

Marginality Underwater: Rural Marginalization and Vulnerability in the 2022 Appalachian Floods

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Abstract: This paper intends to examine how rural marginalization has affected and shaped vulnerability, response, and recovery during the 2022 Appalachian floods in Kentucky. Drawing on reports, articles, videos, and existing academic works, this paper analyzes how social inequalities produce and influence disaster outcomes. The findings show that long-term marginalization has led to an increase in the baseline of vulnerability experienced by these rural communities. The findings also show that social and institutional marginalization play a heavy role in shaping response pathways for the rural Appalachian communities. In addition, they suggest the social inequalities seen in rural Appalachia led to a constrained and uneven recovery. These findings together show that the disaster impacts seen in rural Appalachia are socially produced and require disaster policies to address social and structural inequality.

Introduction

The 2022 Appalachian floods were a catastrophic event that took place in Central Appalachia. Central Appalachia spans parts of eastern Kentucky, Tennessee, West Virginia, and parts of southwestern Virginia (Christian et al., 2023) and includes 13 different counties. These floods inflicted so much damage that it is considered “to be called a ‘Thousand Year Flood’” (Appalachia Service Project, 2022, 2:48). These flash floods resulted in many fatalities and caused many different communities to be completely displaced. This event is a na-tech disaster that exposed the structural and socioeconomic issues that hid within those mountains. It is natural due to the naturalness of thunderstorms, but it is also technological due to the failure of mitigation techniques in place by the coal mining industry that were supposed to dampen the severity of rainfall. There are many reasons as to why the 2022 Appalachian floods require more attention. It is considered to be one of the deadliest non-tropical storms to hit the United States (Carey, 2024), and it caused damage that spanned over 4800 square miles (Appalachia Service Project, 2022). As well, “if a fundamental conclusion of recent disaster studies is that damages alone are not the issue but rather their intersection with existing social inequalities, then the problem is much more pervasive and ongoing than either stratification or disaster research currently acknowledges” (Howell & Elliot, 2019, p. 449). The 2022 floods didn’t cause social inequality; rather, they only enhanced it (Hutchens, 2024), as “Appalachian residents have been pushed to the side and considered inferior by society” (Hutchens, 2024, p. 34) long before they occurred. Due to the nature of this event, the number of people it affected and reached, and the sheer size of the event, it requires a more in-depth sociological analysis than it has received. This deeper research intends to gain insight into how natural disasters are, in some cases, the

outcomes of ongoing structural neglect. This paper will analyze how rural marginalization over time has affected and shaped vulnerability, response, and recovery during the Appalachian 2022 floods.

History

The Appalachian floods that occurred in 2022 devastated all 13 of those counties within Central Appalachia and resulted in 45 fatalities, and left nearly 1,400 people in need of rescue (Carey, 2024). The floods began with rainfall on July 25th, 2022, and lasted through to July 30th, 2022, with the worst days being July 27th and 28th. This rainfall resulted in flash floods that were the deadliest non-tropical event to hit the United States since the 1970s (Carey, 2024). It was said that, though it was not a constant rain over the 4 days, the thunderstorms caused catastrophic damage, as in some areas the rainfall rates fell at 4 inches per hour (National Oceanic and Atmospheric Administration, 2022). The National Oceanic and Atmospheric Administration (2022) explained how the rainfall that was observed was 600% over what is expected to be normal. “The incredible rainfall also led to significant rises and flooding on many rivers in eastern Kentucky including on the main stem of the Kentucky River; North, Middle and South forks of the Kentucky River; Red River and Licking River” (National Oceanic and Atmospheric Administration, 2022, para. 3). This flooding of the rivers caused the communities to face a whole second wave of devastation as “creeks that normally run a few inches deep were 35 feet deep and raging” (Klesta, 2023, p. 1). Not only was the heavy rain destructive, but a previous drought amplified the effects, which led to the flash flooding. This drought hindered the soil from absorbing excess water (Centre for Disaster Philanthropy, 2023). Almost 9,000 homes were destroyed or damaged, and all 13 of the counties were declared federal disaster

areas (Carey, 2024). “The damage covers over 4800 square miles of Eastern Kentucky” (Appalachia Service Project, 2022, 2:33), and cost a total of \$1.2 billion in damages (Center for Disaster Philanthropy, 2023). This flooding was catastrophic and horrific in terms of its far-reaching devastation. Many individuals “have said this flood has brought the most widespread devastation that Eastern Kentucky has ever seen” (Appalachia Service Project, 2022, 2:42). This cataclysmic event produced damages that will take a long time to recover from and left an everlasting imprint on the communities affected.

There are many contributing factors to the 2022 Appalachian floods, many that started long before the floods began. One of the largest contributing factors is the coal mining industry. For many years, Central Appalachia’s economy has been dependent on the coal mining industry. This industry employed many of the residents and caused many mines to go up in the area. A large portion of the mines used mountaintop mining. Mountaintop mining consists of essentially removing the top of a mountain to gain direct access to a coal deposit. This effectively removes all vegetation and natural landscape in that area. This can have devastating impacts on the environment and can alter how disasters affect an area. To mitigate and combat these negative consequences, coal mining operations are supposed to revegetate and build ponds to catch rainfall, which slows the fall into the lower communities and lessens the impact. Though, this has not been regulated very tightly and often goes neglected. It is seen that “the communities most affected are often those downstream from mountaintop mining operations, where the land has been stripped of water-absorbing trees, vegetation and even topsoil” (Morgan, 2024, para. 14). This is what happened during the 2022 Appalachian floods. Due to neglect, “the rains caused a silt retention pond to burst at a nearby mine, sending a torrent of

rainwater and sediment down the mountain” (Morgan, 2024, para. 2). In response to this, Blackhawk Mining and Pine Branch Mining have been sued due to a failure of reclamation work on a coal mine that is located above Lost Creek. “If they had properly re-vegetated the area and maintained the ponds, the suit claims, the community could have been spared” (Morgan, 2024, para. 5), and with this, almost all of the individuals who died resided in a community downstream from a mountaintop coal mine (Morgan, 2024). Mountaintop removal coal mining was effectively one of the largest contributors to the devastating effects of the 2022 Appalachian floods

Risks and Vulnerability

Risk and vulnerability are two extremely important factors that need to be taken into account when assessing a potential or already occurring disaster. Social vulnerability “arises out of differential social relations among groups in a given society” (Fordham et al., 2013, p. 4). Risk is focused on the physical risks associated with a disaster, and these physical risks can be socially produced. The knowledge of risk associated with the 2022 Appalachian floods came primarily from prior flooding events that have occurred in the area. This event was an instance of flash flooding. It was sudden and unexpected; therefore, it would have been difficult for there to have been an analysis of risk done beforehand to give the communities time to prepare. The communities were aware of the risks posed by living where they did due to past events that had occurred. Unfortunately, this was not the first devastating flood to hit Appalachia. It was seen previously that the catastrophic flood that occurred at Buffalo Creek killed 125 people due to “the failure of a coal waste impoundment during heavy rainfall in 1972” (Christian et al., 2023, p. 5). As well, “severe flooding of the nearby Tug Fork River in 1977, affecting West Virginia and

Kentucky, killed dozens of people (including ten in Kentucky) and left thousands more homeless” (Christian et al., 2023, p. 5). Due to these past events, many were aware of the risks posed. Despite knowing this, “people concentrate themselves in dangerous places, so when the hazard comes, disasters are intensified” (Clarke, 2008, pp. 670-671). Though this is not always the complete fault of individuals, as wealth inequality within the United States is high and continuing to rise (Howell & Elliot, 2019). Many are forced to live in areas like this due to economic reasons, like many living in these risky areas of Appalachia. “Institutional arrangements, such as insurance and development regulations, can act as another determinant of vulnerability, since access to them is often uneven among populations” (Oulahen et al., 2015, p. 941). This is seen with the 2022 Appalachian floods, as very few people could obtain flood insurance due to its affordability issues; only 1% of homeowners in Kentucky possessed it. (Morgan, 2024). This vulnerability should have been considered earlier to help these communities mitigate the damage they faced due to the deluge. In addition, many individuals live in denial about flood risks, as some individuals “lack concern about personal risk of flood, even though they were in possession of knowledge or experience that could enable rather than hinder awareness” (Burningham, 2008, p. 230). This could be for many reasons, one being that this event had “only a 0.1 percent chance of occurring in any given year” (Harvey & E&E News, 2022, para. 2). This could have caused the residents to believe that it was so small a chance that it would not happen to them. In addition, “the finding that flood awareness is related to social class, with those in the lower strata being less likely to demonstrate awareness, reinforces concerns about environmental inequalities in relation to flood risk” (Burningham, 2008, pp. 232-233). Those residing in the affected areas of Appalachia were of lower socioeconomic status and

were rural communities, which could have contributed to the lack of perception prior to the event's occurrence.

In regard to planning, it seems as though little was done prior in order to mitigate the damages that could occur. Of course, the mountaintop mining sites are supposed to revegetate areas and create and maintain ponds to catch excess rainfall. In theory, that is a helpful way to mitigate, but in actuality, these mitigation techniques are far less maintained than they should be, which has resulted in devastation. Considering how "it's not the first time the area had seen catastrophic flooding" (Carey, 2024, para. 10), as this area has flooded over 27 times (Carey, 2024), the planning should have been far more extensive. There should have been stricter regulations on the mining companies to follow through with mitigation efforts. As well, "the infrastructure is already poorly maintained and inadequate to deal with these kinds of events" (Harvey & E&E News, 2022, para. 6). In relation, "state and federal organizations were and have been neglectful to this entire region long before the flood took place" (Hutchens, 2024, p. 45). With the previous knowledge of past similar events, there should have been more done prior to the floods, like solidifying and creating proper infrastructure to deal with events of this magnitude. Unfortunately, due to the vulnerabilities presented by the population, these sorts of necessities tend to go ignored, as Central Appalachia suffers from poverty and chronic joblessness (Hutchens, 2024). Appalachian individuals "are underresourced, undervalued, and underprepared for these types of disruptions" (Harvey & E&E News, 2022, para. 29). With this, they are vulnerable due to lack of access to food, unemployment, and because they have a precarity to disasters (Harvey & E&E News, 2022). Money is spent where money is created and "the ability of a community to respond is often based on pre-existing factors such as poverty.

Appalachia is one of the poorest regions in the country, and the areas affected by flooding reflect that” (Center for Disaster Philanthropy, 2023, para. 7). Within this, “the poverty rate in Appalachia was 15.2%, compared to the U.S. average of 13.4%” (Center for Disaster Philanthropy, 2023, para. 7). This staggering statistic is a major contributing factor as to why it seems as though these communities have been extremely neglected. Overall, there was so much more that could have been done to help these communities prior to the floods even occurring.

Vulnerability is “situated squarely at the human-environment intersection requiring social solutions if successful risk reduction is to occur” (Fordham, 2013, p. 12). With this in mind, the affected individuals’ vulnerability was a combination of social and environmental vulnerabilities. The 2022 Appalachian floods occurred in a geographically vulnerable location. Climate change is a major contributing factor to the increased geographical vulnerability. Flooding events are becoming more common due to the increasing temperature, which is creating a warmer climate in Appalachia (Anderson, 2025). The combination of climate change affecting Appalachia that makes these rainstorms more severe, and the mountainous topography the region possesses, has caused the communities to be put at an elevated risk of getting deluged (Harvey & E&E News, 2022). The complexity of the region’s landscape is a major contributing factor as to why this event was so devastating (Harvey & E&E News, 2022). Many of the communities are settled near creeks, rivers, and valleys, which are all extremely prone to flooding. Additionally, “the enduring impact of mountaintop mining in central Appalachia adds another layer of complexity” (Harvey & E&E News, 2022, para. 20). This mountaintop mining furthers Appalachia’s flood risk as the industry has heavily contributed to climate change.

Furthermore, “many areas in central Appalachia with increased flood risks overlap with the landscapes damaged by mining operations” (Harvey & E&E News, 2022, para. 23). The coal mining industry fuels these affected communities. Mountaintop mining became an extremely popular way to mine coal as it was a more efficient method. Mountaintop mining is done by digging or blasting away the soil and rock on top of a mountain that is above a coal deposit, effectively removing the top of the mountain (Morgan, 2024). Consequently, mountaintop “mining has left many mountaintops scarred, deforested and covered in heavily compacted soil. It’s often more difficult for these kinds of landscapes to absorb water, compared with the area’s original spongey natural forests” (Harvey & E&E News, 2022, para. 21). This then contributes heavily to flash floods in Appalachia. Many communities were impacted, but it was the rural communities that were the most vulnerable before, during, and after these floods. The ability to mitigate these events is dependent on resources, and in rural communities the access to these resources is limited. “The aftermath of flooding in rural communities leaves families displaced, buildings damaged, and critical infrastructure eroded” (Anderson, 2025, p. 1). With this, flooding can cause landslides and “washing out of road that will isolate and fragment the community, causing additional stress for people who currently have trouble accessing necessary supplies and receiving needed help” (Anderson, 2025, p. 56). Though there were many affected by the flood, rural communities were more harshly impacted in terms of pre-existing conditions and recovery, as “recovery is a complex process and rural areas are more likely to face challenges” (Klesta, 2023, p. 7).

Analysis

Social and Institutional Marginalization in Shaping Response Pathways

Rural marginalization, both socially and institutionally, plays a large role in how the response pathways are shaped when disaster strikes. It is often seen that “marginality that existed before a disaster persists afterwards, and may even increase, due to various, overlapping, environmental, social or political aspects that hamper access to essential resources and positions” (Kammerbauer & Wamsler, 2017, p. 412). This ultimately comes down to neglect toward these communities. This neglect is seen in two different ways following the flood. The first being with how initial aid processes neglected residents, and the second is how the processes of rebuilding are also doing so (Hutchens, 2024). Despite there being potential opportunities to relocate, these houses are being built in the exact same places where this disaster occurred. This is only pushing rural marginalization and putting these households and communities at more of a risk. The communities being built right where there have been many floods before is only going to cost more in the long run, but because they don’t present as an immediate gain, this path does not get chosen. The process of rebuilding the homes in the floodplain does not involve moving the homes altogether, and it puts many at risk for flood damage in the future (Hutchens, 2024). This option presents as an immediate gain as it seemingly costs less upfront. Whereas rebuilding a home out of the floodplain costs more upfront, but it mitigates future risk and stops the accumulation of future damages. As Justin Hutchens (2024) made clear, this is where the neglect of these communities is seen, as choosing to rebuild in the same location is cheaper in the short term and negligent. They are putting many lives at risk in the rural communities of Appalachia, all to save a little money. This shows how this marginalization has led to neglect, which has then led to the response pathways being shaped to further danger and risk, rather than prevent it altogether.

In general, “this region was not built to withstand major flooding, which allowed this disaster to be so severe” (Hutchens, 2024, p. 57). From the beginning, rural marginalization has caused this area to be structurally disadvantaged. To be structurally disadvantaged means that a community faces disadvantages due to the unstable development of social forces (Hutchens, 2024). These disadvantaged communities come as a result of a dysfunctional relationship between social institutions and the community. This is to say that these social institutions are unable to meet the community's needs (Hutchens, 2024). In this, when the flood hit, this pre-existing disadvantage was further exposed and magnified when the aid was not properly provided by these larger social institutions (Hutchens, 2024). It was seen that “the sheer magnitude of the event has overwhelmed local companies, and the shortage of available housing and rental accommodations has hindered many outside companies from being able to stay long term” (Klesta, 2023, p. 6). This inability to accommodate these outside sources of aid is due to the improper relationship with social institutions. The communities couldn't receive the aid and assistance they needed. This dysfunctional relationship is a product of improper funding allocation in terms of preventative infrastructure and post-disaster recovery efforts. This point can be further made by using the moderating hypothesis.

The moderating hypothesis plays a key role in how rural marginalization has shaped response pathways. The moderating hypothesis “asserts that the regional context in which a disaster occurs may moderate, or alter, its environmental impact on spatial redistribution of locally vulnerable subpopulations during recovery” (Elliot & Pais, 2010, p. 1192). This is to say that urban areas have higher property values and more funds for recovery, thus the institutions involved in recovery are more organized and proactive in their efforts, all in order to chase

material assets and make the greatest dollar (Elliot & Pais, 2010). This then reroutes the pathways and lessens the likelihood that these rural communities affected get the same attention and efforts. There isn't the same opportunity for financial growth and gain.

Unfortunately, this leads to the neglect and inattention of rural communities, pushing rural marginalization further.

Constrained and Uneven Recovery

Rural communities being more likely to be of lower socioeconomic status led to their increased exposure to damage and their constrained and uneven recovery. This was seen during this event as, "lower income households accounted for a higher share of disaster damaged homes: households earning \$30,000 or less per year accounted for 60 percent of damaged homes" (Klesta, 2023, p. 5). If these households decide not to get insurance again, this will set them up for failure, as they cannot claim Federal Emergency Management Agency (FEMA) assistance for a second time (Klesta, 2023). This is extremely problematic due to the unstable relationship between rural communities' socioeconomic status and the cost of flood insurance. Flood insurances cost varies based on certain factors like its location in relation to water and whether it resides within a flood plain (Klesta, 2023). When considering the counties affected by the flood, they happen to reside close to water or within a floodplain, which drives the cost of insurance up. This leads homeowners in these areas to make difficult choices regarding the preventative protection of their homes, choices that are often decided for them due to the unrealistic pricing of insurance in relation to income. This just further shows how flood insurance has been constraining, resulting in uneven recovery for rural communities.

In relation, affluence can create discrepancies with institutional responses to the control of risks and hazards (Cutter, 2020). These discrepancies “are most visible in negotiations over ownership and access to resources, utilization and subsequent degradation of the resource base, as well as the production of risks from resource exploitation” (Cutter, 2020, p. 201). Within this, affluence and poverty break down natural systems, each in their own way, as affluence does so for material gain, and poverty does so for survival, thus they both reinforce chronic poverty and resource degradation (Cutter, 2020). This reinforcement is a large reason for this seemingly never-ending cycle of the rich getting richer and the poor being left worse off. When applied to the disaster context and to the 2022 Appalachian floods, this can be seen in their recovery. In that, these communities affected were often of lower socioeconomic status, as these areas held a “median household income of \$37,263 in 2021” (Klesta, 2023, p. 5). With the average cost of flood insurance being \$1,384 in 2022, that would have accounted for a substantial portion of the household income (Klesta, 2023). The affluent communities were able to afford flood insurance, or to live elsewhere where they avoid the risk altogether, while the lower status households often could not, thus reinforcing that self-perpetuating cycle and contributing to the prohibitive and uneven recovery seen.

It is important to explore the relationship between vulnerability and community resilience when examining uneven and constrained recovery post-disaster. For this, a common definition for both has to be understood. Social vulnerability “speaks to the inherent qualities of a social system that exist before events like disasters occur that contribute to the amount of risk of exposure as well as the degree of harm, while resilience is the conditions that help social systems to absorb, cope with, and adapt to hazards and disasters” (Bergstrand et al., 2015, p.

393). This relationship does show “a trend where the most vulnerable counties are also the least resilient” (Bergstrand et al., 2015, p. 394). When applied to the 2022 Appalachian flood, the social vulnerability seen is a lower socioeconomic status of which caused the rural marginalization seen in these areas. This marginalization caused the resilience of the community to be lessened. Recovery is dependent on community resilience. Recovery can be defined as “the ability of community members to work together to overcome obstacles caused by the disaster in order to embark on the road to recovery” (Bergstrand et al., 2015, p. 396). In order for recovery to occur, communities need to have the knowledge, skills, and capacity to actually participate (Bergstrand et al., 2015). This is dependent on the broader social structures in place. If they do not have adequate access to all of these, they are prone to uneven recovery, like what is seen during and after the 2022 Appalachian floods. Their social vulnerabilities of lower socioeconomic status, leading to rural marginalization, set them up for failure in terms of the recovery process. They did not have adequate access to the broader social institutions to help them in the recovery process, resulting in the uneven recovery of the communities affected. This is seen in how “many homes remain damaged, exacerbating a shortage of affordable housing, and families move away, further weakening an economy dealing with the decline of coal mining” (Klesta, 2023, p. 8). It can also be seen that this long-term marginalization has not only affected recovery but has also affected and raised the baseline of vulnerability in these communities.

Long-Term Marginalization’s Role in Increasing the Baseline of Vulnerability

When considering the 2022 Appalachian floods, long-term rural marginalization has caused the baseline of vulnerability to increase prior to the disaster even occurring. Prior to the

floods, the communities in Appalachia were facing an economic decline due to the loss of jobs and persistent poverty. This hit to the Appalachian economy was caused by a “decline of the coal industry, which has led to the loss of many well-paying jobs and a steady exodus of people from the region” (Klesta, 2023, p. 2). Prior to the 2022 flood, there was a 17 percent drop in total employment from 2006, accompanied by the loss of 9,544 jobs primarily in the area of coal mining (Klesta, 2023). This left the community vulnerable to complete destruction if a large-scale disaster were to occur, like the 2022 Appalachian floods. In addition, “it is also an impoverished region, with county poverty rates topping 20 percent, well over the national average of 12.6 percent” (Klesta, 2023, p. 2). Even before, it was seen to be an impoverished community, and the decline of the coal industry only exacerbated it. The decline of the coal industry and job losses, combined with the high poverty levels, created a factor that fueled this long-term rural marginalization. This rural marginalization, characterized by lower socioeconomic status caused by a reliance on the coal industry, is in large a major contributing factor to their increased vulnerability seen before the 2022 Appalachian floods.

Mountaintop removal mining is another factor that should be considered when examining the effects of long-term marginalization on raising the baseline of vulnerability in the Appalachian communities affected by the 2022 floods. As Appalachia relies heavily on coal mining, it could be seen that mountaintop removal mining was inevitable, as it allows for more economically friendly and efficient recovery of coal. The downside is that it is “associated with hydrologic consequences such as increased downstream flooding” (Haneberg, 2024, p. 135). When relating to rural marginalization and its effects on vulnerability, it is these less-advantaged communities that suffer the most because of the downsides of mountaintop removal mining.

The long-term rural marginalization that has occurred in these communities has led to them being pushed to reside in locations that are prone to extreme flooding, which is magnified by this type of mining. This flooding is magnified because of the structural inequalities already in play. Due to the residents' lower socioeconomic status and rural identity, they are ignored. Thus, these preventative structures and mitigation techniques that should be in place when engaging in mountaintop removal mining are absent. So, these homes that are often located on slopes or at the bottom of creeks are vulnerable to the consequences of extreme flooding. This poor housing leaves these households both structurally and economically exposed to the effects of mountaintop removal mining. This then raises the baseline of vulnerability experienced by the rural communities of Appalachia. To further this argument, concentrated disadvantage can be considered.

Concentrated disadvantage can be applied toward the 2022 Appalachian floods to show how rural marginality led to an increase in the baseline of vulnerability. Concentrated disadvantage is "when socially disadvantaged residents—specifically, the poor, jobless, and single-mother families—cluster spatially, this clustering reduces access to vital resources, leaving all residents worse off" (Elliot & Pais, 2010, p. 1188). This is consistent with the 2022 flood, as subpopulations who are less advantaged directly describe the rural communities that reside in Appalachia due to them consisting of jobless and poor individuals. They often find themselves grouped and concentrated in undesirable areas due to issues of affordability, with these areas being cheaper (Elliot & Pais, 2010). These cheaper values are caused by the drainage of property values and public infrastructures due to these hazards (Elliot & Pais, 2010). This is vital to consider for the 2022 Appalachian floods, as this isn't the first flood the area has

seen. These previous floods have caused this concentrated disadvantage in the rural communities consisting of lower socioeconomic households. Due to this, it only reinforced and worsened this disadvantage, which led to an increase in the baseline of vulnerability.

Conclusions

This paper's examination of how rural marginalization has, over time, affected and shaped vulnerability, response, and recovery during the 2022 Appalachian floods has led to many different findings in relation to sociology. It has been shown that a disaster does not stand alone and needs to be assessed in a way that considers social implications. A disaster is not just a disaster. There are many factors that lead up to and exacerbate a disaster like the 2022 floods. There are social inequalities in place that contribute to and shape how a disaster is received and recovered from. The sociological perspective on the 2022 Appalachian floods revealed that rural marginalization, caused by socioeconomic inequalities, did shape vulnerability, response, and recovery to a certain extent. It shaped vulnerability through the social inequalities in place prior to the disaster. These inequalities pushed for this rural marginalization and continued to push and raise the baseline of vulnerability for these communities. Marginalization shaped response pathways in terms of how these resources are allocated and received. The systemic imbalance seen between larger social institutions and rural communities allowed, over time, for the development of the dysfunctional relationship seen. This has led to the neglect of the rural communities and the rerouting of resources to more privileged communities. In terms of recovery, rural marginalization shaped how recovery is experienced among these affected communities. Marginalization has caused these communities to experience constrained and uneven recovery, as it is the more affluent communities that receive the most aid in a situation

of disaster. The rural communities are ignored due largely to there being fewer opportunities for financial gain and growth. The findings of this paper challenge urban-centred disaster frameworks and reveal how rural marginalization needs to be seen and treated as an active contributor to disaster vulnerability. This further shows that disasters are socially devised and produced before the event even occurs. These findings further expose larger institutions' reliance on rural communities' social relations as a form of aid. They reveal the existing tension between community care and structural abandonment. There is an over-reliance, to the point of neglect, on the larger institutions' part, on rural communities' ability to care for each other and thus recover from a major disaster. This oversight is caused by a heavy reliance on these communities' informal support systems.

To mitigate the risks and protect these rural communities affected by the 2022 Appalachian flood, there are a few policy recommendations that could be utilized. The first is a recommendation to expand access to recovery assistance. At both the federal and state levels, there should be a restructuring of aid programs to better serve lower socioeconomic rural communities. To reduce barriers to aid, there could be a simplification of application processes and guidance along the way. In addition, addressing the matter of cost when it comes to access to aid would highly benefit these marginalized communities rather than continuing to only serve those with financial privilege. The second recommendation addresses the prioritization of safe and affordable housing. In order to properly recover, there needs to be an investment in affordable housing that allows these affected residents to remain in their communities, but outside of the high-risk areas. These policies need to support reconstruction outside of floodplains, as well as provide better relocation assistance. In this, housing policies have to be

seen as disaster policies. The last recommendation has social policy being integrated with disaster risk reduction. Reducing vulnerability means that poverty and employment stability need to be addressed. In this, there needs to be policies within infrastructure development and employment variety integrated into disaster planning. Disasters are not isolated events. Rather, they are the externalization of chronic inequalities.

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