

"The misuse and the destruction of the environment are also accompanied by a relentless process of exclusion. In effect, a selfish and boundless thirst for power and material prosperity leads both to the misuse of available natural resources and to the exclusion of the weak and disadvantaged, ... The poorest are those who suffer most from such offenses, for three serious reasons: they are cast off by society, forced to live off what is discarded and suffer unjustly from the abuse of the environment. They are part of today's widespread and quietly growing 'culture of waste'."

— Pope Francis, September 25th, 2015

nope Francis made headlines earlier this year in June when he published his ambitious encyclical on climate change, "Laudato Si," calling for all people to act on their moral obligations to protect the environment. Blatantly criticizing reckless consumerism and irresponsible development as the primary culprits of environmental degradation, as well as the failure of politics to resolve these challenges, the Pope reiterated this message during his historic visit to the United States this past September. However, as he eloquently points out in the quote above while addressing the UN, it is not only the environment that falls victim to our "culture of waste." The most vul-

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nerable victims to the insatiable exploitation of natural resources, according to Pope Francis, are the world's poorest and most disadvantaged people.

The pattern that Pope Francis describes is evident in the United States. It may be hard to see just how far the ripples of our own actions in Philadelphia reach, let alone our impact on the less fortunate hundreds of miles away. However, on a national level, the pattern of the profit-driven taking advantage of the poor and less fortune is more prevalent than many realize. In the U.S., many low-income and minority communities are exploited by industries that cater to the American public's seemingly limitless consumption. These disadvantaged communities, due to failures of the legislative system, bear the burden for reckless environmentally damaging practices of U.S. industry in the form of poor living conditions and adverse health effects.

66 Powerful farming conglomerates pressured smaller farms into consolidation.

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One potent example of the environmental injustice the Pope calls us to fight can be found in the American pork industry. Over the last fifty years, the industry has undergone a drastic structural transformation, transitioning away from smaller hog farms, which totaled over one million in the 1960s, to only 67,000 larger industrialized farms. (Donham et al. 317). Over time, powerful farming conglomerates pressured smaller farms into consolidation as they struggled to compete with the larger producers. The shift in industry has led to the emergence of industrial hog farms -- also known as CAFOs (confined animal feeding operations), which are, effectively, factory farming operations. In CAFOs, the hogs are packed tightly by the thousands in large buildings, possibly never seeing the light of day before they are sent for slaughter. The waste produced by these massive operations is collected in giant cesspools, which emits obnoxious odors, hydrogen sulfide and ammonia, and contaminates groundwater supplies. Unlike their smaller, more sustainable counterparts, CAFOs pose a number of unprecedented damaging environmental conditions that threaten public health by degrading water and air quality.

EFFECTS

Smaller farms simulate natural conditions, largely respecting the landscape by leaving grass and vegetation in place. By contrast, CAFOs strip the land inside the facilities to, revealing dirt and stirring large amounts of dust into the air. Furthermore, unlike smaller farms, CAFOs produce an immense amount of animal waste which is often not treated properly and accumulates in giant manure lagoons notorious for leaking and contaminating groundwater supplies. Furthermore, CAFOs are disproportionately distributed in low-income and non-white communities. As Pope Francis warned, wealthy businesses, like those in the hog industry, recklessly abuse the environment at the expense of the disadvantaged people.

The health effects of the industrial hog farms' unsustainable practices are varied, but primarily affect the disadvantaged. A recent study in North Carolina, the second largest hog producing state, showed an increased risk of asthma for children living near swine operations, with risk increasing with the size of the operation (Donham et al. 318). Children in North Carolina who attend schools within three miles of a hog CAFO have exhibited higher frequencies of wheezing and asthma (318). Furthermore, over a quarter of CAFO workers suffer from respiratory diseases such as bronchitis, asthma like-syndrome, and toxic dust syndrome, with similar trends of impacts found in neighbors of CAFOs facilities (318). These respiratory conditions are a result of the high concentrations of air pollutants, such as hydrogen sulfide, ammonia, particulate matter, and endotoxins, that exceed EPA recommendations (318).

In addition to causing respiratory problems, the presence of CAFOs greatly affects water quality in neighboring communities. Manure is one of the largest contributors to groundwater contamination due to its sheer volume; the average hog produces an estimated four to eight times as much feces as a human (Nicole 186). This waste is typically left untreated and stored in enormous manure lagoons that contain hazardous waterborne chemicals and pollutants such as nitrates. Studies show that nitrate contaminated drinking water has caused "blue-baby syndrome," hyperthyroidism, insulin-dependent diabetes, and reproductive problems (Osterberg and Wallinga 1704). The lagoons also contain pathogens such as E. coli, that have caused serious disease outbreaks through contamination of the water supply. In contrast, smaller sustainable farms produce a more manageable amount of manure, which is more easily used to add nutrients back to the soil. Given these enormous costs of using CAFOs over smaller farms, the benefits seem to pale in comparison The overall product produced, measured in the amount of hogs raised, has not increased in the last fifty years as we moved to CAFOs. It seems, as Francis argued, that the only benefits are the greater profits for the CAFO owners.

ENVIRONMENTAL INJUSTICE

How did these poor and minority communities come to face the consequences of hog CAFOs? The answer is simple: they are the easiest to exploit and do not have the resources to fight back. The unequal distribution of CAFOs is due to a combination of cheap land, lack of political power, and economic vulnerability of the communities (Wilson et al. 200). States attract industry by

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providing cheap land and legislation incentivizing hog CAFOs, as industrialization stimulates the local economy. One prominent example is North Carolina, where Senator Wendell Murphy — a pioneer of the swine CAFO industry — worked to pass legislation christened "Murphy's Laws." These laws eliminated the sales tax on hog farm equipment and barred local authorities from using zoning laws to to bring odor complaints to legal action (Nicole 185). All 50 states have their own form of these "right to farm" laws that manipulate zoning ordinances so hog CAFOs will face limited punishment for pollution of neighboring communities (Donham et al. 319). It is not surprising these laws have been largely passed due to powerful politicians and lobbyists with interests in the hog production industry.

Furthermore, many of these vulnerable communities face significant economic challenges. In order to influence the political system, hog CAFOs often negotiate with local politicians to provide substantial donations to school districts; faced with both a new industry, and support for schools, CAFOs often get extremely attractive tax incentives. Most residents are unaware of negotiations taking place and resent that they are expected to endure worse environmental conditions because they are socioeconomically powerless (Constance and Bonanno, 19-20).

While the Pope targeted to a global audience, it is evident that his messages especially apply to the United States. Currently, communities lacking in political influence and economic power are forced to withstand the consequenc-

es of environmental degradation caused by the American hog industry. Despite arguments that industrialization is inevitable, the reality is that our total pork production has not changed in the past 50 years, but the production method has. By reverting to sustainable agricultural practices, we could potentially meet current demands of consumption, while preventing environmental injustices as expressed by Pope Francis. It seems the main deterrent for adopting these sustainable agricultural practices is the "selfish and boundless thirst for power and material prosperity." We are at a crucial moment in our history. As the human population continues to grow, the agricultural industry will need to find innovative ways to meet the higher and higher demands for food. If we stay on our current course, not only will we continue to exhaust the earth and its resources, but we will, as the Pope forecasts, continue to marginalize those members of our global community that need our protection the most. To answer the Pope's call to action we must go back to sustainable agricultural practices to ensure environmental justice for both current and future generations.

Brooke is a sophomore in the College studying Political Science. She hails from the state of New Jersey.