

# Stemming The Harbingers of Climate Change

by Olubunmi E. Aboderin

Al Gore must be oscillating between glee and gloom. Glee that his prognostications about climate change have largely been vindicated, and gloom that his prognostications about climate change have largely been vindicated. When his book and documentary **An Inconvenient Truth** came out in 2006, he was viewed as everything from a well-meaning but false alarmist to a destabilizing quack propagating a conspiracy theory. He was one of the first public figures with an international platform to sound the warning on the impending doom we've come to know as global warming. Few believed him at the onset, but now ten years later, history has proved him to be, most unfortunately, more right than wrong.

Both 2014 and 2015 were declared the hottest years on record. 2016 may well be hotter still, judging by the unusually high temperatures we've been experiencing particularly since February. In Nigeria, the undue temperatures and changes in weather patterns are causing year-by-year shrinkage of fertile acreage in the northern parts of the country. This warmer-weather phenomenon and its attendant consequences are being felt in other parts of the world too. In December 2015, the former second largest lake in Bolivia, Lake Poopo, irreversibly evaporated. In April this year, thousands of tons of dead sardines washed up on the banks of the Queule River in Chile. In May, a wildfire started near Fort McMurray in Canada and spread across more than 505,000 hectares, forcing the mandatory evacuation of an entire town.

According to NASA, the global temperature in April 2016 was the warmest ever recorded in any April since 1880. This across-borders rise in temperature is caused by both naturally-occurring and man-made factors. El Nino, the periodic movement of large chunks of warm water across the Pacific Ocean, is the primary naturally-occurring cause of climate change. Greenhouse gases, such as fossil fuel-induced carbon dioxide, are the predominant man-made instigators of global warming. Climate change has an impact on the availability of water, the food supply chain, and of course, the environment. Our production of fossil fuels (like oil) and our overdependence on its derived products (like diesel, kerosene or petrol) are not helping. The quantum of carbon dioxide in the atmosphere is said to have reached its highest recorded level in 2015. Mankind is producing more carbon dioxide than the earth can naturally process.

Most of us would list better roads and constant power supply as absolute necessities for this nation's economic growth. However, our quest for development must be conducted sustainably. For example, while it's splendid that there are plans to build a multi-lane, super highway in Cross Rivers State,

it should only be done after taking time to properly assess the long term, environmental impact of cutting through a national park, felling countless trees and irreparably altering certain ecosystems. When viewed through a climate change prism, such a trade off may prove to be ultimately retrogressive and costly in ways that may only become apparent 30 years from hence.

Having constant power supply is a boon to commercial competitiveness. Nigeria's current power generating capacity is said to have fallen below 2,500MW. There is a possibility that capacity for an additional 2,000MW will be restored by the end of 2016. The Federal Ministry of Power forecasts that our peak power demand in Nigeria is around 12,800MW and hopes to generate up to 40,000MW by 2020. However, there are those who believe that goal is too modest because our needs could in actual fact be as high as 1,000MW per one million people. So how do we balance this vital requirement for electricity with the pressing need to halt drastic climate change? Right now the power shortfall is made up principally by gas-turbined private power projects or the individual use of generators fuelled by diesel or petrol. Perhaps its time for us to be earnest about catching up with the rest of the world and shifting away from relying mainly on fossil fuel to generate our power. The construction of a 10MW wind farm in Katsina has not been completed 10 years after inception. Meanwhile, the Gansu Wind Farm in China started in 2009 and seven years later it can generate more than 7,900MW. Their goal is to generate at least 20,000MW from this wind farm alone by the year 2020. We seriously need to up our game.

Thankfully there are indigenous social utility companies here in Nigeria, which have figured out how to provide 24 hour electricity to rural communities at an affordable rate using solar energy. Incentives should be provided so that more entrepreneurs will be motivated to develop alternative energy solutions. Institutional investors with excess liquidity should consider ploughing their money into renewable energy projects (instead of building yet another block of unoccupied luxury apartments). Individuals with extra funds earning a pittance in savings accounts can also figure out how to invest in viable enterprises dedicated to providing clean energy. These are ways that we can replicate, for example, the community-owned wind farm system practiced in the German region of North Frisia. The wind farms in North Frisia have the capacity to generate approximately 700MW, which is more electricity than the residents can use. Imagine that. Constant power supply without the noise or atmospheric pollution of generators.

The sooner we can switch to using renewable energy like solar, wind or water the better the chance we have for minimizing the damaging effects of environmental anomalies within our borders. Though the chances of Nigeria becoming a zero-carbon economy are minuscule, those who insist that we can pursue development at a pace and in a manner that is "in harmony with nature", are not necessarily tree-hugging lefties and should not be ignored. A

healthy planet would undoubtedly be one of the greatest legacies that we can give to the next generation.

At a personal level, we can do what little we can to slow down or even reverse global warming. We can reduce, reuse and recycle if at all possible. Turning off lights and air conditioning when no one is in the room reduces emissions. Even just raising an air conditioner's thermostat by two degrees in warmer climes (or two degrees lower in colder climes), creates less carbon dioxide. Using LED or CFL bulbs also helps. Opting for cars run by renewable energy or car pooling, or biking to your destination if you are able to, can make a difference. Planting trees or finding ways to incorporate existing trees into your building design is beneficial too because trees absorb carbon dioxide. This reminds me of a US-based NGO known as the Center for Renewable Energy and Appropriate Technology for the Environment (CREATE!). CREATE! provides training to interested groups in rural communities on how to start and maintain year-round, sustainable vegetable gardens and tree nurseries without the use of any fossil fuel. The trees double as living fences, and reverse the trend of deforestation. The foliage provides shade, and the produce provides nutrition, as well as a source of income.

One wonders if Gore sees 2015 as the year the world got serious about tackling the apocalypse of climate change. That year saw the signing of the Paris Agreement and a shift in investment priorities away from fossil energy, in favour of renewable energy. The Agreement has so far been signed by at least 175 countries. It commits the participants to reducing emissions or halting emissions growth. Signatories have also pledged to take actions to keep the temperature from rising 2C above "preindustrial levels". They are actually aiming to cap it at 1.5C which seems like a lost battle already considering that in 2015 the global temperature reached as high as 1.11C hotter than the selected benchmark. Climate scientists believe that if global temperatures rise above 3.5C, small island developing states such as Sao Tome & Principe or Cape Verde will almost certainly be sunk under rising tidal waves.

The sweltering heat wave of the last few months, the southward creeping desert and the drying up of Lake Chad are harbingers of climate change in Nigeria. The last two effects are in turn compounding the problem of urban migration, which as we have seen, has engendered conflicts between hosts and settlers. It behooves us to make adaptive correction, and it would be interesting to know if Nigeria will reconsider its decision not to be a signatory to the Paris Agreement. Even if we don't sign, hopefully we have our own plans to cause our emissions to reduce rapidly, so that we are not negligent contributors to an avoidable calamity that could render parts of the world unfit for any life form to dwell.

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