**Step 1. Choose a focal policy document.** See below for information on potential good sources of policy documents. Your supervisor/advisor/colleagues might have ideas on relevant policy documents. If the policy document is big, it could analyze a particular section of the document.

**Step 2. Read and analyze policy.**

Private Managed Forest Lands Acts – activities for privately owned land

Forest and Range Practices Act or FRPA (Previously Forest Practices Code)

While ecosystem-based approaches exist, fish are the principal and foundation for management. Fish presence or absence is the main determinant. Some objectives of the FPC are:

1. minimize or prevent impacts of forest and range uses on stream-channel dynamics, aquatic ecosystems, and water quality of all streams, lakes, and wetlands;
2. minimize or prevent impacts of forest and range use on the diversity, productivity, and sustainability of wildlife habitat and vegetation adjacent to streams, lakes, and wetlands with reserve zones, or where high wildlife values are present; and
3. allow for forest and range use consistent with  and 2 above (B.C. Ministry of Forests and B.C. Ministry of Environment 995a).

But, FRPA’s Forest Planning and Practices Regulation (FPPR) for water, fish, wildlife, and biodiversity within riparian areas, which is: “without unduly reducing the supply of timber from British Columbia’s forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas”

Riparian Management Area – has a Riparian Management Zone (RMZ) and a no-harvest reserve zone (RRZ).

* Fish presence
* Location in a community *watershed*
* *Average channel width*

Classified based on the ‘reach’ scale; homogenous length of the stream having a sequence of repeating structural characteristics or processes: e.g. channel pattern, channel confinement, gradient, streambed and streambank materials. Under the FRPA, there is a 100m minimum reach length.

Under the FRPA; “‘stream’ means a watercourse, including a watercourse that is obscured by overhanging or bridging vegetation or soil mats, that contains water on a perennial or seasonal basis, is scoured by water or contains observable deposits of mineral alluvium, and that (a) has a continuous channel bed that is 00 m or more in length, or (b) flows directly into (i) a fish-stream or a fish-bearing lake or wetland, or (ii) a licensed waterworks.”

The FRPA allowed licenses to manage more, with professional reliance and accountability -> where environmental objects were largely the same as the FPC, but with more flexibility with riparian management of smaller streams (S4-S6). Under the FRPA, only government oversight is at the forest stewardship plan stage, where licences identify strategies and or results that will ensure their operations are consistent with the government-stated objectives. FPPR instills these objectives in management.

There are three management schemes for riparian systems in BC; two are under the FPC and its successor, the FRPA, and the third is under the FSC. The FRPA builds upon the FPC in that it provides more ability to vary management of riparian standards from the default, based on site level and watershed level characteristics. The FSC is more conservative and requires more riparian protection for all water body classes, particularly small streams (s4-s6). Still, it is a voluntary system and can be one of the alternative approaches approved under the FRPA forest stewardship plan.

FSC Approach to Riparian MGMT

What are key phrases/words?

Are there clear links to science or other sources of knowledge?

What are potential scientific gaps or uncertainties in the document?

Who has final authority on decision making?

Are there potentially important thresholds and if so, how are they defined?

Is the language ambiguous or clear and focused?

**Step 3. Do some research.**

Have other scientists or environmental law experts critiqued the policy?

How does it seem like it is being interpreted and implemented?

Are there legal challenges?

Potential sources for this are typical scientific journals that sometimes have policy contributions or analyses or opinion pieces, or organizations such as West Coast Environmental Law, or the University of Calgary faculty of law (ablawg.ca). There might not be anything, but it is worth doing a bit of digging. If there are other sources, make sure to consider the content carefully, and put everything into your own words with proper citing.

**Step 4. Prepare one of the following two writing assignments.** These writing assignments should demonstrate good fundamentals of written communication. Please see guides for effective writing as needed, such as Heard 2022 or Schimel 2012. Please use topic sentences, proper referencing, and sections. Submissions will be evaluated based on

content, writing, and impact. No plagiarism/AI. Aim for a concise and impactful 3 – 5 pages (1.5 line spacing) document with additional reference pages.

**Option A (RECOMMENDED). The Science-Policy Interface.**

Examine a policy document and consider how science and its application could help advance the effective implementation of the policy.

How could your career or research could be made to be more relevant to this policy?

Title/name/focal policy.

**The policy and science.**

What are key pathways by which science can connect to the policy?

What are key phrases, and how are they defined?

How are science and policy linked in real-world applications? (~1- 2 pages)

**Opportunity identification.**

Describe a scientific research program that would help address the key challenges identified above.

What types of science are needed to inform the effective implementation of the policy document?

Who would need to receive and uptake this research?

This research program could be beyond the scope of what you personally could implement, but it should be realistic.

**Personal reflection.**

What are specific ways for your work/career to connect to the policy?

What are the key take-home lessons for making your work more policy relevant?

Potential sources of documents that guide policies include:

**Minister mandate letters:** These letters set out the priorities for the ministers upon their appointment. What are key gaps, challenges, and opportunities in these mandate letters?

Canadian:<https://www.pm.gc.ca/en/mandate-letters>

BC: [https://www2.gov.bc.ca/gov/content/governments/organizational-structure/cabinet/cabinet-](https://www2.gov.bc.ca/gov/content/governments/organizational-structure/cabinet/cabinet-ministers)

[ministers](https://www2.gov.bc.ca/gov/content/governments/organizational-structure/cabinet/cabinet-ministers)

**Federal:** Federal departments will have policy documents.

E.g.,: https://[www.dfo-mpo.gc.ca/about-notre-sujet/publications/fisheries-peche-eng.html](http://www.dfo-mpo.gc.ca/about-notre-sujet/publications/fisheries-peche-eng.html)

**Provincial ministries.** Within each ministry, there are many embedded plans, recommendations, and draft policies. Can start digging into relevant ministries (e.g., Ministry of Water, Land and Resource Stewardship).

<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries>

**Canadian laws.** These are the major acts that include those that regulate industries that could pose harms to the environment (e.g., Fisheries Act, Impact Assessment Act).<https://laws-lois.justice.gc.ca/eng/>

**Provincial environmental acts.** Start digging within:<https://www2.gov.bc.ca/gov/content/environment>

For example, there are Acts within

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/laws-rules>

References:

Heard, Stephen B. *The scientist’s guide to writing: how to write more easily and effectively throughout your scientific career*. Princeton University Press, 2022.

Schimel, Joshua. *Writing science: how to write papers that get cited and proposals that get funded*. OUP USA, 2012.