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# Environmental Justice Disparities in Alaska Native Communities

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Staff Article

## INTRODUCTION

Environmental justice and environmental racism are relatively new terms in environmental discourse. These new terms arose following an alarming amount of evidence-based research showing that environmental conditions are far worse for communities and individuals of color than they are for white individuals and communities. The Environmental Protection Agency defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” While the EPA and other agencies have finally begun to give consideration to issues of environmental justice after decades of negligence, there is still an alarming amount of work that needs to be done. As evidenced by the ongoing water quality issues in Flint, Michigan, and even the continuous air pollution in Pittsburgh, it is clear that individuals are not only uninformed about environmental issues that will affect their health, but also very rarely invited to be part of the decision-making process that surrounds these issues. <sup>1</sup>

Usually when environmental justice and racism are discussed, the conversation focuses on highly populated communities and urban areas. However, environmental racism is just as relevant in rural communities and those that are removed from the pollution of large cities. Namely, indigenous communities continue to be excluded from the discourse on environmental racism. Despite the communities generally having a smaller contribution to harmful environmental practices, they tend to suffer more of the repercussions of pollution and climate change due to a number of factors. There is a significant need for research, remediation, and

policies to correct injustices and protect indigenous communities from the repercussions of continuing pollution and impending climate change.

## **POLYCHLORINATED BIPHENYLS AND FORMERLY USED DEFENSE SITES**

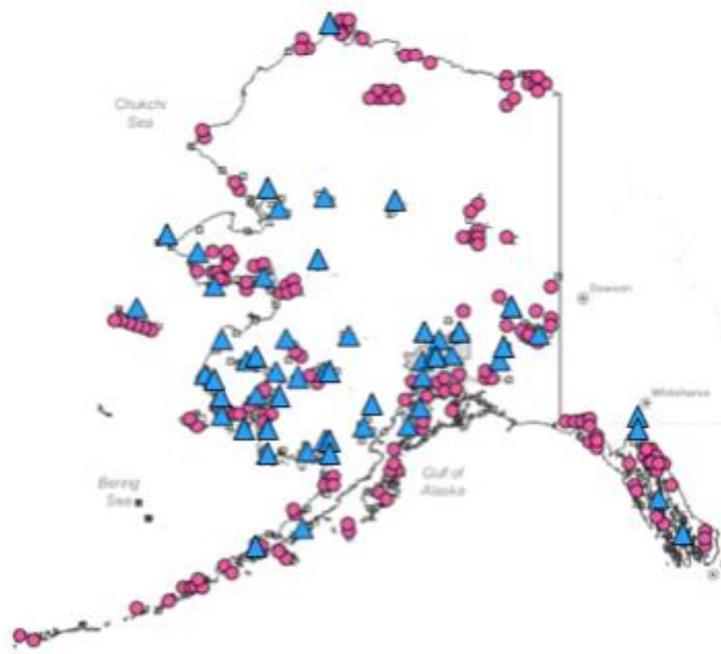
While there is a significant deficit in research on environmental justice in indigenous populations in the United States, there is one subset of indigenous populations that has been relatively well researched. The Yupik and Inuit are two Alaska Native tribes that have suffered health problems due to rising levels of environmental pollutants, specifically polychlorinated biphenyls (PCBs). The bulk of the research on this subject centers around the water quality in and near St. Lawrence Island, Alaska. This water is highly contaminated with a number of pollutants, most notably high levels of PCBs. The high concentration of PCBs indicates an unmistakable correlation between the pollutants and the presence of the United States' formerly used defense sites (FUDs), found in the St. Lawrence Island area and throughout the entire state of Alaska. These formerly used defense sites were established during the Cold War and World War II and no longer serve a purpose as active military defense sites. The US Army Corps indicates the presence of FUDs in all US states, with 364 in the state of Alaska alone. This makes Alaska the state with the third-highest amount of FUDs in the country. Of these 364 FUDs, 248 of them are defined as having toxic, hazardous, or radioactive waste. These 248 hazardous and toxic FUDs have yet to be decontaminated and continue to pollute the waters that the indigenous populations are forced to rely on as food and water sources.<sup>2-5</sup>

While PCBs pose environmental and health risks for all residents near the contaminated formerly used defense sites, they pose an even greater risk for the indigenous populations. Alaska Native individuals who live in recognized indigenous villages have diets that are higher in local fish and marine mammals than individuals who are not Alaska Natives. For Alaska Natives, this diet is especially rich in marine sea mammals such as seals. PCBs are stored in the fat cells of both humans and seals and can be transferred through consumption of the fatty, PCB-contaminated seal tissue. Seals are a common source of nutrition and are an important staple

in the traditional diet of the Inuit and Yupik tribes. The longer the FUDs remain contaminated with hazardous waste, the more pollution will remain in the food chain for Alaska Natives, causing increasing health problems.<sup>2,6</sup>

In addition to the transfer of PCBs through the marine food chain, breast milk can transfer PCBs from mother to child. This occurs in women and children as well as in seals and their pups. These PCBs are often hard to remove from the environment and the food chain; data from lakes and sewage treatment plants indicate that PCB levels have remained constant since the 1960s. PCBs can remain in the food chain of humans and animals for decades, contributing to a seemingly endless cycle of harm to Alaska Native populations. PCBs are a known endocrine-disrupting chemical, which means they have an effect on one or more components of the endocrine system in humans and animals. The endocrine system regulates the production of hormones such as estrogen, androgen, and testosterone. Disruptions in these hormones can manifest in a number of health problems for humans and animals. PCBs at their studied concentration in Alaska Native women and their children have been shown to manifest specifically in the reproductive system. The exact long-term effects of these endocrine disruptors are still being studied, and there is an imminent need for research on how the consistently PCB-contaminated food chain will affect the Yupik and Inuit populations.<sup>2, 7-8</sup>

**Figure 1: Current Toxic and Radioactive FUDs and Proximity to Indigenous Villages in Alaska.**



**KEY:**

- ▲ Two or more indigenous villages in a ten mile radius
- Toxic, radioactive, or other hazardous FUD

**Figure 1:** Formerly used defense sites (FUDs) classified by the military as still containing toxic and/or radioactive hazardous wastes and probable sources of endocrine disrupting chemicals such as PCBs, nitrates, and BPA were plotted as well as legally defined indigenous Alaskan populations that appear within a ten mile radius of one another to show the proximity of sources of harmful EDCs and permanent residence of indigenous Alaskan populations <sup>4,5,18</sup>.

## **WOMENS' HEALTH AS AN INDICATOR OF COMMUNITY HEALTH**

The disregard for the health of Alaska Natives reflects the failure of the government to fulfill its obligations to environmental justice standards defined by the EPA, as well as its obligations to the Alaska Native population. PCB contamination poses a risk specifically for

indigenous women and is an issue of reproductive justice as much as it is an issue of environmental justice. Reproductive justice is defined by the organization, Asian Communities for Reproductive Justice, as “the complete physical, mental, spiritual, political, social, and economic well-being of women and girls, based on the full achievement and protection of women’s human rights.” This is not to be confused with reproductive rights, as reproductive justice has more to do with general women’s health for all ages rather than specifically reproductive issues for women of child-bearing age. The health of women in a community is a crucial indicator of the overall health of a community for a number of reasons. Women’s bodies can be more sensitive to pollution than men’s bodies, as women are more likely to pass contaminants to children through gestation and breastfeeding. Maternal health and discrepancies in infant life expectancy throughout geographic areas and ethnic groups are used as a keystone for the overall health of a group or geographic area. <sup>9-11</sup>

The maternal and reproductive health of Alaska Native women is a subject that requires more extensive research, and the concern of women in these communities has been largely ignored. Increased instances of breast cancer have been attributed to PCB contamination from FUDs in the St. Lawrence Island area, and women in the community believe that many other chronic illnesses could be attributed to them as well. While there is no direct research to support these claims, it is not uncommon for the health concerns of a marginalized group to be ignored instead of taking the difficult steps to alleviate sources of contamination and make reparations for those affected. <sup>12</sup>

In other indigenous communities, there are well-documented cases of reproductive concerns being ignored or blamed on poverty and socioeconomic status rather than environmental pollution. In the Oglala Lakota community in South Dakota, women have a disproportionately high infant mortality rate as well as high rates of reproductive cancer. Rates of mortality for these cancers are disproportionately higher than non-indigenous populations as well. After years of women in this community suffering because of factors out of their control, research was finally conducted. Researchers were able to determine that these issues were linked to mining drainage pollution in the area. In the Mohawk Nation at Akwesasne, residents obtain their fish from rivers that are tributaries of the St. Lawrence River, likely sharing the

same pollutants as the Alaska Native communities near St. Lawrence Island. Mohawk girls were more likely to begin menstruation at younger ages, which could be attributed to their blood serum levels of endocrine-disrupting PCBs. Studies such as these led Mohawk leaders to advise the community to stop consuming fish from the polluted tributaries. Even without consuming polluted fish from the St. Lawrence River, levels of PCBs are still very high in Mohawk individuals who were breastfed as infants, further reiterating the importance of women's maternal health and their role as an indicator in the overall health of a community. <sup>12-15</sup>

## **REPERCUSSIONS OF CLIMATE CHANGE FOR ALASKA NATIVE COMMUNITIES**

In addition to dealing with levels of hazardous contamination that no one should be subjected to, Alaska Native communities are more at risk to experience the detrimental consequences of global climate change. This includes weather disturbances characteristic of climate change such as flooding, erosion, more frequent and severe winter storms, and melting of sea ice. These weather disturbances may decrease the amount of fish and other marine animals used as food sources, depleting already polluted resources. Alaska is the largest state, and is also lined by coasts on the majority of its borders. Because of this, the state is more susceptible to coastal disturbances, and wave and weather patterns can manifest in more serious ways than other geographic areas. Alaska is also a state nearly 80% covered in permafrost statewide. As the climate continues to grow steadily warmer, permafrost is melting, which not only leads to erosion but also contributes to the destruction and sinking of buildings that are built on top of the permafrost. <sup>16-17</sup>

As permafrost melts at an alarming rate, so does sea ice. Alaska Native tribes are accustomed to near-permanent sea ice, even directly off the coast. In accordance, ice fishing is a common practice rooted in cultural significance. Lack of sea ice prevents Alaska Native populations from practicing traditional methods of fishing. In addition, lack of sea ice contributes to erosion, flooding, and more severe storms that occur over bodies of water. Because of these changes to the geography of their communities, many Alaska Natives are

displaced from their locations and historic communities. While communities on St. Lawrence Island have yet to be completely displaced, they are more likely to be affected in the future since they are surrounded by coasts on all four sides. Relocation of communities comes with a steep price tag, and this poses a large financial burden for individuals within the communities. There are few communities where mitigation of erosion and flooding is the solution rather than adaptation to crumbling landscapes. Displacement of communities is not only a burden to individuals during the process, but can also further erase important cultural aspects and traditions for these communities.<sup>16-17</sup>

### **IMPORTANCE OF MAINTAINING CULTURAL PRACTICES**

A plethora of evidence supports the fact that Alaska Natives are innocent victims of the effects of global climate change and environmental contaminants. Those who do not understand or respect Native culture, however, may suggest that natives modify *their* lifestyle rather than demand a solution from the polluters who should address the source of these issues. Alaska Natives should not simply be asked to stop eating their traditional diets because they are contaminated by PCBs and other chemicals. These are practices grounded in their cultural identity and ancestral tradition. These practices are defining for Alaska Native communities, and they should be able to participate in their cultural practices without their health being at risk due to the actions of those outside their community. As we have seen in the Mohawk Nation at Akwesasne, residents were encouraged to stop eating fish from the river, but there is no evidence of any effort being made to contain the source of the pollution. This is an inconvenience which impedes the Mohawk Nation individuals from participating in their traditional diet and cultural practices of fishing. It also neglects to offer a permanent solution or reparations to those affected.<sup>15</sup>

It would also be inappropriate to suggest that Alaska Natives move outside their tribal communities, which can be more prone to the effects of global climate change. The United States has historically had little respect for the land and property of tribal nations, and most

indigenous populations have small government designated areas and reservations. Alaska Natives should not have to be distanced from their communities even further because of negligence and inaction. Alaska Natives not only deserve the right to healthy communities and the ability to raise healthy children, but also deserve the chance to instill their cultural practices in their children.

## **CONCLUSION**

All people deserve the right to a healthy environment and to have their cultural practices treated with integrity and respect. Instead of fixing the source of the problem, the American government has habitually ignored the source of contaminants and continued to allow Alaska Natives to deal with the repercussions. This is unfair to all Alaska Natives, but particularly to women who suffer a number of additional health problems and who are more likely to transmit contaminants to their children during gestation and breastfeeding. Not only is research needed to understand the extent of contamination and subsequent health issues, but remediation and reparations for affected groups are necessary. There should be policies set in place to ban PCB contamination that affects Alaska Natives and to clean up FUDs, as well as to ensure that contamination this severe never occurs again.

In order for policies to be set in place to help Alaska Natives and all other individuals affected by unjust instances of environmental racism, there needs to be a greater awareness surrounding these issues. Environmental justice is a term that not many are familiar with, let alone specific instances outside urban areas and major cities. Through this article, I hope to raise awareness about obstructions of environmental justice and reiterate the importance of the right that all people have to a healthy environment. I hope that in the future there will be more ethical research conducted surrounding these issues, and that all indigenous communities are given an equal opportunity to participate in environmental discourse that will result in necessary change.

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