

Urbanization is the
main contributor to
disaster occurrence
in developing
countri...



**ASSIGN
BUSTER**

In 2008, the world experienced one of the greatest numbers of deaths from natural disasters. Some of the contributing factors included extreme weather brought about by climate change, as well as urbanization in vulnerable areas. The urbanisation phenomenon is a feature that is being shared by all cultures across all continents on the globe, it not so much a result of higher birth rates in urban areas as it is of the continuous migration of people across regions as they are lured into urban areas for economic and social reasons.

As populations grow and urbanization increases, the capacity of communities decreases increasing the vulnerability of the communities to hazards or disasters. Events which in the past might have only impacted a small number of people may now become large-scale disaster affecting hundreds of people. Rapid urbanization thus becomes a major contributor to overcrowding, poverty and environmental degradation when the capacity of the community is insufficient to sustain a rapidly growing population.

Globally the growth of urban population has been astronomical.

Approximately 60% of urban population growth worldwide is caused by natural increase, with migration accounting for only 25% of growth in Africa and 34% in Latin America. From 1985 to 2000 the world's urban population has increased from approximately 80 million people to 2.9 billion (World Commission on Environment and Development, 1987). This is a major phenomenon observed in developing countries where there greater portion of the world's urban population reside.

During the second half of the 20th century, the world urban population seemed to have doubled every 25 years as it grew annually at a rate of over 2.7%. In comparison, the total population increased at an average annual rate of 1.76%, doubling every 39 years. The difference between those two rates of growth – the growth rate of the urban population minus the growth rate of the total population – is the actual rate of urbanization. Hence between 1950 and 2000, the world population urbanized rapidly, with the urban proportion increasing from 29% in 1950 to 47% in 2000 (Kleyn, 2010).

Overcrowding and Poverty An obvious concern of urbanization is overcrowding and lack of housing. According to Davis-Mattis (2005), approximately two thirds of Jamaica's population live in coastal towns and cities. Rapid urbanization has led to major such as traffic congestion resulting from poor infrastructure, contributing to environmental pollution and urban decay. Moreover, inadequate social services and poor housing are consequences of overpopulation and high population densities, often leading to the proliferation of squatters in major cities (Government of Jamaica, 2003).

This scenario is often times intensified when high housing prices force people who are in the lower income strata away from the formal land market and towards illegal squatter settlements frequently situated in forbidden, environmentally sensitive areas; usually state-owned, yet seldom monitored. Only the small upper and middle classes in third world cities have the income, job security and credit worthiness to purchase or rent homes in properly surveyed, serviced or legally conveyance developments.

Compared to other urbanized lands, squatter settlements are mostly vulnerable to natural and anthropogenic hazards (Bernstein, 1994). Under the pressure of survival, poor people ignore essential environmental, technological and safety measures. Clarke (2006) describes an unsightly 'rash of huts' appearing along the flanks of the lower part of the Sandy Gully- one of the main drainage systems implemented in the Kingston Metropolitan Area (K. M. A.). Six persons perished in Sandy Park Jamaica after their house collapsed into the Sandy Gully (Spaulding 2010).

This was one of three buildings on the gully bank to collapse after a section of the retaining wall broke away. According to authorities, people were warned not to live by the gully bank in Sandy Park but the general response was that they had no where else to go. As the squatter population grew the vulnerability to hazards in the area increased. Trees were cut down for more space and houses expanded (vertically and horizontally) thus exerting more weight and pressure on the slope and retaining wall of the gully.

The slope became less stable because of the lack of roots, increased surface run off and the increasing weight of the expanding houses. Eventually, the amount of rain from Tropical storm Nicole caused forceful volumes of water to rush through the gully rapidly eroding the already weakened retaining wall thus causing the house to break away into the gully. Wade and Webber (2002) observed that flooding in the city of Montego Bay occurs quite frequently due to deforestation by squatters in the lower watershed areas.

Caracas in Venezuela is another example; about half a million people live in squatter settlements on steep slopes which are subject to landslides,

<https://assignbuster.com/urbanization-is-the-main-contributor-to-disaster-occurrence-in-developing-countries/>

especially after heavy rain. Between 1980 and 1989, 266 landslides occurred in Caracas especially after heavy rain caused severe losses (El-Masri and Tipple, pp 10, n. d.). The World Bank highlights that the poor who make up 30-60% of urban population in developing countries are the ones who are most affected by degradation of the physical environment; much of which is also caused by them (Simms, 2008).

It has been said therefore that the poor are both victims and agents of environmental degradation. Overcrowding or overpopulation normally leads to an increase in crime and violence. Urbanization leads to poorer conditions for some people. Families are forced to live in unappealing areas as prices rise and race tensions intermingle. Without economic security and amid poor living conditions, crime is inevitable. Additionally, some believe that urbanization directly leads to criminality, as people are shaped by their environment.

Thus, if they live in crime-ridden areas, they are more likely to commit crimes. This spreads from each generation to the next. Violent crime in Jamaica is highly concentrated in urban areas, specifically those sections of the main cities and towns where the poor reside. These are the so-called squatter settlements for example in much of Western Kingston. Those directly involved and affected by violent crime, offenders and victims alike, are typically young, unskilled, unemployed, and undereducated males. 9 In 2008, women comprised approximately 10. 2 percent of murder victims, and children comprised 5. 8 percent (Crime Prevention and Community Safety Unit Ministry of National Security Government of Jamaica, 2010).

Organized crime in Jamaica is also on the increase as frustration about the economic situation and a proposed deal with the International Monetary Fund (IMF) lingers. Most recently, lottery scamming has gotten widespread media attention, with the country's largest remittance company, Western Union, closing down more than 10 agent locations to conduct thorough systems reviews. It implemented tighter control measures on money transfers sent to and from locations in St James, including setting a stricter, US\$400 transaction limit, after reopening a number of those locations (Thame, 2012).

Urbanization and Health Rapid and often unplanned, urban growth is the source for many of the environmental hazards faced by cities within the developing world. Substandard housing on marginal land, crowding, increasing levels of air pollution, water pollution and over usage, inadequate sanitation services, inadequate solid waste collection, and motor vehicle traffic and traffic injuries are all associated with rapid growth of urban centres.

One factor in urban life is the close proximity of people. Crowding usually occurs when multiple families live in the same small space because they cannot afford otherwise. Crowding increases the contact with the air and surfaces that other people breathe and touch. Diseases transmitted through respiratory and faecal-oral routes are more frequent in situations involving crowding, for example tuberculosis, rheumatic heart disease (caused by group A beta-hemolytic *Streptococcus* species), and helminthic infections (Moore, Gould and Keary, 2002)).

The stress of living with limited privacy in tight quarters contributes to the rates of intentional injuries, both suicide and homicide, and to mental illness in general (Moore, Gould and Keary, 2002). Air pollution is a major cause of morbidity and mortality in the developing world, and its effects are mainly felt where air pollution is worst, that is, in highly populated cities. Asthma, chronic obstructive pulmonary disease, lead and beryllium poisoning are associated with increasing air pollution. Air pollution can have both indoor and outdoor sources.

The outdoor sources for particulates and organic and inorganic pollutants are primarily motor vehicles and industrial sites. In Mexico City, three-quarters of the air pollution is caused by motor vehicular exhaust. Lead poisoning from air contaminated with lead is a significant problem in countries where gasoline still contains lead, or where small local refineries are in close proximity to housing (Moore, Gould and Keary, 2002). Indoor air pollution in the developing world is most often associated with the use of biomass, wood, animal dung, and kerosene, and smoking in doors.

Air pollution, from both indoor and outdoor sources, is one of the major risk factors for developing acute respiratory infections, the most important cause of death for children between 1 and 5 years of age in developing countries (Moore, Gould and Keary, 2002). Human faecal waste is an important source of disease causing organisms, and is probably the single most dangerous pollutant in surface water supplies (UNICEF, 2000). Inadequate sanitation is a major risk factor for diarrheal and parasitic disease, including schistosomiasis. Solid waste collection is a major problem in cities in the developing world.

<https://assignbuster.com/urbanization-is-the-main-contributor-to-disaster-occurrence-in-developing-countries/>

Inadequate waste collection services present a variety of hazards, especially in the shantytowns often erected rapidly in any available space in and around the city. In addition, available landfill space is becoming harder to find as housing space for planned and squatter settlements competes with landfill space for example, Riverton City community in Kingston, Jamaica which is situated near to the Riverton City Dump/Landfill (Matthews, 2012). To the abject poor, the small to large waste piles of the better off provide opportunities for recycling but place those sifting through trash at risk for injury from sharps, poisons, and animal bites.

Alternatives to landfill use, such as incineration, involve tradeoffs. While reducing the demand for precious urban space, incineration of solid waste can increase air pollution and create new pollutants such as dioxin (Moore, Gould and Keary, 2002). Uncollected solid waste may also prevent adequate water drainage and contribute to water pollution. Solid waste also can serve as breeding sites for a variety of vectors of infectious disease, such as sandflies and mosquitoes.

Tires, cans, or other items facilitating small collections of relatively clean water can serve as breeding places for mosquitoes such as *Aedes* sp. and *Anopheles stephensi*. The resurgence in *Aedes aegypti* and the rapid colonization of the Asian tiger mosquito *Aedes albopictus* have contributed to very large epidemics of dengue fever throughout the Americas (Moore, Gould and Keary, 2002). Disease vectors, such as rodents and insects, find new habitats within the rapidly growing urban areas. Rapid urbanization, with encroachment into previously wilderness areas, especially near the tropical rain forest, brings the urban environment into close proximity with <https://assignbuster.com/urbanization-is-the-main-contributor-to-disaster-occurrence-in-developing-countries/>

the wild, allowing for close contact between vectors, their natural animal hosts, and their new human hosts.

For example, Environmental Effects of Urbanization Urban populations interact with their environment. As urbanization occurs, land development exerts pressure on surrounding ecosystems. The negative impacts of such development may include the loss or destruction of wetlands and wild lands (together with their rich genetic diversity) and degradation of coastal zones (Berstein, 1994).

Wetlands account for about 6% of the global land area and are the transitional areas between terrestrial and aquatic environments, and are one of the world's most productive natural ecosystems. Wetlands are beneficial in that they provide protection from hurricanes and storm surges, pollution control, wildlife habitat, increase ground-water recharge and shoreline stabilization. In developing countries, wetlands have been undergoing rapid conversion into urban residential and industrial use over the last 30 years (Bernstein, 1994).

A study on coastal environments conducted by Wade and Webber (2002) described the removal of large portions of mangroves in Hunts Bay for the purpose of urban development. In the 1960s there were 14 mangrove islands in Blue Lagoon in Montego Bay. Today, only four (4) mangrove islands are left because of tourism development, the construction of a cruise ship dock and port and the construction of luxury up-scale apartments along the coast. Mangrove areas have been converted to residential or commercial areas such as, Edgewater in Portmore, St.

Catherine or the Donald Sangster Airport in Montego Bay in 1947. Another example is the mangroves which have been removed from the Palisadoes spit to facilitate the construction of the road. Before placement of wave resistant rocks, the side of the road towards the Kingston Harbour was slowly eroded by long shore drift action along the coastline, while the southern side was washed away fast by destructive waves. Eventually, a reef near the strip of land that used to break the force of the waves was destroyed, putting the foreshore under constant threat of erosion.

As for the remaining fraction of mangroves in the area, massive deposits of garbage that wash down to the coast usually get trapped between the roots, contributing significantly to the pollution of the coastal environment which reduces the chance for coastal organisms to flourish. Such activities increase coastal vulnerability of the already vulnerable landmasses to natural disasters such as hydrological disasters (hurricanes and storm surges), when mangroves which act as shock absorbers for the land are destroyed.

Pollution is a major contributor to environmental degradation as high levels of waste are disposed illegally or legally into ecosystems. For example, millions of gallons of partially treated sewage are discharged into the harbour on a daily basis from various semi-functioning sewage plants (National Environment and Planning Agency, 2008). This poses a threat to coastal resources as sewage pollution leads to eutrophication which creates harmful algal bloom that severely depletes oxygen levels in the water. This causes a general deterioration of water quality thus affecting marine life and the aesthetic appeal of the coast.

Research conducted by NEPA revealed that much of the marine life formerly found in the Kingston Harbour has disappeared and is still disappearing due to the degraded state of the harbour. Conclusion As discussed, rapid urbanization poses many challenges to the urban infrastructure and planning. Over the years the influx of persons from rural areas has put a strain on the environment, housing, crime, healthcare, increased demand for electricity on outdated grids which could in the long run prove to be hazardous to societies. All these have implications for disaster occurrence.

Governments need to implement strategies to improve their country's infrastructure in order to build resiliency into their urban infrastructure systems. These could include robustness which is the ability to maintain critical operations and functions when there is crisis. Secondly, resourcefulness which is the ability to skilfully prepare for and respond and manage crisis when they occur. There should also be an element to ensure rapid recovery from disasters when they occur. This would enable them to return to operations quickly and efficiently.