

CAMEROON “TOWARDS A POLLUTION FREE PLANET”

Status of Environmental pollution

1. The threat to the human environment from the progressive deterioration of the biosphere has emerged as a central issue of this decade. Accelerated industrialization, rapid urbanization, the pattern of increasing consumption of natural resources, the development of modern agricultural and transportation techniques, and rising standards of living have not only contributed to modify the ecological balance on which the quality of the environment depends, but present great threats to human survival. The high rate of technological change has increased pollution above the self-cleansing capabilities of the environment.
2. Environmental pollution is increasingly a problem in Cameroon like in most African Countries , where the environmental consequences of development cannot be ignored. The major forms/types of pollution in Africa include indoor and outdoor air pollution, land pollution and water pollution. Pollution affects both urban and rural areas. Poor people, who cannot afford to protect themselves from the negative impacts of pollution, end up suffering the most.
3. In 2012, an estimated 9 million people died from air, water and land pollution, according to the Global Alliance on Health and Pollution. According to the Institute for Health Metrics and Evaluations (IHME), diseases attributed to indoor and outdoor air pollution were responsible for 1 in 10 deaths worldwide in 2013, and air pollution has become the fourth risk factor for premature deaths, just behind tobacco smoking.

Air Pollution

Air pollution remains a major challenge in Cameroon. We know almost nothing about the pollutants emerging from urban centers and their impact on weather systems, crops, and public health at large. There's little monitoring of pollution with insufficient emissions inventories. Researchers say that they struggle to find funding to study the issue.

“Not only is pollution in these cities killing local residents, it has been found these emissions may even be altering the climate along the coast of central Africa, leading to changes in the clouds and so potentially to rainfall with devastating effects,” wrote the study's co-author, Matthew Evans, a professor atmospheric chemistry at the University of York.

Satellite imagery from Oct. 12, 2013 shows enhanced air pollution over coastal cities like Douala. Evans and the study's lead author, Peter Knippertz, from the Karlsruhe Institute of Technology in Germany, worry that these pollutants will change the West and central African monsoon, a sensitive atmospheric circulation system that controls everything from wind and temperature to rainfall across huge swathes of the region. (Scientists have previously linked aerosols to changing rainfall patterns in Asia and the Atlantic Ocean.) Population growth in Africa, will exacerbate these effects, they say.

The sources of pollution in Cameroon are many: car exhaust, wood burning, garbage burning, cooking indoors with fuel stoves, the use of millions of diesel electricity generators, petrochemical plants. “It's not even obvious what source to tackle first,” Evans writes.

According to some statistics, transport is responsible for 61% of CO₂ emissions released against 11% for manufacturing and construction in Cameroon. The inventory of dioxins and furans (highly carcinogenic

molecules and contained in smoke) in 2006 and 2011 revealed the most polluting sources were from Uncontrolled combustion, Incineration of waste and production of energy from products petroleum).

It should be noted that Cameroon has about 66,900 km of roads, of which only 6% are tarred (ECCAS, 2007). To illustrate the consequences of this on air pollution, the conclusions of the above-mentioned study shows that there are 200 cancers cases that develop annually in Yaoundé, and that volatile organic compounds cause approximately 13,000 premature deaths due to air pollution by dust . And on top of that, there are also heavy economic costs related to the costs of consultations and medical care.

According to the third UNEP Africa Environment Outlook (AEO-3) report, air pollution is rising in many countries in Africa with carbon dioxide, carbon monoxide, particulate matter, sulphur dioxide, oxides of nitrogen and lead constituting some of the major indoor and outdoor air pollutants. The key drivers of poor air quality in Africa are urbanisation, industrialisation and motorisation which have all led to an increase in outdoor air pollution on the continent.

The State, faced with the acuteness of the problems relating to the protection of the air, human health and the environment in general, is still obliged to advocate for training, sensitization, standardization, control , without forgetting the possibility of sanctions.

Reliance on solid fuels for cooking, heating and lighting exposes about 90 per cent of people in Cameroon to indoor air pollution, impacting both economies and livelihoods, while contributing to increased emissions of greenhouse gases. In most homes in Africa, Cameroon not being an exception, wood fuel, charcoal or kerosene or a combination of these is used for cooking. Indoor air pollution affects vulnerable women and children most. In addressing the theme of pollution, the 2017 Environment Assembly, should therefore focus on both outdoor and indoor pollution and indoor pollution should not be marginalized.

Water Pollution

Water pollution is another major challenge in Cameroon. The two main phenomena responsible for this type of pollution are the rapid industrialization and urbanization of our main cities. Industries are very often not willing to treat their liquid or gaseous effluents before they are released into the natural environment. More seriously, industrial zones are not generally distinguished from residential areas, which amplifies the effects of pollution on the populations bordering cities such as Douala in Cameroon.

Liquid industrial waste, particularly solvent waste, was estimated at 84,290 m³ per year (MINEPDED, UNDP 2006). However, the national deposit of solvents and waste paint must be at least three times that volume.

Untreated ballast water from ships equally stands as major source of pollution. The quantities of ballast transported on board vessels vary, ranging from Hundreds of liters to more than 100,000 tonnes of water, depending on the size and use of the ship which carry up to 3,000 species are discharged untreated into our seas.

Other causes of water pollution are linked to the poor management of wastewater in our cities due to uncontrolled urbanisation. As a matter of facts, the use of streams as waste dumps or as emptying places for septic tanks is a current practice which leads to groundwater pollution in the main cities such as Yaoundé and Douala in Cameroon leading to waterborne diseases. In September 2010, more than 385 Cameroonians lost their lives due to cholera outbreak.

Here, the general rule is the absence of wastewater collection and treatment systems (sewers, sewage treatment plants, etc.). Less than 1% of sewage generated is treated in our cities in such facilities. Where these treatment plants exist, they are inadequate to local general conditions, which affects their proper functioning and hence their purifying capacity, which thus becomes mediocre. The result is a concentration

of pollution in these areas and their surroundings with aggravated effects.

We must add to these human causes, the poor drainage system of some cities with rather flat relief such as Douala. The wastewater flow is not favored, which leads to their stagnation, their infiltration into the ground and everywhere the pollution of the groundwater bodies which in this case are not deep.

Depending on the source, there are several types of pollution in cities: bacteriological pollution, organic pollution, domestic pollution, toxic chemical pollution, and diffuse pollution that includes a wide variety of sources.

The main manifestations of water pollution are physico-chemical, bacteriological, biological, epidemiological or (eco) toxicological. The presence of abnormally high suspended solids such as various debris (erosion products, organic matter, etc.) or dissolved substances such as ammonium, nitrate, Nitrites, phosphates, etc.), certain toxic chemicals such as mercury, arsenic, lead ... This considerably alters certain water characterization parameters such as color, hydrogen potential (PH), chemical oxygen demand (COD), Temperature, hardness ... which are in fact indicators of the physicochemical quality of the water.

Land pollution

Soil pollution can be diffuse or local, industrial, agricultural (following the massive use of fertilizers or pesticides that infiltrate the soil). Agricultural pollutions can have several impacts on human health, by touching ground water on the one hand and contaminating by bioaccumulation. The presence of pesticide residues in some fishes and plants that are sold in some markets in Cameroon has been found to be as a result of the uncontrolled use of pesticides in fishing (Gimou et al., 2007). This uncontrolled use has equally been the source of to the nearly two million tons of contaminated soil with POPs pesticides spread in the ten Regions of country.

In Cameroon, the average production of solid household waste per person per day was known to fall between 500 and 600 g in 2006 (MINEP, 2006). Despite the rigor observed in the work of waste collection and management institutions, household solid wastes are still discharged by tens of tons each day into the environment. For example, out of 200.4 tons of garbage produced daily in Yaoundé I, 60% is discharged into the environment, that is 119.8 tons. 56 uncontrolled landfills were counted on an area of 8.5 km² for a total volume of 12 278.93m³. (Takougand, 2008)

At present, the major problem is the open burning of garbage even in garbage bins. Like all burning practices, this traditional technique causes air pollution with serious damage to human health and the environment in general.

Although the law prohibits this practice, the population, faced with the omnipresence of non-biodegradable solid waste generally prefers this option. Such waste as plastic waste is a major source of land pollution. A study conducted in 2011 by the Ministry of Environment revealed that:

- Single use plastic waste are largely responsible for the public health problems;
- they are partly responsible for the flooding of our cities because they obstruct the waterways;
- they contribute to diminishing agricultural production by blocking the infiltration of water and preventing the development or Root expansion in the soil;
- they promote the development of vectors diseases such as malaria and cholera just to name but a few;
- they are responsible for the death of several herds of cattle especially in the northern part of our country, where these animals confuse them with food or vegetation.

Accordingly, the investigation revealed that:

- 58% of consumers get rid their plastic waste in their immediate environment;
- 22% hand them over to some collectors and
- 20% burn their plastics in the open air.

The measures taken by government to curb this situation still suffer from lack of the needed means to address the situation.

E-Waste

The theme of the UNEA should also address threats and opportunities from emerging challenges like E-waste, a category of waste generated by electrical and Electronic Equipment (EEE) at the end of its lifecycle.

With the developments in electronics technologies and the increasing availability of electronic gadgets to people in Africa, the volume of e-waste (or electronic waste) being discarded is increasing. Rapid changes in technology and falling prices mean that millions of tons of high-tech electronic devices such as mobile phones, personal computers, personal stereos, florescent lamp bulbs, large household appliances like television sets, refrigerators, washing machines, air conditioners, become obsolete in developed nations. A significant part of this E-waste ends up in landfills or poorly equipped recycling facilities in developing countries. If properly handled through funding from producer countries, this area could combine a threat to the planet with opportunities in business, job creation and poverty reduction.

Conclusions

As the impact of human activities and issues of environmental health have become increasingly global in scale and extent, the need to recognize and to address the health risks associated with environmental pollution becomes even more urgent. The cost inaction arising from these environmental challenges attributable to pollution will be too high to be neglected in the future. Addressing these challenges today for a pollution free future should therefore be a priority. The next session of the UN Environment Assembly should therefore be an opportunity to lay more emphasis on issues of common concerns such as water pollution, land pollution and both indoor and outdoor air pollution.