

# Threats to our Environment

## And what we can do about it.

Compiled from **Care for our Common Home, Laudato Si!** by Pope Francis I,  
with pictures and commentary from Nana Kyerewa and Kirt Bromley

### **I. Pollution and Climate Change**

20. Some forms of pollution are part of people's daily experience. Exposure to atmospheric pollutants produces a broad spectrum of health hazards, especially for the poor, and causes millions of premature deaths. People take sick, for example, from breathing high levels of smoke from fuels used in cooking or heating. There is also pollution that affects everyone, caused by transport, industrial fumes, substances which contribute to the acidification of soil and water, fertilizers, insecticides, fungicides, herbicides and agrotoxins in general.

21. Account must also be taken of the pollution produced by residue, including dangerous waste present in different areas. Each year hundreds of millions of tons of waste are generated, much of it non-biodegradable, highly toxic and radioactive, from homes and businesses, from construction and demolition sites, from clinical, electronic and industrial sources. The earth, our home, is beginning to look more and more like an immense pile of filth. In many parts of the planet, the elderly lament that once beautiful landscapes are now covered with rubbish.

22. These problems are closely linked to a throwaway culture, which affects the excluded just as it quickly reduces things to rubbish. To cite one example, most of the paper we produce is thrown away and not recycled.

**Commentary by Kirt and Nana Kyerewa I:** Most towns in Ghana have a real problem with trash. People drink sachets of water and throw the empty sachet on the ground. If you walk along a roadway, you can see people throw paper and plastics out of the lorry window without thinking who is going to pick it up. Eatables are recyclable. If you throw a banana peel out of the window, it will gradually decompose to soil. A piece of plastic or a tin can will sit by the roadside

and never go away.



The beach at Ada Foah where the Volta River meets the Atlantic Ocean. All the trash washed down the rivers and into the Ocean.

What can we do?

1. Don't you litter. Keep the discarded plastic with you until you can throw it away. Set a good example.
2. Educate the public: "Don't be a litterbug." Have a sign in your library.
3. Encourage children to gather trash and clean up around their homes.
4. Support Zoomlion.

### **Climate Change**

23. The climate is a common good, belonging to all and meant for all. At the global level, it is a complex system linked to many of the essential conditions for human life. A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climatic system. In recent decades this warming has been accompanied by a constant rise in the sea level and, it would appear, by an increase of extreme weather events, a number of scientific studies indicate that most global warming in recent decades is due to the great concentration of greenhouse gases (carbon dioxide, methane, nitrogen oxides and others) released mainly as a result of human activity. As these gases build up in the atmosphere, they hamper the escape of heat produced by sunlight at the earth's surface.

24. Warming has effects on the carbon cycle. It creates a vicious circle, which aggravates the situation even more, affecting the availability of essential resources like drinking water, energy and agricultural production in warmer regions, and leading to the extinction of part of the planet's biodiversity. The melting in the polar ice caps and in high altitude plains can lead to the dangerous release of methane gas, while the decomposition of frozen organic material can further increase the emission of carbon dioxide. Things are made worse by the loss of tropical forests, which would otherwise help to mitigate climate change. Carbon dioxide pollution increases the acidification of the oceans and compromises the marine food chain. If present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us. A rise in the sea level, for example, can create extremely serious situations, if we consider that a quarter of the world's population lives on the coast or nearby, and that the majority of our megacities are situated in coastal areas.

**Commentary by Kirt and Nana Kyerewa I:** Climate warming will increasingly affect the planet. The ice in the Arctic and Antarctic is melting. Polar bears live and roam over the ice. Now the ice is melted in July and August and they are drowning in the ocean. The ice they lived on for thousands of years is gone; sometimes beneath their feet. When the ice melts, the level of the ocean rises. Low lying villages and cities will see the rise of water taking away their streets. Some fishing villages in Ghana are being washed away by the sea. If you walk along the beach in Kokrobite, outside of Accra, you will see some houses being washed away by the sea.

### **The Issue of Water**

28. Fresh drinking water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems. Sources of fresh water are necessary for health care, agriculture and industry. Water supplies used to be relatively constant, but now in many places demand exceeds the sustainable supply, with dramatic consequences in the short

and long term. Water poverty especially affects Africa where large sectors of the population have no access to safe drinking water or experience droughts, which impede agricultural production.

29. One particularly serious problem is the quality of water available to the poor. Every day, unsafe water results in many deaths and the spread of water-related diseases, including those caused by microorganisms and chemical substances. Dysentery and cholera, linked to inadequate hygiene and water supplies, are a significant cause of suffering and of infant mortality. Underground water sources in many places are threatened by the pollution produced in certain mining, farming and industrial activities, especially in countries lacking adequate regulation or controls. It is not only a question of industrial waste. Detergents and chemical products, commonly used in many places of the world, continue to pour into our rivers, lakes and seas.

30. *Yet access to safe drinkable water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights.* access to drinking water, because *they are denied the right to a life consistent with their inalienable dignity.* This debt can be paid partly by an increase in funding to provide clean water and sanitary services among the poor.

**Commentary by Kirt and Nana Kyerewa I:** Pollution of Ghana can be focused on three sources: Industrial pollution, Galamsey, and unregistered toilets near public wells.

**Industrial pollution.** Some companies deliberately dump the waste products of their manufacturing processes onto adjoining land or local bodies of water. When waste products are dumped into rivers or streams, people, fish and animals are poisoned by the chemicals in the waste. Some chemicals cause cancer to develop in people who drink the water. Fish can also develop cancer. Large populations of freshwater fish can die off from exposure to these chemicals.

**Galamsey.** There are many articles written about the dangers of galamsey. More forest and farms have been destroyed by galamsey than any other source. In

addition to the pollution of our rivers, satellite studies show that Ghana has lost 117,163 acres of forest due to the mining between 2005 and 2019.<sup>1</sup>



*Pollution from a toilet tissue factory on the Volta River, dumping white dye directly into the river. I took this picture myself in 2006.*

In addition to the loss of farmland, the pollution of our rivers and streams is a serious health threat. Gold miners use mercury, arsenic and cyanide to extract the gold from minerals in the dirt. This is what the World Health Organization states on their website about the dangers of mercury:

Elemental and methylmercury are toxic to the central and peripheral nervous systems. The inhalation of mercury vapor can produce harmful effects on the nervous, digestive and immune systems, lungs and kidneys, and may be fatal. The inorganic salts of mercury are corrosive to the skin, eyes and gastrointestinal tract, and may induce kidney toxicity if ingested.<sup>2</sup>

The gold miners and casual workers breathe in mercury vapor which can kill them. The fish in the rivers take in the small particles of mercury. When people eat the fish, they take the mercury into their bodies. Mercury is a serious health hazard in Ghana. The WHO recommends that gold miners stop using mercury to separate out gold. There are other extraction techniques that are safe.<sup>3</sup>

**Gold cyanidation** (also known as the **cyanide process** or the **MacArthur-Forrest process**) is a [hydrometallurgical](#) technique for extracting [gold](#) from low-

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<sup>1</sup> "The Large Footprint of small-scale artisanal gold mining in Ghana," Science of the Total Environment, Volume 781, 10 August 2021./

<sup>2</sup> "Mercury and Health," <https://www.who.int> 2017,

<sup>3</sup> Ibid.

grade [ore](#) by converting the gold to a water-soluble [coordination complex](#). It is the most commonly used [leaching](#) process for [gold extraction](#).<sup>[1]</sup> Due to the highly [poisonous](#) nature of [cyanide](#), the process may be considered controversial and its usage is banned in a small number of countries and territories.

Our local and national politicians and leaders are taking bribes that allow this. Our governments efforts are failing to stop the pollution from galamsey. The religious leaders of Ghana have recently spoken out.

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### ***GhanaToday (Accra)***

*By Rex Mainoo Yeboah*

Religious Bodies in Ghana have called on President Nana Addo Dankwa Akufo-Addo to ban small-scale mining in the country until a workable solution is found to dealing with illegal mining, known as galamsey.

The religious bodies, comprising the Christian Council of Ghana, Ghana Pentecostal Council, Ghana Charismatic and Pentecostal Council, the Catholic Bishops Conference and the National Muslim Council made the statement when they called on the President at the Presidency Tuesday.

Leader of the delegation, Rev. Prof. J.O.Y Mante, who is the chairman of the Christian Council of Ghana, said they were worried about the continuous deterioration of the galamsey menace despite the government's interventions.

"We are here as your Spiritual Leaders to find out if there is any problem that we do not know... We know that the government machinery has the power to uproot anything it wants to uproot.

"We are asking ourselves the question, is there something more than we see," Rev. Prof. J.O.Y Mante rhetorically asked, and added that they were ready to partner with the government to deal with the galamsey menace.

Whether you pass Kibi in the Eastern Region or Banda Nkwanta in the Savanna Region, you can see the damage caused by Galamsey. Uncontrolled mining, polluting the water with poisons, destroying beautiful landscapes with piles of dirt left over is indefensible. The Ghana government requires the big companies like Ashanti Goldfields and Newmount to carefully process all contaminants and to restore the land when they're finished, and the government levies fees on the big companies. With galamsey, only local politicians and chiefs benefit, and the land and water are laid waste. We Ghanaians must protest this terrible waste.



When we see pollution we must protest. When we see it happen, we can notify our Assemblymen and women, notify the press and raise the alarm.

Further links to information:

It's in Our Hands. Paper written by Galamsey Action Group

[https://cdn.modernghana.com/images/content/report\\_content/629202115144-osjvm0x442-proposed-solution-and-approach-to-resolving-galamsey.pdf](https://cdn.modernghana.com/images/content/report_content/629202115144-osjvm0x442-proposed-solution-and-approach-to-resolving-galamsey.pdf)

Suggestions for resolving the Galamsey problem:

<https://theconversation.com/ghanas-artisanal-miners-are-a-law-unto-themselves-involving-communities-can-help-fix-the-problem-192256>

University of Ghana Business School paper on Galamsey:

<https://ugbs.ug.edu.gh/sites/default/files/public/documents/The%20Galamsey%20Menace%20in%20Ghana-%20A%20Political%20Problem%20Requiring%20Political%20Solutions.pdf>



*Mounds of dirt are just left in ugly piles*



*Galamsey: the laborers here are exposed to the poisons of mercury, arsenic or cyanide.*





*Local miners using big machines, and paying small fees to government*



*No one can farm here again. It is an eyesore. The water in the area will be polluted.*

### **The Loss of Biodiversity**

32. The earth's resources are also being plundered because of shortsighted approaches to the economy, commerce and production. The loss of forests and woodlands entails the loss of species, which may constitute extremely important resources in the future, not only for food but also for curing disease and other uses.

33. It is not enough, however, to think of different species merely as potential "resources" to be exploited, while overlooking the fact that they have value in themselves. Each year sees the disappearance of thousands of plant and animal species, which we will never know, which our children will never see, because they have been lost forever.

34. It may well disturb us to learn of the extinction of mammals or birds, since they are more visible. But the good functioning of ecosystems also requires fungi, algae, worms, insects, reptiles and an innumerable variety of microorganisms. Some less numerous species, although generally unseen, nonetheless play a critical role in maintaining the equilibrium of a particular place.

**Commentary by Kirt and Nana Kyerewa I :** in Ghana, as in all of West Africa, the disease of Malaria plagues us. This disease is caused by a parasite, which is transmitted into the human blood stream by a mosquito bite. There are only two widely used medicines, which can destroy these parasites in our bloodstream. Both of these medicines come from plants; they are Quinine from the Brazil rain forest, and Artemisinin, from China. Imagine what our lives would be like without these plants! We have to care about the extinction of plants because they are potential sources for medicine.

Biodiversity means the loss of different natural plants and animals. It is logical for us to examine this next threat to the Environment of Ghana, the deforestation of our countryside.

### **Deforestation**

**38.** The ecosystems of tropical forests possess an enormously complex biodiversity which is almost impossible to appreciate fully, yet when these forests are burned down or leveled for purposes of cultivation, within the space of a few years countless species are lost and the areas frequently become arid wastelands.

39. The replacement of virgin forest with plantations of trees, usually monocultures, is rarely adequately analyzed. Yet this can seriously compromise a biodiversity that the new species being introduced does not accommodate.



**Trees cut down in local farmers' fields and left to rot**

**Commentary by Kirt and Nana Kyerewa I:** Many of our beautiful tall trees have been chopped down. Contracts have been given out to foreign companies to cut down all of our prime forests. Selective cutting is a better method of getting wood for our construction and foreign exchange needs. With selective cutting, only a certain number of trees are allowed to be cut. Out of ten trees in a part of the forest only 3 to 5 will be cut. When greediness and bribery enter the equation, an entire section of tall trees are cut down, leaving none still standing. The USA and Canada experienced this in the 19<sup>th</sup> and 20<sup>th</sup> centuries and laws were passed to prevent “clear cutting.” The results of clear cutting are terrible. When trees on a hillside are clear-cut, there are no tree roots to help hold the soil, and the entire hillside becomes eroded. You can see this in Ghana. The picture below shows a small hillside with most of its vegetation cleared. What will prevent the rain from washing the soil down the slope?



When you cut trees on a hillside, the rain will wash the soil away.

When you pass through the Krobo areas, many hillsides are bare; nothing can grow there again. This can happen all over Ghana unless laws are passed to prevent this terrible outcome. The island of Haiti in the Caribbean Sea is the poorest country in the Western Hemisphere. Why? All of Haiti's trees have been cut down, and they have lost most of their topsoil. The people of Haiti cannot feed themselves because they have lost their topsoil. What is happening in Ghana? Could Ghana lose much of its topsoil and become like Haiti ?

This leads to the next threat to farming in Ghana,

### **The Weaning of Topsoil**

**Commentary by Kirt and Nana Kyerewa I:** There is a common scene in many towns of Ghana. One sees huge tipper trucks filled to the brim with topsoil leaving a little village and going to a construction site. These huge trucks break down our roads. Tipper trucks can carry 20 tons or more of soil when fully packed. Most of our rural roads have only one coating of asphalt. This is insufficient to support the weight of a fully loaded tipper truck. When the

surface of the road becomes soft from the mid-day sun, a heavy truck will buckle and destroy the surface.



Heavy trucks break the pavement, which has only one layer of asphalt



You can see how little asphalt the put on the roads



Villages and towns are made poor by the removal of the good soil for planting.

Where will our grandchildren plant the crops if all of the soil is taken from the farms around the town? Will it mean that in the future our farmers must take a lorry many kilometers to get to their farms?

Why are we selling soil that future generations will depend on?



The soil on our farms is being sold and carried away.



Heavy trucks are destroying our farms



## **Noise Pollution and Overcrowding in Cities**

147. Authentic development includes efforts to bring about an integral improvement in the quality of human life, and this entails considering the setting in which people live their lives. These settings influence the way we think, feel and act. In our rooms, our homes, our workplaces and neighborhoods, we use our environment as a way of expressing our identity. We make every effort to adapt to our environment, but when it is disorderly, chaotic or saturated with noise and ugliness, such overstimulation makes it difficult to find ourselves integrated and happy.

### **Commentary by Kirt and Nana Kyerewa I:**

Noise pollution has become a very big problem, which challenges the peace and tranquility of society. In Kukurantumi, there are two Information Centres. The biggest and loudest begins at 4:45 AM despite the ban from the Local Council to prohibit loud noises between 10 PM and 5 AM. The second begins at 5 AM. They each broadcast at very high volumes. I have measured their volume from my front porch, which is 400 meters from their speakers. The volume recorded on my decibel reader is 66 decibels. This is the average volume when two people speak together in a room. Therefore, when the Information Centre broadcasts, it is as though they were right in your room. The peak volume was 80 decibels. The National Institute for Occupational Safety in the USA has determined that any volume over 89 decibels will harm your hearing when exposed for 8 or more hours. I have measured the volume from the street outside the Information Centre. The average was 78 decibels and the peak was 93 decibels. The people who live nearby are exposed to levels that can damage their hearing. When churches hold evening services, they sometimes do not close until 10 or 11 PM. If you live close to such a church and an information center, then you are deprived of sleep. Doctors recommend 7 to 8 hours of sleep for adults and 8 to 10 hours for children. It is an injustice that school children are deprived of sleep!

I wrote a letter to the Coordinating Director of the Municipal Assembly in Kukurantumi last year. The letter contained the signatures of 10 households who live in our area, and complained about the loud broadcasts and the starting times of the Information Centre, which at that time was anywhere from 4:10 to 4:45 AM. The Assembly did not address the loud

volume of the broadcast. The Municipal Assembly obtains money from the licensing of these centers, and it seems they did not want to lose that money. They did threaten to fine the centres if they started before 5 AM. Their threat moved the starting time from 4:15 to 4:45 AM, but it is still outside the legal limits.

You can get a free app that measures decibels from NIOSH, the National Institute for Occupational Safety and Health.

### **Overcrowding**

149. The extreme poverty experienced in areas lacking harmony, open spaces or potential for integration, can lead to incidents of brutality and to exploitation by criminal organizations. In the unstable neighborhoods of mega-cities, the daily experience of overcrowding and social anonymity can create a sense of uprootedness, which spawns antisocial behaviour and violence.

152. Lack of housing is a grave problem in many parts of the world, both in rural areas and in large cities... Having a home has much to do with a sense of personal dignity and the growth of families. This is a major issue for human ecology.

156. An integral ecology is inseparable from the notion of the common good, a central and unifying principle of social ethics. The common good is “the sum of those conditions of social life which allow social groups and their individual members relatively thorough and ready access to their own fulfillment”.

157. Underlying the principle of the common good is respect for the human person as such, endowed with basic and inalienable rights ordered to his or her integral development.

**Commentary by Kirt and Nana Kyerewa I:** The Common Good is an important principal for our times. Too many politicians act as though any behavior is acceptable as long as it produces money for themselves and their friends. There is an interest that is above personal interest. It is called the Common Good. Who defends the rights of the poor and the landless? The government and our laws must support those who don't have a voice. The rights of the poor must be considered in the Common Good. The rights of plants and animals in God's Creation must be considered in the Common Good. We share this planet with nature and the voiceless poor. All must be considered as important in the Common Good. We are all inter-connected.

When nature is hurt, we are hurt. When the poor are exploited and don't receive good health care and education, society is hurt. There is a higher good than individual interest, and we call this the Common Good. It is the basis of good Ecology.

### **The Ecology of Environment includes Economics and Sociology**

138. Ecology studies the relationship between living organisms and the environment in which they develop. This necessarily entails reflection and debate about the conditions required for the life and survival of society... It cannot be emphasized enough how everything is interconnected.

139. **When we speak of the “environment”, what we really mean is a relationship existing between nature and the society which lives in it.** Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it.

143. ...there is a need to incorporate the history, culture and architecture of each place, thus preserving its original identity. Ecology, then, also involves protecting the cultural treasures of humanity in the broadest sense.

144. A consumerist vision of human beings, encouraged by the mechanisms of today's globalized economy, has a leveling effect on cultures, diminishing the immense variety, which is the heritage of all humanity... There is a need to respect the rights of peoples and cultures, and to appreciate that the development of a social group presupposes an historical process.

145. The disappearance of a culture can be just as serious, or even more serious, than the disappearance of a species of plant or animal.

146. In this sense, it is essential to show special care for indigenous communities and their cultural traditions... in various parts of the world, pressure is being put on them to abandon their homelands to make room for agricultural or mining projects which are undertaken without regard for the degradation of nature and culture.

### **Commentary by Kirt and Nana Kyerewa I:**

Ecology includes the environment of people and their culture. Five years ago the chief of Kukurantumi sold the cemetery land of Nana's clan to a German company. The chief received a

lot of money for this land, and the German's wanted to make a big farm. Graves were dug up by a bulldozer. Nana went to a meeting of the Adontenhene of Kukurantumi and the sub-chiefs and complained that it was not right. What the chief did damaged the culture of the town for the sake of the economic gain of a few. Nana's example inspired a wealthy citizen of Kukurantumi to take the sale of the land to court, and the judge ruled that nothing could be done to the land for 25 years.

The threat to the cultures of Ghana is real. We have to protect what is precious to us. We can't let economic gain destroy the natural resources and culture of Ghana.