Upper Thelon River Basin (referred to from here in as 'the Upper Thelon'). This is an area of 112 000 km² (slightly smaller than Greece). It is located in the Canadian Arctic, near the eastern border of the Northwest Territories, in the Akaitcho Region (Map 1). The nearest community is Łutsël K'e, located approximately 280 km to the west (Map 2). Łutsël K'e is a primarily Aboriginal Dene community where traditional harvesting (such as hunting, fishing, trapping) is an important part of the economy.

The public record for these EAs documented several distinctive aspects of the Upper Thelon. These are summarized here.



Map 1. The Northwest Territories. The box on the lower right shows area of Map 2. (Map modified from Government of the Northwest Territories)

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Map 2. The Upper Thelon basin (area shaded in medium grey)

The Upper Thelon is far north of the treeline, but consists of large treed eskers with a distinctive microclimate. It displays a high diversity and richness of wildlife, including such species as moose, musk-ox, grizzly bear, wolverine, barren-ground caribou, wolf, peregrine falcon, and many others, including species at risk (MVEIRB, 2007a: 11; MVEIRB, 2007b: 31). The Upper Thelon has an extensive history and prehistory of traditional use dating from the ice age to the present. It is thought to be home to a relatively high density of heritage sites, many of which are unrecorded and difficult to recognize on the ground (Kreiger, 2006). It is in the central part of the Beverly and Ahiak caribou herds' pre- and post-calving migration routes³ (MVEIRB, 2007b: 141–142).

Several parties told the Review Board that the Upper Thelon is a globally important and internationally recognized wilderness area of special significance (MVEIRB, 2007: 30-33). This was emphasized by the Worldwide Fund for Nature and other parties to these EAs (e.g. Hummel, 2005). Alex Hall of Canoe Arctic testified that 'this is one of our nation's special places, a sacred place that we need to keep intact not just for northerners, but for future generations of all Canadians and for the rest of the world' (MVEIRB, 2007c: 255). Jim Storey, of Great Canadian Ecoventures, said that 'the last wilderness has a special value globally. The whole world should be watching these proceedings' (MVEIRB, 2007c: 174-175). The combination of wildlife richness and wilderness significance draws many ecotourists to canoe the Upper Thelon River.

The Upper Thelon has recently seen a uranium staking rush, with an increase of over 1,000 mineral claims between 2002 and 2007 (MVEIRB, 2007: 37). This is more than a seven-fold increase over previous claim numbers (MVEIRB, 2008a: 31). This

was related to the market price of uranium in that period, which sky-rocketed from \$7 to over \$100 per pound, an increase attributed in part to an inadequate global supply of uranium.

What the developers said

In its submissions to the Review Board, Ur-Energy Inc. described challenges in meeting with the community of Łutsël K'e, particularly low attendance at a meeting. All four developers stated that impacts on heritage resources would be localized and minimized because the small physical footprint of the projects would make disturbance of unrecorded heritage sites unlikely. Due to the short duration of the work, developers predicted little potential impact on land users such as traditional harvesters or ecotourists (such as canoeists) (Ur-Energy, 2006; MVEIRB, 2007b: 28–29).

Developers proposed offsetting any potential adverse social impacts with beneficial impacts, by using local labour where possible, employing local monitors and, for the Boomerang North, Boomerang South and Bayswater El Lake projects, employing a community liaison (e.g. MVEIRB, 2008a: 23–25).

Based on this, all of the developers concluded that each project would have residual socio-cultural effects that were negligible or slightly positive (e.g. Lahusen, 2008: 145; MVEIRB, 2007b: 28–29; MVEIRB, 2008a: 23–25).

Evidence from the Łutsel K'e hearing

In January 2007 the Review Board held a two-day hearing in Łutsël K'e on the Ur-Energy Screech

Lake project. This was attended by many community members. Participants ranged from youths to Elders, who stayed in large numbers for many hours. Representatives from other Aboriginal communities, including the Yellowknives Dene First Nation and the Athabasca Denesuline from Saskatchewan, also attended. Other parties in attendance included:

- Akaitcho Treaty 8 Tribal Corporation (the negotiating body of the Akaitcho government);
- The Beverly Quaminarjuak Caribou Management Board;
- Ecotourism operators:
- Worldwide Fund for Nature; and
- The federal and territorial government.

At the request of the parties, these transcripts were later transferred to the public records of the other three projects.

Aboriginal parties in general, and the people of Łutsël K'e in particular, described to the Review Board the past use of the area by thousands of ancestors since prehistoric times (MVEIRB, 2007a: 21–23; MVEIRB, 2007c: 15, 36–37, 41–42, 63–64). Although the area is still used today for harvesting (MVEIRB, 2007a: 23; MVEIRB, 2007c: 32, 62), the people of Łutsël K'e described that the future is their greatest concern for this area, because it is of paramount importance as the heritage of their children (MVEIRB, 2007c: 109, 123, 126, 199, 259). This is because the Upper Thelon is an area of great spiritual significance. It is known as 'The Place Where God Began'. From this spiritual importance, and from the many years of habitation and use by ancestors, numerous stories that form an important part of oral history are based here (e.g. MVEIRB, 2007c: 15–17, 42, 92–93, 254, 268–269).

The significance of the Upper Thelon to Aboriginal residents of Łutsël K'e was demonstrated by the manner and demeanour of participants' testimony (MVEIRB, 2007a: 39). The hearing was quite emotional, and many speakers shed tears when discussing the importance of the Upper Thelon.

It is noteworthy that the concerns expressed by the people of Łutsël K'e were not directed at pointspecific sites. Concerns were largely not about the disturbance of tent rings or other heritage sites, but

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rather were landscape-wide concerns. These related to the interconnected fabric of the landscape as a whole, which includes not only the heritage sites but the routes and spaces between them. The people of Łutsël K'e made it clear that it was insufficient to consider their heritage values in the area as a series of points on a map, but instead that the entire Upper Thelon was to be considered as a cultural landscape (MVEIRB, 2007a: 38).

Also interesting is that most of the concerns voiced were not mineral-specific. Even though other communities in the Northwest Territories have had negative experiences with uranium related to perceived health effects from radiation, the concerns that people expressed in the Łutsël K'e hearing were about disturbance from industrial activity in general in a special place. The same concerns likely could have applied equally to gold or diamond exploration.

Planning issues

The Upper Thelon is in the Akaitcho Region of the Northwest Territories. It is one of only two regions of the territory without a settled land claim. The Dene Aboriginal communities in the region are represented by the Akaitcho government, which is currently negotiating with the federal government to settle a claim. No land use plans exist for the Akaitcho Region, including the Upper Thelon.

During land claim negotiations, the Akaitcho government had the opportunity to withdraw lands from development prior to the claim being established. However, at the time of this interim land withdrawal, much of the Upper Thelon was already staked with mineral claims. Under the Canada Mining Regulations, staking establishes third-party rights to develop mineral claims. These pre-existing rights would not be extinguished by a land claim. This means that had the Akaitcho government selected the Upper Thelon for interim withdrawal during claim negotiations, existing mineral claims would have remained entrenched, greatly reducing the ability of the Akaitcho government to control development in the area. Accordingly, the Akaitcho government focused its land withdrawal on other areas where it could still meaningfully control development following the settlement of the land claim (MVEIRB, 2007a: 234–235).

Effectively, this meant that mineral rights which virtually guarantee the right to develop existed without any land use planning in the area. Parties emphasized to the Review Board the importance of planning before development, because development before planning carries with it the opportunity cost of reduced options for conservation in the future (e.g. Hummel, 2005).

General approach to considering cumulative effects

The Review Board is required to consider cumulative effects in its environmental assessments. Its approach to this is described in the Mackenzie Valley *Environmental Impact Assessment Guidelines* (MVEIRB, 2003). The Review Board considers the potential impacts of a proposed development in combination with past, present and reasonably foreseeable future human activities (MVEIRB, 2003: 77–80).

In the cases of the assessments described here, some past and present activities were considered. Few relevant past activities were identified that could cause effects that could act in conjunction with the proposed developments. After all, this area is considered a relatively pristine wilderness. Current activities included mineral exploration activities below permitting thresholds and projects in other areas (particularly Nunavut and Saskatchewan) that could affect valued components⁴ in the Upper Thelon (MVEIRB, 2008a: 27).

Even though some past and present activities were considered, it was the potential contribution of reasonably foreseeable future activities that was key to the Review Board's determinations. The people of Łutsel K'e emphasized that the future is their greatest concern for the Upper Thelon (MVEIRB, 2007c: 109, 123, 126, 199, 259).

What is reasonably foreseeable?

In making its determination regarding potential impacts from future projects that may combine with the impacts of the proposed developments to cause a cumulative impact, the Review Board had to decide whether future developments in the area could be reasonably foreseen. It considered the following (MVEIRB, 2007a: 37):

- 1. The area was recently and extensively staked in a mineral rush.
- 2. There were many geological prospects and showings in the area that were already known.
- 3. The area is geologically similar to the Athabasca Geological Basin, which is the world's second most productive source of uranium.

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- 4. The price of uranium increased dramatically in the years preceding the application, suggesting a strong economic incentive for uranium developments.
- 5. The proposal of new applications for exploration activities in the area during the assessments further suggested ongoing mineral interest.
- 6. Case studies presented to the Review Board of development patterns in similar situations illustrated potential scenarios of induced development.

Individually, any of these points does not conclusively establish that future human activities in the area are reasonably foreseeable. However, each of the points serves as an indicator which points in the same direction. Collectively, they provide a cogent basis for the Review Board's finding: 'The people of Łutsël K'e and other land users are understandably concerned with the impacts of reasonably foreseeable future developments' (MVEIRB, 2007a: 37–38).

Findings on cultural impacts

Following consideration of the balance of evidence on the public record, the Review Board made several findings regarding potential impacts for these environmental assessments. The most significant of these related to cultural impacts.

The Review Board found that the degree of biophysical impact was not commensurate with the magnitude of the cultural impact. Although the physical footprints of these proposed projects were small, the potential cultural impacts were not. In the opinion of the Review Board, this was because of the setting of the proposed developments in the Upper Thelon. The evidence before the Review Board demonstrated that the Upper Thelon was an area of intrinsic value, and was of the highest spiritual and cultural importance to the Aboriginal people who value it (MVEIRB, 2007a: 37; MVEIRB, 2008a, b, c: 30).

In the final reports issued for each of these four assessments, the Review Board expressed this in strong terms. In the Report of Environmental Assessment for the Ur-Energy Screech Lake EA, the Review Board (2007a: 35) noted that Łutsël K'e First Nation has 'consistently maintained that the Upper Thelon basin is "vitally important to the culture, history and spirituality of Dene people" and describe this as the "heart and soul of the people of Lustel K'e"'. It stated that 'Łutsël K'e First Nation members wish to pass it [the Upper Thelon] to their children and they inherited it from their ancestors...', and that '(i)ndustrial development here would be seen as a desecration of a spiritual landscape' (p. 36). The Review Board concluded that the 'adverse cultural impacts of a cumulative nature are so significant that the development cannot be justified ... ' (p. 38).

It is very difficult, however, to address cultural impacts of a spiritual nature using physical mitigations

Similar reasoning is expressed in each *Report of Environmental Assessment* for the other three later assessments (MVEIRB, 2008a, b, c: 29–33). The Review Board recommended to the federal Minister of Indian Affairs and Northern Development that each of the proposed projects be rejected without further assessment (MVEIRB, 2007a: 38; MVEIRB, 2008a, b, c: 32).

Mitigating impacts of a spiritual nature

It is worth noting that the Review Board gave due consideration to the mitigations proposed by the developers (e.g. MVEIRB, 2008a: 30). Many of the proposed mitigations dealt with physical aspects of the project (such as timing, scale of operations, and means of access) to minimize disturbance. It is very difficult, however, to address cultural impacts of a spiritual nature using physical mitigations.

An extreme example in a different cultural context that may be more familiar to readers could help illustrate this point. The spiritual importance of this area to the Dene has been compared to that of the Vatican for Catholics (Ellis, 2008). In the interest of providing an analogy of a sacred area that is culturally familiar to more EIA practitioners, consider the scenario of someone proposing an undertaking in the Vatican that fundamentally conflicts with its values. An extreme example illustrates the point: imagine that someone had proposed to operate a Las Vegasstyle casino in the Vatican. It is clear that any attempt to mitigate the spiritual impact of that activity by physical means (such as careful scheduling or reducing noise or visual disturbances) would still not be likely to adequately mitigate the spiritual impact. While the proposed projects clearly were not casinos in the Vatican, they still faced the great difficulty of trying to use biophysical mitigations to reduce impacts that were spiritual, not biophysical.

Mitigating future impacts by planning

The Review Board found that it was reasonably foreseeable for future developments in the Upper Thelon to contribute to cumulative impacts. The Review Board considered the potential for land use planning to mitigate the cumulative contribution of impacts from future developments (MVEIRB, 2007a: 39–40). If wise decisions are made by land

use planners, the values of the Upper Thelon may be protected.

Unfortunately, relying on future land use planning is not enough to deal with the cumulative contribution of future developments. The Review Board decided that land use planning may mitigate potential impacts of future developments, but it may only do so if the opportunity to conserve the cultural landscape has not been foregone. In the words of the *Report of Environmental Assessment* for the Ur-Energy Screech Lake EA, '(e)conomic development can happen over the land's original state, but it is much harder to re-create the original state of the land over an industrial landscape' (MVEIRB, 2007a: 40).

In the same report the Review Board recognized a need for an interim land use plan to ensure that the cultural value of the area is not significantly compromised. It formally suggested that an interim land use plan be completed as soon as possible to provide management prescriptions for future development in the Upper Thelon (p. 40).

In the fall of 2007, shortly after receiving the Review Board's report, and after media attention and political pressures in various directions, the federal government began organizing planning exercises for the Upper Thelon for the first time. The Government of Canada has publicly stated that this was a result of the Ur-Energy Screech Lake EA (Merrithew-Mercredi, 2007).

Concluding lessons

From the assessments described above, four lessons of broader applicability are illustrated.

1. Project-specific cumulative effects assessment can drive regional planning

When practitioners think about regional planning and cumulative effects assessment, it is often assumed that regional planning drives and informs cumulative effects assessment. It may do so, for example, by setting limits that may guide thresholds of acceptability for significance determinations.

However, this need not be a one-way influence. In the cases described here, project-specific cumulative effects assessments affected regional planning. These cumulative effects assessments were conducted in an area without any land use planning, but served to drive regional planning efforts by publicly highlighting the conflicts of values between community members and industrial interests for the Upper Thelon. This resulted in accelerated planning efforts for the area.

2. Go beyond bones and stones

When evaluating cultural impacts, it is important not to think only of impacts on specific heritage sites or resources. There is a tendency among EIA

practitioners to do so, perhaps because it is, in some cases, easier to evaluate and mitigate site-specific impacts than it is to evaluate and mitigate impacts on non-physical elements of cultural landscapes. However, these less-tangible elements may be vital to cultural maintenance. Memory, history and shared knowledge are not found on the ground. They are embedded in the cultural landscape even though they may not have a physical presence (Andrews and Buggey, 2008). Non-physical values can be what matter most to a potentially affected group. For example, in the case of the four environmental assessments described here, the people of Łutsël K'e recognized that even though numerous heritage sites were present in the Upper Thelon, it was the cultural landscape itself that was the focus of the greatest concern. The cultural concerns went far beyond grave sites and tent rings.

3. Weigh a range of evidence when determining what is reasonably foreseeable

Throughout most of Canada, the Canadian Environmental Assessment Act (CEAA) describes the requirements for cumulative effects assessments. The CEAA requires cumulative effects assessments to consider future projects only in terms of projects that will occur. It states that assessments shall include a consideration of 'any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out' [emphasis added] (Canadian Environmental Assessment Agency, 2002). In practice, many CEAA assessments include only projects for which applications have already been received, regardless of other evidence. However, best practice in cumulative effects assessment clearly emphasizes inclusion of impacts from reasonably foreseeable future developments (e.g. Ross, 1998).

The use of the word 'will' suggests a narrower test for inclusion, which could exclude many important and reasonably foreseeable sources of cumulative effects simply because they were not certain. This does not seem to reflect best practice. Reason demands more. Most predictions in non-cumulative EIA are not certain, yet still provide an adequate basis for decision making. In cumulative effects assessment, a broader analysis of a range of evidence can clearly indicate reasonably foreseeable sources of cumulative effects. Reason requires the consideration of all the available evidence, and not only the consideration of existing applications.

Consider the factors cited by the Review Board in making its determinations regarding reasonably foreseeable future activities in the assessments discussed above. Of the six considerations described above (extensive staking, known showings, new applications, the increased price of uranium, new applications and relevant case studies), none individually establishes that future projects are certain.

Even the fact that a few additional applications for small exploration projects were received does not, in isolation, indicate a significant level of reasonably foreseeable future activity.

However, even though each is not necessarily certain, the Review Board recognized that these factors collectively form a compelling body of evidence that indicates a potentially significant source of cumulative effects (MVEIRB, 2007a: 37). Viewed together, it is clear that each indicator is pointing in the same direction. The conclusion of potential future developments is reasonable, and reflects the weight of the evidence. Other cumulative effects assessment practitioners are encouraged to weigh a range of evidence when determining what is reasonably foreseeable.

4. What matters is the scale of the issues, not the scale of the development

It is commonly expected that the complexity and difficulty of an EIA is driven by the scale of the project proposed. That is, one might expect that small projects should only require short and simple assessments, and large projects, complex and extensive assessments. Consider, though, that the projects examined here all involved minimal physical intrusion and disturbance. However, the issues involved were perhaps among the most challenging ever faced by the Review Board. This contrasts with the Review Board's assessments of mega-projects (such as the Mackenzie River Bridge) that were relatively straightforward.

The challenging nature of these four environmental assessments was, of course, a result of the culturally sensitive setting of the projects in the Upper Thelon. A potential impact arises not only as a result of a particular potential activity, but as a result of the activity and its interactions with the biophysical or socio-cultural context. It is important for developers to realize that it is not just the physical site but also the cultural setting that should be considered when planning developments. So, a proposed activity involving large-scale physical disturbance in a setting that is already extremely disturbed may not pose as great an issue for decision makers in EIAs as might a small project in an extremely sensitive or pristine location. Setting matters.

Good EIA should focus on the potential impacts that matter most. When dealing with developments in areas of spiritual importance, these impacts may be entirely intangible, yet of such significance that even small developments merit rejection. A closer

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examination by proponents of projects early on is necessary to determine whether any creative mitigations might be adequate to resolve these issues. What matters is the scale of the issues, not the scale of the development.

Notes

- This extends beyond the practice required by CEAA, which requires EIAs to consider social impacts only when they result from a biophysical impact (CEAA, s2(1)).
- 2. This paper is written primarily considering the Ur-Energy EA, which the author is most familiar with. However, the relevant evidence for all of these EAs was similar. The major body of the evidence from the public registry of the Ur-Energy EA was transferred to the respective registries of the other projects at the agreement of all parties. The main points regarding the Ur-Energy EA apply to the other three projects.
- Although the EAs considered impacts on caribou, and identified potentially significant impacts on caribou, this will not be explored in this paper.
- 4. Although traditional EIA focuses on Valued Ecosystem Components (VECs), the mandate of the Review Board includes the assessment of impacts beyond the ecosystem, such as social and cultural impacts. Accordingly, the Review Board focuses on valued components (VCs) instead of VECs.

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