



## **How stakeholders frame dam removal: The role of current and anticipated future ecosystem service use**

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Many river restoration projects, including dam removal, are controversial and can trigger conflicts between stakeholders who are for and against the proposed project. The study of environmental conflicts suggests that differences in how stakeholders 'frame', or make sense of a situation based on their prior knowledge and experiences, can perpetuate conflicts. Understanding different stakeholders' frames, particularly how they converge, can form the basis of successful conflict resolution. In the case of dam removals, it is often assumed that emphasising increased provision of ecosystem services can be a point of convergence between those advocating for ecological restoration and those opposed to removal because of negative human impacts. However, how exactly stakeholders frame a contentious proposed dam removal and how those frames relate to ecosystem services has been little studied. Here we used the case of a potential dam removal in New Brunswick to investigate how people frame the issue and how that relates to their current and anticipated future use of ecosystem services. Based on in-depth interviews with 30 stakeholders in the area, including both people for and against dam removal, we found that both groups currently used ecosystem services and were in favour of ecosystem protection. However, they differed in how they framed the issue of the potential dam removal. The group against dam removal framed the issue as one of loss and risk – they thought that any potential benefits to the ecosystem would be outweighed by the high risk of negative social impacts caused by a loss of access to ecosystem services, such as recreation and aesthetic enjoyment. By contrast, the group in favour of the dam framed the issue as one of opportunity and justice. They thought that following a short transition period, all stakeholders would benefit from the restored river, particularly from a restored salmon fishery, improved aesthetic appeal and the long-term sustainability of an undammed river. Ultimately, we argue that increased provision of ecosystem services does not always represent a point of convergence between stakeholder groups, because both groups support ecosystem protection but differ in how they expect the benefits they derive from ecosystem services to change. Conflict resolution strategies may be better addressed by measures to mitigate the perceived loss of ecosystem services in the group against dam removal.