



SHORT COMMUNICATION PAPER

CAUSES AND CONTROL MEASURES OF URBAN AIR POLLUTION IN CHINA

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ARTICLE DETAILS

ABSTRACT

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Air pollution is continuously increasing severe health problems in all over the world conscientious for copious diseases and deaths. Extensive economic growth, especially in urban areas of China, has led to escalating episodes of severe air pollution. In the past few decades, continuous industrialization and urbanization in China improved the living standards of their people but also increase the air pollution, which badly affected on health. In early 2002, China has carried out certain steps for the management and control of air pollution, but unfortunately there approaches towards implementation and governance is unsatisfied, after passing the so many years still have haze and other serious air pollution issues, which not only damage the environment but also destroy the people health. Recent, development, industrialization, and urbanization, air pollution has become one of the major and critical problems. Thus, it is very important to examine the cause and source of air pollution, treatment and effectively resolve the problems. Based on the causes and treatment of urban air pollution, this short communication would be a guideline for further control measures and technology development.

KEYWORDS

Urban air pollution, Genesis, Governance

1. INTRODUCTION

For our healthy and happy life, the air we breathe is an essential and very important ingredient. Unfortunately, air pollution is a common issue of the world even in developed countries from the 1960s [1,2]. Polluted air has more than one perilous substance, the contaminant that creates a hazard to general health [3]. In the air, particulate matter (PM), ground-level ozone, PAHs, lead, sulphur dioxide, benzene, carbon monoxide, nitrogen dioxide, and heavy metals have the most concerning contaminants or pollutants [2]. A short lifespan is one of the reasons for air pollution in cities for city dwellers. The concluded remarks of British Scientist that particulate matters and related air pollution at high levels pose hazards to human health [4]. With the continuous development in industrialization, rapid growth in the urban sector and increasing demands for energy and vehicles are the worsenings of air pollution levels.

In China, urban air pollution is escalating over the years and matter of concern especially particulate matter. Fly ash produced from coal power plants and numerous sources in urban vicinity which contains major portions of PM that not only damaging air quality but also plant tissues at microscale, human health risk especially lungs diseases like asthma, lungs cancer, skin infections and many other issues [5,6]. Urban population of China are impacting huge in vehicular emission which increasing by rise of living standard in urban areas. Indoor-outdoor emission of gases at small and medium level are also adding fuel to urban air pollution which would have spontaneously effects. Other factors affecting air pollution such as worst environmental regulation, less efficient production technologies and poor vehicles maintenance.

Bad health wipe out of natural and man-made sources is also caused by air pollution. Major anthropogenic sources of ambient of air pollution include smoking, cooking, heating, cleaning detergents, insecticides industries, automobiles, power generation [7]. In the natural source of air pollution include waste disposal sites, incinerators, forest, and agriculture fires [2]. In this short communication, we found the urban air pollution contents

which can affect human health and causes of urban air pollution. Furthermore, summarize the administrative measures and technology advancement to overcome the urban air pollution problem.

2. URBAN AIR POLLUTION CONTENTS

Geographically China is a complex land situation. It contains an incredible range of different ecosystem such as spanning tropical zones, subtropical zones, temperate and boreal zones. The number of cities has risen because of progressive urbanization, the urban population is reported to have grown seven-fold between 1952 and 2003 and has exceeded half a billion [8]. Urban air pollution is mainly based on "soot" pollution; the main contents of pollutants are carbon dioxide, sulfur dioxide and soot [9]. Furthermore, pollution level increased due to the continuous increase of destructive substances in the air to seize the most horrible effects on air and make a cause of air pollution. This not only hinders the socioeconomic development but also destroys the original inheritance of social environment.

A well-known PM, also known as particulate matter, there are two most common atmospheric pollutants, one is respirable particulate matter (PM10 and PM2.5) and the other is totally suspended particulate matter (TSP), which has a serious impact on air quality and air visibility.

3. CAUSES OF URBAN AIR POLLUTION

Most of the cities in China have under rapid and progressive development phase. Although living standards constantly improving, still lack of environmental issues awareness would because of urban air pollution and create a huge impact of individually. For example, people's unnecessary use of oil, coal and other materials which directly destruct the environment. Due to poor environmental awareness, people continue to use coal and other non-renewable energy materials, which originate the swear air pollution [10].

In recent years, China's urban industry is developed swiftly, a large number of factory enterprises gradually emerged, this phenomenon has led to industrial pollutants have become the most important cause of urban air pollution. When the factory processes, the production of products, it will produce more industrial pollutants, and most of the pollutants emitted are beyond the control of many industrial enterprises, which in turn cause serious industrial pollution. Therefore, it is necessary to analyze the pollutants in industrial discharge and effectively control the urban pollution in a practical way.

Under the background of the economic development of China's characteristic socialism, the comprehensive construction of a prosperous society has been effectively implemented, so people's living standards have been significantly improved as compared to 30 years ago. Not only in the context of the improvement of people's living standards also increasing the transportation industry has entered a stable and efficient stage of development, but China's private car ownership is also increasing. According to the significant increase in the number of private cars that directly effects on traffic and their smoke effects on the environment that ultimately show a serious impact on air pollution in China. For example, many private cars or Lorries are now mainly diesel as fuel, and diesel contains more harmful particulate matter. Particulate matter discharge by the car not only affected people's physical health but also cause the problem of atmospheric pollution [11].

4. CONTROL MEASURES OF URBAN AIR POLLUTION

The core idea of China sustainable development is to protect resources and protection of the ecological environment and economic development and also provide a good resource environment for the next generation. Nowadays, the problem of air pollution is becoming more and more prominent, which caused the damaged resource of an environment. Therefore, the local government should strengthen the treatment of atmospheric pollution in a common, continuous and practical spirit. In the process of air pollution control, the government needs to make good standards for the management of air pollution, supervise and control the discharge of pollutants in the industry and other aspects, and establish effective governance goals.

In the actual urban development, the Government needs to establish and improve the effective energy consumption mechanism and the atmospheric environment supervision mechanism according to the energy and atmospheric supervision and so on. The establishment of these mechanisms can not only regulate the use of coal and other energy sources, the use of new energy sources, but also strengthen the management of urban air pollution, fundamentally solve the problem of urban air pollution, and then fully and effectively control the problem of urban air pollution, promote the stable development of society [12].

Reducing emissions of atmospheric pollutants produced by industrial enterprises is an important objective for the Government to combat air pollution in a realistic capacity. Because of the different standards of governance in different regions, there is a need for practical governance according to the atmospheric pollution situation in different regions. In the production process of industrial enterprises, it is possible to reduce the emission of pollutants from industrial enterprises by introducing advanced production technology processes, and thus effectively reduce the problem of urban air pollution. Therefore, industrial enterprises need to be based on the current situation of air pollution, practical development of standards to control air pollution, the introduction of advanced production technology, from reducing the emission of pollutants to effectively control air pollution problems.

5. CONCLUSION

Nowadays, the level of urbanization in China continues to improve, in this context, a serious problem of air pollution has arisen. In addition, due to people's poor awareness of environmental protection, serious pollution of industrial enterprises, urban heating pollution and transportation pollution caused by air pollution, not only caused serious damage to people's lives, but also greatly hindered the development of China's urbanization. Therefore, the local government needs to implement the sustainable development strategy, build a sound energy consumption mechanism, build a sound atmospheric environmental supervision mechanism, introduce advanced production technology process, practical to effectively control and solve the problem of air pollution, and then promote the development of urbanization.

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