

A DIFFERENT TYPE OF ASSESSMENT: WOOD BUFFALO NATIONAL PARK SEA

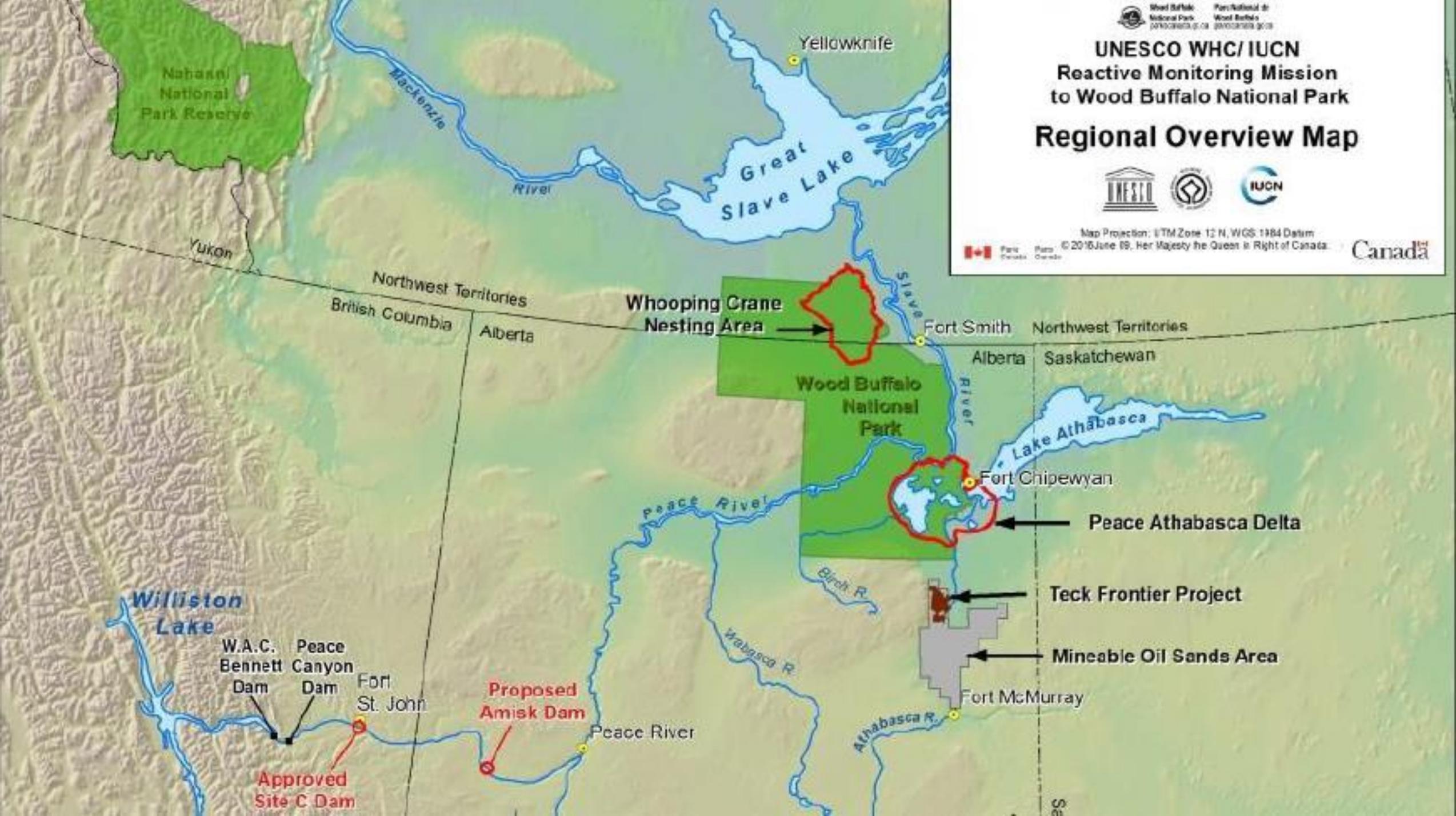
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UNESCO WHC/IUCN Reactive Monitoring Mission to Wood Buffalo National Park Regional Overview Map



Map Projection: UTM Zone 12 N, WGS 1984 Datum
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BACKGROUND AND CONTEXT

- Mikisew Cree petitioned the World Heritage Committee to have WBNP added to the List of World Heritage Sites in Danger in 2014
- In 2015, the WHC asked Parks Canada to undertake a SEA of the cumulative impacts of all developments (including hydroelectric dams, oil sands development, and mining) on the world heritage values of WBNP.
- The SEA was the first attempt ever to quantify the cumulative impacts of surrounding regional development on WBNP.

WHY IS THIS DIFFERENT FROM A TRADITIONAL SEA?

- Looking development as it applied to the Park, inverting the traditional consideration
- Analyze pre-existing data, no new studies undertaken
- Based on World Heritage components
- Not our job to point fingers but to determine if there was a problem



DEVELOPMENT OF DESIRED OUTCOMES FOR WBNP

- The OUV
 - Criterion (vii): “The great concentrations of migratory wildlife are of world importance and the rare and superlative natural phenomena include a large inland delta, salt plains and gypsum karst that are equally internationally significant.”
 - Criterion (ix): WBNP “is the most ecologically complete and largest example of the entire Great Plains-Boreal grassland ecosystem of North America, the only place where the predator-prey relationship between wolves and wood bison has continued, unbroken, over time.”
 - Criterion (x): WBNP “contains the only breeding habitat in the world for the Whooping Crane, an endangered species brought back from the brink of extinction through careful management of the small number of breeding pairs in the Park. The Park’s size (4.5 million ha), complete ecosystems and protection are essential for in-situ conservation of the Whooping Crane.”



METHODOLOGY

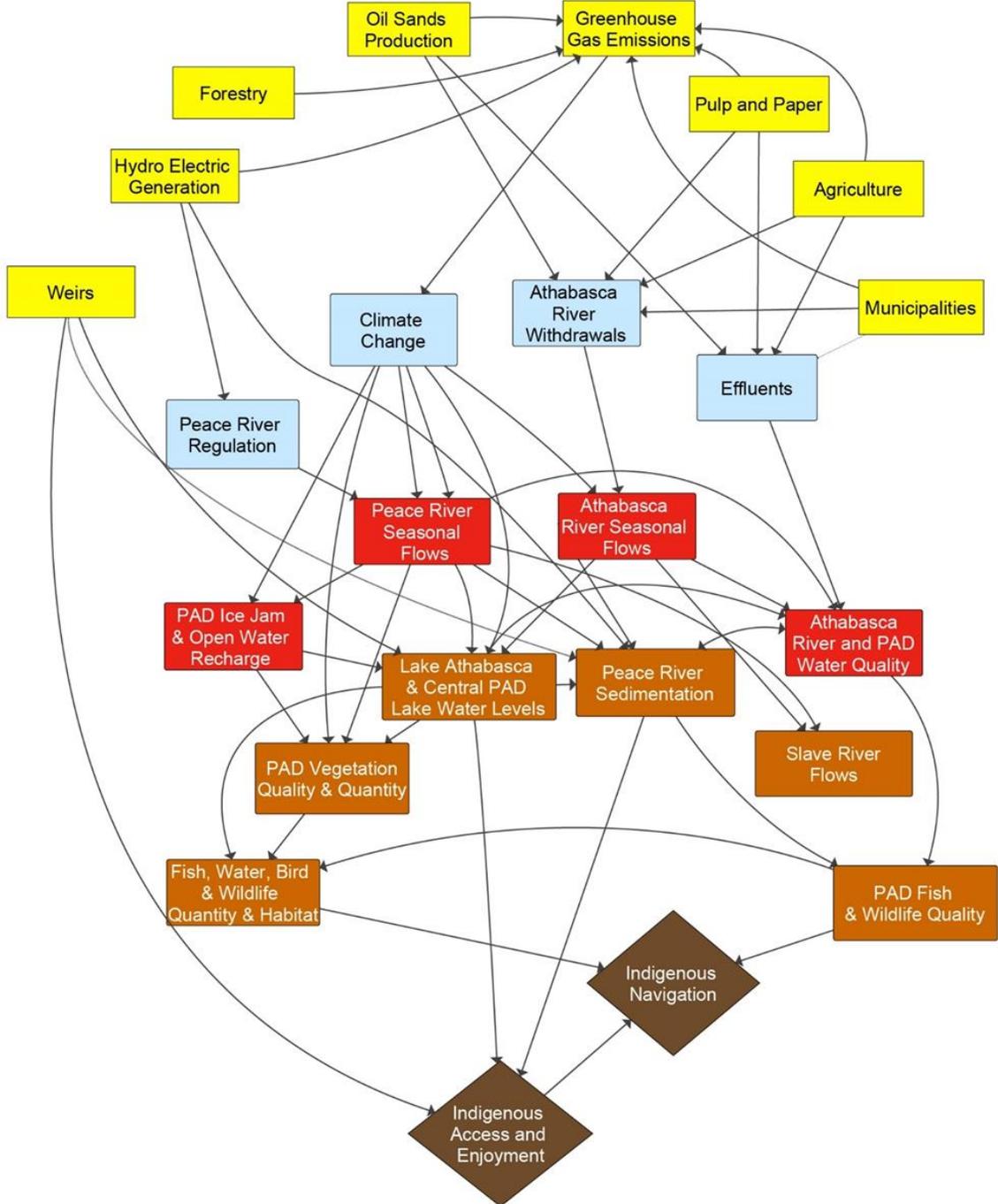
- World heritage statements are “*somewhat high level and nebulous, or (managers) do not understand how it might assist or help to prioritise their planning and management efforts*” (Day, 2015)”
- To “operationalize” an OUV Statement, break down the statement into smaller components
- *Sequentially to:*
 - “*identify key examples of values or attributes against each Statement excerpt*”
 - “*identify the factors affecting those values*”
 - “*prioritize the highest priority threats*”
 - “*consider what are the priority management needs to address the highest priority threats*” (Day, 2015)
- For WBNP, the World heritage statement broken into component parts
- Component parts underwent an extensive literature review and consultation with indigenous knowledge holders and experts
- From this research, a clear understanding of where major concerns within WBNP existed. Additionally, it illuminated where additional research was needed.



COLLABORATION

- Significant involvement from Parks Canada team
- Multiple trips to delta undertaken with Parks and consulting team
- Consulted elders, scientists, community leaders...
- Collaborative approach to writing, editing and reviewing report
- Indigenous communities co-authored sections

PATHWAYS OF EFFECTS



RESULTS FOR THE PAD – FUTURE TRENDS

- Based on the pathways of effects and trends observed from past climate change and industrial development in the region, it was determined whether desired outcomes were being met

Desired Outcomes	Does weight of evidence indicate outcome is currently being achieved? ¹	What does the weight of evidence indicate with respect valid linkage or pathway of effect between the desired outcome and key stressors? What is the likely current direction of the trend from each stressor? ²				What is the likely future trend direction resulting from all stressors?
		Climate Change (e.g. low rain or snowfall)	Change in Surface Water Quantity (e.g. dams, water removal)	Change in GW and Surface Water Quality (e.g. metals or HC pollution)	Other Impacts	
1. Flow regimes and water quality into the PAD maintain the ecological function of the ecosystem	NO	YES ↘	YES ↘	Unknown YES↘	Air Quality ↘	↘
2. Flow regimes and water quality in the PAD sustains vegetation communities and healthy and abundant populations of key ecological and cultural species including waterfowl, muskrat, fish, bison and wolves.	NO	YES ↘	Unknown	YES ↘		↘
3. Indigenous groups have access to the PAD and are confident enough in the health of the PAD to maintain traditional use and way of life through hunting, fishing, gathering, and cultural activities.	NO	Unknown	YES ↘	YES ↘	Air Quality ↘	↘

CHALLENGES AND LIMITATION

- Initiating new studies were not within the terms of reference for the assessment
- Information collected from previously completed project EAs in the region also did not 'tier-up' to the SEA effectively, given that most had not assessed cumulative effects of impacts on WBNP values.
- Challenges assessing and scoping cumulative effects induced from multiple sources, across time scales (industrial development, river regulation, climate change, etc.)
- Integrating and coordinating numerous stakeholders, rights holders, and government departments

THANK YOU!

