

Air pollution comparison and effects between developing cities term paper

[Environment](#), [Pollution](#)



Introduction

As a matter of fact, air pollution is one among the primary health menace in the urban environments of many countries – both developed and developing. The aspect of air pollution is associated with congestion of human beings, vehicles and factories of the power. Currently, the United Nations, in conjunction with various governments across the globe, is trying to protect the human race through reducing air pollution, with the greater purpose of saving the ozone layer – the protective natural cover that filters the dangerous ultraviolet rays of the sun. Currently, many cities have come up with policies to help curb the problem of air pollution. Apparently, some of these policies have been in place for quite a long time now. What governments are currently doing is to evaluate the effectiveness of such policies, as a way of finding a way ahead. This paper is a comparative study on the effectiveness of the air pollution policies in four world cities: New York City, Beijing, Port-Au-Prince and Mexico City.

Air Pollution in Beijing, China

The first three months of this year, saw the city of Beijing experience the highest level of air pollution in history. It is a sorry state, considering that the hazard has been around for a good number of years, and that the government has endeavored to come up with policies aimed at rectifying the situation in vain. Studies suggest that china is among the few countries experiencing such levels of pollution. The main source of air pollution is the dominant uses of fuel, especially fossil fuel (Wong, 2013). The use of fossil fuel in china causes the discharge of such gases as nitrogen dioxide and

sulfur dioxide – a gas that is usually associated with acidic rain. Together with the two gases comes the element of particulate matter. Particulate matter consists of tiny particles whose diameter is close to 10 micrometers. Such particulate matter is made up of tiny elements that penetrate the lungs of a human being, causing acute respiratory diseases, which have seen the number of people admitted to hospitals increase by the day. According to reports from the head of the city's Environmental Protection Bureau (EPB), the levels of the air pollutants had gone up by 30% since the previous year. The report by the head of the city's Environmental Protection Bureau also indicated that the amount of dirt and dust particles had gone up by 47%. Perhaps the most shocking news relating to air pollution in China is the fact that outdoor air pollution had accounted for the deaths of close to 1.2 million people (Wong, 2013). This figure represents exactly 40% of the world cases. Studies indicated that the air pollution threat was the fourth largest killer in the Republic of China, a situation that has not yet been experienced anywhere else around the world. Straightforwardly speaking, China is the worst affected country when it comes to air pollution. Beijing City, particularly, is the worst hit, with smog and constant smoke darkening buildings and forcing people to use face masks as a way of protecting themselves from the hazard. According to Chinese experts, the miserable condition was associated with the high amounts of emissions from factories and vehicles, as well as other aspects of climate and topography.

Air pollution in New York City, USA

The degree of air pollution in New York City is remarkably low, when compared to Beijing. For instance, the amount of sulfuric gases in the Beijing atmosphere is 23 times more than that of New York. Much like Beijing, nitrogen oxides are quite common with nitrogen I oxide, rapidly changing into nitrogen dioxide, which has been described as a gas that irritates the respiratory system of the human system. Another common cause of air pollution is elemental carbon, which comes as a result of fossil fuel. Sulfur dioxide is common and is prominently associated with acid rain, which corrodes surfaces and kills organisms. Worth noting is the fact that the causes of pollution, especially air pollution are strikingly similar to those of Beijing. The pollutants remain to be particulate matter denoted as just PM2.5, which comes as a result, combustion of virtually all forms of fuel including vehicles, boilers and even smaller machinery (Reitze, 2001).

The pollution condition of Mexico City, Mexico

Forbes magazine ranked Mexico City number five among the dirtiest cities in the world. Such ranking is especially a terrible experience for such a distinguished tourist destination. All through the years, Mexico City has been known as one among the cities with the highest levels of pollution, which posed a health menace to the public through inhalation or respiratory diseases such diseases have claimed numerous lives. Research indicates that 50% of the emissions are from the transport sector (Molina & Molina, 2002). In straightforward terms, the smoke coming out from the tailpipes of the automobiles accounted for half of the emissions. Much like NYC and

Beijing, the main pollutants, are sulfur, nitrogen and the particulate matter. As a way of devising policy, the government of Mexico decided that the most effective technique was to begin with the transport sector.

Air pollution condition in Port-au-Prince, Haiti

In the Forbes ranking, Port-Au-Prince was named the fourth dirtiest city in the world. By what standards the ranking was done remains unclear, but that was it. Scholars have always sought to follow the direction of Port-au-Prince after the earthquake. The city has yet to recover and embark on development. Comparing the city with such vast cities as Beijing and New York City may not be a rational decision, but for the purposes of air pollution it is essential to note that there are significant differences and similarities. For instance, the causes of pollution are substantially similar. The combustion of fuels, congestion in the city and PM_{2.5}, are the most common (Ahmed & Sánchez, 2008). However, it is necessary to mention that noise is another means of pollution prominently associated with Port-au-Prince. While noise is not that much of a problem in all the other cities discussed above, it is a primary source of noise in Port-au-Prince and all other developing countries.

Chinese policies on air pollution

Among the key policies advocated for by the government are such propositions as the use and production of high grade oil. Scientists explain that using low grade fuel is one among the most common ways of polluting the environment. One of such low grade fuels is leaded petrol. According to the scientists presence of lead is hazardous to flora and fauna. The second

policy designed by the Chinese government is the up gradation of the production plants. Upgrading of the production plants entails the installation of such gadgets as the Clean Air Tracking system (CATs) which will minimize the emission of smoke. The third policy is the up gradation of the cars made by the Chinese automobile industry. According to government advisors on matters of the environment, the tail pipes of cars can be structured in such a way that they do not release the dangerous gasoline smoke which affects the environment. The last policies are the China III Diesel Standard and the China IV Gasoline Standard. These relate to the quality of diesel and other lighter fuels respectively. The standards give precise criteria of evaluating high quality fuels.

New York policies on air pollution

When air pollution was mentioned as the cause of 6% of the deaths in New York, the mayor came up with what he referred to as PlaNYC. This was a long-term plan for the city, which contained many policies, relating to the city with respect to air pollution. In the mayor's PlaNYC was the target to "achieve the cleanest air quality of any significant U. S city by the year 2030". The Department of Environmental Protection (DEP) has created a number of policies designed to ensure the status quo changes for the betterment of public health. In furtherance of the air Pollution Control Code, the DEP has advocated for the use of Clean Air Tracking system (CATs) for all new commercial buildings that expect to keep boilers in them. This policy is aimed at keeping on the low, the amount of smoke emitted. Other policies include transportation conformity, which requires the traffic department to

inspect all vehicles for road worthiness and tailpipe standard. The DEP has as well made it a policy that all organizations handling anything to do with emissions make a plan on how to reduce such emissions.

Mexico City Policies on air pollution

In the year 1989, the government implemented policies that sought to ensure that congestion is alleviated from the city. This was implemented through making it a requirement that every vehicle could not get into the city on a certain day. This was done through observation of registration numbers. Prior to the implementation of the policy, the pollution levels of the city constantly exceeded the WHO set maximum and 81% of the nitrogen came directly from vehicles (Molina & Molina, 2002). For this reason, they decided to attack the problem from driver behavior.

Policies on air pollution

The city has a strong waste disposal policy, which requires that all waste from households and institutions be dumped together for collecting by the city council and other municipal authorities.

Effectiveness of the Chinese policies

The main reason why the situation in Beijing is as dangerous as described above is because policy has utterly failed in the city. All abovementioned policies have seriously failed, and there is little hope that they will have a positive impact in Beijing. According to various researchers in the city, the situation was attributable to resistance from the key interest groups, the power industry being the most pronounced. Such groups have consistently

refused to comply with the healthy policies citing reasons of heavy additional costs (Finamore, 2013). While the automobile industry is willing to embrace the policies, it has found it difficult since it cannot change the vehicles produced if the oil industry is not willing to embrace standardized oil. Another reason why the policies have not had a positive impact on the situation in Beijing is because of political infighting. Additionally, china's oil sector prioritizes profits at the expense of public health. China is an example of policy failure, and experts suggest that the only way to overcome such failure is to have the government control interest groups as such groups do not have the commoner in mind, but rather are profit oriented (Wong, 2013). Perhaps one way through which the government of China and the authorities of Beijing can see the policy take effect is through enhancing enforcement and enactment of policy. For instance, they should strictly enforce punitive measures against those people that do not comply. Currently, the fine stands at 16000 dollars, which the violators can easily obtain. Additionally, the government should endeavor to have all industries develop their own policies to which they should stick.

Effectiveness of the New York policies

Critics have described the PlaNYC as being somewhat vague as it leaves out many metrics. Even so, the city has seen remarkable improvement in the quality of air over the last decade. Unlike Beijing, New York is an example of policy success. The policies are rapidly changing the environment in the city. The legal structures in the U. S are considerably well established compared to the hierarchical Chinese system. Perhaps among the things that Beijing

ought to borrow from New York City is enforcement and structures. The policies that have been in place have seen the city move towards sustainability.

Effectiveness of the policies

Research indicates that pollution levels, especially air pollution levels have significantly gone down since the 1990s. The policies associated with driver behavior appeared popular, but when the government sought to advocate for buses only to operate in the cities, no one was willing to support the view. Even so, the policy has had positive effects, though it has yet to meet the expectations of the implementing body. The situation in Mexico City is not any good but is not as pathetic as that of Beijing

Effectiveness of the policy

Such an approach has worked to improve the quality of air in two main ways. The first one is through reducing the putrid odor resulting from decomposing matter. Secondly, the smoke that emerges as a result of humans burning trash in different locations across the city has been kept on the low. This has helped in significantly reducing air pollution in the city. While the general policy adopted after the earthquake has not been implemented, a positive change is being observed, as Port-au-Prince heals and rebuilds. The rate of improvement is higher than that of Beijing.

Conclusion

In conclusion, it quite striking that the cities have adopted different policies and that these policies are impacting differently on the respective cities.

Beijing has seen the worst conditions as far as air quality is concerned. The sorry state of the city of Beijing is associated with bureaucracies and resistance by interest groups. Summarily, the policies have not had a positive effect on the city. On the contrary, NYC has seen a lot of significant positive change, thanks to strong implementation and structures. Mexico City is improving but from the look of things, its moving at a slow rate. Port-au-Prince is a reflection of a typical third world city that is generally characterized with noise and dust. Port-au-Prince is changing slowly while new policies are being designed to see the city back on its feet.

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