

Effects of Environmental Pollution on Life and Its Preventions in Ghana

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Abstract

This research work will discuss and highlight the problem of environmental pollution and waste mismanagement in Ghana. Everything that surrounds us is directly or indirectly linked with the environment in which we live, and these things affect the environment either negatively or positively. Not only the man, but also other living things as well as nature have effects on our environment.

Almost every person living in this World is worried about environmental pollution because we experience their consequences through the food we eat, the air we breathe, the water we use for our daily activities and through the radiations we are exposed to in our environment. Also, the effects of environmental problems are manifested through the lack of natural resources, extinction of plants and animals' species, bad smell in our environment, flooding as well as the rise of epidemic.

The rapid urbanization and industrialization in the last few years have resulted in the significant emission of pollutants that cause negative effects on the urban population, the built environment as well as the terrestrial and aquatic habitat.

This research work seeks to address the challenges of environmental pollution, the effects of pollution on the environment and how to manage waste in our environment by gathering data from the field through observation and interviewing of laymen (ordinary citizens), environmental experts, journalists and teachers to organize their ideas on how environmental pollution can be curbed in Ghana.

Keywords: Air pollution, Water Pollution, Land Pollution, Noise Pollution, Urbanization and Migration, Environment and Waste Management.

Introduction

One of the life- threatening problems facing many countries today is pollution. It can simply be explained as the process by which our environment is damaged and made harmful to the quality of life. A polluted environment leads to the outbreak of diseases around us, yet people tend to have no idea or awareness of this grave issue at hand. Pollution in any form; whether in the water we drink, the air we breathe, the land where we grow our food or the increasing noise, we hear every day contribute to many health hazards and therefore lower the quality of life of individuals.

The man, as well as all other living beings from the beginning of existence is closely linked with the entire inanimate things that surround us. This interaction between man and his environment affects our environment in diverse ways. Through the development of man, he develops his interest in the way and manner that would harmonize with the nature that surrounds it to ensure the conditions necessary for their survival. With each new discovery and invention in this age of technological advancement, man makes a bigger part of the eternal desire to reconcile nature and its needs.

Modern urbanization, industrial, economic and technological development has provided great benefits to man, but the industrial air and water pollution, uncontrolled deforestation, illegal mining, littering our environment, depletion of the ozone layer, the accumulation of waste substances as well as the eradication of certain plants and animal species are some of the negative effects of human activities which endanger the environment in which we live. The protection of the environment in this modern time is of great concern as it helps in the prevention and elimination of environmental pollution. Protecting our environment should be seen as a national concern so as to achieve the goal for our own safety. Therefore, in order to achieve the intended goal, actions must be taken at the national, regional and local or municipal levels. From a critical viewpoint of how we live today, it can be concluded that we live in a World of waste, because of increasing production, urbanization and

population growth which are on the increase. Huge amount of waste substances is produced daily and how to manage, process and recycle such wastes seems challenging to many countries. However, waste substances are deposited in certain parts of the cities for a long time and allowed to decompose at these waste storing joints reproducing mice, insects, rats and other harmful creatures which contribute to the spread of infections and diseases in our communities. These waste substances act as dangerous pollutants to air, water and land. This situation and its effects pose a threat to human health, for both present and future generations.

Objectives of the study

The main objectives of this study are:

- a. To highlight the harmful effects of environmental pollution and waste mismanagement in Ghana.
- b. To generate practical ideas through interviews to help solve the issues of environmental pollution in Ghana.

Explanation of keywords and literature review

The keywords that may be relevant to this research are air pollution, water pollution, land pollution, noise pollution, urbanization and migration, waste management and recycling. These are explained below:

Environmental pollution

Environmental pollution is a wide- reaching problem affecting both developed and developing countries. It can simply be explained as the process by which our environment is damaged and made harmful to the quality of life. This can be broken down into sub-sections such as air pollution, water pollution and land pollution.

(Sharp & Bromley, 1979) posit that “Study finds that these kinds of pollutions are not only seriously affecting the human by diseases and problems but also the animals and trees/ plants.” According to authors, (Sharp & Bromley, 1979) “there is still time left in the hands of global institutions, governments and local bodies to use the advance resources to balance the environment for living and initiates the breathed intellectuals to live friendly with the environment. As effective reply to contamination is largely based on human appraisal of the problem from every age group and contamination control program evolves as a nationwide fixed cost-sharing effort relying upon voluntary participation.” This shows that curbing environmental pollution is the responsibility of everyone in the country. That is, we must willingly come together to combat this deadly situation.

Air pollution

The air we breathe is an essential ingredient for our well-being and a healthy life. Unfortunately, polluted air is common throughout the world (EPHA, 2009) especially in developed countries from 1960s. Polluted air contains one or more hazardous substance, pollutant, or contaminant that creates a hazard to general health (Health and Energy, 2007). Air pollution in cities reduces the lifespan of city dwellers (Progressive Insurance, 2005). Holland et al, (1979) showed that British scientists came to a conclusion that particulate and related air pollution at high levels pose hazards to human health.

According to Mishra (2003), increase in urban population, industrialization, and high demands for energy and automobiles are the major cause of air pollution. He made mention of other factors such as poor environmental regulation, congested roads, and over- aged vehicles also add up to the problem. He again added that air pollution is caused by both natural and man-made sources. The major man-made sources of air pollution include tobacco smoke, combustion of solid fuels for cooking, heating, home cleaning agents, insecticides industries, automobiles, power generation, poor environmental regulation, less efficient technology of production, congested roads, and age and poor maintenance of vehicles. The natural sources include incinerators and waste disposals, forest and agricultural fires (European Public Health Alliance, 2009). This explains the major effects of polluting our environment.

Water pollution

This is where our water bodies are polluted and made harmful for use. It can also be explained as the contamination of any source of water with industrial waste, sewage, mining and other materials that are considered to be detrimental to living organisms. 'The water we drink is essential ingredient for our wellbeing and a healthy life. Unfortunately, polluted water and air are common throughout the world' (European Public Health Alliance, 2009). The World Health Organization states that one sixth of the world's population, approximately 1.1 billion people do not have access to safe water and 2.4 billion lack basic sanitation (European Public Health Alliance, 2009). Polluted water consists of industrial discharged effluents, sewage water, rain water pollution (Ashraf et al, 2010). Water pollution affects the health and quality of soils and vegetation (Carter, 1985). Some water pollution effects are recognized immediately, whereas others do not show up for months or years (Ashraf et al, 2010). Estimation indicates that more than fifty countries of the world with an area of twenty million hectares are treated with polluted or partially treated polluted water (Hussain et al, 2001) including parts of all continents (Avdeev & Korchagin, 1994; Carter, 1985; Kan, 2009; Khan, 2010; Krześlak & Korytkowski, 1994; Wu et al, 1999) and this poor quality water causes health hazard and death of human being, aquatic life and also disturbs the production of different crops (Ashraf et al, 2010; Scipeeps, 2009). In fact, the effects of water pollution are said to be the leading cause of death for humans across the globe, moreover, water pollution affects our oceans, lakes, rivers, and drinking water, making it a widespread and global concern (Scipeeps, 2009). These references from other Scholars' works highlight the pollutants and the harmful effects of water pollution and the need to rise to protect our water bodies.

Land pollution

Land pollution is one of the major forms of environmental catastrophe our world is facing today (Khan, 2004). It can be explained as the process where the actions and inactions of mankind deteriorate the quality of the land and makes it unproductive, harmful to the survival of humans and other living organisms and also makes it less effective to serve the needs of mankind and other living organisms. Improper management of solid wastes is one of the main causes of land pollution. Illegal mining has been one of Ghana's major challenges, coupled with deforestation and improper dumping of refuse which is gradually deteriorating the land. Land pollution leads to scarcity of food in a country. Pollution of land resulting from illegal mining also causes threats to humans and animal's life. Land pollution makes the soil infertile, unproductive and makes it unable to produce its intended yield.

Harmful effects of environmental pollution on humans, plants and animals

Air pollution results are cancer (Ries et al. 1999; European Public Health Alliance, 2009), neurobehavioral disorders (Blaxill 2004; Landrigan et al. 2002; Mendola et al. 2002; Schettler 2002; Stein et al. 2002), cardiovascular problems (European Public Health Alliance, 2009; Tillett, 2009), reduced energy levels (Colls, 2002), premature death (European Public Health Alliance, 2009), asthma (Brauer et al, 2007; Gehring et al, 2002; Jacquemin et al, 2009; Mannino et al. 1998; McConnell et al, 2006; Modig et al, 2006), asthma exacerbations

(D'Amato et al, 2005; Heinrich & Wichmann, 2004; Künzli et al, 2000; Nel, 2005;), headaches and dizziness (Colls, 2002), irritation of eyes, nose, mouth and throat (Colls, 2002), reduced lung functioning (Colls, 2002; Gauderman et al, 2005), respiratory symptoms (Colls, 2002; Vichit-Vadakan, 2001), respiratory disease (European Public Health Alliance, 2009; Firkat, 1931), disruption of endocrine (Colls, 2002; Crisp et al, 1998) and reproductive and immune systems (Colls, 2002; European Public Health Alliance, 2009). London Fog episode of 1952, where a sharp increase in particulate matter air pollution led to increased mortality among infants and older adults (Woodruff et al, 2006). High air pollution levels have been linked to infant mortality. (Fereidoun et al, 2007). Air pollutants can also indirectly affect human health through acid rain, by polluting drinking water and entering the food chain, and through global warming and associated climate change and sea level rise. (Mishra, 2003). Associations between particulate air pollution and respiratory disease are reported in Meuse Valley, Belgium, in December 1930 (Firkat, 1931). According to Gardiner (2006) 'acid rain

destroys fish life in lakes and streams and kill trees, destroy the leaves of plants, can permeate soil by making it inappropriate for reasons of nutrition and habitation, unwarranted ultraviolet radiation through the ozone layer eroded by some air pollutants, may cause skin cancer in wildlife and damage to trees and plants, and ozone in the lower atmosphere may damage lung tissues of animals and can

prevent plant respiration by blocking stomata (openings in leaves) and negatively affecting plants' photosynthesis rates which will stunt plant growth; ozone can also decay plant cells directly by entering stomata.

Chemical polluted drinking water produces waterborne diseases like, giardiasis, amoebiasis, hookworm, ascariasis, typhoid, liver and kidney damage, alzheimer's disease, non-hodgkin's lymphoma, multiple sclerosis, hormonal problems that can disorder development and reproductive processes, cancer, heart disease, damage to the nervous system, different type of damages on babies in womb, Parkinson's disease, damage to the DNA and even death, meanwhile, polluted beach water contamination can cause infections such as stomach aches, encephalitis, hepatitis, diarrhoea, vomiting, gastroenteritis, respiratory infections, ear ache, pink eye and rashes (Water Pollution Effects, 2006). Loss of wild life is directly related to pollution (Progressive Insurance, 2005) and according to Water Pollution Effects (2006) on animals),

(i) Nutrient polluted water causes overgrowth of toxic algae eaten by other aquatic animals, and may cause death; it can also cause eruptions of fish diseases,

ii) Chemical contamination can cause declines in frog biodiversity and tadpole mass

iii) Oil pollution can increase susceptibility to disease and affect reproductive processes and negatively affect development of marine organisms and it can also be a source of gastrointestinal irritation, damage to the nervous system, liver and kidney damage.

iv) Mercury in water can cause reduced reproduction, slower growth and development, abnormal behavior and death v) Persistent organic pollutants may cause declines, deformities and death of fish life and Fish from polluted water and vegetable/ crops produced or washed from polluted water could also make impact on human and animal health. More sodium chloride (ordinary salt) in water may kill animals and plants. Plants may be killed by mud from construction sites as well as bits of wood and leaves, clay and other similar materials and plants may be killed by herbicides in water (Kopaska-Merkel, 2000). For tree and plants, water pollution may disrupt photosynthesis in aquatic plants and thus affecting ecosystems that depend on these plants (Forestry Nepal, n.d).

According to Tutorvista (n.d), land pollution effects are cancer, including leukaemia and it is dangerous for young children as it can cause developmental damage to the brain. Furthermore, it is illustrated that mercury in soil increases the risk of neuromuscular blockage, causes headaches,

kidney failure, depression of the central nervous system, eye irritation and skin rash, nausea and

fatigue. Soil pollution closely associated to air and water pollution, so its numerous effects come out as similar as caused by water and air contamination. According to TNAU Agritech Portal (n.d), soil pollution can alter metabolism of plants and reduce crop yields and same process with microorganisms and arthropods in a given soil environment; this may obliterate some layers of the key food chain, and thus have a negative effect on predator animal class. Small life forms may consume harmful chemicals which may then pass up the food chain to larger animals; this may lead to increase in mortality rates and even animal extinction.

Methodology

The methods used for gathering data are observation and interviews. **Observation:** The researcher embarked on a leisurely stroll to renowned places in some cities of Ghana and its suburbs specifically Odawna, Circle, Chorkor, Mallam and Mamprobi, all in the Greater Accra Region in Ghana. The researchers observed piles of rubbish at some vantage points; markets, bus terminals (lorry stations) and in streets.

Again, the researcher observed some citizens could throw containers, bottles, tins, sachet of food bought and eaten in streets. They could dump it anywhere in the streets.

The researcher also observed people urinating at inappropriate places. People got closer to anywhere there are bushes and urinate. It was also observed that cars with weak engines polluted the environment with smoke. The noise of the city which disrupted public peace could not be overlooked.

Interviews (Question and answers): The researcher engaged some citizens in a dialogue and asked them about their opinions concerning the issue of environmental pollution in the country. Some of the people who were less busy at their workplaces shared their opinions. The researcher asked ten (10) laymen (ordinary citizens) to seek their views on the question, “Why do you think some people dump anywhere?” One said pointing his hand through the streets, “there are no dustbins in the streets, and people do not feel comfortable in keeping rubbish of food they eat or drink in their pockets or bags. The government must provide adequate dustbins at vantage points in the streets so that people can dump in it.”

Another also said, “It is the attitude of the people, and it is about time they changed from such irresponsible behavior. Whether there are dustbins in the streets or not, they should keep their rubbish and dump it in appropriate places.”

One also added, “People dump refuse haphazardly because the laws of the country are flexible and its implementations are ineffective. If the government could arrest offenders and fine them or detain culprits for hours in the police cells, this problem would be solved and it would be a thing of the past”

One bag trader also added her opinion. She said “the sanitation officers do not their work well. They only sweep and clean small portion of the cities and streets without any proper supervision from their leaders and close from work. At the end of the month, the government pays them without thorough supervision of their daily works”

The leader of the Market Women Association in Mallam also said that “ the market women sweep their stalls and the entire market every day and keep their wastes in the dustbins provided by the government and cover it neatly but the sanitation agencies do not come to empty the dustbins quickly for them. It could be there for long emanating stench before they would come for it.” She added that ‘when this happens, the dustbins become full and the market women had no option but to choose an appropriate place closer to the market and dump their rubbish there.’ She pleaded that the sanitation officers should come to empty the dustbins promptly in order to prevent the market women for setting up refuse dump in the open.

These are samples of opinions given by the market women and the laymen in the street, each indicating why there are so many waste substances in our communities. Others also shared similar views which are in line with the above discussed.

The researcher also asked them “how can you manage or store your wastes safely to avoid polluting the environment?”

One vegetable seller said “to me, each seller must get a container to store up their waste and later discard it at the appropriate places after work. When this is done, there will be no waste in the market and that the place will look extra neat.” Another said that, “food vendors must be cautioned to advise their customers not to throw the rubbish of the food they buy on the floor but they should have dustbins so that their customers would dump in it.” One shoe seller also said that “the traders have come to agreement to put any person who dumps on the floor to order by calling such person to pick whatever they throw on the floor back into the dustbin.” The leader of the Market Women Association added that “We have put mechanisms into place to avoid polluting our environment and to make our market attractive for our health sake. The market women have donations we make at the end of every month, and we have agreed to buy enough dustbins out of our donations to help us keep our environment very hygienic. I therefore call all marketing associations to do same or similar to keep their environment clean for themselves and their customers.”

Again, the researchers interviewed five (5) journalists who do not want their identity to be revealed about matters related to the environment and how they think the role of the media can curb environmental pollution.

These are the opinions shared by the journalist: “Ghana is a country of about twenty-seven millions of population, but there are not enough journalists specialized on environmental issues. Works on the environment and the quality of coverage on the environment depends on the personal interest and commitment of the journalists and editors. Also, the government does not run enough advertisement on the media coverage day to day to make it part of the citizens and guide them in their relationship with the environment.” They also said that most of such advertisement or notices are made in the newspapers, but this discriminate between the educated and the illiterates as about 65% of the citizens

read newspapers daily. The rest of the citizens do not get the impact of such advertisement. Similar issue popped up when a concern was raised to the coverage on television. One of the journalists said, "There is still a language barrier in the television advertisement. This is because Ghana is a big country with different dialects. During advertisements on television, translations of about five popular local dialects in addition to English Language are considered. The question is: What happens to the rest of the citizens who speak none of these languages and the illiterates in the country? I therefore urge the government to consider translating other languages and dialects whether popular or unpopular within the country if she wants a total change of behavior." One journalist also added that sometimes when members of the Ministry of the Environment and natural resources are invited for either television or radio shows to help use those platforms to educate the citizens on the effects of pollution, some turn down their invitations that they are very busy in their offices. The main heads also do not mostly come but send a representative (representatives) who are not able to explain matters into details as the head would have done. They unanimously agreed that despite the various limitations faced by the media in educating the public about the harmful effects of environmental pollution and creating awareness of the importance of protecting our environment, the impacts of the media as far as the environment is concerned so far has been great.

Again, the researcher interviewed a group of teachers to seek their opinions on how environmental pollution can be curbed. Teachers were considered because they directly nurture children and human resources of the country. They were thought of as a group that could be used to curb environmental pollution by inculcating in their students the need to protect our environment and also the benefits of keeping our environment clean. In the opinions shared by the teachers, the teachers claimed that the government is very conscious of the fact that it is the same children they teach today who would leave the school system one day after graduating entirely from the school to fill their societies. Due to that, the government has introduced some courses or subjects which students in the Basic Schools, High Schools and even the Tertiary Institutions learn to inculcate in the students an environmental- friendly behavior. At the basic level, the teachers said the government has introduced subjects like Environmental Studies, Social Studies and Citizenship Education. They claim these subjects specifically create awareness of the immediate environment of the child and how the children are to relate to the environment in which they live. One teacher said that, 'introducing such subjects into schools at such an early stage of the life of children has helped guided the behavior of children and has created some awareness and consciousness in the children on how to avoid polluting the environment and in general how to relate to the environment. Such children may grow and would not depart from the teachings they have had in school and even caution their parents and some siblings who are illiterates on how to relate to the environment.' Also, the teachers said subjects like Geography, Science and Social Studies are also taught in the High Schools which create the students' awareness of how to treat and relate to the environment. In the tertiary level, subjects like Sociology, Ecology and others which directly relate to the environment are taught. This helps to create awareness of the environment and how to relate to it even at the tertiary level. The teachers concluded that as far as education is concerned, they are trying their best to educate their students on the need to keep their environment clean and also be conscious of how to relate positively to their immediate environment. One of the teachers said that 'this would be totally evident and come to fruition some years to come when the total number of the educated population mightily exceed the uneducated in the country.' The above are the opinions of a group of teachers who willingly agreed to contribute to the study.

Despite the interviews granted above on how to curb environmental pollution, the researchers again interviewed a group of environmental experts (five environmental scholars in all) on how to prevent environmental pollution in our neighborhood, streets and any human habitat. This is the summary of their opinions shared on the subject matter.

One environmentalist began: "Preventing environmental pollution can be said to be the responsibilities of both the government and citizens. This implies everybody has a role to play in order to curb environmental pollution, hence 'all hands must be on deck' to combat this terrible problem at hand. Many people think it is government's responsibility to curb pollution. Others are also of the view that it is the responsibility of some group of people known as sanitation agencies to curb environmental pollution, but the question is, 'if the government or the sanitation agencies put all

mechanisms into place to curb environmental pollution and the citizens do not change their attitude, would there be any positive change?' Inasmuch as the government has a role to play in the curbing of environmental pollution, citizens also need attitudinal change; the basic role of the citizens to ensure improvement in our sanitation."

Another environmentalist also buttressed the concern raised by the first interviewee that curbing environmental pollution lies with both the citizenry and the government. The researcher also asked him about some of the ways by which citizens can contribute to improving sanitation. Below is the opinion he shared with us:

"Citizens can voluntarily organize frequent communal labour in their communities to keep their surroundings clean. Taking part in communal labour is not an option for citizens but it is a must as enshrined in the 1992 constitution of the Republic of Ghana, in Article 16, sub-clause 1,2&3 which termed this as 'our civic responsibility.' Therefore, citizens must help desilt choked gutters, clear stagnant refuse dump and wholly keep our environment clean because it is our civic responsibility.

Again, citizens must be disciplined, and must be able to caution others when they indiscriminately dump refuse defecate or urinate in inappropriate places to stop such an act. What a pity to see a policeman, a teacher, a pastor, or any other dignified personalities passing by someone urinating in a gutter, dumping inappropriately, defecating openly and they shut their mouths and walk majestically away. No, it is about time disciplined people rebuked culprits to refrain from such irresponsible behavior. This is because 'if you are not part of the solution, then you are part of the problem.'

To add to the above, citizens must avoid dumping refuse in gutters, in streets and in river bodies, and make use of dustbins situated at vantage points. One disheartening thing is that people may see a dustbin and still throw rubbish beside the dustbin. Even some people who call themselves 'graduates' do this. I wonder the impact of their education to the country.

Also, citizens need a change of attitude and perception to curb environmental pollution. A lot of people have the mindset that curbing environmental pollution lies with a particular group of people; 'Zoomlions' (an agency in Ghana which takes care of daily cleanliness in the country) and other sanitation agencies. People think they are paid to do that, so that is their sole responsibility and therefore do not contribute their quota to help the country's cleanliness. It is high time we changed such perceptions and contribute our part to save the country from this deadly situation."

Other environmental experts also raised a concern that despite the roles of the citizens elaborated above, the government also has major roles to play to curb environmental pollution. Some of the opinions the environmental experts shared on the roles of government in curbing environmental pollution are written below:

"The government can organize public education on the need to prevent environmental pollution on the various media platforms to educate its citizens on the need to keep their environment clean and the repercussions that may arise as a result of polluting their environment.

Again, the government can enact and enforce laws which forbid its citizens to litter around. Making of such laws in the country is not enough, but strict implementation of such laws will help curb the situation.

In addition to the above points, they also suggested that government must motivate sanitation agencies; the Town Council Members, Zoomlion Officers etc. to do their work diligently and with some form of enthusiasm.

The government must also provide enough dustbins at vantage points, on streets, and in public arena. One environmentalist added: "One sympathetic thing is that many Ghanaians litter haphazardly; the few responsible citizens may buy a drink or any other edible item and may walk miles away just to discard it into a dustbin but will not find any. Only a few keep the rubbish in their bags or pockets to discard it at appropriate places. This calls the attention of the government to provide enough dustbins."

The government must also use its veto power to ban cars with old engines since they release carbon monoxide which pollutes the air and thereby causes respiratory disorders in citizens.

The government can also set up factories which can recycle the waste products into something useful or beneficial to the country. The waste products can be used to generate electricity and other products beneficial to the country. This could solve power fluctuation in the country."

The above are the opinions shared by five environmentalists who willingly accepted the offer to contribute their views in the research work.

Results

The researcher had a conversation with a group of people within the streets (laymen) and urged them to discipline themselves as to how they dump refuse, urinate and defecate. The researcher convinced them that our attitudinal change can make the country hygienic and therefore free from diseases. This means they were to serve as watchdogs to themselves and those who sold around them to caution anyone who would dump or urinate inappropriately. Again, the researcher interviewed a group of some environmental experts who educated us that cleaning our environment is the work of every citizen and the government as well. It is not the only duty of the government and so we must all try to do our best to relate well with our environment because it is our civic responsibility. This will help secure us a safe future devoid of sickness. The researchers also interviewed some journalists who claimed the role of the media in creating awareness of environmental pollution cannot be overlooked. They claimed the media brings such environmental issues into awareness and educate the public on how to relate well to the environment. This has really guided the behavior of citizens to limit the inappropriate dumping of refuse, urinating and defecating and thereby promoting environmental hygiene. The researcher also interviewed some group of teachers about their efforts in curbing environmental pollution. They said they introduced their students to some subjects which create awareness of environmental pollution and the ways by which they can prevent such solutions. Again, the teachers claim that they inculcate into their students some positive ways to relate friendly with the environment. This would save the future of the country since such children are the future leaders of the country.

On the whole, the study was very successful, and if only the few ones who had been educated keep their environment clean, the illiterates will also imitate such behavior and also develop a positive attitude towards the environment to help curb totally the menace of environmental pollution in the country. Also, if the government increases the intensity of public education or mass education on the various media platforms such as television, newspapers, radio and the social media, environmental pollution will totally be prevented.

Discussion

The people (the interviewees) opened up for a detailed discussion on the subject matter; ‘the harmful effects of environmental pollution on the society.’ Some of the people talked about how the whole environment smells and how they do not breathe in fresh air in the cities. Again, the pile of rubbish found in many corners of the streets which has made walking in the cities uncomfortable and eyesore. Others were also of the view that sachet products, plastic products and polythene products must be banned since they are the major form of pollution in the streets.

Others also talked about some of the citizen’s actions and inactions that pollute the environment. Dumping indiscriminately was mentioned. Some revealed that there are some citizens who package their rubbish well as if they are valuable luggage which they are travelling with, but just leave it anywhere in the city. It was also revealed that some people throw rubbish into the gutters at night and when it rains; the rains carry it into people’s home, river bodies and into the sea. Some sellers also talked about open defecation especially in the coastal areas which really pollute our environment.

While the people were sharing their opinions on how the citizens pollute our environment, the researchers asked them to share their views on how the situation could be solved. Some suggested that the government must release the army to patrol the various streets in the country, especially the cities so they can arrest and discipline anyone who drops any garbage haphazardly. Also, some members of the army should be deployed into the markets where much rubbish is made, so they can put the traders into order. Some also suggested that the government must provide enough dustbins in streets so that people can dump easily without having to hold rubbish for a long time. Some people also suggested that the government must enforce all food vendors and sellers to buy dustbins where they can dump their refuse. In addition to the above suggestions, the government must enforce the implementation of the laws of sanitation, so that some citizens could be apprehended, fined or imprisoned for some time

before discharged. This would serve as a deterrent to other people, and may not try to do the same since they can also be arrested. This could solve the problem or minimize it.

While talking about the roles of government in curbing environmental pollution, a food vendor also stated that when the citizens discipline themselves and change their attitude on the way they dump and relate to their environment, the country will be clean, and we shall all enjoy healthy life.

Conclusion

(Kromm, 1973) states that environmental pollution is a global issue and the World community would bear worst results more than they already faced if nothing is done to curb environmental pollution. In view of the above research and discussion, it is evidently clear that polluting our environment is life- threatening and to curb this situation lies on both the government and the individual citizens in the country. This means everybody has a role to play to improve our sanitation. We therefore call all and sundry to contribute to their quota; thus 'all hands must be on deck' to help save the country from this deadly problem.

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