Jason Han

Prof. David Pellow

ENVS 116

12 December 2024

Analyzing Case Studies of Marginalized Communities

Often less fortunate communities bear the brunt of environmental hazards, unlike more affluent communities that are able to distance themselves away from these issues. These marginalized communities often minority and low-income tend to be affected disproportionately and lack economic resources, political power, and access to information needed to address these environmental issues effectively. These issues extend to the surrounding environment, with various health effects on individuals, as well as issues of self-determination and the restricted ability to reduce these impacts. These communities are often ignored, silenced, and overlooked, yet the environmental injustices they face make it essential to amplify their voices and ensure they are heard. This is required for systemic solutions to emerge and for the solutions to have equitable treatment and involvement of the communities.

In this paper, we will look at three examples of communities that face environmental justice issues, and identify the environmental hazards, implications, and challenges that these communities face. The case studies that we will examine include pesticide poisoning in Apopka, Florida, military burn pits in Colfax, Louisiana, and air pollution shaping the environmental justice framework in California's San Joaquin Valley. Each case study highlights how disadvantaged communities face systemic barriers to environmental justice and reveals the critical need for inclusive advocacy methods to voice concerns and drive equitable solutions. In addition, we will look at a research article about stormwater management and how various traits

of marginalized communities play a role in the response toward environmental concerns such as climate change. The outlook from this article may suggest that there will be similar outcomes toward other environmental concerns from marginalized communities.

In the case of Florida's Lake Apopka, this region historically since the 1940s been an agricultural site in which the large use of chemical pesticides, herbicides, and fungicides has increased alongside the rise in environmental issues such as decreased water quality in the region over time (Saville & Adams, 2019). Contaminates such as organochlorine and organophosphate pesticides and high levels of fertilizer have polluted the water impacting local ecology and wildlife but also the health of agricultural workers and local residents. The wide range of health effects on residents due to exposure to chemicals include skin rashes, headaches, and long-term effects such as lupus (Earthjustice). About 20,000 farmworkers get pesticide poisoning every year but this doesn't account for the long-term effects that are felt years down the line such as cancers, reproductive problems, and endocrine problems (Saville & Adams, 2019). Farmworkers are silenced due to fear of losing their jobs when voicing their concerns as they need to work in order to provide for their families. With chemical runoff from agriculture, Lake Apopka became one of the most toxic sites in the U.S. as ecosystems were heavily degraded (Earthjustice). Ultimately, the government purchased the land from farmers for hundreds of millions of dollars to clean up the lake. This process used millions of dollars of funding for the research and conservation of wildlife such as alligators and birds but little to no money was allocated for the agricultural workers and the variety of health issues they faced (Earthjustice). Furthermore, efforts to remediate the surrounding ecosystems were shown to be successful, yet the same could not be said for efforts in supporting the communities in the region. Restoration attempts and the

buyout of land helped remediate the effects of degradation and funding for ecotourism grew but concerns from locals and farmers were ignored (Saville & Adams, 2019).

In this case study, we are introduced to a minority group of low socioeconomic status and the challenges they face brought upon by pesticide usage. Owners of many farms were aware that pesticides are poisonous but still chose to put farmworkers in harm's way for their own benefit to increase crop yield and increase profits. Farmworkers were also more hesitant to report their health issues or bring awareness to issues they faced in fear of retaliation. The governor also vetoed a clinic in the region showing a lack of regard for the members of the community. This occurrence shows a direct correlation with the Treadmill of Production (TOP) theory as we see a capitalistic system placing priority towards market value needs before social needs. The production of agricultural goods negatively impacted the environment such as the water, air, and land in addition to harming the health and wellbeing of farmworkers and residents. This example shows farmers enduring health issues and the neglect of governmental regulation in the industry. Systemic barriers are shown through job insecurity, low compensation, inadequate legal protections, poorly enforced regulations, and lack of representation for community members. As we saw how the health of humans was directly connected to the health of the environment, developing long-term solutions requires the inclusion of all shareholders in this case input from community members in clean-up solutions and conservation efforts. This connection between human health and the health of the environment also reflects the ideas of the Social-Ecological Systems Framework as when the health of the environment such as the lake and animals deteriorated, so did the health of humans. Environmental degradation weakens the resilience of these communities as a whole and not just a certain group or species. An increase in awareness is necessary and acknowledging the experience and legacy left from people who have passed or

were impacted is a step in creating a collective in tackling these issues. Often, not enough are educated on the topic but with an increase in stories from community members being voiced and heard, this can create community-led efforts and grassroots advocacy empowering farmworkers by raising awareness, providing legal resources, and advocating more sustainable agricultural practices that support environmental justice. Additionally, policymakers need to prioritize worker and environmental health while implementing stricter pesticide regulations and additional labor protections.

Taking a look at Colfax Louisiana, located near a low-income and predominantly black community, Clean Harbors is a facility that uses open burn pits to detonate various explosives. Ranging from expired military munitions to expired fireworks from Disneyland, Clean Harbors is the only commercial facility in the country that open burns and detonates (Vice). Open burning causes smoke to go into the atmosphere which falls on the land and water affecting the environment, humans, and agriculture. With the detonation of explosives, a large range of volatile organic compounds are released into the atmosphere through smoke leading to a plethora of health issues in the surrounding Colfax communities. Chemicals such as benzene, toluene, xylene, and many more affect individuals' skin, eyes, cardiovascular, and respiratory systems with these health implications directly correlated to the release of toxic chemicals (Vice). Some residents even require respiratory machines and medication. Even with the Colfax region having particularly high amounts of cancer rates the Louisiana Department of Environmental Quality (LDEQ) has continued to allow for these chemicals to be processed at this facility as open burning is significantly cheaper than contained burning. In 2017, the LDEQ received over 1,500 complaints against clean harbors with only 2,500 residents living in Colfax (Vice). Farmers are also affected as the pollution from the smoke contaminates their crops, animals, and pollinators.

In a nearby town, a federal facility in Minden also conducted open burning practices, but local residents resisted and fought against this so that contained burn pits were implemented allowing for a reduction in environmental hazards released in that region. Many of the residents of Colfax have lived in the small town prior to the burn pits but now live a very altered lifestyle due to the multi-million dollar corporation in which they have no economic or political influence in resisting. Clean Harbors has been able to operate with little regulation as they have been issued many violations by the LDEQ but still continue to open burn under expired permits (Vice).

In this case of open burn pits in Colfax, again we see a low-income minority community face challenges of an environmental hazard with no say in the corporation damaging their health and environment. The residents of the Rock community in Colfax many of which have not completed a higher level of education have not been adequately involved in the decision-making process of the facility. This aligns with procedural justice, an aspect of environmental justice where self-determination including community access and capacity to participate in political decisions in the community exists (Odera et al., 2024). Procedural justice would occur if communities had control over the environmental decision-making regarding the location and control of pollution sources and the environmental benefits they could receive. In this case, the residents have no control over the facility's location, yet the operation that occurs releases harmful smoke into the atmosphere affecting residents. Systemic barriers are shown through the lack of legal protections and regulations in addition to the lack of representation towards community members. We see the system favoring corporations and profit over the health of the residents. Little to no consideration was taken into account for the damage caused to the historical and cultural practices of the community. Pollution damaging the land takes away residents' livelihoods and ability to exist as a sustainable community as owning functioning land

is a way for the self-determination of many residents. This case study also illustrates the ideas of the Disproportionality Theory, highlighting how Colfax's location, low socioeconomic status, limited educational resources, and small population made it a target for exploitation. This has made the community a designated sacrifice zone by the corporation. Furthermore, while the Treadmill of Destruction (TOD) theory primarily focuses on the environmental and societal harms caused by military-industrial systems, some aspects could apply to this case study. The burn pits in Colfax are military-contracted which burns millions of pounds of various hazardous wastes. This further supports how militarization is the most ecologically destructive human activity as even munitions that are not used in warfare are still causing ecological damage to the environment and humans.

In the article *Reframing Air Pollution as a Public Health Crisis in California's San Joaquin Valley*, one of the most productive agricultural sites in the world the San Joaquin Valley is also one of the most economically disadvantaged and polluted regions in the United States. Although the valley grosses more than $25 billion annually there are high rates of food insecurity, poverty, and exploitative practices (White, 2020). The region mainly consists of immigrant farm labor and with government officials often influenced by economic interests, the communities bear the externalizing costs to health since they have little to no political power. With various sectors contributing to air pollution such as agriculture, transportation, oil extraction/processing, land use, and various other industrial activities, the local air district tries to portray the narrative that the poor air quality is due to pollution from the public and various natural/environmental factors (White, 2020). Furthermore, conservative and anti-regulatory political dynamics in addition to local government officials deny and place blame on natural processes instead of acknowledging the true causes of the issues. This defined the issue of air

pollution as more of a technical problem that resulted from the unique geographical and environmental conditions of the valley. It also shifted the blame on individuals and the choices they make in their daily lives such as driving. With many communities feeling the disproportionate effects of outdoor air pollution, there was a need for advocacy as public health and quality of life were greatly impacted. The goal of reframing air pollution as a public health crisis instead of a technical issue was to shift public perception, increase accountability, and mobilize action to address the impacts (White, 2020). Various groups of activists formed the Central Valley Air Quality Coalition (CVAQ) which included a range of backgrounds such as public health, lawyers, unions, environmental justice, as well as other concerned community members in order to address air quality issues. CVAQ was able to pass Senate Bill 719 (Machado) which helped shift the narrative toward a collective action framework centered on public health.

In the case of the communities in the valley, we see how the wealth generated in the region doesn't necessarily indicate that the wealth benefits the local area. Systemic barriers such as political interests in economic gain are valued higher than the overall well-being of the community and farm workers. This case study also shows how the industries in this region benefit many other areas in the U.S. by provisioning goods, but the negative effects such as poor air quality are disproportionately felt in the region, similar to the marginalized communities of Colfax or Apopka where communities are placed at the forefront of environmental hazards. This instance showed communities taking significant collective action in building solidarity and identity in turn creating a framework that focuses on the health and well-being of the people. This may have been due to the vast number of communities that were impacted and the formation of CVAQ which included health professionals, environmental justice advocates,

unions, and legal experts. Colfax and Apopka were smaller regions that were more isolated which may have been why there was a lack of well-organized coalitions although there were activists and smaller grassroots efforts.

Looking back at all three examples in Apopka, Colfax, and San Joaquin we observed similar instances of inequities in the distribution of environmental burdens. They were often minority communities of low socioeconomic status with laborers whose livelihoods depended on working even if the circumstances were unfavorable. Corporations and individuals in governmental power often choose to favor profit over environmental impact and due to a lack of protections for the environment and people allowed them to continue to take advantage of externalizing these costs. In these case studies, the communities impacted often faced health issues from disproportionate exposure to hazardous sites. All these factors contributed to a system of neglect and made it difficult to improve their lives. This shows the importance and need for these voices to be heard as these are just a few examples of countless environmental justice issues that need to gain more awareness. At the same time, we saw that more advocacy and awareness resulted in more involvement and change whether it was grassroots organizations or coalitions that formed for a more equitable and environmentally just future. Regarding Apopka and Colfax, future actions to remediate the effects of environmental hazards must include the members of the community, especially making sure that they are educated and involved in the solutions and that specific community needs are being met. Like the example of CVAQ in San Joaquin, community members can take collective action in creating councils or committees in order to advise state government agencies, assess the effectiveness of state or local laws, develop criteria to assess whether communities may be experiencing environmental

injustices, and gain insight from various local shareholders in the addressing environmental justice concerns.

Unlike the previous case studies, the article *Stormwater on the margins: Influence of race, gender, and education on willingness to participate in stormwater management,* introduces us to the topic of stormwater management and how various factors influence one's concerns and willingness to participate in solutions. Similarly, this article talks about marginalized communities, in this case how they face disproportionate effects of climate change and green infrastructure solutions in stormwater management. Often with solutions such as green infrastructure, they may not benefit but instead harm when local input is not taken into account. The Paradox of Management is a concept where management is controlled by expert-driven solutions rather than having power throughout the community building adaptive practices that don't isolate but instead empower (Scarlette et al., 2021). The article addresses a historical fallacy where marginalized communities care less about climate change due to the constant worries about their basic human needs like housing, food, and employment. This was found to be untrue as additional literature proved that these communities who were more exposed to environmental hazards were concerned if not more about the issue. Furthermore, the article conducted a study and found that race, gender, and education level were factors in an individual's concerns and willingness to pay or volunteer in flood mitigation. The study showed various responses for each category but the main finding was that marginalized groups that were comprised of multi-racial, lower levels of education, or women tend to be more concerned and willing to contribute to solutions in regard to stormwater management. Although the previous case studies such as pesticide poisoning, burn pits, and air quality are slightly different issues they all showed how environmental hazards leave local communities with long-term negative

effects. With this in mind, the study showing how communities responded to flooding and increased green infrastructure may indicate that similarly, the marginalized communities in the previous case studies facing different environmental hazards also may want to contribute to solutions regarding the specific challenges their community face but lack the necessary resources in order to do so.

Overall, in examining the case studies of Apopka, Colfax, and the San Joaquin Valley, it is clear that environmental hazards disproportionately affect marginalized communities, exposing them to systemic neglect and inequities. These communities, often low-income and minority populations, face barriers such as limited political power, lack of access to resources, and minimal representation in decision-making processes. We see that solutions in activism can arise when concerns are voiced and collective action takes place, as demonstrated by the efforts in the San Joaquin Valley. Furthermore, we can infer that marginalized communities, despite facing disproportionate risks, often show higher levels of concern toward environmental hazards and a strong willingness to contribute toward solutions when provided with the necessary economic, educational, and political resources. To address these inequities, it is essential to prioritize inclusive and community-driven approaches that amplify the voices of those most affected. Policymakers need to actively engage with these communities, enforce stricter environmental protections, and allocate resources to build sustainable solutions that choose environmental and social equity over economic growth. Only by addressing systemic barriers and promoting collective advocacy can we create a future that ensures a sustainable and environmentally just future for all.

Works Cited

Earthjustice. “Pesticide Lake - The Poisoning of the Workers of Apopka, Florida.” *YouTube*, 2 Mar. 2015, https://www.youtube.com/watch?v=vA2WiQwJ3xI&t=129s.

Odera, et al. “A Community-Engaged Oral History Study as a Tool for Understanding Environmental Justice Aspects of Human Exposures to Hazardous Waste Thermal Treatment Emissions in Colfax, LA.” *Environmental Justice*, vol. 17, no. 4, Aug. 2024, pp. 1–12.

Saville, Anne, and Alison Adams. “Balancing Environmental Remediation, Environmental Justice, and Health Disparities: The Case of Lake Apopka, Florida.” *Case Studies in the Environment*, vol. 3, no. 1, Dec. 2019, pp. 1–7.

Scarlett, et al. “Stormwater on the Margins: Influence of Race, Gender, and Education on Willingness to Participate in Stormwater Management.” *Journal of Environmental Management*, vol. 290, 15 July 2021, pp. 1–10.

Vice. “The US Military Contracted Burn Pits No One Is Talking About Overlooked.” *YouTube*, 30 Sept. 2022, https://www.youtube.com/watch?v=cYZkvmEjvuI.

White, Catherine Garoupa. “Reframing Air Pollution as a Public Health Crisis in California’s San Joaquin Valley.” *Case Studies in the Environment*, vol. 4, no. 1, Jan. 2020, pp. 1–9.