Lecture 13 Soil Type of Bangladesh;

Location of Bangladesh

- Bangladesh lies between 2034 and 2638 north latitude and 8801 and 9241 east longitudes.
- Located as an interface of two different environments - the Bay of Bengal in the south and the Himalayas in the north. Sits astride the tropic of cancer.
- Bordered by India in the west, north and east except for a small portion in the south-east by Myanmar. The entire south of the country is occupied by the Bay of Bengal.

Physiography/Land of Bangladesh

- The three broad physiographic units belonging to three distinct geological ages:
- A. Tertiary hills occupying 12% area
- B. Pleistocene terraces covering 8% area and
- C. Recent floodplains spreading about 80% area of the country.
- These three physiographic units are again categorized into 20 different physiography considering their geomorphology and origin of soils.

Climate and Agriculture

- Humid tropical monsoon type with three distinct meteorological seasons – summer, monsoon and winter.
- The rainfall ranges from 1500 mm in the northwest to 5000 mm in the northeast.
- The rainfall along with depth and duration of flooding is the main critical factor for agriculture in Bangladesh.
- The critical aspects of rainfall in relation to the use of land for agriculture is related to the uncertainty of the onset and departure of the monsoon as well as occurrence of droughts.
- Based on the climate, physiography and soil, Bangladesh has been divided into 30 Agro 18-Se Ecological Zones (AEZ)

Soils of Bangladesh

- Data on land and soils of Bangladesh was almost nonexistent before mid sixties.
- The first account of the landscape and soils in Bangladesh was published in 1956 where the country was divided into seven soil tracts based on the geological origin of soils without considering the soil forming factors.
- The Seven Soil Tracts of Bangladesh*
- 1.Madhupur Tract--Tejgaon
- 2. Barind Tract-- Amnura
- 3. Tista Silt--Gangachara
- 4. Brahmaputra Alluvium--Ghatail
- 5. Gangetic Alluvium--Sara
- 6. Coastal Saline Tract -- Barisal
- 7. Chittagong Hill Tract--Kaptai

Types of Bangladesh Soils

- 1) Red soil tract or Madhupur tract comprises parts of greater Dhaka and Mymensingh districts and extends through isolated tracts in Comilla and Noakhali towards south in Chittagong.
- This tract represents red later tic soils of Madhupur Jungle area - a high landtract above the flood level intersected by numerous gentle depressions locally known as"Beels" which are highly valued for aman paddy.
- 2) Barind tract comprises parts of greater Rajshahi, Dinajpur and Bogra districts. Barind tract belongs to an old alluvial formation, which is usually composed of massive argillaceous beds of pale reddish brown.

Types of Bangladesh Soils (Con..)

- 3) Gangetic alluvium comprises parts of greater Rajshahi, Pabna, Kushtia, Jessore, Faridpur and Dhaka districts.
- This tract represents the revering lands of the Gangetic plains. The soils are rich and are characterised by high lime content and are well supplied with patrol and phosphate, though a small area in the district of Kushtia is rather poor in phosphate.
- 4) Teesta silt comprises parts of greater Dinajpur, Rangpur, Bogra and Pabna districts. This represents a sandy loam similar to the ordinary silt soil of Bangladesh. The soil is fertile and is well supplied with potash and phosphate though rather poor in lime. Paddy, tobacco and sugar cane are the main crops.

Types of Bangladesh Soils (Con..)

- 5) Brahmaputra alluvium comprises the districts of greater Comilla. Noakhali, parts of Mymensingh, Dhaka, Chittagong and Sylhet districts.
- The soil is sandy loam, very fertile and rich and is replenished every year by fresh deposits of silts carried down by the floodwater. Almost all kinds of crops are grown of which jute and rice are the most important ones.
- 6) Coastal saline tract comprises greater Barisal, Khulna, parts of Noakhali and Chittagong.
- This tract comprises a flat low-lying area. From the south, near the sea is the Sunderban tract - a region of islands most of which clothed with evergreen forest, while some are covered with salt water of flood tide.
- 7) Unclassified hilly soils in greater Chittagong Hill Tracts -The soil is brown sand loams to clay loams, slightly to strongly acid, sometimes shallow over Shaley/Sandstone bedrocks on very steep high hills.

General Soil Types of Bangladesh

- 1. Floodplain soils
- 2. Calcareous Alluvium
- 3. Non-calcareous Alluvium
- 4. Calcareous Grey Floodplain soils
- 5. Non Calcareous Brown Floodplain soils
- 6. Non Calcareous Dark Grey Floodplain soils
- 7. Acid Basin clays
- 8. Acid Sulphate soils
- 9. Peat Soils
- 10. Hill soils (Brown Hill Soils)
- 11. Deep Red-Brown Terrace soils
- 12. Brown Mottled Terrace soils
- 13. Deep Grey Terrace soils
- 14. Grey Valley soils

General Soil Types with Diagnostic Properties

• A. Flood Plain Soils:-

- **2. Calcareous Alluvium,** Similar to non-calcareous alluvium but calcareous throughout or within 125 cm from surface.
- 3. Acid Sulphate soils, Poorly or very poorly drained, grey or dark grey soils on tidal flood plains which are actually or potentially extremely acid (pH < 3.5) within 125 cm from surface.
- **4. Peat soil,** Very poorly drained soils in which organic matters (peat or muck) comprises all or more than half of the upper 80 cm.
- **5.** Non-calcareous Grey Flood Plain soils, seasonally flooded soils developed to below 25 cm, dominantly grey in sub-soils, not very strongly acidic throughout the upper 50 cm and not calcareous within 125 cm from surface.
- **6. Calcareous Grey Flood Plain soils,** Similar to non-calcareous grey flood plain but calcareous throughout or within 125 cm from surface.
- 7. Non-calcareous Dark Grey Flood Plain soils, seasonally flooded soils developed to below 25 cm; not very strongly acidic throughout the upper 50 cm and not calcareous within 125 cm from surface.

General Soil Types with Diagnostic Properties

- 8. Calcareous Dark Grey Flood Plain soils, similar to non-calcareous dark grey flood plain soils, but calcareous throughout or within 125 cm from surface.
- 10. Acid Basin Clays, Poorly or very poorly drained heavy clay developed to below 25 cm. Very strongly or extremely acid to below 50 cm but not sulphuric or sulphidic.
- **11. Non-calcareous Brown Flood Plain Soils,** Similar to calcareous brown flood plain soils, but not calcareous within 125 cm from surface.
- **12. Calcareous Brown Flood Plain Soils,** moderately well to poorly drained flood plain soils developed to below 25 cm, prominently brown in sub-soil, calcareous throughout or within 125 cm from surface.

General Soil Types with Diagnostic Properties

• B. Hill Soils:-

• 14. Brown Hill Soil, Excessively to well drained hill soils, developed to below 25 cm; yellow brown to reddish brown sub-soil; usually very strongly acid throughout 125 cm from surface.

C. Terrace Soil:-

- 16. Deed Red Brown Terrace Soils, Well drained to moderately well drained red to yellow-brown soils, overlying a strongly red-mottled substratum.
- 17. Brown Mottled Terrace Soils, Imperfectly drained soils with a strongly mottled brown and red sub-soil, overlying a strongly red mottled substratum.
- 19. Deep Grey Terrace Soils, Poorly drained, mainly silty soils with a grey mottled brown or red sub-soil, overlying a strongly red-mottled substratum.
- 20. Grey Valley Soils, poorly drained, deep, grey, mainly silty soils occurring in terrace valleys. 18-Sep-23

Thank you

Lecture 14

Conservation of Natural Resources- Forest and Fisheries;

Resources of Bangladesh

- Bangladesh has remained largely agricultural, with nearly half the population employed in this sector in the early 21st century.
- Rice is the predominant agricultural product,
- Jute(Jute Products) and Tea, both of which are key sources of foreign exchange, also are important.
- Leather and Leather Goods
- Fisheries
- Resources are characterized as renewable or nonrenewable; a renewable resource can replenish itself at the rate it is used, while a nonrenewable resource has a limited supply. Renewable resources include timber, wind, and solar while nonrenewable resources include coal and natural gas.

Natural Resources

- Although Bangladesh is a small country, it has a number of mineral resources such as—
- 1. Natural gas,
- 2. Oil,
- 3. Coal,
- 4. Metal
- 5. Hard rock,
- 6. Limestone,
- 7. White clay,
- 8. Glass sand and
- 9. Mineral sand.
- At present, **natural gas** is the only **mineral** commodity significantly contributing to the national economy
- Bangladesh is a developing country with vast quantities of natural resources that play a vital role in economic growth and diversification.
- These natural resources are either renewable or non-renewable of which most have been conserved such as coral reefs, islands, evergreen vegetation and mangrove forests(Sundarbon).

Conservation of Natural Resources

- Bangladesh boasts of a considerable amount of natural resources which play a major role in the economic diversification of the country. Like most other natural resources, Bangladesh faces the challenge of keeping up the natural resources which are constantly under the threat of exploitation.
- For this reason, the government has devised various programs to aid in conservation as well as create public awareness and participation. The economy of Bangladesh is heavily reliant on the availability of natural resources and hence all efforts are geared towards protecting.

1. Fisheries,

- 2. Forest cover,
- 3. Natural gas and
- 4. Water sources.

MEANNG OF CONSERVATION OF NATURAL RESOURCES

- Conservation of natural resources, the wise use of the earth's resources by humanity.
- The term conservation came into use in the late 19th century and referred to the management, mainly for economic reasons, of such valuable natural resources as timber, fish, gas, topsoil, pastureland, and minerals, and also to the preservation of forests, wildlife, parkland(Garden Land), wilderness(Desert), and watershed(Pond or River/Lake etc..) areas. 18

Conservation of Natural Resources

- Conservation of natural resources is a procedure of protection and skilful management to preserve the resources provided by nature. The methods that can be used to conserve the natural resources are mentioned below:
 - 1. Reduce, reuse and recycle. The R3R3 should always be followed.
 - 2. We should take part as volunteers in cleanups in our community.
 - 3. Water should not be wasted, and rainwater should be harvested for future use.
 - 4. Ponds and lakes should be kept clean, and digging should be done more often.
 - 5. Dams and water reservoirs should be built.
 - 6. Deforestation should be stopped.
 - 7. Natural resources should be used more efficiently.
 - 8. Public awareness of the importance of natural resource conservation should be developed.
 - 9. Use of alternative forms of energy should be developed.
 - 10. Plantation of trees should be practised.
 - 11. Pollution should be controlled by using electric vehicles and alternative forms of energy.

12. Laws on the preservation of natural resources should be strictly implemented.

NECESSITY OF CONSERVING NATURAL RESOURCES

- 1. We need to conserve natural resources because there isn't an evidence that these resources are going to last for a long time, considering man's usual consumption of these resources.
- 2. There will come a time that there are some natural resources that will be gone [especially non-renewable ones and ones that are in high demand] and humans have to thrive in order to find alternative resources for the ones that have been lost.
- 3. And that specific task is not an easy one because there may be a possibility of unavailability or scarcity of it.
- 4. Conserving natural resources reduces the rapid depletion of biodiversity and it maintains the balance of the undisrupted ecology.

Forest Resources

- The country is covered with evergreen highlands in northeastern and southeastern regions with natural deciduous forests.
- The Sundarbans consists the largest forest reserve in the country, taking a large share of nearly 40 percent of the total forest cover in Bangladesh.
- The total land covered by forests is about 20 percent of the main land.
- Efforts are being made to safeguard the forests from population pressure through enactment of laws, educating the public on conservation measures and adopting agro-forestry policies to maximize food production as well as conserve trees.
- Valuable tree species native to Bangladesh forests include the Passur, Baen, Sundari, and Keora.
- 1. Huge Timber
- 2. Honey
- 3. Animal (Tiger, Deer, Crocodile etc.)
- 4. Fish
- 5. Water

6. Snakes

CONSEQUENCES OF DEPLETION OF NATURAL RESOURCES PRESENT SCENARIO OF FOREST

- Forests are the habitats of millions of species.
- CAUSES: Urbanization, Illegal logging, Agriculture, Subsistence Farming.
- CONSEQUENCES:
- Soil erosion, Global Warming caused by the rise of greenhouse gases- Extinction of species and loss of biodiversity.
- Flooding and drought.
- They produce the oxygen we breathe.
- Trees absorb greenhouse gases and carbon dioxide.
- Deforestation contributes 12 to 17% of global greenhouse gas emissions annually.
- Half of the world's forest has been cleared.
- An estimated 18 million acres of forests are destroyed each year.

• Imagine a world without trees.

Fisheries Resources

- The fisheries resource in Bangladesh comprises of marine sources such as the sea and inland resources like ponds, rivers and lakes which take the major percentage of fish production in the country.
- A variety of climatic conditions favor the fishing patterns, fish farming, and general growth of the fishing industry.
- Bangladeshis are the biggest consumers of fish-based animal protein based on the highest per capita income and culture with 60% protein coming from fish supplies.
- Bangladesh is among the leading inland fisheries producers, producing more than 2.8 million tons of fish every year.
- It possesses plenty of prawns, lobsters, turtles, mollusks, Crabs and other fishery resources in the vast rivers and inland water bodies.
- The fishing industry provides about 1.4 million job opportunities to citizens of Bangladesh which helps lift the economy. In addition, fisheries contribute to foreign exchange earnings and an overall nutritious diet to the locals.

CONSEQUENCES OF DEPLETION OF NATURAL RESOURCES PRESENT SCENARIO OF FISHERIES

- EXTINCTION OF SPECIES: Extinction can be defined as a situation in which a certain kind of species is continuously poached and hunted such that it is no longer available on Earth
- MAIN CAUSE: If we see the whole scenario, it becomes obvious that the root cause of all These problems is human overpopulation. The Earth has enough resources to support only FOUR BILLION people at present rates of consumption. The Earths population is 7.5 billion now. All measures to conserve natural resources are meaningless without controlling population growth. In the end this is the only measure which can efficiently conserve natural resources
- Increased irrigation, increased use in agriculture, roads and infrastructure prevent water seepage in the soil, rising temperatures
- CONSEQUENCES:
- 1. Drinking water shortage.
- 2. Food Shortage.
- 3. The depletion of our water resources is more serious

Importance of Natural Resources

- Natural resources are
- 1. Used to Make food and Nutrition
- 2. Fuel and raw materials for the production of goods.
- 3. All of the food that people eat comes from plants or animals.
- 4. Natural resources such as coal, natural gas and oil provide heat, light and power.
- 5. Research Topics
- 6. Education/Higher Study
- 7. Foreign Currency
- 8. Source of Income
- 9. Source of Energy

Importance of Natural Resources

- Natural resources are essential for the survival and development of humankind on this Earth. The importance of natural resources in human life are mentioned below:
- 1. They provide us with oxygen to breathe.
- 2. The land is used for cultivation and growing food products.
- 3. Sunlight gives us solar energy, an important alternative energy source.
- 4. Oil and natural gas give us fuel used in many industries and vehicles.
- 5. Minerals are used as fuel and steel-like coal, iron ore, etc.
- 6. Valuable materials like gold, and diamonds used for the jewellery industry and many mechanical types of equipment.
- 7. Forest provides us with food, timber, and fuel, and it is a shelter for many living organisms.
- 8. Natural resources help in industrialisation and urbanisation.
- 9. Dams built on rivers prevent floods, proper irrigation, development of fishing industry, and electricity generation.

Threats to Natural Resources

• These are the following threats that are responsible for the destruction of natural resources:

1. Overpopulation: The increase in population is the primary threat to natural resources because of the rise in the number of people; more land has been used for housing and development, so many forests and vegetation land have been converted for accommodations and making roads and farms. Overpopulation harms natural resources.

- **2. Over Exploitation:** Overexploitation of natural resources can result in resource destruction, including extinction. An increase in population has resulted in the overconsumption of natural resources. Industrial development is also a significant reason for the overconsumption of natural resources.
- **3. Climate Change:** Severe climate change has affected natural resources, especially change in rainfall cycle affects plant growth cycle, agricultural growth, and soil health. Without timely rain or high temperature, it is a risk of drought and forest fire. It decreases forest productivity.

4. Environmental Pollution: Pollution has affected natural resources like land, air, and water causing environmental pollution. It also affects the chemical composition of the soil, rocks, freshwater, and underground water, which destroys natural resources.

Thank You

Lecture 15

• Population Movement and Urbanization;

Population Movement

- An important aspect of **population** studies is the **movement** of people from place to place.
- As there are many different types of **movement** it can help to classify them.
- Population movements are responsible for the diffusion of culture, perhaps even a basic form of globalisation that doesn't involve trade or the internet.

Types of Population Movements

- There are two main types of population movements International (between countries) and Internal (within a country).
- 1) International Population Movements Many contemporary migrations are closely related to the economic, political and cultural links being formed between nations due to the process of globalisation. Types of international migration are:

- Resettlement migration

- Contract migration - guest workers, business migration, student migrant

- Forced migrations – the "slave trade", refugees

• 2) Internal Population Movements

Types of internal migration are:

- Rural-Urban migration
- Population movements to regions where the growth of the service sector is greatest (a developed world phenomenon)
- Sub-urbanisation
- Seasonal movements

Urbanization

- The process of making an area more urban.
- <u>Urbanization is a process</u> whereby populations move from rural to urban areas, enabling cities and towns to grow.
- It can also be termed as a progressive increase in the number of people living in towns and cities.
- It is highly influenced by the notion that cities and towns have achieved better economic, political, and social mileages compared to rural areas.
- Accordingly, urbanization is very common in developing and developed worlds as more and more people have the tendency of moving closer to towns and cities to acquire "privileged" social and economic services as well as benefits.
- These include social and economic advantages such as better education, health care, sanitation, housing, business opportunities, and transportation.
- Process in which there is an increase in the number of people living and working in a city or metropolitan area.

Types of Urbanisation

- Sub-**Urbanisation** (SU) : This is spread of people, services and industry to the edge of the existing urban area.
- Counter Urbanisation (CU) : This is the movement of urban workers from a city to rural towns and villages within commenting distance of the city.

Factors of Population Movement and Urbanization • **Push and Pull factors**

- The first Bangladesh census completed in 1981 shows a low level of urbanization: Only 15% of the total population lived in cities.
- But the country has recently experienced a higher rate of growth in its urban population. A variety of reasons that include both economic and non-economic factors have been identified to explain internal migration in Bangladesh.
- Poor and middle-class people alike engage in internal migration. Employment opportunities and higher wages in urban labour markets inspire migrants to move to urban areas.
- Factors which contribute to internal migration in Bangladesh are ecological in nature, such as river erosion, and natural hazards like cyclones, droughts and floods.
- Yet social conventions and politics play a role too: Living in the cities is viewed as prestigious. Marriage, pressure from relatives, and disputes with friends or family lets people leave the rural areas, as does political unrest.

Factors of Population Movement and Urbanization • Economic Transformation

- Now, most people in rural villages are dependent upon off-firm livelihoods. In the past, most of the migrants from rural areas were young men.
- These days though, due to increasing demand in the ready-made garment (RMG) industries in the metropolitan cities, the number of female workers is also increasing respectively. They are contributing greatly to increasing production in the RMG industries.
- Though it has an agriculture-based economy, Bangladesh's macro economy depends highly on the RMG sector, which is also a prime earner of foreign currency: The RMG sector contributes around 76 % to total export earnings.

Factors of Population Movement and Urbanization • Industrial Growth

- The industry has been regarded as the source of economic development, employment opportunities for poor people and industrial development of Bangladesh.
- Despite the challenges of low wages, long working hours, poor working conditions and labour rights issues, the rise of the RMG sector and trade liberalisation have already proven helpful in delaying marriages for young women who have managed to work and save up for the higher dowry demands that come with marriages later in life.
- In Bangladesh, rapid growth in the literacy rate of young women in both urban and rural areas took place in the decade between 2000 and 2010 through a range of government programmes.

Causes of Population Movement and Urbanization 1. Industrialization

- Industrialization is a trend representing a shift from the old • agricultural economics to a novel non-agricultural economy, which creates a modernized society.
- Through the industrial revolution, more people have been attracted to move from rural to urban areas on account of improved employment opportunities.
- The industrialization has increased employment opportunities by giving people the chance to work in modern sectors in job categories that aids to stir economic developments.

2. Commercialization

- Commerce and trade play a major role in Population Movement and urbanization.
- The distribution of goods and services and commercial transactions in the modern era has developed modern marketing institutions and exchange methods that have tremendously given rise to the growth of towns and cities.
- Commercialization and trade come with the general perception that the towns and cities offer better commercial opportunities and returns compared to the rural areas. 37

Causes of Population Movement and Urbanization

• 3. Social Benefits and Services

- There are numerous social benefits attributed to life in cities and towns. Examples include better educational facilities, better living standards, better sanitation and housing, better health care, better recreation facilities, and better social life in general.
- On this account, more and more people are prompted to migrate into cities and towns to obtain a wide variety of social benefits and services which are unavailable in rural areas.

• 4. Employment Opportunities

- In cities and towns, there are ample job opportunities that continually draw people from rural areas to seek a better livelihood.
- Therefore, the majority of people frequently migrate into urban areas to access well-paying jobs as urban areas have countless employment opportunities in all developmental sectors such as public health, education, transport, sports and recreation, industries, and business enterprises.

Causes of Population Movement and Urbanization

- 5. Modernization and Changes in the Mode of Living
- Modernization plays a very important role in the process of urbanization. As urban areas become more technology savvy together with highly sophisticated communication, infrastructure, medical facilities, dressing code, enlightenment, liberalization, and other social amenities availability, people believe they can lead a happy life in cities.
- In urban areas, people <u>also embrace changes</u> in the modes of living namely residential habits, attitudes, dressing, food, and beliefs. As a result, people migrate to cities and the cities grow by absorbing the growing number of people day after day.

• 6. Rural-urban Transformation

- As localities become more fruitful and prosperous due to the discovery of minerals, resource exploitation, or agricultural activities, cities start emerging as the rural areas transform into urbanism.
- The increase in productivity leads to economic growth and higher value-added employment opportunities.
- This brings about the need to develop better infrastructure, better education institutions, better health facilities, better transportation networks, the establishment of banking institutions, better governance, and better housing.

Challenges for the Poor Urban Community

- The edges of the cities have become dumping grounds for the urban poor. The nature of life and labour in the peripheries clearly reveals the poverty and vulnerability so widespread here.
- 1. Most of the urban poor are involved in low paid peripheral economic activities, in Dhaka just as they are in many other developing cities.
- 2. They mostly work as rickshaw pullers, street vendors, construction workers, transport workers, garments workers and low-grade employees in the government and private sectors.
- 3. The poor generally experience harassment at their workplace either from employers or police.
- Their low income level means that their expenditure level is also low and most of their earnings are spent on food. As a result, essential non-food goods related to health and education are often neglected.
- At the same time Bangladesh and its capital Dhaka show a continuous expansion in informal sector growth.

Effects of Population Movement and Urbanization on Cities Positive Effects of Urbanization

- Urbanization yields several positive effects if it happens within the appropriate limits. Some of the positive implications of urbanization are –
- 1. Creation of employment opportunities,
- 2. Technological and infrastructural advancements,
- 3. Improved transportation and communication
- 4. Quality education and medical facilities, and
- 5. Improved standards of living.

Effects of Population Movement and Urbanization on Cities

• Negative Effects:

• 2. Housing Problems

 Urbanization attracts people to cities and towns which leads to a high population increase. With the increase in the number of people living in urban centers, there is a continued scarcity of houses.

• 3. Overcrowding

• Overcrowding is a situation whereby a huge number of people live in a small space. This form of congestion in urban areas is consistent because of overpopulation and it is an aspect that increases day by day as more people and immigrants move into cities and towns in search of a better life.

• 4. Unemployment

- The problem of joblessness is highest in urban areas and it is even higher among educated people.
- It is estimated that more than half of unemployed youths around the globe live in metropolitan cities.
- The increasing relocation of people from rural or developing areas to urban areas is the <u>leading cause</u> of urban unemployment.

Effects of Population Movement and Urbanization on Cities

• 5. Development of Slums

- The cost of living in urban areas is very high. When this is combined with random and unexpected growth as well as unemployment, there is the spread of unlawful resident settlements represented by slums and squatters.
- The growth of slums and squatters in urban areas is even further exacerbated by fast-paced industrialization, lack of developed land for housing, a large influx of rural immigrants to the cities in search of a better life, and the elevated prices of land beyond the reach of the urban poor.

• 6. Water and Sanitation Problems

- Because of overpopulation and <u>rapid population</u> increase in most urban centers, it is common to find there are inadequate sewage facilities.
- Eventually, communicable diseases such as typhoid, dysentery, plague, and diarrhea spread very fast leading to suffering and even deaths. Overcrowding also highly contributes to <u>water scarcity</u> as supply falls short of demand.

Effects of Population Movement and Urbanization on Cities

7. Poor Health and Spread of Diseases

- The social, economic and living conditions in congested urban areas affects access and utilization of public health care services. Slum areas in particular experience poor sanitation and insufficient water supply which generally make slum populations susceptible to communicable diseases.
- <u>Environmental problems</u> such as <u>urban pollution</u> also cause many health problems namely allergies, asthma, infertility, food poisoning, cancer and even premature deaths.

• 8. Traffic Congestion

- When more people move to towns and cities, one of the major challenges posed is in the transport system. More people means an increased number of vehicles which leads to traffic congestion and <u>vehicular pollution</u>.
- Many people in urban areas drive to work and this creates a severe traffic problem, especially during rush hours. Also as the cities grow in dimension, people will move to shop and access other social needs/wants which often cause traffic congestion and blockage.

• 9. Urban Crime

- Issues of lack of resources, <u>overcrowding</u>, unemployment, poverty, and lack of social services and education habitually lead to many social problems including violence, drug abuse, and crime.
- Most of the crimes such as murder, rape, kidnapping, riots, assault, theft, robbery, and hijacking are reported to be more prominent in the urban vicinities. Besides, poverty-related crimes are the highest in fast-growing urban regions. These acts of urban crime normally upset the peace and tranquility of cities/towns.

Advise for Population Movement and Urbanization

- 1. Building Sustainable and Environmentally-friendly Cities
- Governments should pass laws that plan and provide <u>environmentally</u> <u>sound cities</u> and smart growth techniques, considering that people should not reside in unsafe and polluted areas.
- Governments should also encourage sustainable use of urban resources and support an economy based on the sustainable environments such as investment in green infrastructure, sustainable industries, recycling and environmental campaigns, pollution management, <u>renewable</u> <u>energy</u>, <u>green public transportation</u>, and <u>water recycling</u> and reclamation.

• 2. Provision of Essential Services

- Urban stakeholders must ensure all populations within the urban areas have access to adequate essential social services namely education, health, sanitation and clean water, technology, electricity, and food.
- The objective here is to provide and implement employment opportunities and wealth creation activities so that people can earn a living to pay for the maintenance of the services.

Advise for Population Movement and Urbanization

3. Creation of More Jobs

- To lessen the negative effects of rapid urbanization while at the same time conserving natural ecosystems, private investments should be encouraged so as to utilize natural resources and create more job opportunities.
- Tourism promotion and the sustainable exploitation of natural resources can create more jobs for urban populations.

4. Population Control

- Key stakeholders in urban areas must provide campaigns and counseling for effective medical health clinics and family planning to help reduce the high rates of population growth.
- Medical health clinics oriented towards family planning options must be made accessible across the entire urban area with the objective of controlling diseases and population growth.

Thank you