

Urbanization and Environmental Pollution

1. Introduction

Urbanization is the process through which cities grow, and higher and higher percentages of the population comes to live in the city.

Or

Urbanization, the process by which large numbers of people become permanently concentrated in relatively small areas, forming cities.

The world is becoming more and more urban. It has been predicted that by the year 2050, 70% of the human population on Earth will live in cities. There are many environmental problems that are associated with so much urbanization on the landscape.

1.1. Heavy natural resource use

The human population that lives in urban areas around the world consumes a lot of resources and energy to keep everything up and running. This means that cities exhibit a net drain on natural resources and ecosystems, and also produce a very large carbon footprint. In addition, most resources must ultimately be transported large distances to reach consumers in cities, requiring lots of energy.

1.2. The loss of natural ecosystems

Like the loss of valuable farmland, as urban areas continue to grow and sprawl across the landscape, this development process often leads to the development of previously pristine ecosystems.

1.3. Pollution

Cities can be large sources of air pollution, water pollution, land pollution, and soil pollution, waste that is littering the landscape, and are also often associated with challenging issues of sanitation that can lead to the pollution of land and water.

1.4. Waste

Cities are a large source of waste. This waste must be managed somehow, and can end up polluting the landscape and waterways. Industrial and toxic waste that is produced in cities can lead to large amounts of pollution of the urban landscape, causing many environmental and human health issues.

1.5. Urban runoff

Cities contain large amounts of impervious surfaces that do not allow water to infiltrate the ground. Much of the rainwater that does fall on the urban landscape quickly runs off into rivers and streams, bringing all of the pollutants and chemicals that were present on these surfaces with them into waterways.

1.6. Light pollution

With increased urbanization, there is a lot more light that shines at night. There are studies that indicate that all of the human-produced light at night is disrupting the natural biological rhythms of organisms that have evolved within a dependable natural night and daylight cycle. This can impact not only diurnal species, but also nocturnal species that greatly depend on it being naturally dark at nighttime.

1.7. Noise pollution

With increased global urbanization, there is also an increased level of noise, both in volume and in consistency that humans and other organisms are constantly exposed to. Because wildlife are highly dependent on sound, they can become disoriented and their behavior and communication abilities can be hampered due to the excessive noise levels that they are exposed to in and around urban areas.

1.8. Fragmentation of habitat and isolation of wildlife and plant populations

As urban development continues across the landscape, wildlife habitat is becoming increasingly fragmented and wildlife and plant populations are becoming increasingly isolated from one another. This habitat fragmentation impacts these organisms' capacity to reproduce and

reduces the genetic diversity that is present within the remaining populations. It also reduces the suitable habitat that is needed for their survival.

1.9. An increase in human-wildlife conflicts

As human development fragments habitat, and leaves wildlife with no place to go, there has been an increase in human-wildlife conflict. Wildlife are hit by vehicles, birds and insects hit windows on cars and buildings and are killed, and sometimes wildlife come into human communities looking for food and other resources that they need to survive.

Sometimes, wildlife may be killed if they exhibit aggression or prey on pets or livestock. Sadly, only a few select hardy species can ultimately adapt and survive in an urban area and in such constant proximity to humans.

1.10. Feral animals and pets

Wherever humans have dwelled, they have always brought along their animals, both for companionship and for helping with labor. In urban areas, the keeping of animals has resulted in the feralization of many different animals like cats that compete and prey on local wildlife, and pets that do the same thing as well.

1.11. Loss of connectedness to nature

As more people are living in urban areas than ever before, many of them have begun to lose the intimate connection that they once had to the land they depend on, how all living things are connected, and how nature works.