Beninese members help their nation become a cleaner and healthier place to live

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The national leader of Benin, Emmanuel Allognon, accompanied by an ambassador for peace is presenting a moringa plant to a government official in Aplahoué, population 180,000

Because the government of the Republic of Benin is responsive to the circumstance of Beninese citizens, it is concerned about the state of the people's health and worries about environmental factors that are causes of disease and unpleasantness. Beninese members have participated in helping their nation become a cleaner and healthier place to live and work. From some past time, many of us have become accustomed to some pollution in our environment. We focus on our daily activities and move through polluted surroundings. From time to time with great intensity and suddenness incidents occur that remind us just how harmful pollution is to our environment and to ourselves. What follows are descriptions of the three most notorious cases.

Belgium in 1930

Medical professionals and other scientists have long been aware that polluted air is bad for health. One of the first experiences that brought that fact to light was a thick fog that afflicted inhabitants of Meuse Valley, Belgium, in 1930. Meuse Valley today, in the south of Belgium, is an area of dense forest, with quaint riverside buildings hugging a shore that features rocky limestone cliffs. In 1930, Meuse Valley had a heavy concentration of industrial enterprises; the area described below was home to four coke ovens, three steel mills, four glass factories and three zinc smelters as well as establishments that manufactured explosives and fertilizer.

In Meuse Valley, Belgium, in a 1930 incident, thousands of terrified people scrambled up into the hills to avoid the toxic air.

In 1930, December 1–5, a thick fog covered much of Belgium. In Meuse Valley, between the towns of Huy and Liege, thirty-four kilometers apart, people had much trouble breathing and began developing serious respiratory problems. The fog was thickest on the third day. It appeared as if whole swaths of people had suddenly developed asthma. People in the area also felt nauseous, some vomited. Naturally, the noxious fog affected the old and the weak most seriously but even the young and healthy were wheezing. People experienced shortness of breath, fluid formed in their lungs to the degree that their skin took on a bluish tinge, their breathing sped up alarmingly and their spit turn foamy. Nausea and vomiting were widespread symptoms but the only poisonous substance they had shared among them was the foul malodorous air. No food or drink contributed to this tragedy, just the air on which human beings depend for life.

During the course of days four and five, sixty people died. The highest number of deaths occurred in Engis, population 3,500. In later years, scientists gleaned from newspaper descriptions of forty- eight of the dead that those victims were between twenty and eighty-nine years old. Twenty-seven were male and their average age was fifty-six; the average age of the twenty-one females was seventy. The fog affected

all of Belgium but doctors found poisonous particulates in the bodies of only those living in a valley where factories spewed those particulates into the open air. For the first time, scientific evidence showed the extreme threat to health that accompanies environmental pollution.

The zinc-plating plant in Donora, Pennsylvania, produced pollution that was the main cause of the deaths that occurred.

The United States in 1948

Similarly, a poison-laden fog descended on citizens of Donora, Pennsylvania, population fourteen thousand, in late October eighteen years later. The fog itself blanketed an immense area from the Northeastern to the Midwestern United States. In many towns and cities in that vast area, the fog adversely affected people -- planes could not take off, traffic slowed and car accidents occurred due to low visibility. The fog inconvenienced people elsewhere, but people died in Donora.

The fog remained from October 27 to 30 in Donora and the nearby town of Webster, where heavy industry had been attracting workers since the turn of the twentieth century. They worked in the Union Steel Company mill producing metal rods and in the American Steel and Wire Works. Some worked at a zinc plating plant. Sometime after the zinc plant opened, the grass on the nearby hill died and none grew there again. The air was often bad, but the residents endured it because they needed the jobs that the steel industry provided.

The switchboard at the local telephone exchange began lighting up as the effects of the polluted air worsened; people were calling doctors to report shortness of breath. Some suffered heavy coughing but others could barely breathe. They kept the town's thirteen doctors busy and the local fire department sprang into action, rushing to homes -- not to put out blazes but to carry an oxygen tank to aid the most serious sufferers. Within a span of twelve hours, seventeen people died. Three more died later. Out of a population of fourteen thousand people, six hundred became very ill and ten percent of the population sought medical attention.

In a letter of complaint she wrote soon after the tragedy, Mrs. Lois Bainbridge informed Pennsylvania's state governor that the company bosses had talked for years about moving the zinc works away from populated areas. She continued, "Perhaps, this will awaken some of those high officials, who have built beautiful homes outside of Donora, where vegetation still grows."

Temperature inversion

Normally, as the sun warms cool air near earth, that air rises and cool air descending from high elevations replaces it. In rare instances, in what is known as temperature inversion (or anticyclone) which occurred in the tragic cases in Belgium, the US and the UK outlined here, dense stagnant fog blocks out the sun, preventing it from heating the air, which doesn't rise. Being trapped near earth, the air takes in an increasing amount of noxious gases as each hour passes. Fortunately, on November 1, 1948, rain poured down on Donora and Webster, Pennsylvania.

London, England in 1952

As was the case with Belgium and with Donora in the US, the city of London is in a valley, the Thames Basin, formed by the River Thames. Being in a valley is a factor in temperature inversion; the surrounding hills impede airflow. In London, the chalk hills to the city's north and south added to air stagnation when the other elements of temperature inversion were present.

In most extant pictures of the smog that killed thousands in London in 1952, discerning images in the dense gray mist is hard; this may have been taken outside the city or at the beginning of the catastrophe

About 8.6 million people were living in the Greater London area on December 5, 1952, when the densest fog any Londoner had ever seen descended on the city. The temperature was just below freezing. Visibility was below sixty feet (eighteen meters) and in some places it did not exceed twenty feet (six meters). The poisonous fog pervaded London during a time when many people were suffering from influenza. By December 13, four thousand people had died, from the poisonous smog alone or in combination with other factors. At the annual Smithfield Show, held that year at Earl's Court Exhibition Center in Earl's Court, London, where the hardiest cattle, sheep, pigs, poultry and other livestock win prizes, even some cows died. In the year that followed, perhaps another eight thousand people died, as the poison residing in their bodies continued to do damage, or fighting against the poison lowered a person's resistance to some fatal disease.

That cumulatively so many people, in an effort to stay warm, burned coal in their home fireplaces, the fumes rising through chimneys, was later deemed a major factor in the air becoming toxic. Temperature inversion kept a lid on the city preventing those deadly fumes from dissipating. The Greater London area in those days also had factories that produced similar products as those in the Meuse Valley and Donora. Additionally, on July 5 that year, London had retired their electric trams as public transportation, replacing them with five thousand diesel-burning buses.

Serving the nation

This is all to say that pollution is not unique to Benin, though like most other nations, Benin suffers from it. From the above examples, we can see how dangerous pollution can be and how seriously we all ought to be about eliminating it.

On June 1, their nation's Arbor Day, members of UPF and the Family Federation in Benin conducted a project to reduce the amount of environmental pollution in their nation. Their report to PeaceTv stated the following:

> As part of a project against pollution in Benin, UPF-Benin and FFPMU-Benin, in concert with a government program, developed a project to plant moringa saplings. For this, we went to three prefectures and gave a lecture to authorities from May 15 to 28. Our aims are to contribute to the fight against pollution and contribute to the health and socio-economic development of people living it three prefectures, Couffo, Zou and Littoral and seven communes, Zagnanado, Ouinhi, Zogbodomey, Akpro-Missérété, Grand-Popo, Abomey-Calavi and Kpomassè. At each stage, we explained to the authorities why we had chosen the moringa tree.
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> In accordance with the Action Plan of the government of Benin, UPF and FFPMU in Benin, have developed a project of cultivating moringas. We donate some of these plants. The project serves two purposes, fighting pollution and contributing to improving health conditions and promoting socio-economic development of the local population. At each stage, we explained to the authorities the good qualities of the moringa tree. Indeed, in addition to other widely known medicinal virtues, moringa leaves have a strong carbon dioxide absorption capacity, which helps to fight against environmental pollution. Everyone we approached seemed touched by our gesture of donating and the explanations we provided. In the commune of Zagnadado, where we donated two hundred moringa plants, we commissioned the mayor and two deputy mayors as ambassadors for peace. Benin, a nation of about ten and a half million people, is home to about one thousand five hundred FFPMU members. The country is French speaking and poor, but along with Senegal, Ghana, Zambia, South Africa and Namibia is among the most democratic nations in Africa.

Moringa oleifera

The moringa tree has attracted great attention for the great variety of problems it is a solution for. In one study, scientists at a veterinary college interviewed farmers to ascertain which natural medicines the farmers rely on to rid pigs, chickens and goats of parasites. They discovered that farmers relied on ten different natural remedies. The scientists recorded the part of the plant or tree used as a natural medicine in all ten remedies and the process the farmers used to prepare each, which was either pounding into a

powder, heating and pounding or decoction (extraction by boiling). The scientists did a controlled laboratory study. They diagnosed pigs, chickens and goats suffering from barber pole worms, made a culture including the parasite and compared the effectiveness of various natural remedies in killing the worms. They recorded the part of the plant used and the dosage and compared the effectiveness and the speed at which an animal became free of the infestation. In a field of ten competing medicinal products, moringa oleifera proved the most effective against worms in pigs and chickens and the third most effective in goats.

The roots are edible and taste like horseradish

The moringa tree has applications far beyond curing animal diseases and ailments. According to Wikipedia, humans boil the leaves and eat them or dry and crush them as a flavoring. Having compressed moringa seeds to extract the oil, which scientists are studying as a possible biodiesel fuel, the remaining mass of crushed seeds has proven to have qualities that purify polluted water. The living trees themselves have also proven effective in countering air pollution. Governments the world over are studying ways to use the efficacious qualities of this tree, which our fellow members in Benin have offered to various governmental agencies throughout their nation.