

Introduction

My research looks at how cumulative effects are addressed in the Yukon, taking stock of where we are at, where there are barriers for a more effective approach, and where there are opportunities for improvement. I'm looking at cumulative effects related to mining in particular, so I've been focussing on the Dawson region. Rather than focussing on the technical aspects of assessing cumulative effects, I have been talking to the people who are involved in making or informing decisions about cumulative effects. This means that I have been speaking with representatives from TH, Yukon Government, land use planning, environmental assessment, co-management boards, and independent experts about their expectations, perspectives, and experiences in addressing cumulative effects.

Cumulative effects has been a bit of a buzzword lately and clearly it will be an important part of this plan. The draft Resource Assessment Report (RAR) does a great job of identifying cumulative effects as an issue and identifying potential values where cumulative effects might be relevant. What I want to do is add a few examples of issues related to cumulative effects that have come up in my research. I'm hoping they may be useful in providing a few key lessons learned to keep in the back of our minds when we think about cumulative effects.

Example 1

When I asked people what their cumulative effects concerns were related to mining, the most frequent answer was about impacts to **wildlife populations and hunting** – just as the RAR mentions, this is about impacts from mines as well as roads related to mines and other activities. There are a lot of different impacts in this category that people discussed - animals and people avoiding the area, locals not feeling welcome in the area, impacting the growth rate of a wildlife population in the long term, not having enough in tact environment for animals to migrate into, having more competition for hunting, etc.

One of the interesting issues that was raised in these conversations about cumulative effects and wildlife is that the relationship between mining and wildlife populations is not always straight-forward. For example, several of the people I spoke with pointed out that there are moose populations that use old placer mines. In other words, one type of cumulative effect could be having multiple remediated mines that together create important moose habitat.

The first take-away point here is that when we think about cumulative effects, it should include both positive and negative cumulative effects.

However, the other side of this conversation is that there are also situations where people may not trust that animals spending time in old placer sites are safe to eat.

This is the second take-away point - that our understanding of cumulative effects is not just determined by science; it's also socially and/or culturally determined, meaning it's influenced by the kinds of change that people are comfortable with.

Example 2

One of the other areas that I think the RAR did a good job on is acknowledging the relationship between different values, such as the relationship between wildlife and TH's cultural landscape. This is especially important because impacts to cultural and socio-economic values were the second most frequent response to the question of what cumulative effects issues people are worried about. This makes sense, because values such as way of life, cultural sustainability, wellbeing, harvesting rights, etc. rely on a landscape, not individual parcels of land. Yet, one of the biggest challenges in addressing cumulative effects in other jurisdictions in Canada is the fact that the focus is often only on biophysical values.

The third take-away point is that cumulative effects are not just biophysical and that impacts to some socio-economic and cultural values may be best viewed through the lens of cumulative effects.

Of course, the challenge with some of these values is that they are not easily quantifiable; some socio-economic and cultural values are more intangible than others. Another example of socio-economic values being impacted by cumulative effects is the Faro mine – the fact that taxpayers will be paying for the maintenance and/or clean-up of this mine for generations is an example of a type of cumulative effect known as a legacy effect, meaning the effect will last far beyond the lifespan of the project itself.

This is the fourth take-away point – cumulative effects require us to think about how past activities continue to impact what we think is important today.

Example 3

Other examples of cumulative effects that people are concerned about in the Dawson region are cumulative effects impacting water quality and quantity, wetlands, and permafrost. For each of these values, the RAR did an excellent job of identifying ways that climate change may cause uncertainties in the future. From a cumulative effects perspective, this means that if you are considering the impact that placer mining activities will have on permafrost, it is also useful to consider impacts that climate change will have on permafrost in the future.

My fifth and final take-away point – cumulative effects requires thinking about both human-caused impacts and natural disturbances.

In summary

What matters is that when we hear cumulative effects, we should be thinking about: both positive and negative effects; an understanding of acceptable change that includes what is socially and/or culturally acceptable, not just scientifically acceptable; cumulative effects to biophysical and socio-economic and cultural values, acknowledging that there are a lot of connections between them; past, current, and future activities; and naturally-occurring and human-caused impacts. This sounds like a lot to do, but I think the Resource Assessment Report did a great job of breaking down some of the key components of a cumulative effects approach, including identifying indicators, thresholds, and management directions. There are a couple of things I would personally add to that list, but in the interest of time I will stick to just one, and that's thinking about how a cumulative effects approach will be implemented. I realize implementing the Final Plan is not the responsibility of the Commission, but I do think the Commission can set up the plan for effective implementation. Across Canada there have been cumulative effects studies, assessments, etc., but what many of them fail to do is get to the point of saying "what are we going to do about it?" The DRLUP has the opportunity to get to that point if it thinks about implementation ahead of time.

When I ask people about the barriers to more effectively addressing cumulative effects in the Yukon, one of the most common answers I get is lack of political will. I think this is especially interesting because we often hear "oh we don't have enough data to do anything about cumulative effects". That's absolutely true in many cases, but at other times it may be used as an excuse not to address the challenging issues that cumulative effects present. The DRLUP will certainly not address all cumulative effects issues, but it does have the opportunity to be very clear on what cumulative effects issues it *is* addressing and hopefully spark political will to encourage further work where necessary.

Contact information

Kiri Staples

kstaples@uwaterloo.ca

(867)-335-9950