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Original Paper

Discussion: Should the Dams Be Removed to Save the Pacific Northwestern Salmon Population?

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Abstract

From 1885 till now, dams keep played an important role in Pacific Northwest. However, despite providing transportation convenience and electricity affecting the salmon population, they greatly impacted the salmon population. Nowadays, people standing for different parties are arguing whether the dams should be removed to restore the salmon population. Currently, a solid plan for dam removal has been proposed by Congressman Simpson. And it's barely a start, further discussions will become more intensified and require an urgent environmental political response.

Keywords

the environmental issue, environmental politic, political analysis, Pacific Northwest, dams, salmon

1. Introduction

As people's increasing development and exploitation of natural resources to pursue a higher quality of life, conflicts between nature and humans are inevitable. In this paper, the positive and negative aspects of removing dams to save the salmon population in the Pacific Northwest will be discussed. In particular, the venue shopping in this case is identified where different parties stand on their views and protect their interests. Notably, the surviving condition of the salmon population becomes an environmental political issue and urgently demands an effective policy response.

Dams, huge and time-consuming constructions in the engineering area, were firstly built in the Pacific Northwest in Spokane in 1885 (Hydropower, n.d.). But it was just the beginning of dam constructions. Nowadays, 40 percent of the electricity used in the Pacific Northwest is generated by federal dams in the Columbia River Basin (Hydropower, n.d.). Despite the great number of electricity that dams in the

Pacific Northwest provide, the dams also serve other uses. In general, dams provide “flood control, hydroelectricity, water for irrigation, lock for navigation of boats, and places for recreation” (Dams: History and purpose, n.d.). They indeed use the streams in Pacific Northwest to the utmost. The value of these dams is considerably large because they serve to meet local people's basic life requirements and facilitate transportation in the Pacific Northwest.

2. Discussion

Removing these huge constructions will bring serious consequences. To begin with, the dams in the Pacific Northwest provide around 40 percent of the electricity. How to find alternative resources to resupply such a huge electricity deficiency? And even exerting the most common way, burning fossil fuels, will bring extra troubles like more carbon emissions. Secondly, playing a critical role in transportation, dams in the Pacific Northwest provide a relatively much cheaper transportation method compared to transporting by road, not to mention transporting by air. Thirdly, based on official federal financial estimation, an average of $18 million is required for the removal of every large dam. With evident disadvantages of removing dams in the Pacific Northwest, disagreements with this dam removal policy arise quickly. For example, knowing that the two metro places, namely the Tri-City and the Lewiston-Clarkston area, would suffer the most when the dams are removed, David Reeploeg argues that dam removal policy is simply not good enough. He points out the reason that the rise of fish numbers is uncertain but the harming communities and industries in the Pacific Northwest was something expected to happen (Annette, 2021). David Reeploeg, the vice president for federal programs for the Tri-City Development Council, insists on keeping the dams though Tri-City will receive $75 million financial support if dams are removed.

However, the salmon population in the Pacific Northwest faces huge survival issues due to these dams, since they begin their lives in freshwater, migrate downstream, and eventually reach the sea (Fazio, 2021). As dams in Pacific Northwest become barriers that cannot pass through for salmon, they are forced to reproduce in different places. The disturbance of their life cycle finally brings a huge impact to the number of their species. Take some parts of the Columbia River Basin, the Umatilla Reach of the Columbia behind John Day Dam, and Hells Canyon of the Snake River as an example, the water flow become slower after dams are constructed, which in turn causes the rise of water temperature and threaten the survival of salmon and steelhead (Dams: Impacts on salmon and Steelhead, n.d.). Furthermore, according to the publication from American Rivers, wild salmon returns dramatically decreased by over 90% since the dams have been completed (Golden, 2021). Additionally, the Idaho Conservation League reported that before the dams were constructed, around 1.5 million spring-summer chinook salmon made their way back every year to the Snake River, but only 5,800 of them completed the journey by 2017 (Golden, 2021).

Providing the loss of so many benefits that dams continuously bring to all the people in the Pacific Northwest, the removal of dams has many supporters majorly because of the impact on the salmon

population. Salmon, a vital species in the Pacific Northwest, provides locals with about 16,000 jobs and supports many kinds of related industries to thrive, such as the recreational fishing industry. Also, they are economically significant since they draw many tourists worldwide which significantly improves local people's life quality (Fazio, 2021). The dramatic drop in salmon number leads to a consequence chain. Not only other species that are related to salmon are influenced, but also the locals who work in the fishing industry or tutorial industry.

What's more, the impact of a decline in salmon number maybe not be so significant so far, since the ecosystem is resilient, providing a "buffer" to keep a temporary balance. Yet, if the salmon number keeps being low in the long run, the damage it brings to the whole ecosystem will be immeasurable and beyond reclaim. We should learn from the past and keep it as a reminder for the future. Columbia Climate School posted a very detailed explanation about how the number of wolves in Yellowstone Park, which were hunted to near extinction by 1930, negatively affected the whole local ecosystem. Without wolves, the elk and deer population increased so quickly that they consume too many willows and aspens, leaving songbirds no suitable places for homes (Cho, 2019). This condition made stream banks vulnerable to erosion, and insects like mosquitoes were able to thrive because of the decline of the songbird population. Wolves started to prey on the deer again when they were reintroduced in 1995, and the ecosystem became stable again (Cho, 2019). The public, especially the locals, cannot bear to watch and allow the same thing to happen to salmon.

Plus, native Pacific Northwest people, who call themselves Salmon People, rely greatly on salmon. Their existence is vital for achieving the environmental balance. To clarify this point, take the Meru people in East Africa as an example to view since their situations are like Salmon People. Meru people were the indigenous people in the Tanzanian region of Mount Meru. They lost their lands due to the government established "coercive land control" (Robbins, 2011). The government did not expect the great importance of Meru people to "bio-complex landscapes of the region" (Robbins, 2011). Similarly, since the loss of salmon will lower the Salmon People population and their habitats, the same disappointing result will happen in the Pacific Northwest if dams are not removed. Moreover, Salmon People have their own "fish culture", which is a culture based on the "abundance of lands and waters renewed in a sacramental covenant of caregiving by the first people of this place" (Mapes, 2020). This is the region of old wealth, a place where plants and animals, especially salmon, are carefully preserved. To Salmon People, plants and animals are not resources, but a secrete alliance that is rooted deep inside their minds (Mapes, 2020). Salmon people and their culture are invaluable treasures and should be protected altogether.

3. Political Analysis

Congressman Mike Simpson, an active supporter for a new energy policy and the House of Representatives for Idaho's Second Congressional District, has proposed a salmon recovery plan. Simpson's proposal would provide $10 billion for new power generation facilities to replace the

production of the four dams from Ice Harbor near the Tri-Cities upriver to near Lewiston; it also provides $2 billion for changes and improvements to the grid that delivers electricity (Annette, 2021). However, some long-time supporters of keeping the lower Snake River dams are barely listening and waiting to see if he can move forward by winning the support of the rest of the Northwest Congressional delegation (Annette, 2021). Thus, Simpson's pursue of congressional support is not an ideal start.

Concerning the worries of disadvantages it may bring, Mike Simpson has come up with detailed solutions to cope with. He aims to restore the salmon population by removing four federal dams. He asks for funds for the Yakima Basin Integrated Plan, which removes the select fish-blocking dams in the Columbia Basin, increases tourism, and recreation opportunities (Tao, 2021). The plan attempts to restore salmon and points out alternative ways to recover economic loss at the same time. However, his proposal is obviously on the contrary of many parties' interests, which may largely affect whether his claim can be executed in the future. Hopefully, the previous example may become very strong evidence for him to use: Edwards Dam, which is removed in 1999, was successful because it helped recover the number of affected species.

Noted, the current policy is to mitigate and help salmon find some pathways through which they can migrate from one place to another. However, not all problems can be solved smoothly. If the number of salmon cannot rise back in a relatively short period, or approximately back to the level it used to be, the damage to the Pacific Northwest ecosystem can be permanent. Thus, the removal of dams should be the most beneficial environmental policy in the long run.

4. Conclusion

The decision to remove dams is never a small issue and it relates many parties and forces. Venue shopping between local communities, native people, local factories, and Pacific Northwest legislators and governors is important because they all hold different opinions and strengths to lead the policy to develop as they prefer. Fishing industries and people who work for them hope certain dams to be removed since their concern is majorly the yield of fish. However, the local farmers will be dissatisfied, because their irrigation system heavily relies on the water provided by dams. If the dams no longer exist, their land yield will decrease significantly. As for the Salmon People, they cannot wait to remove the dams for the sake of their critical living condition and their weakening culture. In addition, the dam companies disagree with the dam removal decision, since they do not want to pay for the removal of dams. Some governors may feel worried about removing dams since local development will be hugely influenced, while some believe the removal of dams will offer alternative opportunities, and if they are properly utilized, the economic influence can be balanced. In conclusion, the multiple forces will intensify the discussion, and due to the diversity in perspectives, they will propose hugely different claims towards environmental policymaking.

To summarize, the benefits of removing dams outweigh its costs. The ecosystem is immeasurably

significant, and humans should try their best to protect them. Usually, the public, even experts, underestimates the profit a good ecosystem can bring. Decreasing intensive environmental hazardous phenomenon, providing valuable natural resources, offering beautiful views for humans, and keeping the earth a nice place for all species to live. As can be seen, wonderful ecosystems have contributed massive benefits to humans. And it has been proven that the destruction of the ecosystem will bring disasters. Wolves in Yellowstone Park is a valuable lesson, and we need to learn from the past. And it's worth mentioning that the benefits of recovering ecosystems are often more than expected. Further, local people and industries who rely on salmon need the dam removal policy to thrive, while cities that are negatively influenced by the loss of dams can find other ways out through adapting to new plans like Simpson's salmon plan. The concerns about the tribes nearby the river should be taken into consideration when designing the dam removal policy as well because the tribes relate to salmon deeply, and their valuable culture includes salmon as an important element. In the end, based on the reasons above, the dams should be removed to save the Pacific Northwestern salmon population.

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