**Environmental Injustice: An analysis of low-income communities struggles with the changing climate**

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The impacts of climate change are far reaching; they range from melting polar ice caps to ocean acidification to biodiversity loss that have devastating impacts.⁠1 Humans largely cause these impacts and the fact that climate change is anthropogenic is agreed upon among 97% of scientists and is verified by recent studies.⁠2 Regardless of whether these long-term impacts will destroy the human race, or whether or not climate change is human-induced, it is indisputable that the changing atmosphere adversely affects low-income populations the most.

One of the major anthropogenic factors contributing to climate change is greenhouse gas, and 90% of excess greenhouse gasses are stored inside of the ocean; these gases combined with higher temperatures during the summer caused by other chlorofluorocarbons result in increased hurricanes, droughts, sea waves, floods, and cyclones.⁠3 In the United States alone, 50 million people along the eastern seaboard are vulnerable to these disasters.⁠4 The impacts of the climate change could cause billions of dollars in economic damage to houses, communities, businesses, and poorer populations. Primarily, poorer communities are located and placed in what Giroux calls “zones of terminal exclusion”⁠5 nearer to the coast in urban centers where they are more vulnerable.⁠6 Secondly, poorer communities don’t have effective response mechanisms when disasters occur. For example, during Katrina and Sandy, policymakers “did not plan for people who did not have lots of money, do not own cars, [or] the poor.”⁠7 shown by the fact that they did not have police guidance, government oversight, or proper infrastructure for evacuation as compared to richer communities.⁠8 Therefore poorer communities are more adversely affected by natural disasters extenuated by climate change.

A slower type of violence is pollution that also disproportionately affects low-income communities. Coal plants and highways are placed in low-income communities, so the poorer communities bare the brunt of the environmental damage from the plants and car pollution while the rich communities that decide those policies don’t have to suffer from the negative consequences.⁠9  While the richer communities get to use the highways, the poor without cars are only given access to slow, crowded and inefficient diesel buses that further harm the environment in their area.⁠10 This air pollution triggers asthma attacks and many other health hazards that affect low-income people (usually minorities).⁠11 Annually, this air pollution is responsible for killing 70,000 people in the United States through various diseases, cancers, and lung problems.⁠12

Environmental damage affecting poor people is not only a domestic problem, but an international one as well. The impacts of domestic environmental destruction are limited compared to the ones faced in developing nations. For example, in Somalia, European countries dump millions of tons of nuclear waste every year.⁠13 This has killed the ecosystems, income, and food of Somalis because fishing used to be a primal activity for Somali people living along the coast.⁠14 Now the fish are diseased and killed, and the radiated water affects humans too through documented cases of diseases and radiation.⁠15 This not only adversely kills the citizens, but also spurs them to become international pirates robbing from ships because they lose their form of sustenance. The environmental damage is the root cause of violence inflicted upon Somalis, and violence they have to inflict to survive. But still, even this is a misconception because most of the time they aren’t pirating, just protecting their coast, families and environment from ships that are dumping nuclear waste on their shores.⁠16

On a much grander scale, about 800 million people are malnourished⁠17 and a “majority … live in rural areas where agriculture is the predominant form of economic activity, and, therefore, their fate is inextricably inter-woven with that of farming.”⁠18 This means the controlling factor of crop yield (climate change) is responsible for their sustenance. Although initial changes in climate may help certain crop yields, in the long term, it will decimate crops in all areas.⁠19 Major institutions that track the effect of climate change (Agro-PEGASUS, DSSAT, and the IPCC) all conclude that a 2 degrees Celsius include in temperatures would have devastating effect for poorer countries: -13% for spring wheat amd -22% for soybeans and -27% for maize.⁠20 A further comprehensive analysis lists that some food prices will increase by 10-60%.⁠21 Not only does deceased crop yield limit the amount of food produced in low-income communities that allows impoverished people to feed themselves, but it also limits the distribution of crops from non-profit organizations to poorer communities because it is more expensive to give them food.

Environmental damage causes poverty, and this claim is also reverse causal: poverty causes environmental damage. Nets given to poorer people in Africa with insecticide treatment intended to protect Africans from insect-transferred diseased are used as fishing nets by the people it is given to.⁠22 They recognize the need to protect themselves from diseases, but the more immediate hardship they face is hunger, so they use the nets given to them as fishing nets. These Africans understand the environmental damage; “I know it’s not right,” Mr. Ndefi said, “but without these nets, we wouldn’t eat.”⁠23 This means the environmental damage that occurs isn’t built on their ignorance (like what happens in rich countries), but rather necessary for their survival. These insecticide nets are used by millions of Africans to fish as it is their only form of sustenance, and not only does it damage African fish, overall ocean biodiversity, and coral reefs, but the same environmental damage they produce ends up hurting themselves. The fish they catch these nets in are subject to the insecticide sprayed on the nets, which causes the consumer of these fish to get diseases. They also fish in clear water areas that make them damage water supplies with the insecticides further increasing the likelihood of disease. These poor populations hungry stomach makes them perceive the immediate benefit of diseased food outweigh the long-term benefit of environmental damage. They are put in a place where they must make a decision to damage the environment that they should not have to go through.

This example in Africa is emblematic of how poverty stricken communities will damage the environment for basic needs even though they know it is wrong. Poor communities do not have the opportunity to extract resources or provide for sustenance sustainably because they don’t have the advanced technology or resources to do so, so they go for the cheapest (usually least environmentally-friendly) way to do so. The sad reality is that richer countries don’t do so either because they under the drive to extract resources and profit motives, the environment is always a second concern.

These examples pave the way to the conclusion that poverty and environmental damage are intrinsically linked. Not only do advanced developing methods by richer communities damage the environment, but also poorer communities are forced to resort to unsustainable economic development practices just to survive. The solution to these problems through the fight for creating environmentally friendly methods of survival necessitates a combination of environmental movements with social justice movements. Fighting for the usage of sustainable environmentally friendly practices both helps environmental groups reduce environmental damage and help justice groups achieve their goals. Only through inclusive approaches can we create movements and tangible change through collective action by involving people making specific demands with larger coalitional movement.

1 Barnes, David K A, and Stefanie Kaiser. "“Melting of Polar Icecaps: Impact on Marine Biodiversity”." Encyclopedia of Life Support Systems. Accessed March 30, 2015. http://www.eolss.net/ebooks/Sample Chapters/C10/E5-05-17.pdf.

2 Cook, John. ""Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature"" *IOP Science*, April 22, 2013.

3 Evans, Robert. "Global Warming Not Stopped, Will Go on for Centuries - WMO." March 25, 2015. http://in.reuters.com/article/2014/03/25/climatechange-temperature-idINDEEA2O00620140325.

4 Beatley, Timothy. *Planning for Coastal Resilience Best Practices for Calamitous times*. Washington, D.C.: Island Press, 2009.

5 Giroux, Henry A. "Henry A. Giroux | Neoliberalism and the Machinery of Disposabilit." Truthout. April 8, 2014. http://www.truth-out.org/opinion/item/22958-neoliberalism-and-the-machinery-of-disposability.

6 Giroux, Henry A. "Age of Disposability: Hurricane Sandy, Unwanted Populations and Climate Change." *Arena Magazine*, February 1, 2013, 30-33.

7 Featherstone, Liza. "Slow Katrina Evacuation Fits Pattern of Injustice during Crises." Grist. September 8, 2005. Accessed March 30, 2015. http://grist.org/article/featherstone-katrina/.

8 Wolshon, Brian. "Evacuation Planning and Engineering for Hurricane Katrina." *The Aftermath of Katrina* 36, no. 1 (2006). https://www.nae.edu/Publications/Bridge/TheAftermathofKatrina/EvacuationPlanningandEngineeringforHurricaneKatrina.aspx.

9 Energy Justice Network. "Coal: Dangerous Power." Coal: Dangerous Power. Accessed March 30, 2015. http://www.energyjustice.net/coal.

10 Hoang, Huong. "The Route to Transportation Equity: A Critical Evaluation of the Job Access and Reverse Commute Program and Strategies to Implement First-Class Public Transportation Systems." April 1, 2005. Accessed March 30, 2015. https://www.oxy.edu/sites/default/files/assets/UEP/Comps/2005/hoang.pdf.

11 Bullard, Robert. "Moving Beyond Energy and Transportation Apartheid Through Climate Justice." OpEdNews. December 8, 2011. http://www.opednews.com/articles/Moving-Beyond-Energy-and-T-by-Robert-Bullard-111205-502.html.

12 Ibid.

13 Hussein, Bashir Mohamed. "The Evidence of Toxic and Radioactive Wastes Dumping in Somalia and Its Impact on the Enjoyment of Human Rights: A Case Study." June 8, 2010. Accessed March 30, 2015. http://somalitalk.com/sun/toxic\_waste\_dumping\_somalia.pdf.

14 Tharoor, Ishaan. "How Somalia's Fishermen Became Pirates." Time. April 18, 2009. Accessed March 30, 2015. http://content.time.com/time/world/article/0,8599,1892376,00.html.

15 Hussein, Bashir Mohamed. "The Evidence of Toxic and Radioactive Wastes Dumping in Somalia and Its Impact on the Enjoyment of Human Rights: A Case Study." June 8, 2010. Accessed March 30, 2015. http://somalitalk.com/sun/toxic\_waste\_dumping\_somalia.pdf.

16 Hari, Johann. "You Are Being Lied to About Pirates." The Huffington Post. April 13, 2009. Accessed March 30, 2015. http://www.huffingtonpost.com/johann-hari/you-are-being-lied-to-abo\_b\_155147.html.

17 Sengupta, Somini. "800 Million People Still Malnourished, U.N. Says." The New York Times. September 16, 2014. Accessed March 30, 2015. http://www.nytimes.com/2014/09/17/world/africa/hunger-poverty-united-nations.html.

18 Hertel, Thomas W., and Stephanie D. Rosch. "Climate Change, Agriculture and Poverty." November 1, 2010. Accessed March 30, 2015. https://openknowledge.worldbank.org/bitstream/handle/10986/3949/WPS5468.pdf.

19 Tubiello, Francesco N., and Cynthia Rosenzweig. "Developing Climate Change Impact Metrics for Agriculture." *The Integrated Assessment Journal* 8, no. 1 (2008): 165–184.

20 Hertel, Thomas W., and Stephanie D. Rosch. "Climate Change, Agriculture and Poverty." November 1, 2010. Accessed March 30, 2015. https://openknowledge.worldbank.org/bitstream/handle/10986/3949/WPS5468.pdf.

21 Hertel, Thomas W., Marshall B. Burke, and David B. Lobell. "The Poverty Implications of Climate-Induced Crop Yield Changes by 2030." GTAP. January 1, 2010. Accessed March 30, 2015. http://iis-db.stanford.edu/pubs/22837/GTAP\_2\_2010.pdf.

22 Gettleman, Jeffrey. "Meant to Keep Malaria Out, Mosquito Nets Are Used to Haul Fish In." The New York Times. January 24, 2015. Accessed March 30, 2015. http://www.nytimes.com/2015/01/25/world/africa/mosquito-nets-for-malaria-spawn-new-epidemic-overfishing.html.

23 Ibid.