

ENVIRONMENTAL ASSESSMENT AS A TOOL FOR MANAGING IMPACTS ON WETLANDS: Understanding current practice in the mining sector

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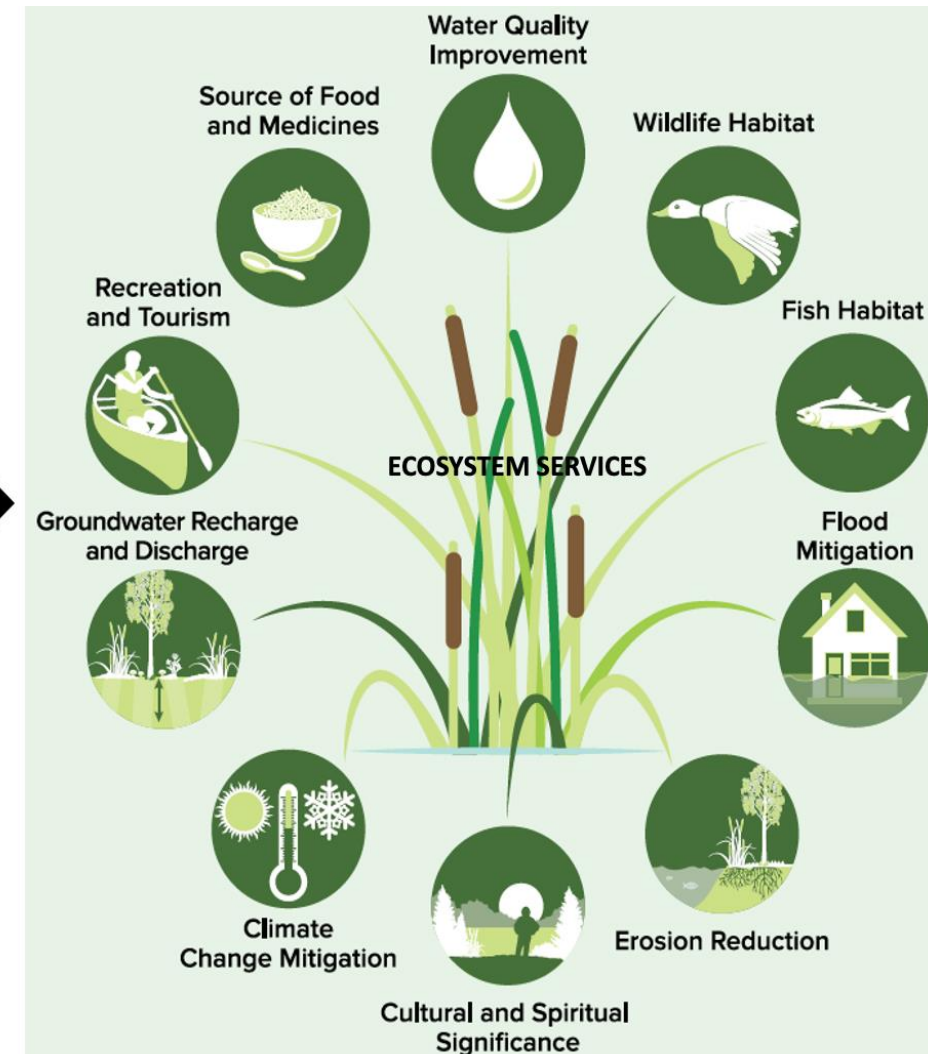
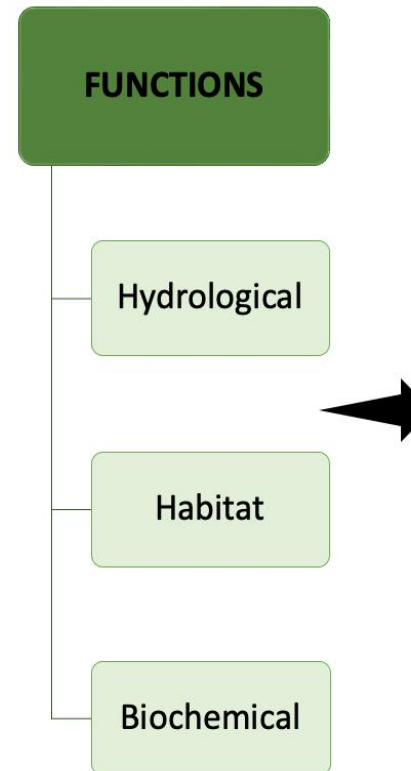
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Wetlands

- Among the most highly productive natural systems in the world
- Canada has a major portion of the world's wetland resource base - up to 25%
- Fulfill a wide range of ecological, hydrological, biochemical, and habitat functions
- Provide important ecosystem services to humans
- It is crucial to maintain wetland ecosystems for their wide range of key functions and services



Adverse Impacts on Wetlands

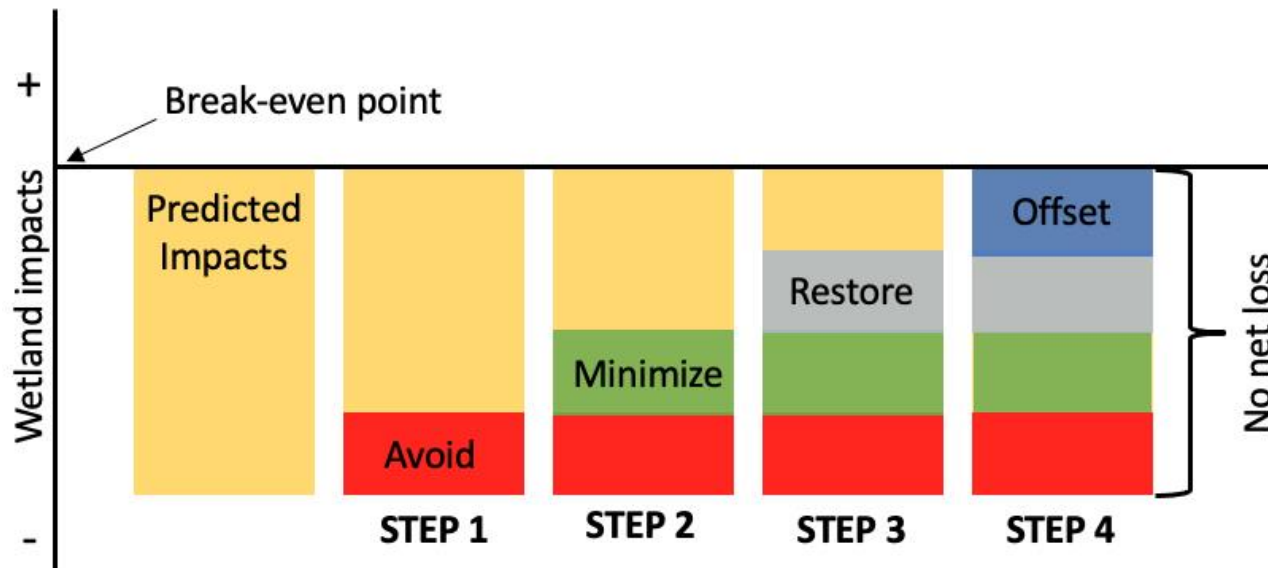
- Wetlands are among the most ecologically rich lands in Canada, but one of the most heavily impacted
- Under constant threat of loss and degradation due to industrial development and other land uses
- Canada has a large mining sector, with construction and operation impacting wetlands
- Mining developments often overlap areas of high wetland density



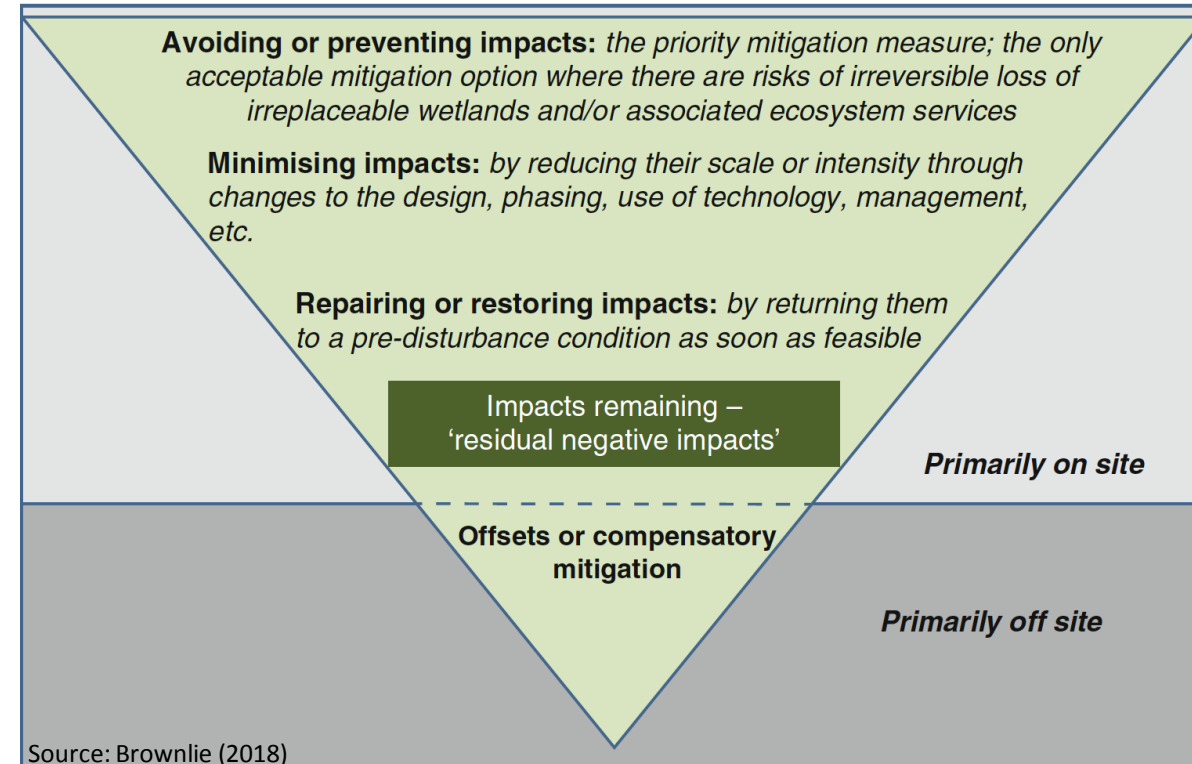
Placer mining in the Indian River Valley, central Yukon. Photo Credit: C. Mantyka-Pringle, WCS Canada.

EA, Wetland Conservation and the Mitigation Hierarchy

- Many Canadian wetland policies have the goal of ‘no net loss’
- Ensuring no net loss is best achieved using the hierarchical sequence of mitigation
- EA is the primary instrument in Canada for assessing and managing the impacts of development, including mining, to ecological systems
- Impact mitigation in the EA process:



Adapted from: IUCN, ICMM. Independent report on biodiversity offsets. The Biodiversity Consultancy (2013)

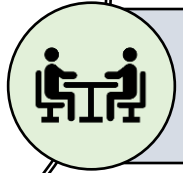


Source: Brownlie (2018)

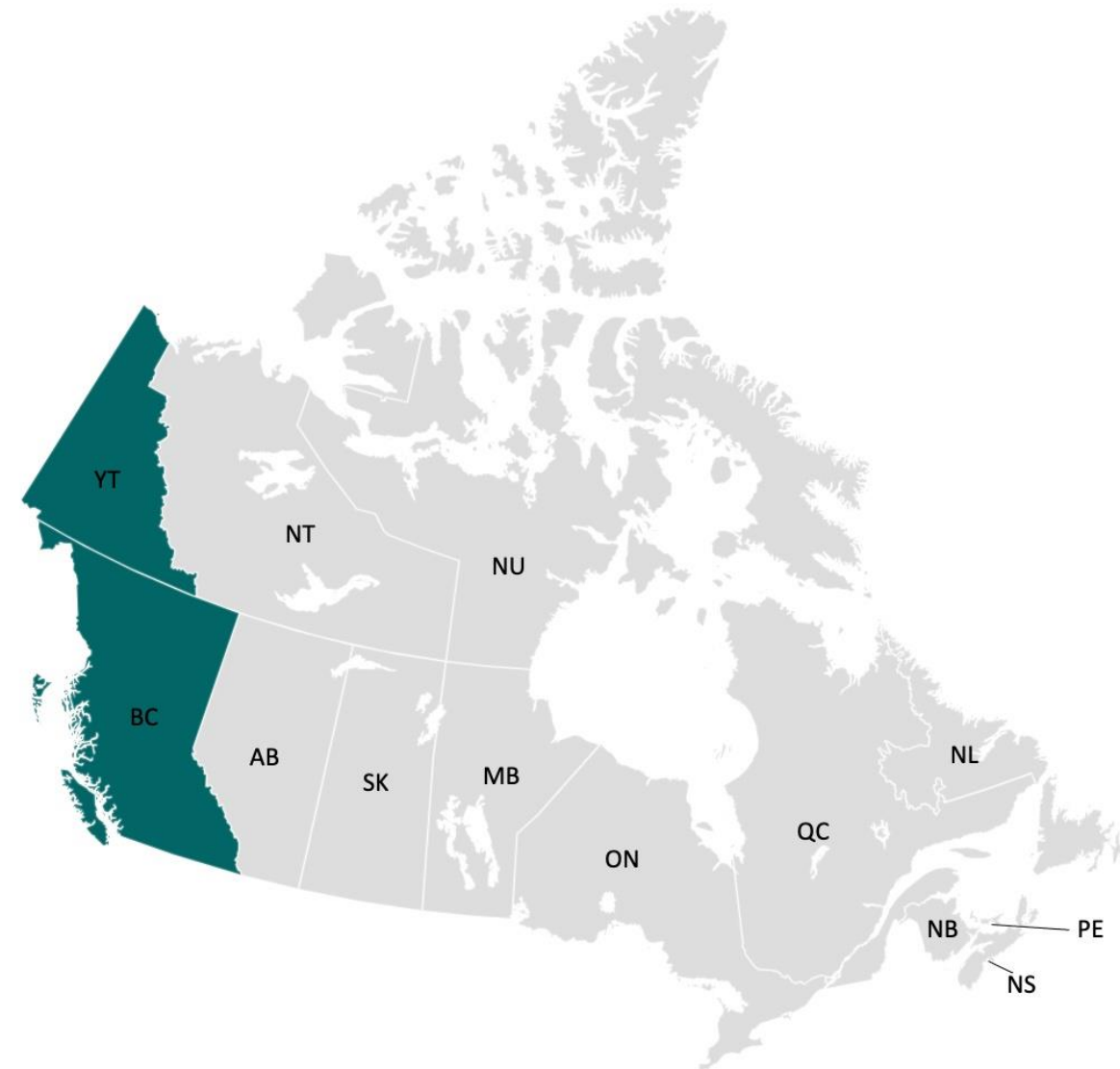
What is the state of practice of wetland impact assessment and mitigation in BC and YT?



➤ Document analysis of Environmental Impact Statements (EISs)



➤ Semi-structured interviews with key participants



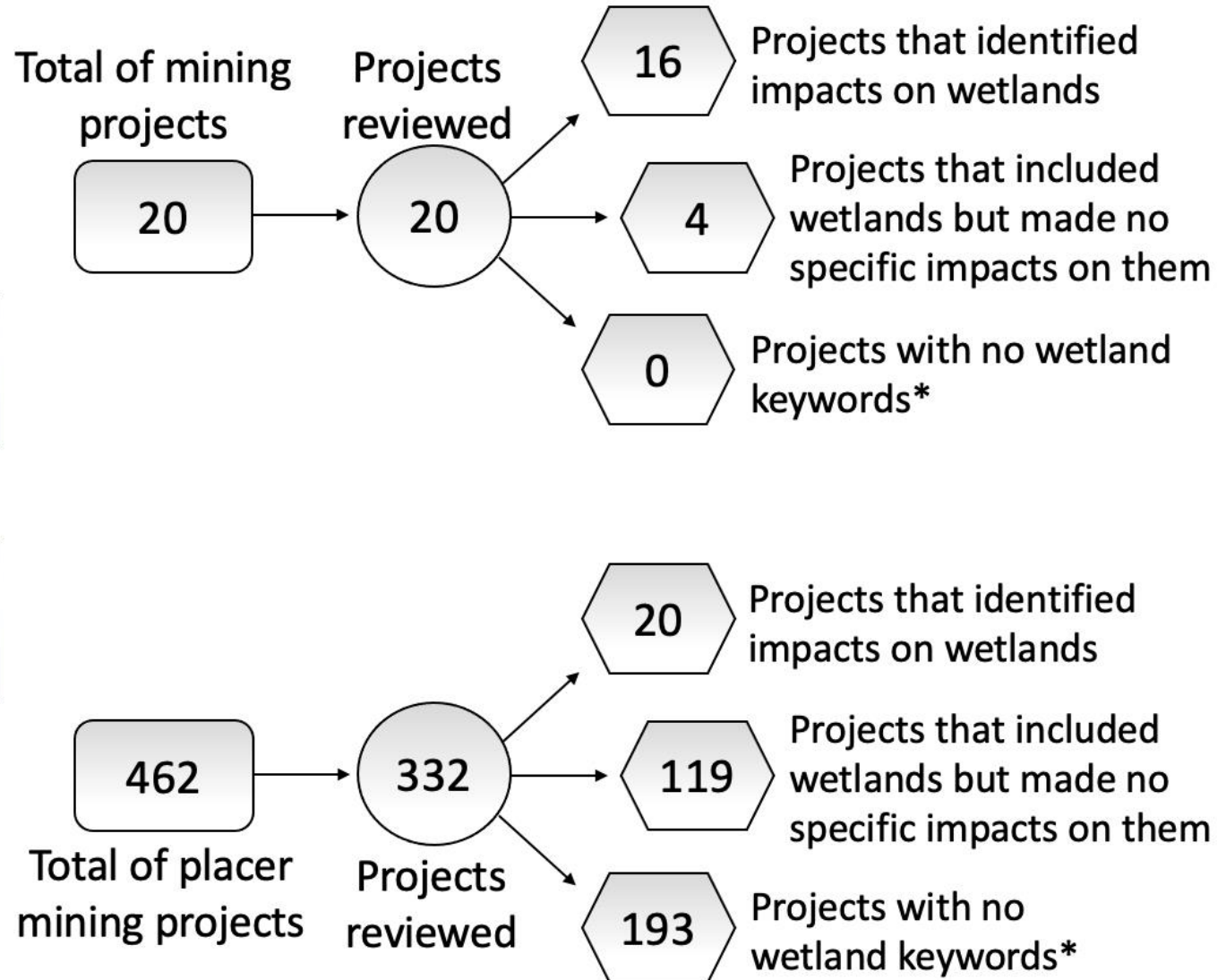
Methods – Part 1



Major projects
(Reviewable
Projects Regulation)

EA Process

Most new projects
(YESAA regulations)



*Keywords: wetlands; bog; fen; swamp; marsh; shallow open water

Results

Total number of impacts on wetlands across the full sample of EAs:



111

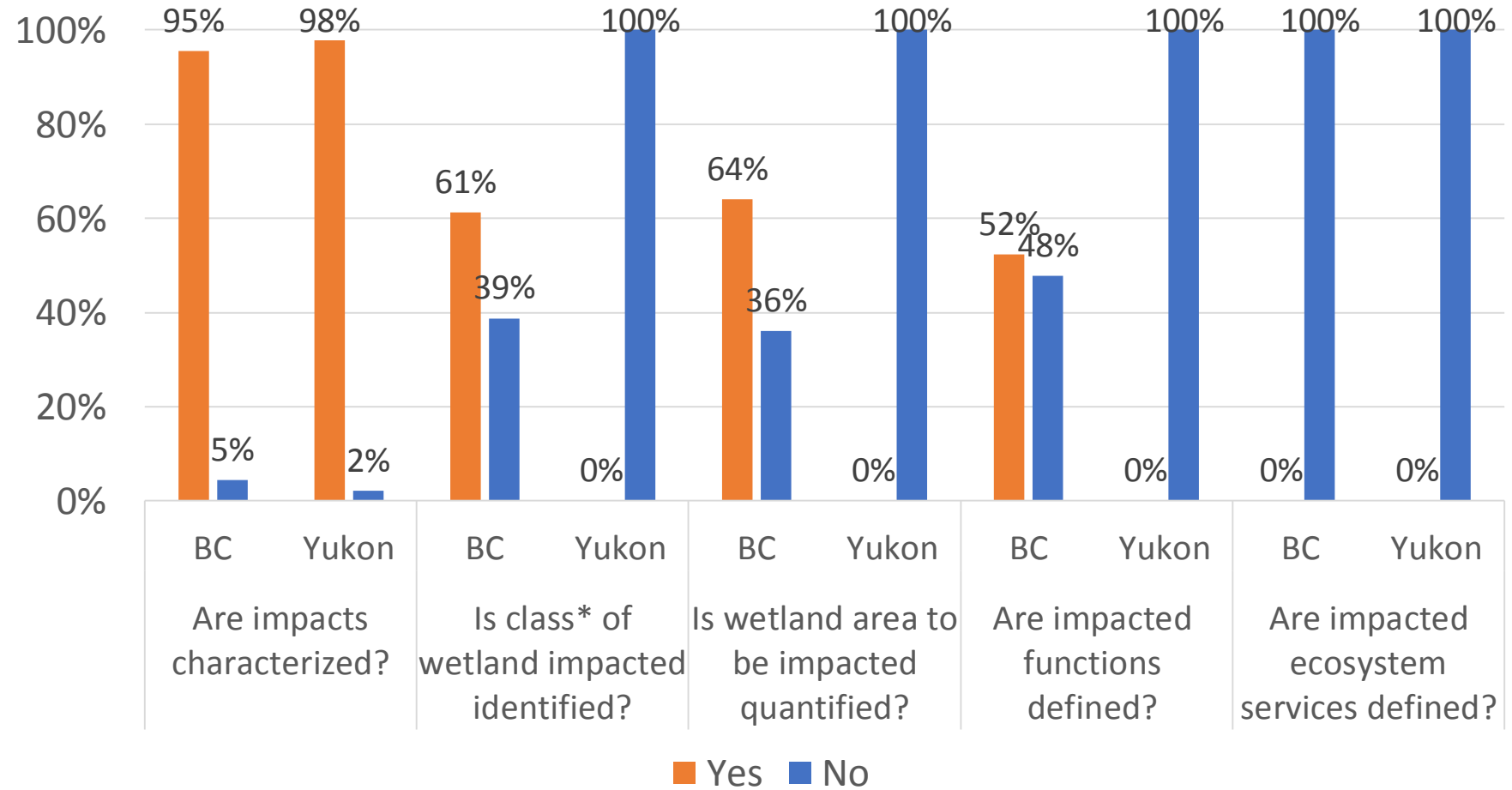
BC



94

YT

Wetland impact prediction



*bog, fen, swamp, marsh and shallow open water

Results

Total number of wetland mitigation measures across the full sample of EAs:



246

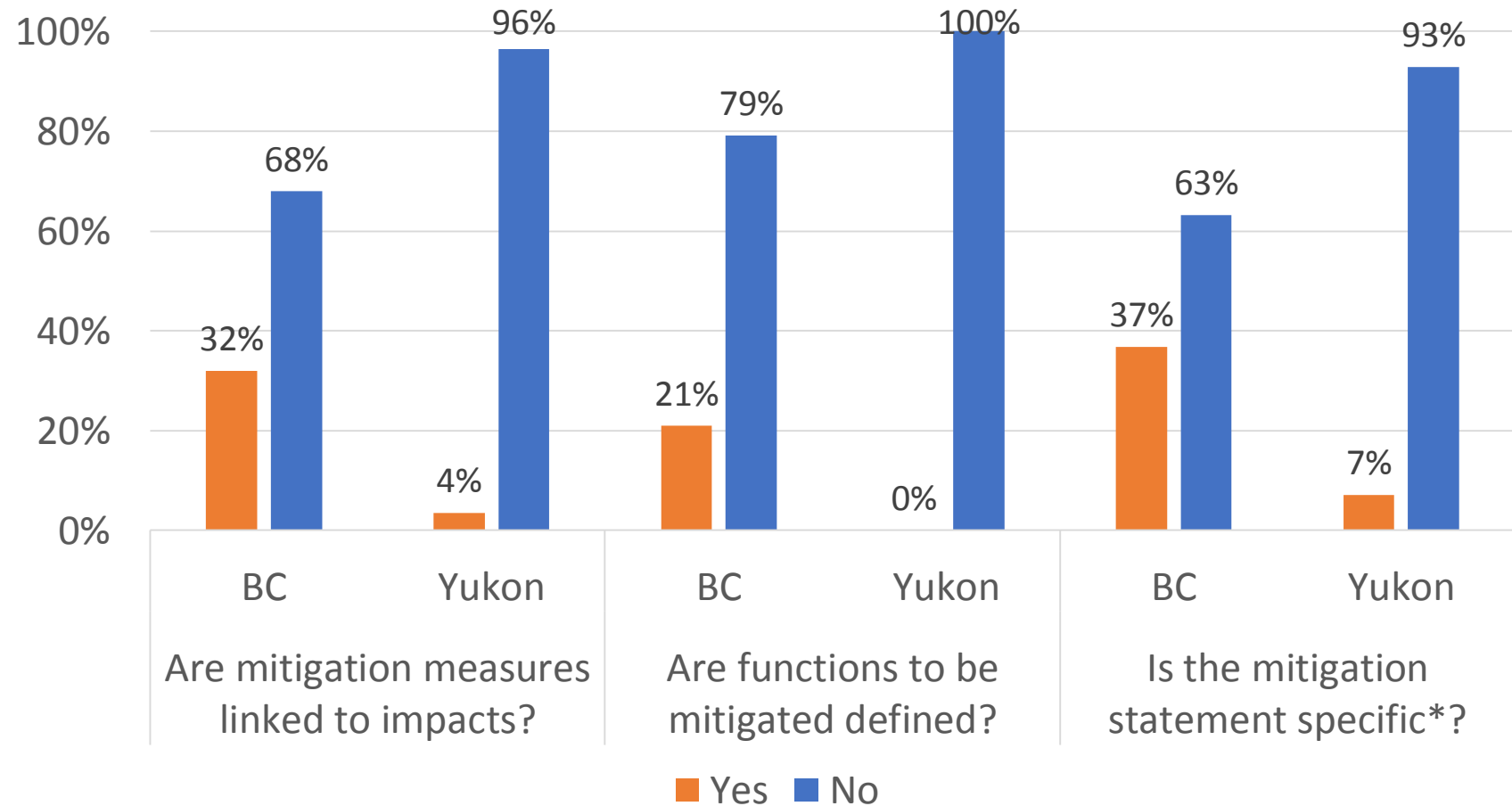
BC



28

YT

Wetland mitigation actions proposed

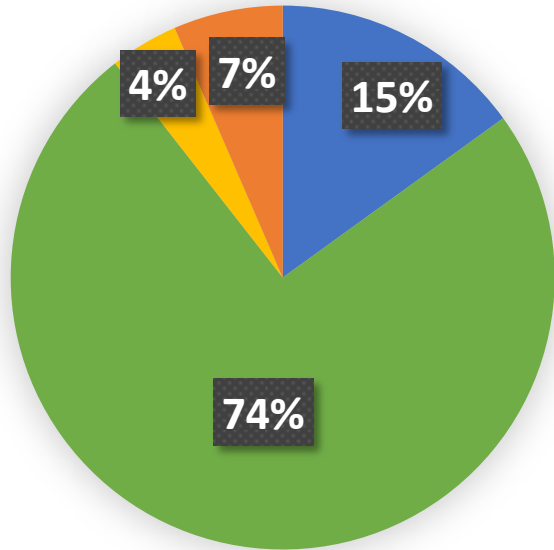


*citing regulatory documents, distance, timing, responsibility, management plans

Results



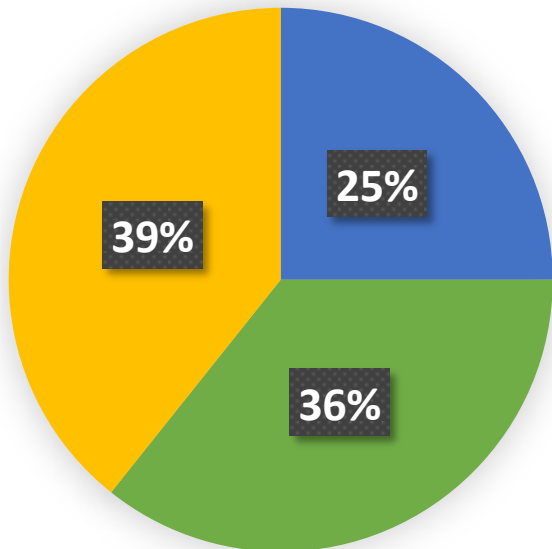
BC



- Avoidance
- Minimization
- Restoration
- Compensation

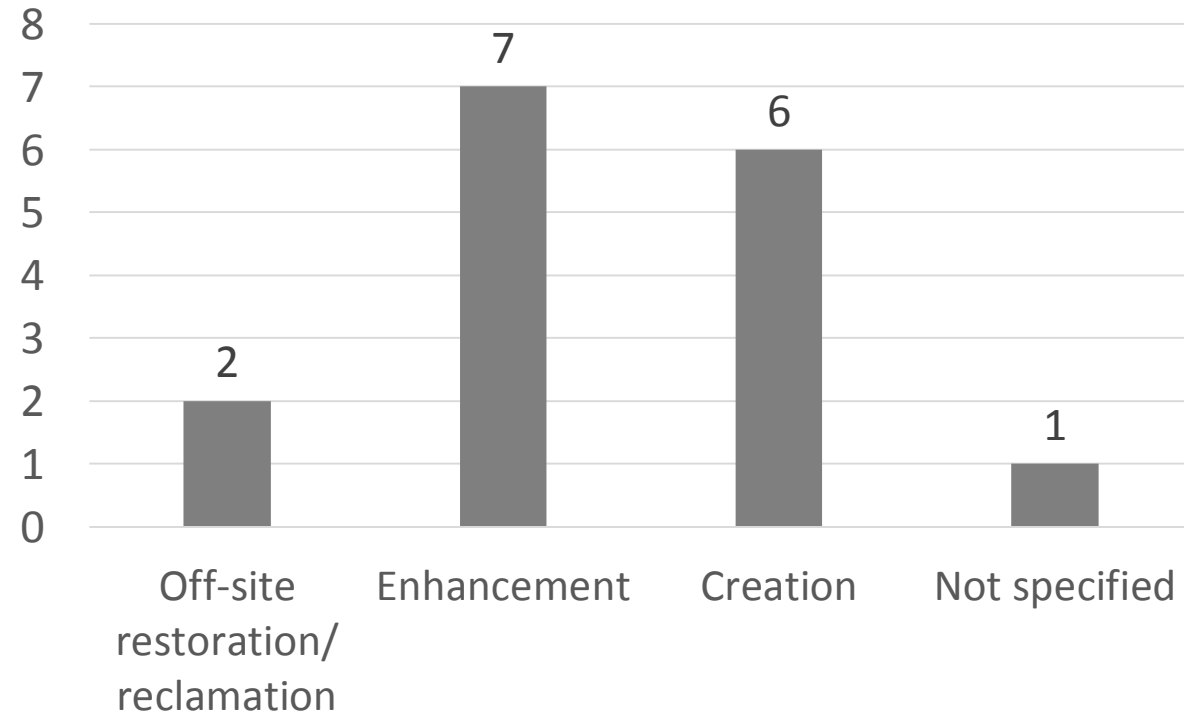


YT

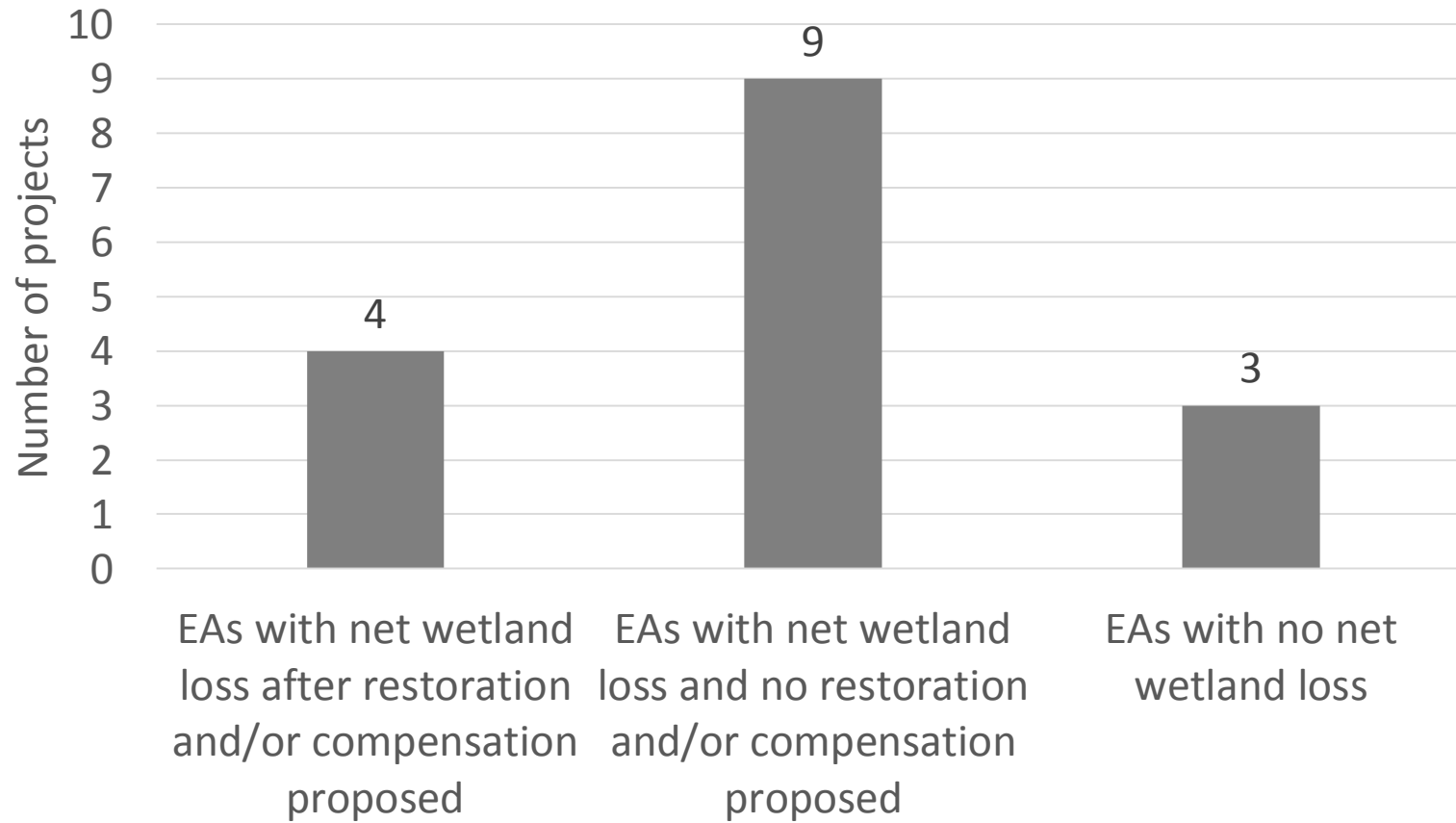


- Avoidance
- Minimization
- Restoration

Number of compensation approaches proposed in BC



Conclusions





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Photo credits: Nichole-Lynn Stoll.

