

Emerald
Izuakor

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Conflict

The Niger Delta: A Great Crisis, a Great Injustice

My grandfather once said, “When I was a child, we would take our baskets to the streams and they would be filled with fish.” This is not true anymore for the people of the Niger Delta. For years, continuous oil extraction and gas flaring has destroyed the livelihoods, water sources and ecosystems of those living in southern Nigeria. This great injustice is little known and insignificant to some, but nonetheless, has caused great devastation.

Nigeria is the richest country in Africa, boasting a GDP of almost 400 billion dollars (Charles). This is due to oil exports, responsible for about 90% of all revenue (OEC). Even though Nigeria is Africa’s richest country, 112 million of her people live in poverty with about 5 million frequently who are food insecure (Oxfam). Ongoing government corruption and ongoing embezzlement of national funds contribute to poverty. Since 1960, about \$20 trillion has been stolen, far more than the annual GDP of many Western nations (Oxfam).

The incredible financial mismanagement has hindered progress in Nigeria. This occurs in most sectors of daily life, such as the workplace, healthcare and education. Common occupations in Nigeria include manual labor, transportation, farming and trade (Obunadike). Due to corruption and lack of infrastructure, people have had to become “jacks of all trades.” Citizens cultivate staple crops and livestock in their compounds and off-site farms like yam, cassava, plantain, maize, chickens and goats (FAO).

Health care in Nigeria faces numerous challenges, due to lack of investment and funding. The government only spent 4% of the National budget on health, compared to South Africa's 13% (Ilesanmi). Even though the NHIS (National Health Insurance Scheme), is responsible for providing health care and benefits, many people still pay out of pocket (Aregbeshola). “Brain Drain” is a major issue impacting Nigeria (Ilesanmi). Many doctors leave in search of better opportunities, due to inconsistent pay and poor working

conditions. All these issues contribute to the overall poor health and mortality rates in Nigeria.

Located in southern Nigeria, the Niger Delta produces the economy's main source of revenue: oil. The region spans across 27,000 sq. miles and is home to about 30 million people in 40 different ethnic groups (Hinsch). Oil was discovered in 1956, and supposedly would benefit the Delta People financially while boosting the nation's overall economy (Ajodo-Adebanjoko). However, the Nigerian government and oil companies failed to deliver; most oil profits are stolen by top ranking officials. Moreover, the carelessness in oil operations has had a great negative environmental impact in the region. Before oil extraction, the Delta was one of the world's most biodiverse wetland ecosystems, home to five diverse ecological zones, rare species and a food source for many people (Izah) (Ajodo-Adebanjoko).

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Figure 1: Map of the Niger Delta. Taken from
<https://pindfoundation.org/poverty-assessment-niger-delta-november-2018>

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The Niger Delta and similar regions are characteristic of having freshwater systems of creeklets that empty into oceans (Izah). Consequently, the Delta region has historically relied on seafood as main sources of food and income, but continuous contamination has rendered the fishing industry virtually obsolete. Each year, about 240,000 barrels of oil are spilled into Delta, contaminating crops, waterways and ecosystems (Hodal). Natural gas flaring associated with oil extraction also contributes to the Delta's deterioration. Nigeria flares more natural gas than any country, contributing to harmful greenhouse gas emissions and global warming (Hinsch).

The Niger Delta crisis also triggered serious tension and violence. Since the late 1980's, various indigenous groups, especially the Ogoni people have been fighting the government for their financial and land rights (Hallmark). Locals formed militant groups in attempts to gain control. They targeted oil companies directly, damaging pipelines and stealing oil to sell (Hallmark). These tactics were not

successful, resulting in further environmental damage and violence. In 1995 Ken Saro-Wiwa, a prominent Ogoni activist was hanged by the government alongside 8 other companions, famously known as the "Ogoni Nine" (Ajodo-Adebanjoko). This only fueled more outrage and destruction. In 2006, a group called MEND (The Movement for the Emancipation of the Niger Delta) led by Henry Okah emerged. They were better equipped and more strategic, however the incarceration of their leader halted operations. (Hallmark). In 2009, the federal government implemented an amnesty program to curb conflict. MEND militants received compensation, Henry Okah was freed, and nearly 30,000 surrendered their weapons (Hallmark) (Ajodo-Adebanjoko). In 2016 however, the Niger Delta Avengers (NDA) emerged. They focused on directly impacting Nigeria's economy by damaging valuable pipelines, such as Shell's "Forcado". This had staggering effects, decreasing oil production by nearly 65% in 2016 (Hallmark).

This crisis has had numerous effects on the Delta people, still affecting them today. Many are falling ill and dying, especially women and children. A recent study found that children were twice as likely to die if mothers were pregnant near oil spills, even from 5 years ago (Hodal). The unborn are very susceptible to oil pollution related defects because they do not have protective toxin barriers (Hodal). Contaminated food also increases the risk for sickness and malnutrition. As previously mentioned, Delta communities hardly receive oil profits. There is a lack of development in the region, as most areas lack electricity, safe

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water sources and health care (Were). Since the fishing industry is no longer reliable, people have gravitated to other income sources, especially trees (Were). Deforestation is an effect of oil-pollution, which has contributed to other problems, including ecosystem loss and global warming. These issues have created animosity and tension between ethnic groups, often resulting in violence and death (Were). The cycle of injustice gripping the Niger Delta has seemingly irreversible consequences, making its future appear bleak.

Figure 2: Pastor Christian Lekoya Kpandei standing in his oil-soaked fish farm in Bodo, Nigeria. Taken from *Amnesty International*

As aforementioned, Nigeria has a long history of government mismanagement, which has negatively affected the Delta. In 1992, the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), was founded to survey environmental regulation of Nigeria's oil sector. However, the policies do not correlate with the criteria that merit the remediation of contaminated sites. Furthermore, other agencies such as the Department of Petroleum Resources (DPR), do not properly acknowledge EGASPIN, allowing oil companies to prevent cleanups before they begin (UNEP). Due to little investment in resources and qualified technicians, these governmental departments are internally unsound, and often look to private oil companies for support (UNEP).

If the Niger Delta is to survive, a sustainable plan must be developed. In the past, the government attempted to compensate militants, but money is useless without food to buy (Hallmark). Shell claimed they cleaned up various sites and said *oil theft* causes contamination, blaming the people. This is untrue, because those sites are still untouched and there is a visible lack of pipeline maintenance (Gaughran). The Nigerian government even attempted to fund "The Ogoni Project", a model cleanup in Ogoniland, a heavily affected area, but never took effect due to military violence (Odenthal). Lying, blaming and bribery will not solve the problem, rather a plan that includes *all* communities and sectors will.

There are a few possible solutions to this crisis, which emphasize community involvement. UNEP (United Nations Environment Programme) laid out a plan focused on Ogoniland, but relevant to the whole Delta Region. First, measures must be taken to identify and safely manage highly contaminated sites to prevent existing pollution from spreading. Soil in the Delta is clay-like and seemingly

impenetrable, but UNEP has found oil up to 5m below ground (UNEP). This contaminates groundwater supply and destroys crops from the roots. Before progressing to aquatic cleanup, soil in swamplands must be cleaned, allowing mangroves to be replanted. Mangroves are essential to the Delta because their root systems preserve the soil, combat erosion and provide habitat for fish.

To manage and monitor these projects, UNEP recommends that locals are in charge to stimulate motivation and awareness, attainable through designated project and education centers throughout the Delta (UNEP). This will include continuing and vigorous assessments on the environment, public health and oil extraction, enabling communities and the government to accurately monitor improvement and establish permanent guidelines (UNEP). The government first has to reconfigure environmental legislation (including budget allocation) and include local communities in the lawmaking. These improvements will allow local agencies to function with proper resources and staff who can implement policies (UNEP). It is also imperative that oil companies and the Nigerian government substantially fund cleanups. UNEP proposed an initial investment of 1 billion USD to be managed by the local agencies (UNEP). This is a fair proposition because it is right that a government aids its people, especially in situations like these.

A German organization named One Earth-One Ocean (OEOO) proposed a viable solution called “PURE”, a “kind of wax-based cotton that can absorb up to 8 times its own weight in oil and pollutants” (Odenthal). PURE sits on surfaces and absorbs everything but water without a chemical reaction. It can then be spun in a centrifuge and be reused (Odenthal). OEOO wants the people to be educated about PURE and its uses and paid for the cleanup. If there is enough local support, this idea could win government approval and funding, creating many jobs and opportunities.

In 2007, Chinyere Nnadi, an ambitious Nigerian entrepreneur founded the nonprofit Sustainability International. His objective was to clean villages with community support. He believes that combating the overall issue requires community involvement (Yaquib). Nnadi is using Bioclean, a technology developed at the University of Central Florida, is organic, non-toxic and bacteria-based, restoring affected sites in less than 30 days. It eliminates hydrocarbons at a molecular level, essentially killing oil, and leaves behind nutrients that encourage rehabilitation (Yaquib). This technology has proven effective in other countries, notably in Chinácota, Colombia’s by cleaning the area four weeks after an oil duct fracture (Yaquib). To combat mistrust, Nandi also proposed Blockchain, a “digital, decentralized, virtual ledger that provides a transparent, instantaneous and indisputable record of transactions that are publicly accessible” (Yaquib). This ensures that all participants receive a fair salary for their work.

Regarding aquatic cleanup, there is a highly promising solution offered by researchers in Australia. Dr. Justin Chalker and his team of scientists developed a substance made entirely from waste products called a *low-density polysulfide polymer* (Worthington). This product is made from elemental sulfur, unsaturated seed oil, such as canola, and sodium chloride. Sulfur is a by-product of the oil industry and cooking oil is readily available, meaning the polysulfide can be affordably produced from recycled materials (Worthington). The oil and sulfur are reacted together in a process called *copolymerization*,

and then combined with sodium chloride. The sodium chloride is rinsed out to make tiny pores in the composite, essentially creating an absorbent sponge. Alternatively, the product can be finely milled and *then* rinsed, creating a “low-density” polysulfide rather than a highly “porous” one (Worthington). The low-density option would be more efficient because it could clean more area in less time. The experiments testing the polysulfide were highly successful. One gram absorbed 1mL of crude oil, showing that the polysulfide has 100% efficiency. Similarly, a 100g low-density sample was added to 1.5 L of seawater mixed with 100 mL of crude oil, absorbing the oil in about a minute (Figure 3). Because sulfur and oil are

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hydrophobic, crude oil can be compressed out and the polymer reused, creating a sustainable system (Worthington).

Figure 3: Low-Density Polysulfide. Taken from *Sustainable Polysulfides for Oil Spill Remediation: Repurposing Industrial Waste for Environmental Benefit.*

Experts predict the cleanup of the Delta to take at least 25 years, but it is necessary for us to remain hopeful for the future (UNEP). Collaboration among people from different fields and acknowledgment of various ideas is vital for the rejuvenation of the Niger Delta. With this, we could create a circular system that would not only benefit the Delta, but all of Nigeria. Locals would manage collection of recycled oil, sulfur and other materials, researchers and technologists would mentor young and aspiring Nigerian scientists, and communities could promote the importance of environmental restoration, slowly inspiring the world to do the same. This circular and localized method would create opportunity in amazing ways for Nigeria and her people, including diversification of the economy. It is also very important that the Nigerian government is willing to invest long term in its people. Why should the world care about a country’s crisis if its own *leaders* do not? The Delta is an important region to Nigeria and the rest of the world. It is home to diverse people, rich and unique ecosystems and is the center of Nigeria’s main moneymaker. Of course, oil is not the cleanest or most environmentally friendly resource in the world, but there are methods to limit its impact. We see this around the world in American and Middle Eastern oil plants, and Nigeria should be no different. Let the Delta be saved so future generations may experience her beauty and bounty.

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