

# Urban sprawl and motorization

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Increasing urban sprawl and motorization have become leading causes of environmental and social problems in recent years throughout the world, particularly in cities of developing countries. Urban sprawl is the disorderly expansion of urban areas, especially resulting from real estate development on the out skirts of a city. Motorization, which is linked to urban sprawl, can be defined as the increasing use of motor vehicles. Although motor vehicles offer some benefits such as convenience, their use results in environmental and social problems.

All sorts of people are concerned about this issue, and making some suggestion to solve these problems. This essay will describe six solutions for the environment and social problems, and demonstrate that land management, reducing car use and using hydroponics or aeroponic technology are more effective ways to confront these issues. Climate change, which is caused by motorization and urban sprawl, is one of the most significant problems. Urban sprawl results in more energy use in transportation, and it also uses energy in large homes on the urban fringe which leads to more heating and cooling.

This creates global warming gases such as carbon dioxide into the air. There are two solutions that offer different degrees of effect for the problem of climate change. Nuclear technologies are one solution. In Gonzalez's article, two international business organizations named the World Business Council for Sustainable Development (WBCSD) and the International Chamber of Commerce (ICC) recommend using new technologies such as new renewable energy and cleaner fuels helps to reduce global warming.

However, Gonzalez (2005) explains these technological solutions can only shift the ecological pressure and cut down the global warming problem in the short term. For instance, nuclear energy emissions will cause other major environment problems (Gonzalez, 2005). Another shortcoming about nuclear technologies from Gonzalez (2005) is that now no technology are able to effectively reduce climate change problem, and allow present percentage of economic increase and consumption to keep going meanwhile decreasing global warming.

Then the author highlight that environmental issues will become more serious before the success of the new technologies. Another solution of climate change is environmentally sensitive land management. Gonzalez (2005) suggests regulating the distances of residential and work places, and creating these places smaller. As a result, although nuclear terminologies can reduce climate change problem in a short term, land management is the most effective means. Urban sprawl results in the dramatically increasing use of automobile.

Frumkin (2001) notes that motorization causes a numerous greenhouse gas emissions into the air, and physical health problems, such as worse lung function, and the mental health issues that affect local communities, especially the elderly and the very young. Living in suburbs, where is peace and quiet, provides benefits for human's health (Frumkin, 2001). Thus, it increases the rural population. Gonzalez (2005) urged that people should get rid of dependence on cars, and spend more time on walking, biking and public transit.

This solution seems to create the best effects to decrease the gas emissions to solve health problems. Another social problem is loss of farm land. Kenworthy and Hu (2002, 5 cited in Martin , 2007) explains that the percentage of urbanized land in China is growing, but the land use per capita has declined from 164 to 146 in six Chinese cities in five years. Yardley (2004 cited in Martin 2007) states that more than 2 per cent of farmland was replaced by urban areas in 2003.

There are two solutions that offer different benefits. First, for this problem, McCartney (2010) suggests that people who live in the city are able to grow food in their private gardens or on balconies. Moreover, the author points out that people can grow food in a large-scale by using hydroponic or aeroponic technology in the future. This technology reduces vehicle CO<sub>2</sub> emissions and people do not need to worry about the impact of droughts or floods to crops. Therefore, using hydroponics or aeroponic technology offers more.

In conclusion, urban sprawl and motorization brings a variety of environmental and social issues namely climate change, health problem and loss of farm land. In this article, providing a number of methods to solve these problems. While some ways of approaching this problems including nuclear technologies, moving to suburbs and planting food in people's private gardens or on balconies are able to help to decline damage of problems, these solutions still have some drawbacks. Accordingly, more effective and long method to resolve these problems are land management, reducing car use and using hydroponics or aeroponic technology.