

# [Air pollution26 assignment](https://assignbuster.com/air-pollution26-assignment/)

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intro Air pollution is one of the most serious environmental problems in urban areas around the world. The rapid process of urbanization and extensive energy utilization mostly due to rapid economic expansion and population growth over the past few decades has made urban air pollution a growing problem. The air contains varying levels of pollutants originating from motor vehicles, industry, housing, and commercial sources. In most megacities, such as Mexico City and Los Angeles, cars are the main source of these pollutants.

Stoves, incinerators, and farmers burning their crop waste produce carbon dioxide, aerosol sprays and leaky refrigerators, as well as fumes from paint, varnish, and other solvents. causes 1. The industrialization of society cause more factories build up that burn huge amount of fossil fuel contributing to carbon dioxide around the world. 2. the introduction of motorized vehicles,. The two main sources of pollutants in urban areas are transportation (predominantly automobiles) and fuel combustion in stationary sources, including residential, commercial, and industrial heating and cooling and coal-burning power plants.

Motor vehicles produce high levels of carbon monoxides and a major source of hydrocarbons and nitrogen oxides 3. explosion of the population: cause the contamination of air by the discharge of harmful substances. mass transportation which enables people to move farther and faster through a city and more work force in industry that run with chemical means. -economic problems 1. Loss of productivity There are potential costs associated with employee productivity loss due to perceived poor air quality.

It estimates that the building environment can reduce productivity by 2 – 6% and the potential decrease in productivity could be as high as 6 – 8%. Most importantly, the perception of poor air quality could result in the possibility of tenants leaving the building if their employees are dissatisfied. 2. Private cost of production Potential costs that contribute to business owners that perceive poor air quality including increased operation and maintenance, increased insurance costs, and the threat of litigation.

Quantifying the potential property management costs associated with perceived poor air quality is difficult and in the short-term costs can amount to millions of dollars. 3. Social cost of production air pollution damages the health of everyone, numerous studies have shown that certain groups of vulnerable people (e. g. elderly people, children, and those with underlying disease) are at greater risk of being affected by air pollutants. Additionally, many recent health studies increasingly support the hypothesis that poor indoor environment not only cause respiratory and cardiovascular diseases, but may also cause premature death. social problems 1. low quality of life Epidemiological evidence supports an association between exposure to these ambient air pollutants and various health effects, such as respiratory symptoms or illness (e. g. asthma), impaired cardiopulmonary function, reduction of lung function, and premature mortality. In particular, the most serious health impacts include a significant reduction in life expectancy, and premature death, both of which are strongly linked to exposure to PM. 2. global warming/ climate change Air pollution includes greenhouse gases.

One of these is carbon dioxide, a common part of the exhaust from cars and trucks. Greenhouse gases cause global warming by trapping heat from the Sun in the Earth’s atmosphere. The increase in greenhouses gases is the cause of most of the global warming that happened over the past century. Scientists predict that much more warming will likely happen during the next century. Greenhouse gases stay in the atmosphere for years and cause warming around the world. Computer models indicate that, worldwide, the tiny aerosols cause about half as much cooling as greenhouse gases cause warming. government problems 1. Health care expenditures The health effects caused by air pollutants may range from subtle biochemical and physiological changes to difficulty breathing, aggravation of existing respiratory and cardiac conditions. In addition, these effects can result in increased government medication spending due to higher use of doctor or emergency room visits and hospital admissions. Most of government supports often go to the poor who live in squatter settlements and more suffer from ill health due to less access to health care and lower living standards. 2.

Ineffective implementation of environment policy and legislation There are several reasons resulting less effective air pollution controls. 1. The inability of democratic industrial nation-states to reduce environmental degradation results from compromising environmental health in the interests of capital accumulation by regulating rather than eliminating environmentally destructive behaviors. 2. In developing country like Thailand, overlaps in administrative jurisdiction occur as the Thai government has attempted to introduce some measure of coordination by establishing multi-representational committees or boards. . Channels of communication with provincial governments are difficult to maintain, especially in the more remote regions. 4. Administrative policies lack continuity due to frequently changing governments, and these results in a lack of a consistent environmental policy. 3. Subsidies for pollution control Subsidies of interest involve financial support by the government of activities believed to be environmentally friendly, including grants, low-interest loans, favorable tax treatment, and procurement mandates for products believed to have environmental advantages such as natural gas vehicles (NGVs).

In United States, numerous states offer favorable tax treatment for the construction and installation of pollution control equipment which provide an incentive to exceed requirements. The huge exemption from taxation the interest on debt that is issued by state or local governments to finance pollution control or waste disposal facilities was estimated a cost of $625 million in 1995. -Control measures There are three main methods that the government uses to cope with external costs: Taxes, Emissions Charges, and Marketable Permits 1.

Taxes (look at Appendix 1) The government can set a tax equal marginal external cost. The effect of such a tax is to make marginal private cost plus the tax equal to marginal social cost, 2. Emissions Charges (look at Appendix 2) The government sets a price per unit of pollution, so that the more a firm pollutes, the higher are its emissions charges. For the emissions charge to induce the firm to generate the efficient level of pollution, the government would need a lot of information that is usually unavailable. 3. Marketable Permits (look at Appendix 3)

Each firm is assigned a permitted amount of pollution per period and firms trade permits. The market price of a permit confronts polluters with the social marginal cost of their actions and leads to an efficient outcome. This method was used successfully to decrease lead pollution in the United States. (Pearson Education) recommendations Good air quality is one of many basic requirements contributing to society. It increases productivity as well as directly enhancing human welfare through better health and an improved environment. There are some strategies for government to take account of:

Sustainability ??? this principle is at the heart of all Government policy and lies behind the push for technologies, behavior and the use of resources which are sustainable in the long-term Effects-based approach ??? This allows the effects on people and the environment to be treated proportionately to the particular risk of harm or damage, using the most appropriate package of measures. Polluter pays principle ??? Of the polluter is made to pay those costs that give them the incentive to behave in a less harmful way. It also means that the costs do not fall on society at large.

Precautionary principle ??? as defined as “ where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. Taking account of costs and benefits ??? decisions must take account of a wide range of costs and benefits. We should take into account public values, the timing of costs, benefits risks and uncertainties. Risk assessment ??? they must base air quality objectives on an understanding of the relationship between exposure to pollution and its effects on human health and the environment.

Using scientific knowledge ??? when they take decisions, they must anticipate early on where scientific advice or research is needed, and identify sources of high quality information. Subsidiarity ??? they should take action to improve air quality at the most appropriate level, be it international, continental, national or local. Effective international monitoring and enforcement ??? ratification of international protocols should be followed by national action plans, where appropriate, and reports to the relevant supervisory body. They should monitor and enforce legislation rigorously across the community. ———————– MC + tax = MSC.