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An examination of the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger delta regional shorelines to the Atlantic coastline in the gulf of guinea and the hinterland/swamps estuaries, the global environment, updates and implications on the attainment of goal 14 (Life under water) of the united nations sustainable development goals 2019 and its targets

Dr. Sylvanus Abila

Abstract
The paper examines the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines of the Atlantic coastline in the Gulf of Guinea and the hinterland/swamps estuaries, the global environment, updates and implications on the attainment of goal 14 (life under water) of the United Nations sustainable development goals 2019 and its targets. The paper adopts an admixture of the doctrinal, historical, pictorial, comparative, the law and development and empirical approaches. The paper ends with a conclusion and a set of recommendations.

Keywords: Examination, incidents, shoals, dead croaker fishes, washed ashore, floating, Niger delta regional shorelines, Atlantic coastline, gulf of guinea, hinterland/swamps, estuaries, Nigeria, global environment, updates, implications, attainment, goal 14 (life under water), United Nations, sustainable, development, targets

Introduction
In the Month of January shoals of dead croaker fishes were washed ashore and also found floating along the Niger Delta regional shorelines to the Atlantic coastline in the Gulf of Guinea and the hinterland/swamps estuaries [1]. The massive dead fishes were found along the Atlantic shorelines from Bayelsa, Rivers and Delta States of the Federal Republic of Nigeria [2]. Reports collated from the various states mentioned above showed the following:

Bayelsa state of Nigeria
Residents along Foropa Fishtown and Sangana axis of the Atlantic coastline in Brass Local Government Area and Koluama, Ekeni and Ezetu in the Southern Ijaw Local Government Area of Bayelsa State of Nigeria, between the 15th day of March, 2020 started witnessing dead croaker fishes littering the shoreline [3]. While there were prevailing fears amidst safety concerns in the maritime ecosystem. Some of the residents, who spoke in reaction to the said development, opined that the incident was strange and could be an indication of increasing toxicity of the Atlantic Ocean, which could have a negative impact on residents [4]. It was further seen by residents of the above communities that the source of the pollution may have emanated from the facilities in the oil and gas industry. Chevron Nigeria Limited (CNL) which operates an oilfield near the communities in a response to requests for its reaction said, there were no leaks from its facilities in the area [5]. Mr. Esimaje Brikinn, General Manager - Policy, Government and Public Affairs, Chevron Nigeria Limited and Star Deep Company, denied any links with the alleged pollution with the operations of its oil firm [6].

Rivers state of Nigeria [7]

Sometime, between the 15th and 16th April, 2020, residents of Amariari, Lighthouse, River 7, Agaja, Uku-Mbi, Mbisu 1, Mbisu 2, and Ifoko communities in Bonny LGA; Oyorokoto and others in Andoni Local Government Area of Nigeria, also saw dead croaker fishes littered along the shoreline from the Lighthouse all the way to Ifoto on the fringes of the boundary between Bonny and Andoni Local Government Area of Rivers State [8] of Nigeria, along the Atlantic shoreline across the area referred to as the 'Gulf of Guinea'. The fish were also sighted dead and floating on the sea and being washed ashore by waves [9].

Upon learning of the incidence of the dead fishes on the shores and waterways of Bonny Local Government Area, a volunteer team of Bonny indigenes decided to undertake the examination of the general impacts and possible remedies to the situation. The community leaders and members, fishermen, market women who trade on fish and children living in the impacted communities, among others testified of witnessing incidents of shoals of dead croaker fishes onshore and offshore [10]. The fisher-folks further disclosed the following:

1. The odour of the dead fish were scaring away other living fishes thus depriving them of their daily catches.
2. The incidences began about the last week of March 2020 and were in large quantities as much as filling their fishing baskets and boats.
3. Most of the locals took the dead fishes for domestic consumption while others dried the fishes and sold same to their customers both in Bonny and Port Harcourt in the Rivers State of Nigeria.
4. Only the Croaker fishes were affected across all the observed areas.
5. The dead fish were always turning up fresh in the mornings along the shores.
6. The fishermen observed out at sea that some of the fish kept popping up on the surface of the water and some were alive when sighted only to be struggling to stay alive and then die ultimately.
7. Within 2 nautical miles from Lighthouse the fish were all dead but beyond that and as far as the Fairway Buoy many of the fishes were sighted alive only to die later.
8. On the body of the fish, swellings were sighted making it to look like a lesion or boil. When pricked something like a pus would be excreting from it.
9. The fishes were seen to get rottening from the tail, as against the head.
10. The fishes were seen turning green and then it began to get rotten.
11. When spread out on the fire to dry, unlike the normal fishes caught, these do not thoroughly dry up, instead they would disintegrate or scatter.
12. Out at the sea, the locals observed that the tide was carrying fishes from the high sea towards the sea shores, suggesting probably that the cause of their untimely deaths maybe, in the deep sea.
13. Fisher-folks who first witnessed did not alert the relevant authorities but went haywire harvesting them for sales both fresh and dried.
14. In spite of the injunctions by various community leaders that people should not harvest the fish, locals were sighted harvesting them in large quantities. Even at the high sea, several fishing boats were sighted harvesting the fish.
15. Expectedly, residents of the areas have been fetching the free dead fishes as manna from heaven at the time of the lockdown over coronavirus control [11].
16. The Rivers State Government of Nigeria took some steps to get to the root cause of the death of the fishes as the Commissioner For Agriculture, Dr. Fred Kpakol confirmed the strange phenomenon but assured the State that investigation into the cause of the death of the fishes had begun, as samples were taken to a laboratory at the Rivers State University department of fishery [12].
17. Investigations further showed that the samples of the dead fishes found in the two Local Governments have been taken to the Fisheries Department of Rivers State University and the Department of Agriculture and Environmental Studies in the University of Port Harcourt for laboratory analysis to find out the cause of death [13].

Delta state of Nigeria

Reports on the Daily-Trust Newspapers, Nigeria, also indicated, that the Delta State House of Assembly, Nigeria, also met and passed a resolution [14] calling on the Delta State Governor, Senator Ifeanyi Okowa:

"To facilitate an investigation into the cause of the rising cases of dying fishes along the shore lines of River Forcados and Escravos River in the State. They urged Okowa to persuade President Muhammadu Buhari to direct the Federal Ministry of Environment and its parastatals to carry out the investigation.

The resolution, passed as a matter of urgency, came under matters of urgent public importance and was sponsored by the member representing Warri South-West Constituency in the House, Hon Emomotimi Guwor. The House drew attention of authorities to the impending outbreak of another deadly pandemic if necessary actions were not taken" [15].

Guwor, in the motion, said [16] "the River Forcados and Escravos River and their tributaries were under the siege of a yet to be identified disease that is presently killing fishes along the shore lines of the rivers. The lawmaker named areas worst hit to include Ekemetagbene in Bomadi Local Government Area, Akparemogbene, Oyangbene and all communities in Ogulagha and Iduwini kingdom in Burutu Local Government Area as well as the entire Gbaramatu kingdom, all Ugborodo and Orere communities in Warri South West and Ogheye and other communities in Warri North Local Government Area [17] of Delta State in Nigeria.

The motion further sought to appeal to the President of Nigeria "to direct the Federal authorities to protect the biodiversity, conservation and sustainable development of the natural resources and the ecosystems of the affected communities from total extinction. It also urged the Governor to direct the Commissioners in charge of the state ministries of environment and oil and gas to carry out public enlightenment and sensitization campaigns on the health hazards and harmful implications of the consumption of the dead fishes in order to avoid outbreak of epidemic in the State [18]."

The motion also urged the "State Government to send relief materials to the affected communities with a view to alleviating the sufferings of the people whose socio-economic wellbeing and livelihood have been disrupted as a result of the impact of the environmental crisis." The motion also stressed the need for concerted efforts to ensure that citizens of the affected communities live in a cleaner and healthier environment devoid of pollution and pointed out that "any

damage to the ecosystem calls for worry as the entire society has been exposed to danger [19]." Shown below are virtual pictures taken from shoals of dead croaker fishes washed ashore and floating along the Niger Delta Regional shorelines to the Atlantic coastlines in the Gulf of Guinea and the hinterland/swamps estuaries:

Source: https://www.thisdaylive.com/index.php/2020/04/17/thousands-of-dead-fish-washed-up-on-rivers-shoreline/

Source: https://www.vanguardngr.com/2020/04/declare-strange-dying-fishes-in-rivers-health-emergency-stakeholders-urge-govt/, https://dailypost.ng/2020/03/18/epidemic-looms-in-bayelsa-as-stinking-dead-fishes-wash-ashore-in-brass-coastline/

Reactions from experts, non-governmental organizations and government on the incidents of shoals of dead croaker fishes washed ashore and floating along the Niger delta regional shorelines, etc.

This segment examines the views and reactions from different environmental experts, non-governmental environmental agencies and arms of government of the Federal Government who are also stakeholders working for the sustainable development of the environment in Nigeria, as follows:

1. Although, there were speculations that there was a leak from one of the offshore platforms, DAILY POST Nigeria newspapers checks through the operators indicated that none of the companies has admitted to be having an oil leak [20].
2. Adi Noel, an industry expert also said that the incident may have been triggered by the use of dispersants to clean up operational spills. Dispersants are toxic chemicals used to break down crude oil molecules in deep offshore environments far from human settlements [21].
3. Ebi Seigha, a fisherman in Southern Ijaw Local Government Area in Bayelsa State, Nigeria, in a telephone chat with the Daily Post newspaper reporter, Nigeria [22] aid that the fishing communities were worried at the development, adding that they were concerned about the health and safety of the catch as "Dead fishes washed ashore in great numbers are not only a strange occurrence; it points to a very serious environmental safety related matter [23]. "Such dead fishes cannot be said to be windfall to be happy about by residents. It was further observed that, "coastline communities should not only be seriously disturbed, but be made to become aware of the dangers of consuming such fishes or even processing and selling to unsuspecting members of the public since it has health and economic implications given the fact that the coastline communities mainly depend on the sea for the means of livelihood [24].
    a. Another resident of Sangana, a coastline settlement in Bayelsa of Nigeria, Michael Owin, said people have been seeing dead fishes washed and dropped by the tide on a daily basis for some days and creating great fears. He stated further that some unsuspecting people have picked the dead fishes taking them for 'stranded' and eaten them [25]. "It is not unusual to find fishes dropped at the coastline after the tide goes down but that the number is making them curious to suspect that the marine ecosystem must be getting much toxic. "The common fish species here are known to be resilient and sensitive, one would have expected them to migrate deeper but their death in numbers may be an indication of crisis" [26].

According to the renowned environmentalist Rev. Nnimmo Bassey, "the littering of the coastline for more than three weeks may be an indication of increased toxicity of the coastline adding that consuming the dead fishes may pose a

public health danger [27]. Similarly, Surv. Furoebi F.S. Akene is the Chairman, Board of trustees of the Centre for Environmental Preservation and Development-CEPAD-
"It has also become a common knowledge that, the Shell Petroleum Development Company of Nigeria Limited SPDC discharged sludge mixed with chemicals into the waters of the Atlantic Ocean through one of their waste disposals pipes from the Forcados Terminal around Ogulagha and that it was not oil spill from any of the trunk line pipes conveying crude oil from the Forcados terminal but the conspiracy between SPDC and NOSDRA which has become very strong since the assumption of office by the present DG of NOSDRA is making all efforts to down play it" [28].
Finally, reference is made to the view of a one-time Commissioner for Environment in Bayelsa State, Nigeria, on the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines to the Atlantic coastline in the gulf of guinea and the hinterland/swamps estuaries also expressed concern over the continued death of fishes in the Nigeria territorial waters in the past one month [29].

Reactions from the agencies of the federal government of Nigeria

This segment examines the views and reactions from different agencies of the Federal Government of Nigeria who are also stakeholders working for the sustainable development of the environment in Nigeria, as follows
1. Mr. Ibrahim Goni, the conservator-general of the National Park Service in Nigeria, in reacting to the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines opined that:
"Maybe the result of dumping from international fishing trawlers on international waters especially since they are all of a particular stock. Sea poisoning, dynamite fishing or oil pollution cannot be this selective in fatality. This can only come from dumping by croaker trawlers perhaps operating illegally in international waters. These then get washed ashore. The dumpings may not even be within our territorial waters but the currents then carry them onto our coastal shores could be trans-boundary dumping [30]."
He further, also stated, drawing from his experiences in dealing with animals as follows: [31]

a. Animals can sometimes appear healthy even when they are carrying germs that can make people sick, depending on the zoonotic disease.
b. Zoonotic diseases range from minor short-term illnesses to a major life-changing illnesses that can even cause death. Residents and others in Bonny in preliminary investigations have determined the species of dead fish being washed ashore as croaker.
c. According to the reports, the fishes appeared to be contaminated by some unidentified chemical. Some were swollen, excreting pus from their dead bodies, turned green and had a pungent odour that could be smelt from a distance. The Service has warned such fish should not be allowed to enter the markets around the community to prevent serious health dangers.
d. With a massive and rising death toll, and crumbling economic and education systems, the world has already taken serious hits from COVID-19.
e. Any possible further incident must be quickly brought under control so as to nip in the bud another zoonotic disease - this time originating from Nigeria.
f. The pandemic [that is COVID-19] has been linked to a wildlife market in the Chinese city of Wuhan, where it first emerged. The Service is of that opinion that Nigeria could not afford another zoonotic disease while still battling with the scourge of COVID-19.
g. Zoonotic diseases are diseases that can be transmitted from humans to animals or animals to humans. Coronaviruses have been in animals for a long time, but a new strain that emerged this year and infected humans for the first time has been found responsible for the ongoing pandemic of COVID-19.

2. On the part of The Nigerian Maritime Administration and Safety Agency (NIMASA), the agency stated that it had commenced a scientific inquiry to identify the cause of the recent shoals of dead fish washed ashore along the Niger Delta coastline states of Bayelsa, Delta, and Rivers States and other places within the region. The Agency also sent a warning to the general public, especially, the fisher-folk in the affected areas, about the dangers of consuming or selling the dead fish to unsuspecting members of the public. In the words of Bashir Jamoh, Director-General of NIMASA:
"We are working with relevant scientific experts to isolate the cause of the abnormal issue of dead fish along the Niger Delta coastline. We want to identify the cause and establish what can be done to alleviate the adverse effects of this occurrence on the people and the marine environment in the affected areas. While we are working to decipher and mitigate this strange incident, we appeal to locals in the affected communities and those who trade in aquatic animals to avoid consumption and sale of the dead fish, as such acts may carry criminal liabilities, especially with regard to deliberate sale of the dead fish to the public [32]."
Bashir Jamoh further said that "tripodal investigation would involve an examination of the dead fishes as well as water and sediment analyses" [33]. According to him "NIMASA has the mandate to regulate and protect the country's marine environment as provided for in the Merchant Shipping Act 2007 and in compliance with the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 1973/78), and other relevant instruments aimed at protecting the maritime domain" [34].
On the 21st day of April, 2020, the Nigerian National Oil Spill Detection and Response Agency (NOSDRA) issued a press release signed by Idris O. Musa (Director General/Chief Executive) wherein it stated as follows:

1. "There had been a number of postings in the social media as well as the mass media on the sudden appearance of dead fishes along the shorelines of Bayelsa, Delta and Rivers States.
2. The National Oil Spill Detection and Response Agency (NOSDRA) carried out a reconnaissance of the area in Delta State where they first got the report through a member of a Non-Government Organization. There was no incidence of oil spill within the area of reported dead fishes notwithstanding that a few dead fishes were seen along the shoreline.
3. The event of recent days where the death of fishes in large numbers occurred made it expedient to look beyond oil spillage as the likely cause of the death of fishes in such number. The agency proceeded to collect sample of water, sediments and some of the dead fishes for laboratory testing.
4. In doing so, the agency brought on board other relevant agencies of government that equally have mandates on

our territorial waters particularly, Nigeria Maritime Administration and Safety Agency (NINASA), Nigerian Institute of Oceanography and Marine Research (NIOMR), the Federal Institute of Fisheries Research and National Environmental Standards and Regulations Enforcement Agency (NESREA) for an all hands on deck assessment of possible cause(s) of the death of the fishes in such large numbers.

5. Currently, the analyses were being carried out and that their findings will be jointly considered by these relevant stakeholders to enable an appropriate solution as well as put in place more stringent regulations in the future. It is equally important to reiterate that, the avoidance of serious incidents like this, accounted for why there was a limitation to the use of chemical dispersants regulation that prescribe the conditions and where such could be used in water bodies in Nigeria and that the agency will continue to strive for a livable and sustainable environment in our dear country.
6. Mr. Idris Musa, Director-General of Nigeria's National Oil Spills Detection and Response Agency (NOSDRA) said the spill agency will commence an investigation as soon as the lockdown for the COVID-19 is lifted [35]."

As a follow up to an earlier press release, the NOSDREA issued a 2nd press release of NOSDREA containing a report of the mass fish kill (sic) along the coastline of Bayelsa, Delta and Rivers States dated 13/05/2020 and signed by IDRIS O. Musa (Director General/Chief Executive) with the preamble recalling "reports in the mass and social media a few weeks back in respect of dead fishes washed ashore the Nigerian coastline in Bayelsa, Delta and Rivers States" [36] and proceeded to state the following:

1. The National Oil Spill Detection and Response Agency (NOSDREA) went to the areas aforementioned to pick samples of water, sediments and the dead fishes for laboratory analyses. Similarly, relevant Government Agencies which have mandates on the marine environment such as the Nigerian Maritime Administration and Safety Agency (NIMASA), Nigerian Institute of Oceanography and Marine Research (NIOMR), National Environmental Standards and Regulations Enforcement Agency (NESREA), and the Federal Institute for Fisheries Research were notified for collaboration on the need to swing into action in order to unravel the likely causes(s) of the death of the fishes. The agency informed these other agencies that its findings would be shared with them at the end of the analyses to the carried out by it.
2. The results of the laboratory were perused, and explanations made on the parameters of concerns that were analyzed for the purpose of clarity and understanding. And that, as earlier mentioned, the findings did not show hydrocarbon (Oil) as the possible cause of the death of the fishes. In the course of the analyses, Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbon (PAH), Benzene, Toluene Ethylene and Xylene (BTEX) were within regulatory standard limits in water, sediments and fish tissue analyses. However, there were some heavy metals such as Cadmium, Chromium Copper, Zinc and Iron that exceeded regulatory standard limits in the coastlines of the three aforementioned states.
3. In the water samples taken at the coastline in Bayelsa State, the values of Cadmium and Iron were higher than the regulatory standards limit.
    a. The Cadmium in the water was between 0.001 and 0.173 mg/l with an average value of 0.064 mg/l. This is above the regulatory limit of 0.05 mg/I as well as the control sample value of 0.08 mg/l. similarly, the value of the iron content in water in the area ranged between 1.914-3.408 mg/l with a mean value of 2.503mg/I. This is above the regulatory limit of 1.00 mg/l.
    b. The values of the parameters in sediments were substantially within regulatory limits.
    c. The values of chromium and copper in the sampled dead fishes' tissue were slightly higher than the European Union (EU) Standards limits. Chromium was 1.53 mg/kg with a mean value of 1.01 mg/kg as against EU's 0.5 mg/kg.
4. In the water samples taken at the coastline in Delta State, the values of Cadmium, Iron as well as Zinc is higher than the regulatory standards limits.
    a. The Cadmium in water was between 0.07-0.184 mg/l with an average of 0.158 mg/l. This was above the regulatory limit of 0.05 mg/l as well as the control sample which was 0.08 mg/l.
    b. The value of iron ranged between 1.220-2.064 mg/l with a mean value of 1.699 mg/l. This is higher than the regulatory limit of 1.00 mg/l.
    c. The Zinc in the water ranged between 0.079-0.184 mg/l with a mean value of 0.238 mg/l. This is higher than the control sample value of 0.145 mg/l.
    d. The value or Copper in the sampled dead fishes was 0.66 mg/kg as against 0.5 mg/kg in the regulatory limit.
    e. All other parameters of concern such as chromium, TPH, BTEX, PAH and nickel were within the regulatory limits.
    f. The values of TPH, Cadmium, PAH, BTEX, Mercury, Barium in the analysed samples of sediments were within the regulatory limits.
5. In water samples taken at the coastline of Rivers State of Nigeria all the parameter of concerns analyzed namely: TPH, PAH, BTEX, Chromium, Copper and Mercury were within the regulatory limits except dissolved oxygen which meant that the value of 5.55 mg/l was slightly higher than the regulatory limit of 4-5 mg/l. similarly, the values of TPH, PAH, BTEX, Chromium, Copper and Zinc in the sampled dead fishes were within regulatory limits.
6. In the light of the foregoing, noting that hydrocarbons were not responsible for the death of the fishes, the plausible cause(s) could partially be attributable to other anthropogenic activities which were probably land based.
    a. In this case, while it is commonly observed that most industrial and domestic waters which contain heavy metals such as cadmium, iron, zinc, copper found their ways into drainages an are onwardly transferred to the water bodies; their deleterious impact may be negative to aquatic species, other mammals and human beings. The main sources of these were batteries, galvanized pipes, fertilizers, sewage sludge and plastics. Such may be the case in the analyses of dead fishes found at the coastline in Delta and Bayelsa States of Nigeria where chromium was found in fish tissue. Copper was also found in fish

tissue sampled in Delta State but not in those of Bayelsa and Rivers State - all in Nigeria.

b. Furthermore, a sudden release of heavy metals is not likely to kill fishes except those trapped at the point of release because; cadmium in particular is highly toxic.
c. Long term accumulation (chronic) rather than short term (acute) heavy metals could cause the death of fishes.
d. It is also curious that a specific species of fish is allegedly involved in the circumstance under consideration. That it further pointed to the fact that Nigeria as a nation needed to pay more attention to the activities of those illegally carrying out fishing in Nigeria's territorial waters to guard against possible dumping of waters as well as unwanted aquatic species. The pictures below show the investigative activities of NOSDREA at the shorelines of the Niger Delta regional shorelines to the Atlantic coastline in the gulf of guinea and the hinterland/swamps estuaries.

It is surprising to note that the NOSDREA and its sister agencies appear to have ended up this massive ecological disaster leading to the mass death of croaker fishes on the door of mere press releases as shown above. More worrisome is the failure of NOSDREA and its sister agencies to keep fate with their promise at their 1st media briefing were they stated, amongst other things, as follows:

"Currently, the analyses are being carried out and our findings will be jointly considered by these relevant stakeholders to enable an appropriate solution as well as put in place more stringent regulations in the future. It is equally important to reiterate that, for the avoidance of serious incidents like this, accounts for why there is a limitation to the use of chemical dispersants regulation that prescribe the conditions and where such could be used in our water bodies. The agency will continue to strive for a livable and sustainable environment in our dear country".

As shown above there is no sign of any "appropriate solution" nor is there any form of "more stringent regulations" as they held out in their 1st press release.

From the examination of the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines to the Atlantic coastline in the Gulf of Guinea and the hinterland/swamps estuaries, clearly show the negative impacts of the incidences contained in this study on the environment, economy and the lives of the people of the Niger Delta region of Nigeria who live along the said area and by extension the global environment, spanning from the hinterland/swamps estuaries to the Atlantic coastline in the Gulf of Guinea. Furthermore, though unimpressive, the report of the NOSDREA clearly show valid threats on the attainment of goal 14 (life under water) of the United Nations sustainable development goals 2019 and its targets specifically and on the global environment, generally.

Worthy of urgent note, for example, are the potential negative effects of pollutants such as batteries, galvanized pipes, fertilizers, sewage sludge and plastics on life under water. Here, for example, the NOSDREA report and analyses show, from a clinical analyses of the dead fish along the coastline the presence of "chromium" just as "copper" was also "found in fish tissues sampled in Delta State". It is now axiomatic that "most industrial and domestic waters which contain heavy metals such as cadmium, iron, zinc, copper find their ways into drainages and onwardly transferred to the water bodies. Their deleterious impact may be negative to aquatic species, other mammals and human beings". To this end, the findings of NOSDREA casts a great burden on the global community to work towards removing the negative impacts of the sources of pollution mentioned above if the global community must achieve the laudable.

A summary of goal 14 of the 2019 United Nations sustainable development goals and its targets

This author has maintained in a related article and reproduced here to the effect that: "goal 14 of the millennium development goals 2019 of the United Nations, essentially deals with the conservation and sustainability in the use of the oceans, seas and resources in the marine sector of the global economy. It is submitted that this goal is founded on the fact that, oceans, lakes, rivers, wetlands, excavated wells, rain water, ponds and coastal waters which provide the key natural resources including medicines, food, biofuels and other products. These products are also known to contribute to the breakdown and processes of removal of pollution and wastes generally and also contributes in the process of acting as buffers around the coastal ecosystems in reducing damages from arising from storms. Apart from ensuring the maintenance of healthy coastal waters, rivers or oceans" [37]. The targets this goal seeks to attain, in summary are: (1) environmental sustainability, etc. [38]. (2) prevention and reduction of marine pollution of all kinds, etc. (3) sustainable management and protection of marine and coastal environment, etc. (4) minimizing the impacts of ocean acidification, etc. (5) regulating harvesting and end overfishing, etc., (6) conservation of at least 10 per cent of coastal and marine areas, consistent with national and international law, etc. (7) prohibition of certain forms of fisheries subsidies which contribute to overcapacity and overfishing, etc. (8) increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, etc. (9) increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries, etc. [39].

As stated earlier above and as ambitious as the above goal and its targets are towards its achievement of sustainable development and the protection of life under water, it is submitted that the challenge facing life under waters in Nigeria and the global environment posed by shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines to the Atlantic coastline in the gulf of Guinea and the hinterland/swamps estuaries the global environment and the implications for the attainment of goal 14 (life under water) of the United Nations sustainable development goals 2019 and its targets not only in Nigeria but in several other nations, as shown, by the examples drawn above, in this paper. The United Nations may need to take more drastic steps to deal with the issues mentioned in this paper more seriously. It may need to add bites to treaties, conventions and international legislations, most of which, at the moment, appear lying dead, only in the various conventions but hardly making any deterrent effects on many nations of the world, especially in Africa generally and in the Nigerian coastal waters specifically.

Conclusion

This paper has attempted to examine the recent incidents of shoals of dead croaker fishes washed ashore and floating along the Niger Delta regional shorelines to the Atlantic coastline in the gulf of Guinea and the hinterland/swamps estuaries, the global environment, updates and implications on the attainment of goal 14 (life under water) of the united nations sustainable development goals 2019 and its targets. The paper, amongst other things, is of the view that much still needs to be done to actualize the targets set under goal 14 of the United Nations' sustainable development goals 2019. The following recommendations drawn from the above analyses are hereby made.

Recommendations

1. That the global community effectively manages to stop sewage wastes sediments from entering rivers and oceans.
2. That the global community works together to reduce industrial and domestic waters which contain heavy metals such as cadmium, iron, zinc, copper which ultimately find their ways into drainages an onward transfer to the water bodies as their deleterious impact may be negative to aquatic species, other mammals and human beings.
3. That the global community reduces the major sources of batteries, galvanized pipes, fertilizers, sewage sludge and plastics as such may find their ways into the seas and water courses as was found in the analyses of dead fishes found at the coastlines in Delta and Bayelsa States in Nigeria where chromium was found in fish tissues.
4. It is also submitted that humanity make Safe, sustainable seafood choices globally since global fish populations are rapidly being depleted due to demand, loss of habitat, and unsustainable fishing practices and the toxication of the waters bringing about a mass pollution of waters in oceans, the hinterland/swamps estuaries, the global environment.
5. From the findings of NOSDREA, shown above, it is important to warn not only those who are involved in harvesting and consuming the obviously polluted croaker fishes because of the lethal materials found in the dead fishes as it could lead to other outbreak of a pandemic in Nigeria and the rest of the global community.
6. As this author has said elsewhere: "For open ocean and deep sea areas, sustainability can be achieved only through increased international cooperation to protect vulnerable habitats. Establishing comprehensive,

effective and equitably managed systems of government-protected areas should be pursued to conserve bio-diversity and ensure a sustainable future for the fishing industry", and also that:

7. "On a local level, we should make ocean-friendly choices when buying products or eating food derived from oceans and consume only what we need. Selecting certified products is a good place to start".
8. Nations should increase the sensitization of the global community about the importance of marine life and the need to protect it.
9. The author also calls for a declaration that the Croaker Fish as at now, be avoided and not allowed to be bought or sold, and not harvested wherever it is sighted whether dead or alive with a view to staving the likely outbreak of a pandemic in Nigeria and other neighboring countries of the world.
10. Law enforcement and security agencies be mandated to enforce the ban on harvesting and consumption of the croaker fish onshore and offshore, in Nigeria within the impacted regions and neighboring countries until proper remedial and life saving measures have been put in place.

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