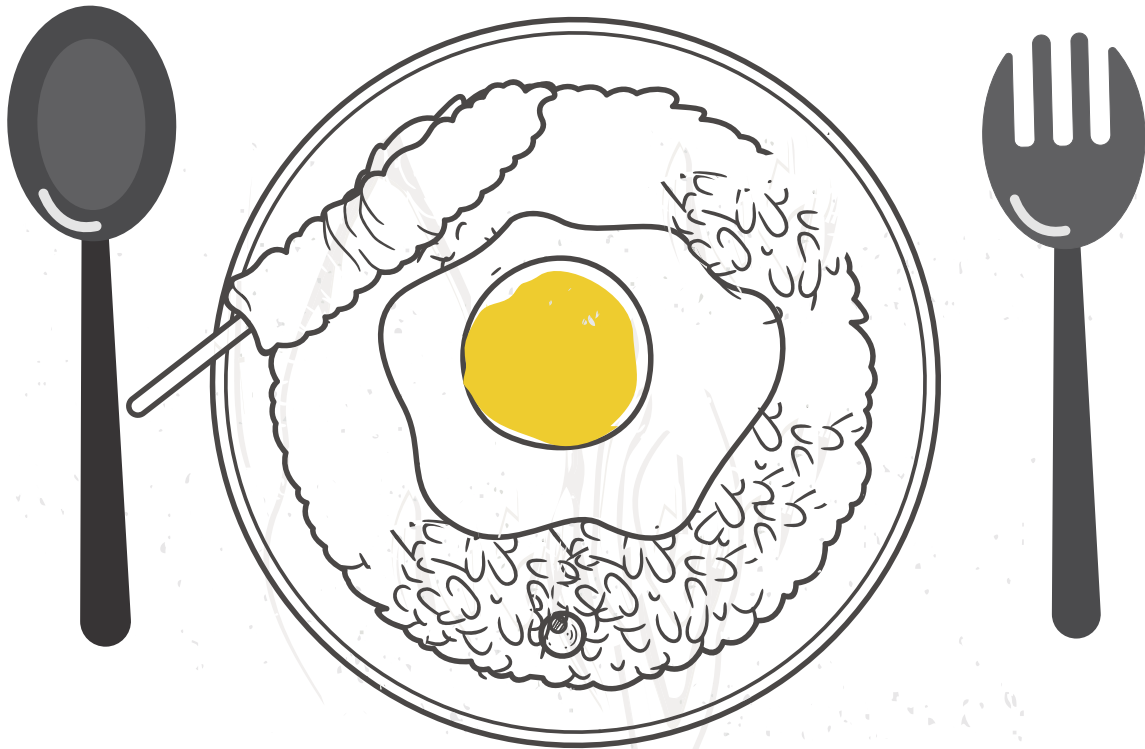


eco ~
INSTIGATOR

A PUBLICATION OF HEALTH OF MOTHER EARTH FOUNDATION

EATING

genetically engineered
insecticides



A SPECIAL REPORT:
Water Situation
in Juba

NIGERIANS REJECT GMOs:
Refuse to be used for
Experiments

FOOD SOVEREIGNTY
and Matters Arising

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HOMEF

HEALTH OF MOTHER EARTH Foundation

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Home Run



NNIMMO BASSEY
Director, Health of Mother
Foundation

The influx of genetically modified organisms into Nigeria continues despite objections by the populace. While HOMEF and other members of the GMO-Free Nigeria Alliance were having a massive protest against the state of affairs in the country, the national biosafety regulators were busy announcing the granting of a permit for the environmental release of Bt Cowpea (GM beans).

Welcome to our first edition in 2019. As you already know, eco-Instigator brings us exciting, informative, educative and inspiring articles/reports. These are aimed at instigating actions to save our Mother Earth and recover our collective human dignity.

In 2018 we examined the water supply situation in a Juba, South Sudan's capital city. In this edition we bring you a special report from that investigation. The oil fields of South Sudan echo the travails of the oil fields of Nigeria and in subsequent editions we will bring you snippets of the situation in those communities whose water has been hugely impacted by produced water from oil extraction activities.

For more information you may see the book *Oil, Power and a Sign of Hope* by Klaus Stieglitz. HOMEF published the African edition of that important book in 2017.

In this edition, we also bring you report from COP24 held in Katowice, Poland where Shell was fingered as deliberately influencing articles of the Paris Agreement as well as the Rules-Book for the implementation of the agreement.

The influx of genetically modified organisms into Nigeria continues despite objections by the populace. While HOMEF and

other members of the GMO-Free Nigeria Alliance were having a massive protest against the state of affairs in the country, the national biosafety regulators were busy announcing the granting of a permit for the environmental release of Bt Cowpea (GM beans).

You will find articles on why this move is not only needless but a betrayal of the rights of our people to own, grow and feed on healthy local staples. We also bring you report from the demo held against GMOs in Nigeria.

As usual we bring you fascinating poetry as well as some books that you should read. Feel free to send in your poems, essays, reports or photos. We will be pleased to share them with our teeming readers. Your reaction to our reports are also welcome.

Finally, we are happy to showcase one of our regular contributors, Sonali. We will be featuring regular contributors from time to time. You may be next in line.

Until victory!

Nnimmo.

Eating Genetically Engineered Insecticides

BY NNIMMO BASSEY



image: Freepik.com

All through the ages, in the development of agriculture, humans have selected and cultivated crops and animals that thrive in their environments and are good for their health. Some of the factors that determine what we love as food are highly

sensory and include the texture, taste, colour and their smell. Taste, for example, can drive people to eat things they know are not good for their health. Besides, people may tilt to a food product due to the power of suggestion through advertisement on the mass

media.

Communities and nations make regulations and laws to govern what their people eat, how they are produced and sometimes what is forbidden. One reason why care is taken in this regard is the close links between crops and ecological health and between food and human health.

When we say that we are what we eat, we are not far from the truth. Apart from the fact that the statement emphasizes the impact of food on our health and wellbeing, it also talks about our culture, spirituality and socio-economic relationships.

Food plays a key part in our cultural activities. Without food, our celebrations and festivities are not complete.

Food is so much expected at social events that by simply mentioning “item 7” everyone knows that you are referring to food and refreshments.

It will be hard to find any religion that does not have food as a major aspect of some of their rituals. Agriculture is key in any economy.

Food can be an instrument of control and power. Weather variations and extreme weather events can bring communities and nations to their knees. Violent conflicts and wars can also render peoples hungry and expose them to the need to receive or purchase food aid. Yes, some food aids are paid for and are not exactly humanitarian.

One nation that stood her grounds and insisted on what sort of food aid was acceptable is Zambia. They rejected the genetically engineered grains that were extended to them as food aid in 2002. And although much political pressure was piled on the nation, they did not starve but transited to bountiful harvest the following year. In the case of Nigeria, after the devastation of the agriculture of the North East, we have received tones of seeds without verifying if they were genetically modified or not.

That is how much food aid can trump caution.

What do consumers look for when they go shopping for groceries? Research has shown that consumers that care to read the labels on the food products they buy prefer to buy those that are pesticide free and are not genetically modified. Generally, buyers prefer fresh, clean and natural products.

Unfortunately, many of our foods in Nigeria are sold in measures using cups and basins.

Foods such as beans, *garri*, corn, *amala*, and the like are often neither packaged nor labeled. You simply have to trust your eyes to tell you whether what you are buying is wholesome or not. And, our people hardly read the labels on the packaged products on the market shelves.

They may read the brand names and pay less attention to the contents. Agencies saddled with policing our borders against entry of unauthorized foods, such as the ones that are made of genetically engineered materials appear overwhelmed by the influx of these products.

Products are imported without much filtering with the assumption that whatever is presented as food is safe. It is as if it is assumed that because a thing was made in the United States of America, for instance, then it must be good for our consumption. We simply do not know what we are eating. However, we should care to know as our health depends on that knowledge and our choice.

Regulators and promoters of

genetically engineered crops and foods in Nigeria accuse those that question the technology of being fear mongers or anti-science. This may be dismissed as a hollow accusation, but when they make such arguments frequently, the real fear is that they may believe themselves.

Besides, they also believe that they are running the best biosafety system in Africa and that other countries such as Burkina Faso who junked genetically engineered cotton,



cannot be compared to the supposed high skills and facilities Nigeria boasts of. This arrogant posturing is extremely dangerous.

Food is not all about science. Even if it were reduced to that, any science that is not in the interest of society is to be treated with extreme caution.

Poisons are produced by scientists. Cigarettes are designed and promoted by scientists. Atomic bombs, biological weapons and diverse weapons of mass destruction are all made by scientists. Can anyone claim that such inventions and productions should not be questioned or restricted?

When scientists produce genetically engineered beans (cow pea), do they consider the fact that the insecticidal beans could also kill non-target organisms and that even the target pests could develop resistance? When crops are genetically engineered to withstand herbicides, do they consider that they kill other plants and not merely weeds? And what about the soil microorganisms they kill thereby disrupting the webs of life in the ecosystems?

Food is not all about science. Even if it were reduced to that, any science that is not in the interest of society is to be treated with extreme caution.

Working beneath the supervisory radar, the promoters of these technologies are set to erode our biodiversity and set the stage for ecological harms. Nigeria has quickly become the testing ground for novel and risky technologies, exposing citizens to next levels of danger. With regard the recently approved genetically engineered beans, we note that this beans variety with the transgene Cry1Ab used in its transformation has not been approved anywhere else in the world.

The International Institute of Tropical Agriculture (IITA) may have concluded field trials for a cassava variety that has never been planted anywhere else in the world. That cassava was engineered to produce starch that would last longer than normal before degrading. Right now, there is another application for a new cassava variety engineered to have more starch than normal.

All these genetically engineered events are prepared overseas and brought for testing in Nigeria and yet we boast that we are so equipped and innovative in the sector. Even the genetically engineered cow pea is originally a Monsanto product given to Africans on humanitarian grounds.

Humanitarian grounds indeed! Fellow compatriots, if anyone tells you that the producers of genetically engineered crops and foods are cocksure of their products, ask them why they fight against nations having strict liability clauses in their Biosafety laws. Uganda just

inserted such a clause in their genetic engineering regulatory law, ensuring that makers of GMOs will be held liable for any harm that may come from cultivation or consumption of their products at any time, even if such effects come years down the road. Since that law was enacted, scientist have branded President Museveni and the Ugandan parliament as being anti-science. In other words, good genetic engineering science must leave room for doubt and when harms manifest, the producers should not be held strictly liable.

That posture puts the Precautionary Principle on its head. That principle is the bedrock of Biosafety regulation. It simply means that where there is doubt we should be cautious.

The speed with which Nigeria is permitting GMOs is highly suspicious and offers no assurance that the government is concerned about food safety and the preservation of our biodiversity.

Nigerians must be mindful of what we buy, cultivate or eat. We can bet that no one will knowingly eat an insecticide. But that is what we do if we eat any crop genetically engineered to be insecticidal.





COP24: FOSSIL FUEL INC.'S OUTSIZE PRESENCE AT TALKS REFLECTS ITS INFLUENCE

BY HANS NICHOLAS JONG

Oil majors have been seen to influence international agreements “intended” to combat climate change just to twist the outcomes to favour their business continuity while they proffer solutions which will further destroy mother Earth and her climate.

KATOWICE, Poland — “How did you get here?” asked the angry fossil fuel company executive.

“Have you ever been to Nigeria?” responded the agitated environmental activist.

This was part of an exchange between Swedish environmental activists and a senior executive from oil-and-gas giant Royal Dutch Shell at

the ongoing United Nations climate summit in Katowice, Poland.

Not exactly fighting words, but not a friendly conversation either.

What it exposed, though, was just how deeply entrenched parties with a vested interest in fossil fuels are in influencing the global climate pact.

It started after Shell, among the top 10 fossil fuel companies in terms of greenhouse gas emissions, presented its future scenario on climate change, called SKY, during a side event at the climate talks on Dec. 11.

Shell's chief climate change adviser, **David Hone**, and its projects and technology director, **Harry Brekelmans**, said solutions ranging from

carbon capture technology to hydrogen fuel and market-based mechanisms would be essential to limiting global warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit), as targeted by the Paris Climate Agreement.

Brekelmans responded to charges that Shell had willfully withheld since 1988 knowledge that its fossil fuels were contributing to climate change, saying that no one company was responsible for the current climate situation.

“So we are all responsible for this,” he said. “We can't be pointing fingers at each other to say that you are unilaterally causing [climate change].”

Because we are all enjoying the energy in this room with electricity powered by fossil fuel. There's no way to say it's only one party and one actor.”

After the event, **Anna Bokström** and **Johanna Norrbo**, environmentalists from Sweden, confronted Hone about Shell's responsibility for climate change and its operations in the Niger Delta, which have resulted in decades of oil spills that have which have resulted in decades of oil spills that have ruined the homes of more than 40,000 people.

Hone responded that fossil fuels had brought more benefits than they did harm, then turned the argument on Bokström and Norrbo, saying they were complicit by benefiting from the fossil fuel industry themselves.

“How did you get here?” Hone asked Bokström during the 10-minute exchange witnessed by **Mongabay**.

By train, she replied. Hone pointed out that trains in Poland run on electricity; 80 percent of the country's electricity comes from burning coal.

“I know I am part of the system,” Bokström told Mongabay later when recounting the exchange.

“I don't want to be a part of the system anymore ... killing other people. I think we have to move to something else, and they [Shell] are so into this [fossil fuels], so they never want to do it.”

She added she hadn't intended to confront Hone at first, “but I

felt so frustrated because I've been talking to people from Nigeria and they told me about the situation there in the Niger Delta.”

Shell's 200 gas flares operating in the region have been declared illegal, but continue to burn 24 hours a day. The resultant air pollution and constant spills has caused health problems such as skin irritations and respiratory issues, and affected farming and fishing.

“In the Niger Delta where I come from, we've endured 60 years of gross oil pollution and human rights abuse,” said **Nnimmo Bassey**, from the environmental alliance Health of Mother Earth Foundation.

Bokström asked Hone whether he had ever been to Nigeria to see the devastating impacts that Shell had wrought upon the people living in the Niger Delta, to which he answered

that he'd never been to the country.

“Well, maybe you should,” Bokström replied.

She later told Mongabay that the exchange had sent chills down her spine.

“It's scary, I think, because it's like you can't get into their hearts,” she said. “If you could get into their hearts, they wouldn't be able to do what they're doing. But their hearts are closed.”

'Polluters in the COP'

Mohamed Nasheed, a former president of the Maldives and the head of the island nation's negotiating team at this year's climate talks, said that begging polluters to stop destroying the environment based on ethical grounds wasn't effective.



Coal exhibited at COP24 by host country, Poland. Image: Babawale Obayanju



“The problem is we keep asking polluters to take the ethical route, but they never listen to us,” he said. “We should ask the big emitters to invest so much in clean energy that they will stop using fossil fuel. We need to reframe what we're demanding.

That a massive oil company like Shell gets a platform to promote its policies at the U.N. climate talks is confounding, Bassegy said. “Today oil, gas and coal companies populate the corridors of the negotiation halls of COP24,” he said. “They have the guts to claim that they have the right solution to the weak Paris Agreement. They are proud to claim that their wordings are in the Paris rulebook. Shameful to have these polluters in the COP.”

He was referring to a statement by Hone on Dec. 7,

at another event at the summit, when he said Shell could take credit for a provision in the 2015 Paris Agreement that identifies carbon markets as one of the chief ways for oil companies and other major polluters to offset in their emissions.

The Paris Agreement, a landmark global pact to tackle climate change, has been signed by 195 countries. Only state actors can negotiate the text of the agreement, while companies and civil society groups act as observers.

Hone, though, was candid about the extent to which Shell likely influenced the final outcome of the Paris Agreement.

“We have had a process running for four years for the need of carbon unit trading to be part of the Paris agreement. We can take some credit for the fact that Article

6 [of the Paris Agreement] is even there at all,” he said as quoted by The Intercept.

“We put together a straw proposal. Many of the elements of that straw proposal appear in the Paris Agreement. We put together another straw proposal for the rulebook, and we saw some of that appear in the text,” he added.

“The problem is we keep asking polluters to take the ethical route, but they never listen to us,” he said. “We should ask the big emitters to invest so much in clean energy that they will stop using fossil fuel. We need to reframe what we're demanding.

The provision in question allows companies to offset their carbon emissions by buying credit elsewhere instead of actually reducing them.

Carbon-trading schemes have been criticized for not actually doing anything to reduce the local impacts of a company's emissions-producing activities. Jesse Bragg, media director of the watchdog group Corporate Accountability, said Hone's statement proved what campaigners had suspected for a long time: that the very corporations contributing to the climate crisis are the same ones pushing the supposed solutions to the problem.

"It's what we've always known, but the shocking thing is how honest and sort of arrogant he [Hone] was when he said, 'Yeah, we influenced the Paris Agreement,'" Bragg told Mongabay. "All of that points to what we've been saying for a long time: that these guys are writing the rules by which we're supposed to solve climate change.

It's the first time we're seeing them admit it publicly."

'Economic interests over climate'

Fossil fuel producers may also have been influential at the current climate talks in Poland. Bassey, the Nigerian activist, said they were responsible for getting the delegations from the United States, Russia, Saudi Arabia and Kuwait to block the conference's adoption of a key report from the U.N. Intergovernmental Panel on Climate Change (IPCC).

The IPCC report warned that the world has just 12 years left in which to cut global carbon emissions by half to prevent catastrophic global warming that will have severe impacts on populations, food supplies and natural systems.

According to the investigative media outlet DeSmog UK, at least 35 delegates from the four countries have ties to the oil, gas and mining industries. They are either currently employed or used to work for companies and organizations involved in the petrochemical and mining industries or lobbying on behalf of those industries.

Of these 35 delegates, 12 represent Saudi Arabia and nine represent Russia, according to DeSmog UK. The NGO Climate Tracker previously identified 13

delegates representing Kuwait who worked for the fossil fuel industry.

Pascoe Sabido, a researcher and campaigner at the nonprofit Corporate Europe Observatory, said having delegates with ties to fossil fuel companies at the climate talks was unacceptable.

"What it shows is how blatantly economic interests come before the climate. Gulf states know exactly what these talks mean for their economy," he told Mongabay.

But Pascoe added that these individuals didn't necessarily have to be in the official delegations at Poland to influence the climate policies coming out of the talks.

"Let's not pretend that just because the U.S. and EU don't have them on their delegations, they're not influencing," he said.

"They don't need to be on their delegations, because they've already written their governments' positions back home in the national capitals. With the U.S., you had the CEO of Exxon going straight into government. He wasn't on the delegation. But [it was] clearly worse!"



Image : Babawale Obayanju

A platform at the pavilions

Activists like Bokström, Bassey and the others are a part of a growing civil movement taking on the U.N. for allowing big polluters to be involved in its annual climate conferences, where politicians

30 events hosted at numerous countries' pavilions that gave fossil fuel companies a platform to promote themselves. The South African pavilion, for instance, showcased just one company, Exxaro Resources, under the theme “How a mining

The Indonesian pavilion is sponsored by the oil major Chevron and Adaro, an Indonesian coal mining operation. The pavilion hosted two sessions: one where Chevron representatives talked about the role of the private sector in achieving the U.N.'s Sustainable Development Goals, and another, also courtesy of the oil company, on “corporate responsibility on environmental management.”

Yuyun Harmono, a climate campaigner from Indonesia's largest green NGO, Walhi, said both Chevron and Adaro were major contributors of greenhouse gas emissions. According to the Carbon Disclosure Project's Carbon Majors Report 2017, Chevron was the 12th-biggest emitter among fossil fuel producers; Adaro was 78th.

The top 100 fossil fuel companies have since 1988 accounted for more than 70 percent of the world's greenhouse gas emissions, the report says. “By accepting money from these companies, the Indonesian government has contradicted its own climate policies,” Yuyun told Mongabay. “It's a conflict of interest because our main goal here is to reduce the use of fossil fuels. So why accept money from companies whose core businesses are in fossil fuels?”

Speaking opportunities for support

Agus Justianto, the official in charge of the Indonesian pavilion, said there was nothing wrong in accepting financial support from

are supposed to negotiate solutions to climate change.

Since the start of the talks in Poland, protesters have been chanting the slogan “Polluters out, people in,” in reference to what they see as unfettered access for the fossil fuel industry and to lobby world leaders. Nor have the protesters overlooked the heavy corporate sponsorship of the conference.

The summit carries a hefty price tag of nearly \$67 million, and is being sponsored in part by fossil fuel companies, including three state-run coal giants as well as a gas company — a decision that has caused an uproar among activists.

Climate Tracker found at least

company is contributing to sustainable food.”

The Russian pavilion also highlighted just one company, the energy and mining outfit EN+ Group, under “EN+ Group climate responsibility.”

Taylor Billings from Corporate Accountability said that it was clear fossil fuel corporations saw the climate talks as a one stop shop to obstruct the negotiations and sell their products.

“While countries may be arguing in the negotiations, it's clear many of them agree on promoting oil, gas and coal corporations at their exhibits,” she said. “This means that the negotiations are playing second fiddle to the corporate trade show happening just down the halls.”



Image - Babawale Obayanju

private companies to cover the minimum 240,000 euro (\$272,500) cost of the pavilion.

He added that fossil fuel companies needed to be given an opportunity to work with other stakeholders, including the government, on ways to tackle climate change. That's why their sponsorship of the pavilion doesn't contradict Indonesia's climate policies, Agus said.

"The government's task is to bridge the gap between private companies and civil society," he told Mongabay. "We can't side with either one of them. We have to stand in the middle." He added the government preferred to use the term "supporters" rather than "sponsors," and that in exchange for their "support," these companies would get opportunities to speak during the many side events at the pavilion. The more "support," the more opportunities, Agus said.

Walhi spokeswoman **Khalisah Khalid** said the Indonesian government could still facilitate dialogue between companies and civil society without having to take their money.

"If the government indeed considers climate change a serious issue, then it should have allocated funding for the pavilion in the state budget," she said. "This way, the government wouldn't have to rely on corporations. When they do

that, there's a conflict of interest and the government is facilitating these companies in their greenwashing."Orangutan threat

Another of the pavilion's sponsors is North Sumatra Hydro Energy, the developer of a dam in Sumatra that scientists almost universally agree poses a severe threat to the survival of the world's most endangered great ape.

The \$1.6 billion hydropower project calls for the partial flooding of the only known habitat of the recently described Tapanuli orangutan (Pongotapanulien sis), as well as the cutting of roads through the ape's forest. With a population of no more than 800 individuals, the Tapanuli orangutan is already teetering on the brink of extinction, as its habitat in Sumatra's Batang Toru ecosystem continues to be fragmented by infrastructure projects.

And the hydropower project threatens to exacerbate an already precarious situation, with a group of orangutans already being driven out of their habitat due to preconstruction activity for the dam and power plant.

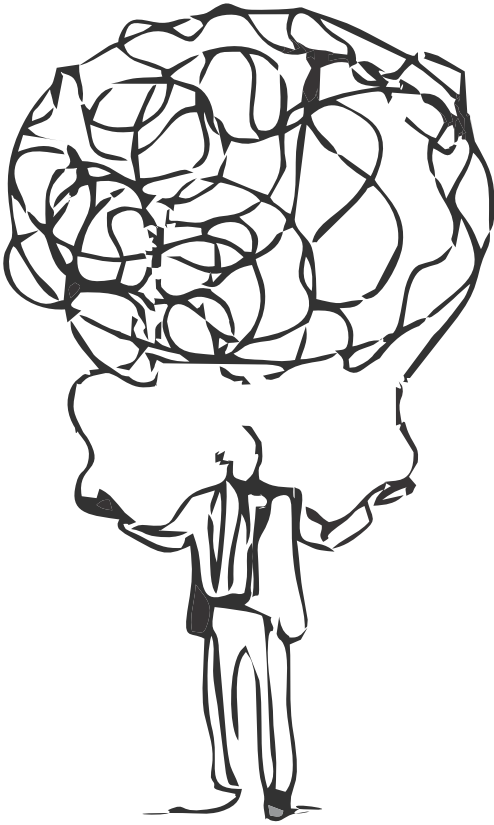
Yet the developer's ads play on a loop at the Indonesian pavilion in Katowice, touting the project as "a socially and environmentally responsible development" and describing efforts —

building a wildlife research center, putting up animal signs, and restoring land — meant to mitigate the environmental impacts. An ads by PT North Sumatra Hydro Energy (NSHE) on the Batang Toru hydropower project displayed at the Indonesian pavilion during the 24th U.N. climate talks in Katowice, Poland. Image by Hans Nicholas Jong/Mongabay.

Dana Prima Tarigan, who heads the Walhi chapter in North Sumatra, called the display an embarrassment for the Indonesian government because it highlighted the state's powerlessness to protect its own environment and biodiversity. "The government should be promoting Batang Toru as a national asset, not as an investment in destroying the ecosystem itself," he said. "And remember: who was in Batang Toru first? The orangutans or the company?"

Culled from:
<https://news.mongabay.com/2018/12/cop24-fossil-fuel-inc-s-ousize-presence-at-talks-reflects-its-influence/>

"If the government indeed considers climate change a serious issue, then it should have allocated funding for the pavilion in the state budget,".



No, I did not create you this way

No, I'm not religious in any way
Yes, the world as we know it is entirely miraculous
If I could ever fathom how it was conceived

But I know many will raise up in arms and pelt eggs
When I say, it couldn't possibly have been done in 7 days

A work of art
And heart
And most likely a love beyond compare
A love for life
Any kind
So even if I don't believe in that one higher power
Maybe, just maybe

He or She
is looking down above and saying

I did not create you this way
I did not create the deep blue and dark stormy seas
To have it covered in itsy bitsy colourful plastic waste
I did not create the sky blue and the clouds white
So they can be obscured by the grey smog spewing from towers trying to reach me

Don't tell me these are a celebration of my love for you
Don't tell me these are the gifts I gave you

I did not create the lions, leopards and elephants and whales
For you to take their homes away, carve their beloved bodies, swallow their essence, or fill them up with crap

I did not create a mortal being ready to tear families apart
and justify it with my words
I did not create an intellectual being just to exploit the rest of the world
Oil exec versus fisherman
Banker versus villageman

Take a moment and close your eyes
And mourn for a silent moment
Because I made intricate networks of co dependency for all to discover and savour
and love
and respect
and you failed
in my love for you

I think that's what He or She would say

I did not create you this way

Poem by Xinying Tok
Sustainability Consultant,
Singapore.



Farmers/Herders Clash – Beyond Ethnic and Religious Labels.

BY MFONISO ANTIA

Nigeria is a country endowed with human, socio-cultural and natural resources. The country has in the past few years experienced a strain on its resources due partly to poor management of some resources (as seen in the extractive sector) and partly to total negligence of other important economic sectors (e.g agricultural sectors).

Nigeria's six geopolitical zones (North Central, North-West, North East, South-South, South-East and South West) are known for different but interrelating occupations, which cut across farming (crops and livestock) and

trading. Pastoralism is predominant in the Northern region of the country while crop farming and trading cut across all zones; however, there are other peculiarities of farming depending on what thrives in a particular zone.

In the past decade, Nigeria has battled with both political agitators and the terrorist group – Boko Haram. Herders conflict with their crop producing counterparts and other farmers over land space for cropping and feeding of cattle have increased the death tolls. A lot of speculations and assumptions have been going on while trying to trace the root cause of

the farmers/herders incessant clashes. Agreed that there could be tiny bid of varying opinions and undertones to the conflicts but one must put sentiments aside to be able to critically look into and find out the real reason for these crises.

This opinion piece is in no way justifying the horrendous killings perpetuated by the herders but is merely trying to direct the readers to view these conflicts from the lens of an environmental scientist. The writer believes that it is only when the reason behind the conflicts is found that proper solutions can be proffered.



experience of drought and desertification which result in scarcity of fodder for their livestock and their sole decision to feed their flocks at all cost.

and more disputes between the farmers and herders.

Man has always adopted migration as a strategy to cope with his existential vicissitudes as life's difficulties force him to move from one place to another in search of better opportunities to meet his needs.

With the increase in global temperature comes a handful of attendant impacts, one of such impacts would be drought/desertification which have degraded pastures and dried up natural water sources in Northern Nigeria.

Fertile lands have dwindled due to this impact of changing climate, these combined population boom are fuelling conflicts as herders are forced to migrate down South in search of fodder for their livestock. The noticeable increase in population would imply that there are more people to feed which in turn mean more agricultural settlement and less available land and water for herders. All of these tend to trigger more

In a 2017 paper titled ***Climate change, pastoral migration, resource governance and security: the Grazing Bill solution to farmer-herder conflict in Nigeria***, Lere Amusan stated; *"While many factors shape human's decision on migration, the compelling roles of environmental factors have gained increasing attention in recent years. Man's decision to move and his choice of destination are often informed by his goals and experience in one environment, either by virtue of the limitations, which it imposes or the opportunities that abound elsewhere".* In the case of the herders from Northern Nigeria, their decision to move down south is informed by the

As the herders move southward, their cattle eat/destroy plants and crops (which are sources of livelihood for others) on their way. There is no community in which the herders have settled in their nomadic sojourn who haven't had their sources of livelihood destroyed while experiencing a strain in other available natural resources like water and lands. In responding to these strains and other attending implications of migration and also in a bit to protect their sources of livelihood (farm crops), farmers have reacted by asking the herders out of their communities and this has resulted in the incessant clashes which have claimed thousands of lives.

There are few communities in which the herders have settled in their nomadic sojourn who haven't had their sources of livelihood destroyed while experiencing a strain in other available natural resources like water and lands. In responding to these strains and other attending implications of migration and also in a bit to protect their sources of livelihood

i(farm crops), farmers have reacted by asking the herders out of their communities and this has resulted in the incessant clashes which have claimed thousands of lives. Conflicts between farmer and nomadic herders have become a national security issue in recent times, owing largely to its plurality and ethnic divide,

There are few communities in which the herders have settled in their nomadic sojourn who haven't had their sources of livelihood destroyed while experiencing a strain in other available natural resources like water and lands.

environment-induced migration such as this one creates volatile contact and competition between groups of highly conflicting natural resource-dependent livelihood systems. In the case of farmers and pastoral herders, it further strains already fragile national fault-lines and fuels insecurity.

A problem created as a result of an environmental imbalance would need an environmental approach to tackle it. Tagging the clashes as merely religious or ethnic problems would be a grave error as this would blind the eyes of the people to the root cause – being the changing climate and its impacts, making it difficult to deal with the problems and the attending implications.

Nnimmo Bassey, the Director of Health of Mother Earth Foundation in his welcome words at the organisation's Sustainability Academy co-hosted with the Confederation of Traditional Herders Organizations in Africa (CORET) on October 18, 2017 at the International Conference Centre, Abuja, stated that to proffer a lasting solution to these crises, we need to interrogate the causative factors propelling this unwholesome development. In closing his statement he challenged participants to ponder on the questions below, as he said, those would shape their views about the conflict in an attempt resolve it.

a. *What are the economic roots and what role does careless relationship with the Earth play, especially with regard to the preservation of our forests and grasslands?*

b. *Why are we not utilizing the symbiotic*

relationship of animal husbandry and farming – where animals help fertilize the soils of fallow lands that also serve as pasture?

c. *If climate change escalates the movement of herders, is migration the only way to mitigate the impacts?*

d. *Would better soil and water management impede the rate of desertification in Nigeria?*

e. *If the Great Green Wall project restores its area of focus, would that reverse the migration and conflicts?*

f. *Are there cultural practices and political factors that lock in the crises?*

Recommendations made from that event towards proffering solutions to end the clashes can be found here: <http://www.homef.org/article/climate-change-pastoralism-land-and-conflicts>.

To tackle the farmers/herders clashes, we need to look beyond political, ethnic and religious inclinations and see them for what they are – environmental wars – which needs environmental approaches and solutions. A while ago, Nigerians thought of climate change as a mere political term used by some to request and squander funds, I hope however, with the daily experienced droughts, desert encroachment, flooding etc, we would be able to accept or agree that climate change is real and its impacts are already here.

ASSESSING ACCESS TO CLEAN DRINKING water IN JUBA, SOUTH SUDAN

- A Report on the Water Situation in Juba

The Republic of South Sudan gained its independence in 2011, the nascent republic was confronted with an uphill task providing services to 12 million people with minimal infrastructure. Although the country has been receiving a substantial amount of petrodollars from its oil industry, the level of services provision to citizens has stagnated at the pre-intendence period, arguably due to the fact much of the country's oil wealth is siphoned off to foreign bank accounts by the country's elites. Before conflict erupted in 2013, the population of Juba was estimated to be 80,000 according to the 2008 national census. After the crisis, this figure has mushroomed to 325,000 as of 2015, and has been rising ever since as the conflict forces more people to abandon their homes, especially in the Greater Equatoria Region (GER) and Greater Upper Nile Region (GUN). This huge number of people is noticeably putting an unimaginable pressure on the water supply system in Juba.

WATER-HEALTH NEXUS

Access to safe, clean, and affordable drinking water is a critical determinant of population and public health outcomes in developing countries. Water contamination from industrial and domestic waste continues to dangerously threaten human and ecosystem in developing countries.

Furthermore, it has been recognized that the key determinant for addressing global poverty issues is the provision of unimpeded access to clean, safe, and affordable drinking water. There is plethora of diseases that is associated with water contamination. Among these are diarrhea, cholera, typhoid fever, Shigella, polio, meningitis, and viral hepatitis. More often than not, the demographics that are severely impacted are women and children.

Understanding the relationship between drinking water and good health is critical to the public as, as access to clean drinking water through the protection of drinking water source, treatment, sanitation, is the foundation of a healthy population. When the communities can access clean, safe, and affordable drinking water, the health of each individual in those communities is substantially improved, and this invariably leads to significant reduction in the amount of time required to fetch water and undertake related Water, Sanitation and Hygiene (WASH) activities. This will in turn result in improved food preparation, and other livelihood activities. It is therefore a fact that will remain undisputed for a

significant lap of time that the primary route to solving the problem of poverty in resource-scarce countries is through unimpeded provision of safe, clean, and affordable water.

This report aims to interrogate the major sources of drinking water in Juba and compare the findings with international standards to determine the portability of the water. The analysis was done through two selected methodologies:

i. Qualitative data collection

To gain an appreciable understanding of water provision system and infrastructure in Juba City, South Sudan, a desk review of relevant documents concerning government plans, water provision assessments, and limited number of study reports was undertaken.

A qualitative data was also collected by conducting interviews with relevant authorities in the Ministry of Water, Dams and Electricity, Juba Municipal Council, Ministries of Environment and Health, South Urban Water Corporation (SSUWC), and some individuals in the private sector who deal in water services provision businesses in the city such as the Ethiopian water

trucks owners and bicycles water distributors. Some of these meetings and discussions took place over tea, in the offices of the interviewees, or sometimes on the phone over the course of two (2) months. The qualitative method of data collection was chosen because it requires less time, and an in-depth knowledge about a particular issue being researched could easily be assessed without having to collect large and cumbersome volume of data over a prolonged period of time.

ii. Laboratory water parameters testing

The quality of drinking that is provided to most suburbs of Juba was tested in the laboratory by sampling water from three (3) water collections in Juba, namely Juba bridge water collection hub, Konyokonyo water collection hub, and Gumbo Water Treatment Plant (GWTP), which was installed by Oxfam-South Sudan and managed by the community of Gumbo Township. Using a previously validated water safety parameters testing protocol, the water safety parameters such as the pH, Total Dissolve Solids (TDS) and the presence of bacterial contamination (Microbial Total Coliforms Test) were

tested at the South Sudan Public Health Laboratory by a trained water laboratory technologist.

a. Microbiological analysis:

The water samples were tested for the presence of total bacterial coliforms using a WAGTECH Potatest®+ method. This method is based on the membrane filtration principle, which uses semi-permeable membranes to separate materials. Briefly, the membrane acts as filter that allows water to flow through, while it retains suspended solids and other substances such as bacteria. To perform the test, the sample is vacuum filtered through the membrane filters. The filters are then laid on nutrient medium. The membrane has a printed millimeter grid printed on it and can be reliably read to count the number of colonies under a binocular microscope after 18-24 hours of incubation.

b. Physical parameters: TSD and Electrochemical conductivity

The Total dissolved Solid (TDS) in the samples was measured using WAGTECH TDS probe meter. The probe was placed inside the samples tubes, and the Electrical Conductivity (EC) of the water was recorded

and converted into TDS values using conversion factors as demonstrated previously.

c. Physical parameter: pH

The pH of the water samples was measured using Wagtech pH meter as demonstrated previously. The pH values were recorded. Turbidity is the cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye, similar to smoke in air. The turbidity of the water samples obtained from various water collection points was measured using Nephelometric Turbidity tube as shown previously.

RESULTS

Water safety parameters

Inadequate water supply is still one of the major challenges in developing countries. The Joint Monitoring Program (JMP) for Water Supply and Sanitation, implemented by the World Health Organization (WHO) and UNICEF, reports that 783 million people in the world (11% of the total population) have no access to safe water, 84% of whom live in rural areas.

About 187 million people use surface water for drinking purposes; 94% of them are rural inhabitants and they are concentrated in sub-Saharan Africa.

Regarding the quality of drinking water, microbiological contamination is a primary concern of developing countries. The Juba City, the Capital of the Republic of South Sudan, boasts a population of 80,000 inhabitants.

However, due to the crisis that has been raging in the countryside since 2013, the population of Juba is rapidly mushrooming, and this is overwhelming the meager modern services that exist in the city such as water provision services.



The city of Juba is facing water crisis and this crisis, due to the unrest in the countryside, which is forcing many people to come to the city, continues to get worse as the population is growing in an astonishing rate.

Although the government institutions and the families of government ministers have access to pipe water from the South Sudan Urban Water Corporation (SSUWC) water treatment plant, the majority of Juba residents get their drinking water untreated straight from the Nile River.

There are about two principal water collection points along the Nile River where water trucks that have been licensed by the Juba Municipal Council (JMC) collect the water for distribution to the neighborhoods around Juba, namely, Konyokonyo Water Collection Hub (KWCH), and Juba Bridge Water Collection Hub (JBWCH). To determine whether this water is clean and safe for drinking, water samples were collected from KWCH, JBWCH, and the Gumbo Water Treatment Plant and taken to the South Sudan Public Health Laboratory (SSPHL) for testing. At the laboratory, basic water safety parameters such as pH, Total Dissolved Solid (TDS), and Total Microbial Coliforms tests were conducted. The values obtained were compared with the water quality guiding values (GVs) that have been established by the World Health Organization (WHO).

In all the samples tested, the pH was found to be consistent with the pH guiding values established by the WHO. While the water samples taken from GWTP didn't exhibit any bacterial growth (zero coliform-forming Unit [CFU]), the samples collected from KWCH exhibited growth that was designated "Too Numerous To Count TNTC-CFU" per 100ml of water sample tested. This shows that this water is not safe for drinking; it shouldn't be distributed to the neighborhoods prior to treatment.

Similarly, the samples taken from JBWCH yielded 55 Coliform-forming Unit per 100ml (55 CFU/100ml), which is well above WHO GV of zero Coliform-forming Unit per 100ml (CFU/100ml) of water tested. This water is also not fit for human consumption without treatment. In all the samples tested for Total Dissolved Solids (TDS), the samples from GWTP and KWCH were within the range of WHO TDS GV of 500mg/L while the samples taken from JBWCH has TDS above WHO recommended value of 500mg/L. Without treatment, this water is also not fit for human consumption. These results show that the

residents of Juba have no access to clean and safe drinking water, and since they have no other options beyond River Nile, they will continue to consume raw water from the river, which saturated with disease-causing microorganisms, organic and inorganic impurities that find themselves into the river either from industrial wastes or domestic wastes. As the population of Juba continues to mushroom in an astonishing rate, the water crisis in the city will continue to worsen, and if no appreciable measures are taken, and expeditiously so, the public health implications of this water crisis will soon become apparent to the government of South Sudan and the residents of Juba.

This report is an excerpt from a research conducted by HOMEf in collaboration with Nile Initiative for Health and Environment (NIHE). Please you can download the full report: <https://homef.org/wp-content/uploads/2019/01/Juba-Water-Project-Report.pdf>

NIGERIANS REJECT GMOs:

Refuse to be used for Experiments



BY JOYCE EBEBEINWE

Hundreds of people including farmers, youths, women, students, medical practitioners, scientists and CSOs convened in Abuja on December 7, 2018 in a rally against products of agricultural biotechnology known as GMOs (Genetically Modified Organisms).

The aim of the rally was to publicly denounce the unchecked admission into

Nigeria of genetically modified (GM) crops and products which pose severe threats to our food system, biosafety and overall wellbeing. The rally also aimed to increase public awareness on the implications of agricultural biotechnology, to reinforce calls for a ban on GM crops/food products and instigate action for better protection of our food systems and biosafety.



“products are flooding our markets and people are consuming them daily with no knowledge of how they were produced or their implication on human health.”

An important highlight of the rally was the presentation of findings of the report (tagged **What's on our Plates?**) of a survey carried out by HOMEF on the presence of GMOs in our markets.

According to the HOMEF's Director, Nnimmo Bassey, “well over 30 products sampled in 10 Nigerian cities were found to be labeled as produced with genetic engineering or as containing genetically modified ingredients. These products included: cereals, vegetable oils, noodles, mayonnaises, ice-cream, food spices etc. and were mostly imports from USA, China, India, South Africa. Genetically modified ingredients labeled were largely corn and soy”.

He expressed great displeasure that these products are flooding our markets and people are consuming them daily with no knowledge of how they were produced or their implication on human health. He reiterated that the public and indeed our regulatory agencies must wake up to these threats to our food and indeed our lives, citing that several scientific researches have linked GMOs to severe health complications and diseases.

Speaking on commercialization of genetically modified agricultural products in Nigeria, Mariann Bassey, Chairperson of the Alliance for Food Sovereignty in Africa, stated that the National Biosafety Management Agency (NBMA) approves nearly every application [for importation/use of GMOs] brought to it without proper safety assessments, without due consideration of public opinion/concern or the impact of proposed activities on human health, our economy or environment.

One case which was said to be of serious concern is the approval granted to WACOT Nigeria Limited for importation of GM maize over a period of 3 years. The company had tried to illegally ship in truckloads of the GM product in September 2017 but was apprehended and ordered to repatriate the goods. However, in a few weeks after that order, NBMA granted permits to this same company despite the fact that the law requires that a minimum of 270 days be given before any application is approved to allow for proper impact assessments.

“More disappointing, is the realization that the Agency failed to get clearance from National Agency for Food and Drug Administration and Control (NAFDAC) as stipulated in The National Biosafety (Implementation, Etc.) Regulations, 2017.

The regulations demand among other things under objective 41. Application for permit to import GMOs and GMO products for commercial production that NBMA on receipt of an application in the prescribed form for GM food, shall after acknowledgement of receipt forward information relating to food and feed safety assessment to NAFDAC for review and certification.

HOMEF sent enquires to NAFDAC in February and October 2018 as to whether they provided clearance to NBMA after consideration of safety assessments conducted on the said crop and in September 2018, NAFDAC

responded and stated that they have 'not received any genetically modified maize in the name of WACOT Nig. Ltd in recent times for the purpose of reviewing, analyzing or certification'. This buttresses the fact that the law is constantly being disregarded and the health/safety of the people and environment is taken for granted” Mariann explained.

It was mentioned that In July 2018, Nigeria registered and released two transgenic hybrid cotton: MRC 7377 BG11 and MRC 7361 BG1.1 into the market and this was done despite the fact that the modified crop variety is famous for its failure in many countries where it has been used.

Nnimmo Bassey explained that Burkina Faso, in 2016, discontinued cultivation of the crop due to poor quality of the output and high cost of inputs and that farmers in India have had a disastrous experience with

the crop as it proves ineffective against the bollworm pest and causes instead a boom of non-target pests; increase in pesticide use and in production cost. “China, Indonesia and Pakistan are

other countries where the transgenic cotton has failed” he added.

To add to data on failure of this technology, the South African government was said to have recently rejected Monsanto's triple stacked GM drought tolerant maize as they found that the data provided by company was insufficient to demonstrate the claimed drought tolerance and insect resistance by the GM event.

Also, the Tanzanian Government ordered the discontinuation of Monsanto/Gates' GMO trials and destruction of remnants of GM materials due to illegal use for GMO propaganda.

<https://acbio.org.za/en/tanzania-orders-destruction-monsantogates-gm-trials-due-illegal-use-pro-gm-propaganda>

On November 28th 2018, the Ugandan Parliament passed the GMO Bill (Genetic Engineering Regulatory Act 2018) with Strict Liability as one of the major clauses of that Act, meaning that whoever introduces a GMO is legally responsible for any damage, loss or injury that will result from its use.





Gbadebo Rhodes-Vivour, Coordinator of the GMO-free Nigeria Alliance stated Nigeria should learn from the experiences of these other nations, take a firm position against the infiltration of GM products and urgently review the National Biosafety Management Agency Act 2015 to close all loopholes (including the absence of strict provision on Liability and redress) that encourage illegal dealings with GMO .

He urged that we should be circumspect about technologies that aim to contaminate our natural varieties and environment, destroy our agricultural systems, rupture our socio-economic fabric and assert unbridled control over our food system.

Also speaking at the Rally was Jackie Iketuonye, Country Representative Bio-Integrity and Natural

Food Awareness Initiative. She asserted that Nigeria can solve agricultural challenges without selling off our food systems to corporate control. “What is needed is adequate support for farmers in terms of credit loans, storage, processing and infrastructural facilities better access to land and markets for produce. To tackle the menace of pest and diseases, there are effective traditional methods that promote healthy ecosystems instead of endanger them like GMOs” she explained.

While we battle with use of GMOs, other technologies that have dire socio-economic and ecological consequences are finding their way to Africa. These include extreme genetic engineering such as synthetic biology (Synbio) and gene drives organisms (GDOs). Gene drives was explained to be a new

gene-editing technology that makes it possible to have species-wide genetic engineering by the aggressive spreading of genetic changes through whole species. Joyce Ebebeinwe, HOMEF's Programme Officer on Hunger Politics encouraged the people to take forward information gathered from the rally and carry our personal research to learn more about these issues to uphold their rights to safe food and environment.

The coalition representing millions of Nigerians demanded:

- . A nullification of the permits already granted for dealings with GM products in Nigeria
- . A close surveillance of our borders, markets and farms to halt illegal entry of GMOs into Nigeria
- . A ban of all toxic agrochemicals-especially those composing of glyphosate which has been identified as a probable carcinogen.
- . A halt to the assault on our agriculture through genetic modification of staple crops and a halt on negotiations towards adoption of Gene Drives.
- . An urgent review of the National Biosafety Management Agency Act 2015



Photo of fisher from Togo – second left (Adam Muhamadou Derman) and other fishers from Makoko, Lagos State at the knowledge exchange meeting organized by HOMEF.

Standing Together in Solidarity for Sustainable Fishing!

BY STEPHEN ODUWARE

Health of Mother Earth Foundation (HOMEF) hosted fishers from Nigeria and Togo on December 28, 2018 in Makoko community, Lagos State, Nigeria. The meeting was organized to create space for exchange of information and ideas on how to ensure sustainable fishing, halt offshore oil exploration and exploitation and also ensure that fishers' rights are upheld and respected by policy makers. The meeting featured Adam Muhamadou Derman, the Secretary General of Fishermen Trade Union in Togo; who also doubles as the chairman of FishNet Alliance, Togo and leaders of fishing associations in Makoko.

Apostle Akintimehin, one of the leaders of fishing associations in Makoko, thanked HOMEF for being always committed to the cause of fishers in Makoko and Nigeria at large.

According to him “We thank HOMEF for always being committed to the course of fishers in Makoko and other fishing settlement in Nigeria and look forward to a productive knowledge exchange today and we hope that it will unite the fishers more and sustain our livelihood now and for the next generations.”

While narrating the fishing practices in Togo, Adam said that there are federations of fishers in Togo which include: continental fishers (folks that fish in rivers, creek and other inland water) and oceanic fishers (folks that fish in seas, oceans etc).

He added that, at a time, a new fishing port was constructed in Lome by the Chinese without due consultations with the fishers – so the fishers were not involved in the construction. He stated that it would have been better if the fishers were consulted so they can decide how the port would be operated.

According to him, a time came when the fishers and trade union of fishers raised their voices because the construction activities were negatively impacting their fishing activities. A

management committee was set up and fishers were incorporated into the management of the port, affording them the opportunities to be involved in decision making for the port operations and fishing in their region.

He added that monitoring of fishing activities was done by the government in the past, but now that there are professional fishing association associations. “We are part of the monitoring and control team with government public administration. With the fishers' involvement, they have put in place good fishing practices like fishing with small nets, fishing with generator, in which they go for fishing with generator and put light inside the water to attract fish,” he said.

While reiterating the stance of FishNet Alliance, he said that there is a sensitisation going on now to discourage fishers from using chemicals because some fishermen go to the sea with some chemicals and put them in the water to catch more fishes to have more money.

“We are currently dialoguing with them

and informing them about the harm (both to the marine environment and to humans that consume the fishes and also our livelihoods) of using chemicals to fish, informing them that the

chemical kills the fish, their eggs and other aquatic organisms. When this happen, they will not be able to reproduce and if this continues over some years; there will be no more fish in our water.”

He informed that they have gone a step ahead to ensure that the local knowledge is preserved for now and the future – so they organise workshops to train community fishers (both young and old) on sustainable local fishing techniques and resource management as a way of continuous reminder about their traditional methods of fishing that respects nature.

He believes that by so doing, they are transferring the local knowledge to the future. They expressed their readiness to uphold the tenets of the FishNet Alliance.

stating that the FishNet Alliance is the way to go and that it will help unite fishers in Africa and in other parts of the world.

The fishers from Makoko thanked him from coming all the way from Togo for a knowledge exchange and solidarity visit, stating that they face threats of displacement from their coastal environment due to dredging activities by the government, and that, secondly, fishing gears are expensive, and they do not enjoy any assistance from the government.

Participants opined that the problems faced by coastal communities are similar in nature, yet the authorities involved are not taking the plight of the fishers in coastal areas into consideration, even when the fact is clear that the sector employs more people than the oil and mining sectors.

With the FishNet Alliance, the fishers in coastal regions in Nigeria, Togo and Ghana believe that they now have leverage and a platform to express themselves and share their experiences and issues with other fisher folks across the coast of West Africa. The platform brings about collective efforts in putting a stop to the activities of the explorative and extractive industries across Nigeria and the coast of West Africa, the fishers stressed.

The fishers from Lome and Makoko agreed that since exploration for hydrocarbons is ongoing along the entire coastline of West Africa, it is essential that the FishNet network expands to more countries and that fishers are trained to monitor the marine ecosystem in their territories.

UPCOMING EVENTS

Team Building Gathering



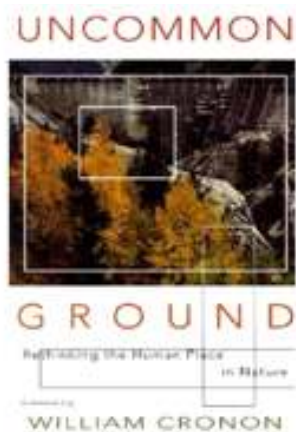
Biosafety Conference

Ogoni Clean-up Monitors Training



School of Ecology

Books You should Read



Uncommon Ground: Rethinking the Human Place in Nature Edited by William Cronon

In a lead essay that powerfully states the broad argument of the book, William Cronon writes that the environmentalist goal of wilderness preservation is conceptually and politically wrongheaded.

Among the ironies and entanglements resulting from this goal are the sale of nature in our malls through the Nature Company, and the disputes between working people and environmentalists over spotted owls and other objects of species preservation.

The problem is that we haven't learned to live responsibly in nature. The environmentalist aim of legislating humans out of the wilderness is no solution.

People, Cronon argues, are inextricably tied to nature, whether they live in cities or countryside. Rather than attempt to exclude humans, environmental advocates should help us learn to live in some sustainable relationship with nature. It is our home.

The End of Nature Bill McKibben

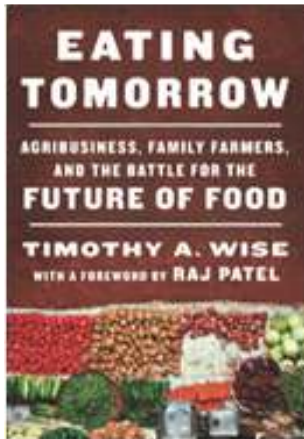
The author laments the loss of a pristine natural world untouched by human hands and capable of sustaining and renewing itself indefinitely. With the advent of such global environmental problems as acid rain, the greenhouse effect, the depletion of the ozone layer, and the massive destruction of tropical rain forests, humankind has lost its sense of nature as an infinitely renewable resource capable of absorbing any amount of human alteration.

Whatever we think nature is—the external world, wilderness, the biosphere, the source of life, God—it can no longer be considered a force independent of human impact. The air, the water, trees, land, and oceans all have become increasingly subject to environmental degradation to the point that they have lost their natural resiliency. Earth, Gaia itself, is like a great organism suffering from the impact of man's technological civilization.

This impassioned plea for radical and life-renewing change is today still considered a groundbreaking work in environmental studies. McKibben's argument that the survival of the globe is dependent on a fundamental, philosophical shift in the way we relate to nature is more relevant than ever.

McKibben writes of our earth's environmental cataclysm, addressing such core issues as the greenhouse effect, acid rain, and the depletion of the ozone layer. More than simply a handbook for survival or a doomsday catalog of scientific prediction, this classic, soulful lament on Nature is required reading for nature enthusiasts, activists, and concerned citizens alike.

Books You should Read



Eating Tomorrow Timothy A. Wise

In *Eating Tomorrow: Agribusiness, Family Farmers, and the Battle for the Future of Food*, author Timothy A. Wise takes readers on a worldwide journey to understand the continued prevalence of hunger amid plenty. If the world now has record levels of grain production, why does it also have rising indices of hunger and malnutrition?

Wise makes a convincing case that increasing the industrial production of agricultural commodities does almost nothing for the world's hungry. Oddly enough, it can even make them hungrier.

He argues that agribusiness and its well-heeled philanthropic promoters have hijacked food policies to feed corporate interests. Rather than helping the hungry eat today, they are undermining sustainable food production and destroying the natural resources - land, air, water, climate—we all will need to eat tomorrow.

The United Nations Commission on Human Rights in South Sudan said it was “outraged by reports of thousands of civilians forcibly displaced following a scorched earth policy in which the parties to the conflict are attacking villages, torching homes, killing civilians and also raping women and girls,” Andrew Clapham, a member of the three-person panel, told reporters in Geneva.

“A peace deal signed five months ago brought some hope to parts of South Sudan after five years of brutal conflict between President Salva Kiir's forces and those loyal to his former deputy” Riek Machar, the panel said.

Oil Companies May Be Complicit in Atrocities in South Sudan, U.N. Panel Says

*The scale of sexual violence
carried out by warring forces had
“markedly worsened” over the past year..and such crimes
persisted because “impunity is so entrenched in South Sudan.”*

BY NICK CUMMING-BRUCE

But in a 216-page report it will submit to the Human Rights Council next month, the commission detailed continuing war crimes and crimes against humanity, and intensifying repression by the country's security services.

Fighting between government forces and a rebel group, the National Salvation Front, in the south of the country had driven thousands of villagers to seek safety in nearby towns and thousands more to flee across the border into the Democratic Republic of Congo, Mr. Clapham said.

In its report, the panel also cited “astonishing brutality” by government forces

and associated militias in the northern, oil-rich Unity State in 2018, including a flare-up of mass rape and sexual violence in the last months of the year, detailed last week by United Nations investigators.

Mr. Clapham said that more than 125 women had suffered multiple gang rapes over a period of 10 days in December.

The scale of sexual violence carried out by warring forces had “markedly worsened” over the past year, he said, and such crimes persisted because “impunity is so entrenched in South Sudan.”

The commission is compiling dossiers on individuals linked to atrocities and has already submitted names to the United Nations human rights office, but the panel expressed concern at the lack of progress in setting up courts to prosecute perpetrators.

The report emphasized the role of South Sudan's oil industry as “a major driver for the continuing violence, the ensuing human suffering, and the violations of international humanitarian law witnessed there,” warning foreign companies that they could be implicated in

abuses.

Control of the country's oil resources was “a top prize” in the struggle for political and economic power, the panel wrote, noting that a government offensive carried out using “extremely violent methods” in the first half of 2018 was aimed largely at securing control of areas close to oil fields and either pacifying or driving out the civilian population.

South Sudan's intelligence services have increasingly taken control of the state-owned Nile Petroleum Corporation, known as Nilepet, siphoning off

money to finance the conflict and to enrich the political and ethnic elites, the commission said. Western companies had pulled out of oil production activities in the area before South Sudan gained independence in 2011, partly because of human rights violations, opening the way for companies from Asia.

Oil production is now dominated by three joint ventures between Nilepet and Chinese National Petroleum Company, Petronas of Malaysia and the Indian Oil and Natural Gas Corporation.



Internally displaced persons in South Sudan, near the border with Uganda. Fighting between government forces and rebels has driven thousands to flee their homes. Credit Sumy Sadurni/Agence France-Presse — Getty Images





The United States Commerce Department added the three joint ventures last year to its list of companies that had violated American policy or national security interests.

It said the oil companies were “contributing to the ongoing crisis in South Sudan because they are a source of substantial revenue that, through public corruption, is used to fund the purchase of weapons and other material that undermine the peace, security, and stability of South Sudan rather than support the welfare of the South Sudanese people.”

The United Nations commission on South Sudan said that international companies “should be well aware of the legacy of unaddressed human rights violations associated with oil explorations.”

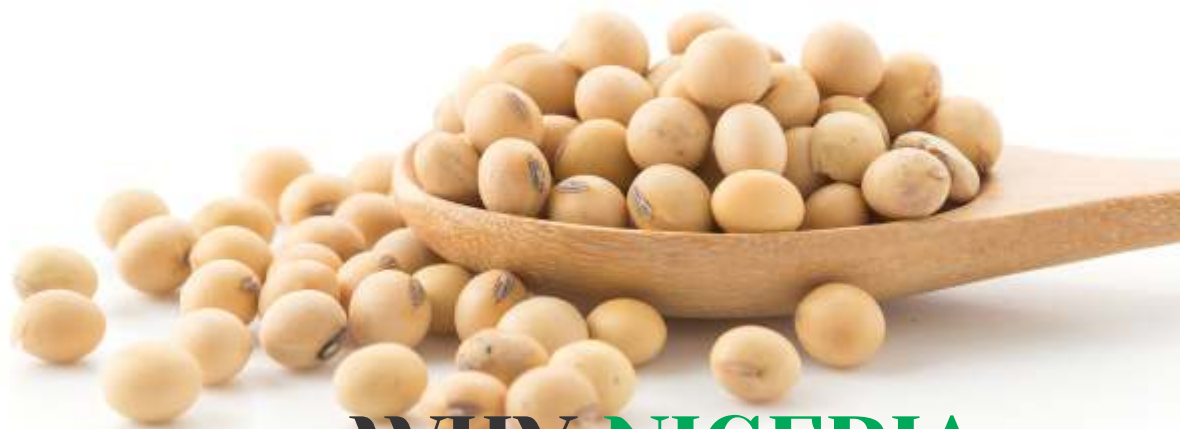
That listing underscored the companies' exposure to potential

criminal liability for causing or contributing to the continuing armed conflict and the violations against civilians in their areas of operation, the panel said.

The international community and Human Rights Council “should pay more attention” to the issue, Mr. Clapham said.

As a case in point, the panel noted that Sweden began the prosecution of the chairman and chief executive officer of a Swedish oil company, Lundin, in October 2018 for crimes against civilians. Those arose from military operations in the late 1990s and early 2000s that were intended to clear the area for oil production and that involved widespread abuses.

Culled from:
<https://www.nytimes.com/2019/02/20/world/africa/south-sudan-oil-war-crimes.html>



WHY **NIGERIA** MUST HALT MOVE TO COMMERCIALIZE BT COWPEA

BY JOYCE EBEBEINWE

Nigeria is the prime producer of cowpea in the world, with yearly average production of about 2.7 million metric tons over the last decade. Ironically, Nigeria is also the largest importer of cowpea in Africa (ACB, 2015). This clearly suggests that the economic challenges for farmers or the availability of food is not solely a problem of production.

Cowpea (popularly known as beans) is an indigenous African crop and a major source of protein for the Nigeria populace where it is prepared and eaten in various forms either as ewa agoin, akara or moi moi.

It is a staple food crop and an important source of income especially for women. The crop is also very essential for animal feed.



Currently, Nigeria and indeed Africa as a whole is under pressure to accept modern biotechnology as the solution to agricultural problem and it is portrayed as the singular silver bullet approach to the challenge of food security.

The National Biosafety Management Agency (NBMA) in December 2018, organized a public presentation on an application for commercialization of Bt cowpea which is said to be resistant to maruca insect pest. The Agency opened a window (14th January-4 February 2019) for the Nigerian public to send in comments or objections but this is seen as a mere ritual as objections sent in the past were treated with disregard and permits were granted. Let us however, consider the following reasons Nigeria must not commercialize this crop and by extension other genetically modified (GM) crops.

This article serves as a call on the Nigerian populace to pay attention to the issues with this technology, to speak out against it and on the government to be circumspect about

profit-driven technologies that aim to contaminate our natural varieties, destroy our agricultural systems, destroy our socio-economic fabric and assert unbridled control over our food system.

Bt cowpea is not commercially grown anywhere else in the world

Nigeria will be the first country to commercialize cultivation of the crop. Field trials have been ongoing in Burkina Faso and there has been resistance to its release in the past two years. In Ghana, field trials have been ongoing since 2012 but their cogency is being heatedly disputed by civil society organizations, for example, Food Sovereignty, Ghana has applied to court for an order to stop the commercial release of GM cowpea in the country (FSG, 2015). Also in Malawi, the first field trials launched [by Bunda College] were met with strong resistance by a coalition of civil society organizations, led by the Commons for EcoJustice (CfE) (2015). This resistance across African countries buttresses the enormity of the threat

genetic modification of food crops poses to our lives and agricultural systems.

Bt cowpea is linked to severe health implications

Bt cowpea contains the Cry1Ab gene developed by Monsanto (now Bayer) and it is the same as in Bt maize event, MON810 manufactured by the company. Since Bt Cowpea has not yet been commercialized anywhere in the world, it will be helpful to consider findings on that GM maize event.

“ Africa as a whole is under pressure to accept modern biotechnology as the solution to agricultural problem and it is portrayed as the singular silver bullet approach to the challenge of food security. ”

Current In-vitro experiments have revealed that protein produced by MON810 has toxic effects on human liver cells (Mesnage et al., 2012.) In November 2008, researchers in Italy resolved that the consumption of Bt maize, MON810 induced alterations in intestinal and peripheral immune response of both weaning and old mice. In a more recent study with investigative system different from those previously used, results showed that effects (seen in blood cells, adrenal glands, kidney weights etc.) linked with the GM maize are generally detected either after 14 weeks of consumption.

The scientists recommended additional long-term (up to 2 years) animal feeding studies, preferably also multigenerational. (de Vendômois et al., 2009) Use of this Cry1Ab Bt gene was discontinued in South Africa where the cultivation of Monsanto's GM maize, MON 810 containing the transgene led to enormous pest resistance and infestation. This is very instructive as Nigerians are made to believe that this Bt cowpea will bring about the reduction in pesticide use.

It is also important to note that genetic engineering of this Bt cowpea was conducted by a Commonwealth Scientific and Industrial Research Organisation (CSIRO) based in Australia which was previously involved in a biosafety scandal. In the early 2000s, the organization developed a GM pea seed that expressed a protein found in kidney beans that causes the weevil to starve to death (Kruger 2005). Trials came to a rapid stop in 2005 when it was found that the transgenic pea triggered significant immune responses and inflammation in the lungs of mice (Prescott et al., 2005).

These kind of information are carefully excluded in so called public presentation by the nation's biosafety regulatory agency.

Bt cowpea will contaminate natural varieties of the crop

Cowpea [as has been stated] is an indigenous African crop and cultivation of a GM variety will bring about an irreversible contamination of the natural varieties nurtured over the years by farmers. A study of

pollinator characteristics and population genetic analysis of the natural West African wild cowpea populations revealed that the Bt-gene could move from the genetically modified lines to non-modified lines of both cultivated and wild cross compatible relatives (Fatokun et al., 2012).

This transfer of the Bt-gene is a major cause for alarm as this will result to other plants gaining the resistance trait that causes an alteration in ecological balance and presents adverse effects.

Bt cowpea is not the solution to agricultural problems

The pro-GMO promoters present the technology as a means to increase production and cater to the burgeoning populations. How about the fact that the world currently produces double the amount of food we consume but most of it is wasted due to poor storage and processing facilities or access to markets? The Bt solution responds only to one single aspect of production that is the pod borer pest. Apart from the pod borer (*Maruca vitrata*), other pests disturb cowpea in their growing season including:

pod sucking bugs (Riptortus spp., Nezara viridula and Acanthia sp.), aphid (Aphis fabae, Aphis craccivora), blister beetle (Mylabris spp.) which are not controlled by the Bt toxin.

There exist biological methods that can be employed e.g use of plant-based (neem) or fungal-based (endophytic strains of Beauveria bassiana) bio-pesticides which offer effective and wide-coverage alternatives to chemical control (Sokame et al., 2015). In Asia, where it is said that Maruca vitrata originated, biological control (use of natural enemies) is being adopted as solution to the pest invasion. (Tamò 2015, pers. Comm.).

In place of the Bt solution which requires a significant increase in input costs and portends to overturn socio-ecosystems, Nigeria can focus on biological control and augment with governmental action towards provision of needed infrastructure and other necessities such as credit schemes, access to land and extension services to farmers for enhanced productivity and food security/food sovereignty.

GM crops will not ensure economic stability for farmers

Evidence already shows that there is a trend towards uptake of large portions of land for cowpea monoculture. Small-scale farmers usually intercrop cowpea with other cereals, mostly staple crops such as maize, millet and sorghum. (Saré 2015; Coulibaly 2015; Enoch 2015, pers. comm.). This in addition to the high cost of GM seeds and the inability of farmers to reuse GM seeds present serious threat to farmers.

Also, Nigeria's cowpea is presently under a ban from the EU because of quality and residual chemicals issues and majority of the EU locals reject GMOs. Where will the export market for this Bt cowpea be?

The challenges with Bt cowpea are many. In addition to the fact that scientists generally observe unexpected impacts in and from genetically engineered crops, there is no knowledge about the potential impact of this modification in cowpea on human health. This move by the Nigerian government goes against the precautionary principle (a major

principle of the Cartagena Protocol to which Nigeria is signatory) which advises governments to take precaution in the face of uncertainty of safety of GMOs in terms of human and environmental health.

For more details on genetic modification and the seed industry in Africa please see report by African Centre for Biodiversity (ACB) at: <https://acbio.org.za/wp-content/uploads/2015/07/GM-Cowpea-report.pdf>

You can also visit the website of Health of Mother Earth Foundation: www.homef.org for more information on GM events approved in Nigeria and on sent objections.





FOOD SOVEREIGNTY & MATTERS ARISING

BY BENITA SILOKO

Food sovereignty is people having a right to food that is culturally appropriate, produced through sustainable methods, and their right to define their own food and agriculture system.

In recent years, there has been an increasing interest in food sovereignty.

Food sovereignty is people having right to food that is culturally appropriate, produced through sustainable methods, and their right to define their own food and agriculture system.

Despite its importance, there have been some controversies over the issue of food sovereignty.

Advocates of food sovereignty have said that food should not be traded like other commodities. For example, in the statement of The World Forum on Food Sovereignty, “food is not just another merchandise and the food system cannot

be viewed solely according to market logic".

A community's need for safe and culturally appropriate food must be the main driver of agricultural policy. This is because the profit motives of speculators and transnational agricultural companies fail to respond to the food needs of local communities.

It has been said that food security is best considered in food sovereignty. We have to focus on food produced by the people and are healthy and respond to the needs of the people appropriately. It is essential because the availability of food does not automatically address the issue of food sovereignty if the people are compelled to eat what they would rather not eat.

In other words, the decisions about food and its production should be hinged on the priorities of local producers, distributors and consumers, not on the preferences of "powerful corporations or geopolitically dominant governments."

Local control helps protect small-scale

agrarian communities from any possible destructive effects of market fluctuation and rapid changes in the prices of foodstuffs. It also enjoys knowledge of place and benefits from traditional wisdom to make informed decisions about production of appropriate food.

It is becoming increasingly difficult to ignore that industrial agriculture is one of the main source of GHG emissions and highest degree of landscapes specialization means that both agro-inputs and outputs frequently travel over long distances. The distance that food moves from farm to mouth has climate change implications.

However, labour-intensive and biodiverse small farms are more likely to reduce GHG emissions in production, increase capacity for carbon sequestration and reduce the distance that food is transported.

Beyond the compound and contextually diverse struggles for agrarian reform lies a rank of other hurdles to greater food self-sufficiency. Dependence on industrial food surpluses has dampened

smallholder earnings in local markets, and in the long term this has served to undermine the viability of small-scale farming. Where agro-export-oriented wide range holdings keep commanding notable portions of the best arable land, redistributive land reform continues to remain a priority in efforts to control food deficits and move in the direction of greater self-sufficiency.

One of the most captivating features of food sovereignty is the thought of strengthening direct solidarity-based relationships between producers and consumers

"food is not just another merchandise and the food system cannot be viewed solely according to market logic"

“ Food sovereignty is fundamentally a multidimensional idea.”

Another facet of localization that needs to be considered originates from the reality that urban and peri-urban places are not only areas of consumption but are also increasingly major sites of food production.

While urban agriculture contributes only a small part of total food supply, it is approximated that it helps to feed up to about 800 million people globally. More importantly, it is practiced by a large part of poor urban populations, centred on contributing to urban food security.

Taking into consideration the ongoing migrations of the rural poor to slums, the significance of urban agriculture will continue increase. Urban food production is difficult to quantify, since it stems mainly from independent livelihood initiated by individuals or groups who produce food for consumption and for the market.

Food sovereignty is fundamentally a multidimensional idea.

The only way to be food

sovereign is to grow systems of aggregation, processing, commercialization and distribution that are connected to other sectors of the economy.

Food sovereignty discourses have frequently concentrated closely on food and farmers, but if food producers and consumers are to be truly sovereign, then both will have to be supported by and incorporated into a variety of social, economic and political fora that go well beyond food itself.

In other words, food sovereignty requires a healthy, sustainable and diverse economy that goes well beyond food production.

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Contributors' Corner

Welcome to our contributors' corner where we introduce you to very important personalities who write articles and stories for eco-Instigator.

You would agree with us that articles and reports in all our eco-Instigator publications are educative, informative and at the same time inspiring.

In this edition we feature Dr Sonali Narang is an independent climate change researcher from India. **She can be reached at snarang68@gmail.com**

Enjoy our interview with this great personality.



What Drives Your Passion For the Climate Change Issue?

Climate Change is the largest geopolitical challenge for the mankind in the 21st century. I have been in the process of understanding the phenomenon of climate change from the last 12 years.

When I applied for my M.phil, the world was talking about climate change very piercingly; I started reading more on the same topic. And I did M/phil and PhD on Climate Change and Migration Studies. I am passionate about educating and informing the vast majority of the people about climate change related issue.

Who are refugees, why they are, and various questions pertaining to their life always made me think since my childhood.

My grandfather and grandmother had to come from Pakistan to India and they were victims of the partition of India. Thus, I belong to a refugee family in this sense and hence, my engagement with refugee is in my blood. This is the one among many reasons behind my profound interest towards the several questions/Puzzles related to the life of refugees.

Tell Us About Your Career

When I started my academic career, I chose the issue of refugees as my research area and began to look objectively at this problem. During my field work for Oxford Monitor of Forced Migration article, I interviewed many elderly people who came from Pakistan to India because of partition. It was really a heart touching experience.

They were still strongly connected to their birth place. It was distressing for them to remember the horrifying event but at the same time, I heard the nostalgic voices regarding their birthplace and the life they lived there.

My interest in refugee study has grown enormously after my interaction with those refugees who were victims of partition. I found much literature on political refugees due to partition but there is want of studies on the victims of climate change. So, by this time, I started studying those refugees who are the victim of climate change i.e. climate refugees. For my fieldwork, I visited Sundarbans Island in order to capture the voices of those inhabitants of Ghoramara Island whose lands have already been submerged under the sea and the term 'climate refugee' enjoys no accepted legal sanction.

The irony appears when 'The UN Convention Relating to the Status of Refugees 1951', which is said to be the core treaty of international refugee law, still lacks of clear-cut mentioning of climate and or environment. It is obvious to state that this definition authentically remains to fail to address the needs of climate refugees. I learnt that climate change is anthropogenic and the world has to witness its consequences then I wanted to know more of it since 2006.

If human are causing this climate change then by making the right choices we can minimize its effect. Earth gets warmer with greenhouse gases. Some activities that produce green house gases are burning fossil fuels using electricity made by burning fossil fuels, clearing of land and some industrial processes such as making aluminium and cement.

What are the Effects of Climate Change and What are People Doing About It Around the World?

Some of the effects of climate change are rising temperatures, rising sea levels as ice sheets and glaciers melt, weather pattern changes such as droughts, heat waves, severe storms, floods, higher chances of bushfires and changes in rainfall patterns.

Permanent damage to important and vulnerable ecosystems such as coral reefs, alpine areas and rainforests. As climate patterns change this will have negative impacts on plants, animals and human health.

According to World Bank report, India is already experiencing a warming climate. Unusual and unprecedented spells of hot weather are expected to occur far more frequently and cover much larger areas. Under 4°C warming, the west coast and southern India are projected to shift to new, high-temperature climatic regimes with significant impacts on agriculture. South Asia is a hotspot for the migration of people from disaster-affected or degraded areas to other national and international regions.



Image: Babawale Obayanju

The Indus and the Ganges-Brahmaputra-Meghna Basins are major trans-boundary Rivers, and increasing demand for water is already leading to tensions among countries over water sharing.

Climate change impacts on agriculture and livelihoods can increase the number of climate refugees. Droughts have major consequences. In 1987 and 2002-2003, droughts affected more than half of India's crop area and led to a huge fall in crop production.

Climate Change is a huge problem and one that world leaders need to address urgently to ensure that future generations inherit a healthy and sustainable planet. While world leaders are developing policies and hopefully the latest text offered by the polish presidency in Katowice (COP24) presents little hope that serious climate action is on the agenda instead of massive amount of paperwork is getting ready to be generated.

The first Talanoa Dialogue took place at COP24, during which the international community reviewed global emissions reductions since 2015 and countries discussed how they can step up their efforts and increase their national climate targets.

Further discussion is made on assisting developing countries with Climate funding in carrying out the global transformation and the international community wants to make available 100 billion US dollars annually from 2020 in order to help developing countries and emerging economies to implement the Paris Climate Agreement.

We can all develop good habits that may be small but together have a big impact on our own local environmental Landscape. I have started new initiative Climate hope ([facebook.com/climatehope](https://www.facebook.com/climatehope) 17) to educate masses for changing climate and make them aware how their contribution can make a colossal difference

. Under this initiative we will go in school and colleges and clubs to educate the students and masses. It's time to teach climate change in school and colleges.

We need to give our children the tools to understand the effects of a changing climate for their future and ours. Students and masses hear about climate change discussed in the news as a very real threat, but it is largely absent from science and social science curriculum. It is important that we look to future generations as a source of hope in this time of change and accepting our responsibility to educate future generations by utilizing all of the resources.

In future, I wanted to understand climate change phenomenon so deeply and to do postdoctoral and climate change related projects and moving towards creating a balance between knowledge from 'above' and knowledge from 'below'.

The future of our communities, natural resources and ecosystems landscapes depends on how well we understand value and protect the habitats and species that sustain our world. We need to be practical and give learners the tools to observe the effects of a changing climate for themselves. It's one more way to invest in the future of our planet and let our children shape the world that soon will be theirs.

To quote Carl Sagan, ***“This is our world. It is our responsibility to cherish it.”***

Here are ten tips for everyone:

- Turn off any lights or appliances in your house you don't need on
- Have shorter showers or have baths
- Don't hold the fridge door open for long periods of time

- Ride, walk or catch the bus to school, colleges and car pool

- Get your school and colleges involved in environmental projects

- Recycle as much as you can, clothes, toys, books, Plastic waste

- Adopt an endangered animal

- Consume less, only buy what you really need

- The best thing you can do is plant a tree; trees take the carbon dioxide out of the atmosphere, so the more trees the planet has the better!

- consume vegetarian food, being vegetarian can reduce carbon footprint

A farmer can feed up to 30 people throughout the year with vegetables, fruits, and cereals produced on less than 2.5 acres of land, but if the same area were used for the production of eggs, milk, and/or meat, it would only feed 5-10 people.

Forests in Brazil and other tropical regions are destroyed to make room for raising livestock animals: if the meat industry loses some of its support through vegetarianism, it will directly save the forests.

Climate Change is a serious issue but we need to stay hopeful and remember that together we can make a difference in small ways for better or worse.



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