Rebuild, rewild or decommission: Consulting locals about the fate of the Mactaquac Dam, Canada, using floating focus groups

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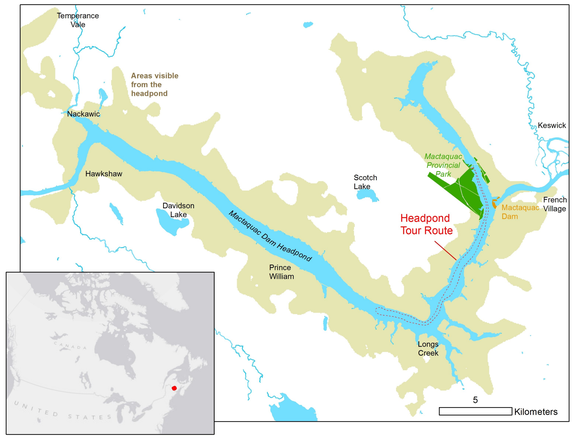
Mactaquac, New Brunswick, is the site of the Canadian Maritimes' largest hydroelectric dam, producing 668 MW of renewable energy. Built in the mid-1960s at great economic, environmental and social cost, the cement used to build the dam contained a faulty aggregate which is compromising the stability of the structure. By 2016, a decision must be made whether the dam will be rebuilt, removed, or decommissioned (left in place without producing power). We took groups of locals on houseboat tours in August 2013 to learn how they felt about the place, and the options available. The manmade amenity of the Mactaquac headpond evoked a sense of shared tragedy for long-time residents but – across all groups – a deep sense of place, identity and of the area's aesthetic and recreational value, as well as energy, that speak for rebuilding the dam. The strength of emotion suggests a careful consultation process is needed to ensure an acceptable outcome.



METHODS

We took three groups of participants on a three-hour houseboat tour of the Mactaquac headpond, in late August, 2013 (n=25):

1. **Individuals who lived in the area before the dam (before 1967);**
2. **Individuals who grew up on the headpond and never saw the prior landscape; and**
3. **Individuals who moved into the area more recently as amenity migrants.**

The novel water perspective helped us to 'break the frame' of everyday experience, to elicit local stories, observations and preferences using landscape elicitation and focus group discussions.

FOCUS GROUP RESULTS

On the return trip, structured group discussions explored:

1. How the landscape has changed, for better or worse;
2. Future development ideals for the landscape; and
3. What participants think the future should hold or will hold for the Mactaquac dam.

Pride and pleasure in the headpond landscape
They have enormous pride in the headpond landscape, and its growing residential development. Overwhelming support was voiced for the maintenance of the headpond landscape, with the preference that it be done while still providing 'green power'.

"There is nothing like it in Atlantic Canada and it attracts a lot of people from different provinces, the houseboats and the boating on it." (Female 1, Day 3)

"…there are so many people that live here now and they seem to have a sense of community when they do come, a common bond, they have the [pond] and it seems to be that that is the reason they have come here, to live, and that is a very strong bond for them and they promote it" (Female 3, Day 3)

Preference for green development options
Despite a loss of agricultural production in the area, and instability in industrial jobs (e.g. pulp and paper), meaning many family members have to leave town to work, there is a strong preference for development that will not despoil the landscape, such as ecotourism. Dam upgrades were seen as the better investment than other, even renewable, energy options.

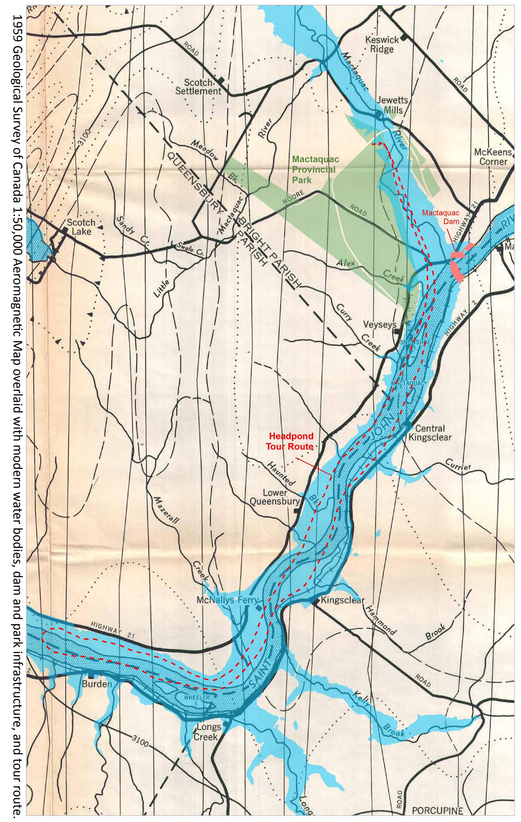
"Winter tourism, I think could maybe be cross-country skiing and since we have 5 months of winter here, and it is such a beautiful park." (Female 1, day 2)

"Seems like a simple thing to me, we have a headpond because we have a dam and a generating station, why do we need other energy sources on the headpond?" (Male 4, day 1)

Belief that the dam should be rebuilt
Participants felt that the locals had been traumatized by the original building of the dam, and that they should not be made to accept the loss of the new landscape, too. Whether or not the dam is refurbished to provide power, they feel they are owed that landscape in perpetuity, despite the costs.

"Lives were ruined back when it happened but why go through that again? When you've got so many more people to worry about." (Female 3, day 3)

"I guess for me, I would say, my family has been down that road before, the trauma of losing our property. Now as far as I know, everyone within the family is now on board to keep it as it is. We enjoy our waterfront and the pleasures we have in using it that way, so the last choice for me would be decommission." (Female 5, day 3)

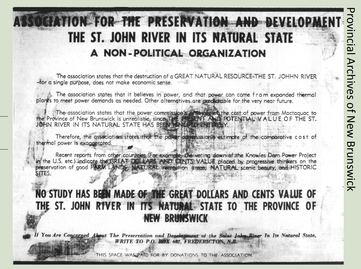


1959 Geological Survey of Canada 1:50,000 Aeromagnetic Map overlaid with modern water bodies, dam and park infrastructure, and tour route.

PARALLELS

The public discourse against the loss of the dam and headpond today mirrors those against the dam in 1966. In fact, many of the same families are represented in each group. This is consistent with the literature on dam removal (e.g. Babbitt 2002, What goes up may come down, *BioScience, 52 (8), 656-658*)

Type of loss	1966	2013
Recreational	Island Park in Woodstock was flooded (pool, racecourse, fair grounds); fishing decline with salmon.	Popular site for pleasure craft, swimming and snowmobiling in the winter when frozen.
Aesthetic	The natural landscape of the St. John River was loved by many.	Most locals love the dam's headpond, today.
Property	Homes and land were lost, due to government appropriations, causing enormous trauma.	Many fear the loss of waterfront property value; unclear what would happen to exposed land.
Livelihoods	Loss of agricultural land and other businesses in flood area.	E.g. Jobs at Kings Landing Historical Settlement, houseboat rental, other tourism and residential development.
Community	Close-knit, 200-year old rural farming community.	Locals feel bonded by their love and use of the headpond.
Environment	Loss of salmon; natural flows.	Need to keep this renewable energy source, as well as the wildlife that has moved in (otter, eagle).
Overall	**It was *not right* to do it (e.g. flooding graveyards, etc.)**	**It is not right to do it *to us* again.**



ASSOCIATION FOR THE PRESERVATION AND DEVELOPMENT OF THE ST. JOHN RIVER IN ITS NATURAL STATE
A NON-POLITICAL ORGANIZATION

The association states that the destruction of a GREAT NATURAL RESOURCE-THE ST. JOHNN RIVER -for a single purpose, does not make economic sense.

The association states that it believes in power, and that power can come from expanded thermal plants to meet power demands as needed. Other alternatives are available for the very near future.

The association states that the power commission's figures show the cost of power from Mactaquac to the Province of New Brunswick is unmeasurably cheaper than the DIRECT AND POTENTIAL VALUE OF THE ST. JOHN RIVER IN ITS NATURAL STATE HAS BEEN DETERMINED TO BE.

Therefore, the association stands ready to prove that the cost of thermal power is cheaper than the comparative cost of hydro power is cheaper.

Recent reports from other countries, for example, concerning several of the Knowles Dam Power Project in the U.S. etc.) indicate GREAT DOLLARS AND CENTS VALUE placed by progressive thinkers on the preservation of good RIVER SYSTEMS for recreation, their NATURAL scenic beauty, and HISTORIC SITES.

NO STUDY HAS BEEN MADE OF THE GREAT DOLLARS AND CENTS VALUE OF THE ST. JOHN RIVER IN ITS NATURAL STATE TO THE PROVINCE OF NEW BRUNSWICK

If You Are Concerned About The Preservation and Development of the Saint John River In Its Natural State, WRITE TO P.O. BOX 100, FREDERICTON, N.B.

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CONCLUSIONS

Our novel *in situ* focus group with locals of the Mactaquac headpond area provides insights relevant to the decision the public utility must make in 2016 about the fate of the dam and its headpond. While participants whose families have been in the area since before the dam was built shared a sense of tragedy about its impacts at the time, most study participants:

1. Value the headpond landscape for its beauty, wildlife and recreational opportunities;
2. Want to see the area develop economic opportunities but not development that changes the headpond landscape; and,
3. Prefer to maintain and refurbish the energy source they have in the dam rather than invest in new energy sources with the commensurate change and uncertainty.

The protest against the dam's removal today mirrors that against the dam in 1966. The Province may not be able to afford the option most acceptable to locals. The public utility has complex justice issues to negotiate, as well as acceptability; careful public consultation is needed over this potentially drastic landscape and energy system change.

WATCH THE DOCUMENTARY

***Mactaquac Revisited* (2014)**

This short documentary (14 minutes) follows the tours and provides the local perspective on this challenging resource and landscape issue, in their own words. **Simply scan the box with your smartphone or visit *http://vimeo.com/87082790***

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Read more at https://www.facebook.com/pages/Reimagining-Canadas-Energy-Landscape/267842286688664