

Alex Ecker Cape Elizabeth High School Cape Elizabeth, ME, USA Sierra Leone,
Overfishing (Animal Health, International Trade, Spoilage & Waste)

Overfishing In West Africa: A Mass Extinction

Sierra Leone is a country of picturesque beauty; seated on the West Coast of Africa, the country is home to lush jungles, white sand beaches, and jagged mountain peaks. Under its surface, countless precious minerals lie such as the famous blood diamonds. Furthermore, the people of Sierra Leone have a rich history of culture tied to their art, music, and dancing. Yet, despite its splendor and intrigue, Sierra Leone's population is riddled with poverty, hunger, and illness (Sesay).

Although small in stature (71,740 km²), Sierra Leone has been a place of conflict and struggle since its liberation in 1961 ("The World"). Starting in 1991, Sierra Leone faced an eleven year long civil war dealing with conflict between a hostile military group and the government ("The World"). With the help of the UN, the war ended, but with fifty-thousand dead and a third of the country's population displaced, the war leaves a lasting impact on the people ("The World"). According to the CIA, 42.9% of the population is urban, but there is an upward trend suggesting that soon, there will be an urban majority ("The World"). The capital of Sierra Leone is Freetown, with a population of over 1.2 million people located on the midwest coast of the country ("The World"). The official language of Sierra Leone is English, yet there are twenty-three African languages spoken within members of the tribes ("Languages"). Even with a growing population, the people look to their roots to celebrate their unique cultural heritage ("The World").

A typical family in Sierra Leone consists of immediate members and extended family all living in one home or nearby ("Sierra Leone - AFS-USA"). According to the Pew Research Center, the average number of people in a house is 6 (Fry). This is more than double the size of the average American household, 2.6 people ("Sierra Leone Integrated"). This suggests that parents in Sierra Leone want more children in an effort to better their economic status and potentially to create marital connections to other families. A majority (60%) of the jobs in Sierra Leone are agriculturally related (including fisheries) which means many of the citizens live on their family farm ("Agriculture and Food"). The climate is hot and humid year round which makes it the ideal place to grow several tropical crops such as cacao, coffee, and cashews ("Agriculture and Food"). Nevertheless, the staple crop in the country is rice ("A Teacher"). A common saying is, "If I haven't had my rice, I haven't eaten today!" ("A Teacher"). The U.S. Government Global Hunger and Food Security Initiative found that a staggering 85% of farmers grow rice on their farms, with the average farm size being 1.2 to 5 acres (1 to 4.25 football fields) (Festus et al.). With all of this familial agriculture, Sierra Leoneans actually have one of the healthiest diets in the world (Petri). While the quality of food is fantastic, the cleanliness of the food and general sanitation is poor. With minimal access to clean water, a shortage of toilets, lack of supplies, and few trained

professionals, health in Sierra Leone is suboptimal (“Sierra Leone.”). The government is making an effort to provide health care, but the country is struggling to find ways to pay for it (“Sierra Leone.”).

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Similarly, the government is making strides to ensure everyone is educated. Yet, with a lack of resources and funding, it is hard to guarantee school is accessible for all (Ozisik).

Amongst the many problems facing Sierra Leone, overfishing is at a critical state. Earth’s waters are being torn apart in the pursuit of meeting the global demand for fish. This issue is not only prevalent in Sierra Leone, but also throughout Africa’s West Coast. The greed of multinational companies coupled with the global demand for more fish is causing irreversible damage to the West African and the world’s oceanic ecosystem, in addition to destabilizing the West African economy (Ighobor).

When analyzing how overfishing is impacting this region, the groups bearing the burden are: the native West Africans, the economy of the West African people, and the marine species ecosystem. One of the major ramifications of overfishing in the West African region is increased unemployment and the lack of food for the West African People. According to “African Business Magazine”, “In West Africa, about 7m people depend directly on fishing as a source of income, according to the UN” (“Sierra Leone Moves”). Seven million people equates to the entire population of Hong Kong relying on fish to survive. Yet, with the unsustainable practices of overfishing, the majority of these people are having trouble finding enough to feed themselves let alone their families. Through overfishing, multinational fishing corporations are destabilizing the economy of Africa by selling African fish, a major monetary source for the continent, to markets in Asia and Europe. Although there are other higher earning exports such as gold and oil coming from the continent, the World Bank Organization estimates that the fish market contributes \$24 billion to the economy and without it, a chain reaction could occur leading to a major drop in the earnings of West African countries (“Africa Program”). The destructive high yielding practices of the fishing industry are causing the extinction of marine species. Each species has a job to do in the ecosystem and without one, it can collapse. The film, “The End Of The Line - Where Have All the Fish Gone?”, points out that as larger predators die, there is a domino effect that changes everything in an ecosystem. With 37 species labeled “threatened” and another 14 “near threatened”, the West African ecosystem is heading towards collapse (Ighobor). If this industry does not make a shift immediately there is potential that the world’s oceans will be forever lost.

Principally, the overexploitation of fish to meet global demand is prohibiting fish from repopulating. As the world population is increasing, the demand for food is rising as well. According to the “World Bank”, “On average globally, fish and fish products account for 18% of animal protein intake. Due to the growing population and per capita income, demand for fish is expected to increase 30% by 2030” (“Africa Program”). While the need for fish is growing, fishing corporations are abusing the ecosystemic balance without looking for sustainability. One astonishing figure mentioned in “The End Of The Line - Where Have All the Fish Gone?” is that the bluefin tuna quota is set at 15,000 tons per year by scientists to keep it from collapse, but in reality, 1/3 of the total population, 61,000 tons, are fished per year (“The

End”). This disregard to the quotas is unacceptable and is why the United Nations Food and Agriculture Organization found that 90% of the world's fisheries are collapsing (Jacobs). If this trend continues, experts say that by 2050, the world's fishing grounds will collapse (“The End”).

Beyond blatantly ignoring quotas, fishing corporations also employ IUU (illegal, unreported and unregulated) fishing to avoid detection. It was found that in Somalia, roughly 300 million dollars worth

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of fish was pirated annually (Ighobor). The governments of West Africa are trying to establish borders in which only locals are allowed to fish, but when rich countries interfere, it is hard to stop them. Moreover, the scale of this “underwater” business is huge, with 264 Chinese ships found guilty of illegal practices according to Greenpeace, and those are only the ones that got caught (“Sierra Leone Moves”).

Unfortunately, with the lack of funding, these countries simply cannot monitor the oceans enough, and the greed of foreign mega corporations are taking what little money West Africans make away from them.

Finally, the dangerous and destructive methods used to catch fish are causing West Africa's oceanic desecration. The nets used to catch fish today, do not only catch fish, but also anything that swims into them (Jacobs). Furthermore, the locals are having a hard time competing with these sophisticated international corporations. The article, “The Effects of Overfishing in West Africa” mentions that, “Increased presence of boats searching for a fewer amount of fish has turned both local and foreign boats to more destructive, habitat-decimating techniques” (“The Effects”). While locals do not want to destroy their environment, they also need to provide for themselves and their families, causing them to turn to these destructive methods. The documentary, “The End Of The Line - Where Have All the Fish Gone?” found that, “Every year more than 7 million tons of fish 1/10 of the world catch is put back in the water dead” (“The End”). All of those dead fish could have contributed to the continuation of fish as a species or fed starving families. Moreover, that wasted fish could have allowed the 7 million people that depend on fish for income to each sell a ton of fish. Instead, this reckless industry has wasted enormous amounts of this precious resource, revealing their stance that money is more important than the lives of millions of human beings and billions of aquatic life.

One potential solution, educating the public and encouraging them to only buy sustainably caught fish, will not solve the overfishing crisis because to stay sustainable, fisheries must lower their yield, which will drive the price of fish up, making it unaffordable for the majority of the public to buy. Movements such as the “dolphin-safe” tuna project help to show the public which products were caught with ethical and environmentally conscious methods by marking the goods with a seal (Safina). However, with each additional screening and certification, the price of the fish will grow, eventually making it hard to sell to the directed consumers. According to the World Wildlife Organization, three billion people around the world, nearly half of the global population depend on fish as their main source of protein (“Sustainable Seafood”). Interestingly, according to the Do Something Organization, three billion people are in poverty, living below \$2.5 a day (“11 Facts”). While it is unreasonable to assume correlation means

causation, these two statistics suggest that the poorest people could be the ones that rely on fish. Are the impoverished people that this plan depends on going to care about how their fish got to their table? They probably do, but unfortunately they do not have the resources to have a better option. For a marketing campaign in the U.S, “Dolphin-Safe” tuna might achieve a more sustainable fish market, but where it counts, this plan falls short.

Increased monitoring backed by the public and national governments with firmer policies and punishments is the best way to solve the overfishing crisis because it will help African nations catch illegal fishing boats and help manage the supply of fish in their waters. The first part of this plan centers around stopping the dishonest and illegal actions that occur within this enterprise. If these corrupt ships could regularly be stopped and checked, those trying to monitor the fish could finally get an accurate

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count of the population and what the catch quotas should be. To accomplish this task in West Africa, the government needs to get involved locally and internationally to address the problems they are facing. According to the “African Business Magazine”, “African governments and their trading partners should disclose in full the terms of fisheries agreements ... [and] declared catches should be regularly compared with data reported to the FAO and other agencies.” (“Sierra Leone Moves”). Such actions will guarantee cooperation within the markets in West Africa but also help monitor what fish is coming out of the area. It is also implied that by increasing monitoring in the area, potentially unemployed citizens could find jobs and help protect the fishing grounds. It is estimated that over 300,000 more jobs could be created through the management of the fishing grounds (“Sierra Leone Moves”). If the entire West Coast works together and supports each other, this could also lead to stronger bonds between these coastal nations. If all of these steps are taken, the industry will create an entire network devoted to preserving the oceans and maintaining the species that live there. With action from both the private and public sectors of the world to increase surveillance on the open waters, corporations will be held accountable for their actions.

The other aspect of this plan involves increasing the regulations that fishermen must follow and the consequences of breaking the rules. Moreover, these fines need to target international entities not local fishermen. For this reason, quotas and regulations should be designed for foreign boats and large quantities of fish, not West African fishermen. In Alaska, there is a very careful monitoring system that enforces a 200 mile fishing limit, and controls the amount of boats in the area. If boats break the rules, they can be fined or punished accordingly (“The End”). The Seafood Watch organization reports that with careful monitoring, Alaska is bringing in 20 times the catch of the entire U.S. pacific West Coast (“Wild Seafood”). This approach should be adopted by all countries that have protected waters so that the IUU is not only reprimanded but also severely punished. Once again, this zone will target foreign entities and will allow local fishermen to catch freely within the limit. The article “Overfishing destroying livelihoods” reveals that with increased monitoring, “Liberia had collected \$6.4 million in fines from IUU fishing, while the percentage of foreign vessels committing IUU infractions fell from 85% to 30%” (Ighobor). As the results show, this method helps reduce IUU fishing and should be implemented throughout the West African Coast.

While this plan solves many of the problems overfishing is causing, one flaw it has is its high cost, more specifically, its initial cost. Once the surveillance is in place and IUU fishing is reduced or caught, the net gain from the fish population plus the fines collected from ships disobeying the new system should provide a budget for this new “fish guard”. Yet at the beginning, West African countries will need to find a way to buy monitoring equipment, hire surveillance workers, and create a department that monitors the fish populations. Due to the relatively low budgets of the West African governments (Average Sierra Leone Budget: 11 billion USD) and the variety of problems riddling this region, funding for this effort will most likely need to come from an outside source (“Sierra Leone Government”). However, this deal should appeal to investors and governments because of the lucrative future of fishing along the West African Coast.

One potential funding solution is to ask for foreign aid from a powerful country such as the U.S. A benefit of working with the United States is that they already have some experience regarding overfishing, such as the program in Alaska, and could lend a helping hand to help jumpstart West African

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surveillance. While the climate and geography of West Africa and Alaska are very different, the Alaskan surveillance program should work well even in West Africa. While there are some state officials of Alaska who work specifically to stop defiant ships, the system largely utilizes local fishermen to help protect the waters (“How Alaska”). If officials of the Alaskan program could hold several workshops in the West African region regarding protecting and enforcing marine law, native West Africans would already have all of the equipment they need to defend their local oceans. Another benefit of working with the U.S., is the U.S. could place sanctions on countries in Europe and Asia participating in illegal overfishing, which could help lead to the end of IUU fishing. While this funding solution would be great, the problem with it is actually gaining backing by an organization. So far the Trump administration has been adamant on lifting restrictions on commercialized fishing. In New England, Trump recently opened up a completely protected zone allowing it to be commercially fished. A fishery analyst opposed to the deal named Gib Brogan said, “Today’s proclamation is another nail in the coffin for both productive fisheries and healthy oceans in New England” (Darryl). It appears that Trump’s desire to expand the fishing industry for economic purposes will eventually lead to its demise. While support for surveillance in West Africa may not come from the Trump administration, perhaps a future administration or a different foreign entity could stand up for the oceans of West Africa.

One other funding solution is to create an organization that promotes sustainable fishing around the world, in turn raising money to support overfished areas. This fundraising effort would be similar to “Dolphin-Safe” tuna which promotes sustainable fishing at local markets. By agreeing to be a part of the effort and fishing within international regulations, fish markets can put a seal on their product that declares it sustainably caught. In addition, they will agree to give a certain percent of their earnings towards the organization to help combat overfishing. Why would they donate some of their earnings? First, they will be helping to save their industry from collapse. As it is right now, the fishing industry will

collapse and soon, all those in it will be jobless. By joining this organization they are giving a future to their business. The other reason is that when the movement has grown large enough, customers will only want to buy from markets or stores with the sustainable marking so they will make more money by joining in the long run. Through advertising on social media and talk throughout the fishing industry, hopefully this could become a “trend” and consumers will start to only buy fish and marine products that are associated with the movement. At first, this may seem like a very idealistic approach, but already it has proven to work with the “Farm To Table” movement in the restaurant business. The “Farm To Table” movement is an effort that supports local farms and sustainable ingredients. It started as a way to combat the growing fast food industry and remember what cooking with fresh ingredients was like (“How James”). One of the founders of the movement, James Beard once famously said, “There is absolutely no substitute for the best. Good food cannot be made of inferior ingredients masked with high flavor. It is true thrift to use the best ingredients available and to waste nothing” (“How James”). By focusing on fresh and local ingredients, farm to table is commonplace throughout the restaurant industry, saving local farms in countries around the world (Drayer). In essence, this new sustainable fish organization is an extension of farm to table only it would be “ocean to table”. These two funding strategies would take a lot of work to plan and execute, but the ocean needs our cooperation now more than ever.

In locations where these actions have been implemented, tremendous growth in the fish population has already been seen. The World Bank reports that, “The fishing community of Tombo in Sierra Leone ...

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reported a 42 percent increase in catch in 2015” (“Africa Program”). While great strides have occurred in Sierra Leone, this type of surveillance must be employed throughout West Africa in order to restore the fish population. This is the best solution primarily because its implementation has led to results. Countries that are implementing higher surveillance are protecting their waters and allowing the fish to grow back. While educating the public might seem like an ideal approach, it only lengthens the path to change. Instead of dealing with the industry directly, consumers actions must resonate with the fishing corporations which is more of a hope than an effort. While this vigilant surveillance approach could still lead to the increased price of fish, it will create thousands of jobs throughout Africa and the fish supply will be cared for, as opposed to other solutions which rely on differing company standards. Funding for this solution will certainly take some time and likely involve international engagement, but with the right people committed to solving this crisis, it can be done. When these plans are enacted, marine species across West Africa will start to recover from the destruction humans have created.

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Works Cited

“11 Facts About Global Poverty.”
DoSomething.org,

www.dosomething.org/us/facts/11-facts-about-global-poverty. Accessed 26 Apr. 2020.

“Africa Program for Fisheries.” World Bank,

[https://www.worldbank.org/en/programs/africa-program-for-fisheries#](https://www.worldbank.org/en/programs/africa-program-for-fisheries#3)

3 Accessed 15 Jan. 2020.

“Agriculture and Food Security: Sierra Leone.” U.S. Agency for International Development, 21 Nov.

2019,

www.usaid.gov/sierra-leone/agriculture-and-food-security#:~:text=Agriculture%20%20forestry%20and%20fisheries,are%20the%20major%20cash%20crops. Accessed 25 Jun. 2020.

Amadu, Festus, et al. “Sierra Leone: Landscape Analysis (Focusing on Agricultural Extension and Gender and Nutrition).” Academia.edu, University of Illinois at Urbana-Champaign, 2017,

www.academia.edu/37158073/Sierra_Leone_Landscape_Analysis_focusing_on_agricultural_extension_and_gender_and_nutrition_. Accessed 25 Jun. 2020.

Darryl Fears, Juliet Eilperin. “Trump Lifts Limits on Commercial Fishing at Ocean Sanctuary off New

England.” The Washington Post, WP Company, 5 June 2020,

www.washingtonpost.com/climate-environment/2020/06/05/trump-fishing-seamounts-marine-national-monument/. Accessed 23 Aug. 2020.

Drayer, Lisa. “Eat Farm-to-Table for You and the Earth; Here's How.” CNN, Cable News Network, 2

Aug. 2018, www.cnn.com/2018/08/02/health/farm-to-table-food-drayer/index.html.

Accessed 27 Aug. 2020.

Foundation, Blue Marine. “The End Of The Line - Where Have All the Fish Gone? 25min

Version.” *Vimeo*, 23 Apr. 2019, <https://vimeo.com/44104959>. Accessed 23 Nov.

2019.

Fry, Richard. “The Number of People in the Average U.S. Household Is Going up for the First Time in

over 160 Years.” Pew Research Center, Pew Research Center, 1 Oct. 2019,

www.pewresearch.org/fact-tank/2019/10/01/the-number-of-people-in-the-average-u-s-household-is-going-up-for-the-first-time-in-over-160-years/. Accessed 25 Jun. 2020.

“How Alaska Keeps Its Seas from Being Overfished.” The Christian Science Monitor, The Christian Science Monitor, 10 Nov. 2008,

www.csmonitor.com/Commentary/Opinion/2008/1110/p09s01-coop.html

. Accessed 27 Aug. 2020.

“How James Beard Pioneered the Farm-to-Table Movement.” PBS, Public Broadcasting Service, 21 Apr. 2020, www.pbs.org/wnet/americanmasters/james-beard-pioneered-farm-table-movement/8800/.

8

Accessed 27 Aug. 2020.

Ighobor, Kingsley “Overfishing Destroying Livelihoods | Africa Renewal.” United Nations, United

Nations, July 2017,

<https://www.un.org/africarenewal/magazine/may-july-2017/overfishing-destroying-livelihoods>

. Accessed 23 Nov. 2019.

Jacobs, Andrew. “China's Appetite Pushes Fisheries to the Brink.” *The New York Times*, The New York

Times, 30 Apr. 2017,

[www.nytimes.com/2017/04/30/world/asia/chinas-appetite-pushes-fisheries-to-the-brink.htm](http://www.nytimes.com/2017/04/30/world/asia/chinas-appetite-pushes-fisheries-to-the-brink.html)

l Accessed 20 Nov. 2019.

“Languages.” Visit Sierra Leone (VSL TRAVEL),

www.visitsierraleone.org/background-information/languages/. Accessed 25 Jun. 2020.

Petri, Alexandra E. “The Countries with the World's Healthiest Diets Are Mostly in Africa.” *The Daily*

Meal, *The Daily Meal*, 27 Feb. 2015,

www.thedailymeal.com/travel/countries-world-s-healthiest-diets-are-mostly-africa-0. Accessed 25

Jun. 2020.

Ozisik, Shenel. “Education in Sierra Leone and Its Struggling School System.” *The Borgen Project*,

Borgen Project <https://borgenproject.org/education-sierra-leone/>. 2018,

borgenproject.org/education-sierra-leone/. Accessed 25 Jun. 2020.

Safina, Carl. “The Continued Danger of Overfishing.” *Issues in Science and Technology*, vol. 19, no. 4,

2003, pp. 49–51. JSTOR, www.jstor.org/stable/43312357. Accessed 25 Apr.

2020.

Sesay, Shekou M., and Christopher Fyfe. "Sierra Leone." *Encyclopædia Britannica*, Encyclopædia

Britannica, Inc., 29 Mar. 2019, www.britannica.com/place/Sierra-Leone. Accessed 25 Jun. 2020.

"Sierra Leone." Future Health Systems, www.futurehealthsystems.org/sierra-leone. Accessed 25 Jun. 2020.

"Sierra Leone - AFS-USA." AFS, www.afsusa.org/countries/sierra-leone/. Accessed 25 Jun. 2020.

"Sierra Leone Government Budget 1999-2018 Data: 2019-2020 Forecast: Historical." Sierra Leone Government Budget | 1999-2018 Data | 2019-2020 Forecast | Historical, <https://tradingeconomics.com/sierra-leone/government-budget>. Accessed 26 Aug. 2020.

"Sierra Leone Integrated Household Survey (SLIHS) Report 2018. 2019." Statistics Sierra Leone, www.statistics.sl/images/StatisticsSL/Documents/SLIHS2018/SLIHS_2018_New/sierra_leone_integrated_household_survey2018_report.pdf. Accessed 25 Jun. 2020.

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"Sierra Leone Moves to Combat Overfishing." African Business Magazine, 21 June 2019,

<http://africanbusinessmagazine.com/region/west-africa/sierra-leone-moves-to-combat-overfishing/>
Accessed 14 Jan. 2020.

Stop Illegal Fishing. "The Effects of Overfishing in West Africa." Stop Illegal Fishing,

<https://stopillegalfishing.com/press-links/the-effects-of-overfishing-in-west-africa/>
Accessed 14 Jan. 2020.

"Sustainable Seafood." WWF, World Wildlife Fund,

www.worldwildlife.org/industries/sustainable-seafood. Accessed 26 Apr. 2020.

"A Teacher from Sierra Leone Share Culture and Customs Common at Mealtimes." Cuisine and Etiquette

in Sierra Leone,

www.peacecorps.gov/educators/resources/cuisine-and-etiquette-sierra-leone/#:~:text=In%20Sierra%20Leone%2C%20the%20staple,at%20least%20twice%20a%20day.&text=Only%20the%20right%20hand%20is,left%20hand%20is%20considered%20unclean. Accessed 25 Jun. 2020.

“The World Factbook: Sierra Leone.” Central Intelligence Agency, Central Intelligence Agency, 1 Feb. 2018, <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/sl.html>. Accessed 25 Jun. 2020.

Vidal, John. “Seven Steps to Prevent the Collapse of West Africa's Fishing Grounds.” The Guardian,

Guardian News and Media, 2 Apr. 2012,

www.theguardian.com/global-development/poverty-matters/2012/apr/02/steps-prevent-collapse-west-africa-fishing. Accessed 2 Apr. 2020.

“Wild Seafood.” Illegal Fishing of Wild Seafood from the Seafood Watch Program at the Monterey Bay

Aquarium, www.seafoodwatch.org/ocean-issues/wild-seafood/illegal-fishing.

Accessed 29 Aug. 2020.