

## **MODULE 4**

- Unit 1           Urbanisation and Environmental Issues
- Unit 2           Waste Generation and Disposal System in Urban Centres

### **UNIT 1        URBANISATION     AND     ENVIRONMENTAL ISSUES**

#### **CONTENTS**

- 1.0   Introduction
- 2.0   A. Objectives  
      B. How to Study this Unit
- 3.0   Main Content
  - 3.1   The City as a Source of Environmental Degradation
  - 3.2   Cities and Environmental Sustainability in the Developing World
- 4.0   Conclusion
- 5.0   Summary
- 6.0   Tutor-Marked Assignment
- 7.0   References/Further Reading

#### **1.0   INTRODUCTION**

The problem of environmental deterioration arises either from the inadequacy of existing urban facilities and hence their over-utilisation or inability of the city to cope with these needs at current rates of urbanisation. Most of the large cities are closely associated with overcrowded and dirty/degraded environments.

This unit discusses the health and environmental security as prerequisites for successful urban development. As the environment is simultaneously the cause and a victim of urban problems, it is an issue which links together shelter, employment, basic needs, poverty, human rights, politics and gender. The unit moves on to examine the way in which environmental issues are gendered, before examining a number of key environmental priorities for developing world cities, namely: adequate access to safe and secure shelter, basic to that urban environment. The unit concludes that environmental sustainability and the empowerment of the poor need to be addressed simultaneously in order for any real change to occur in the immediate future.

## **2.0 A: OBJECTIVES**

At the end of this unit, you should be able to:

- explain the meaning of environmental sustainability;
- highlight and explain the main components of sustainability; and
- discuss the contradictions between the intentional call for sustainable development and the current global economic trends.

## **2.0 B: HOW TO STUDY THIS UNIT**

1. You are expected to read carefully through this unit twice before attempting to answer the activity questions. Do not look at the solution or guides provided at the end of the unit until you are satisfied that you have done your best to get all the answers.
2. Share your difficulties in understanding the unit with your mates, facilitators and by consulting other relevant materials or internet.
3. Ensure that you only check correct answers to the activities as a way of confirming what you have done.
4. Note that if you follow these instructions strictly, you will feel fulfilled at the end that you have achieved your aim and could stimulate you to do more.

## **3.0 MAIN CONTENT**

### **3.1 The City as a Source of Environmental Degradation**

Recent reports by Amnesty International and the media about the execution of street children in Brazilian cities by police death squads to clean the urban environment are just one extreme example highlighting the perceptions held by urban municipalities over the causes of environmental degradation and aesthetic blight. In the first half of 1993 alone, Amnesty International reported that 320 homeless children had been executed in Rio de Janeiro in a campaign, which regarded homeless children as unwanted pests. In this, and many other instances, the vulnerable victims of poverty are seen by urban governments to be the cause of environmental degradation.

While no government would publicly sanction the execution of children as a policy to tackle homelessness, Timberlake and Thompson (1990) argue that this 'child crisis' results from an unequal economic system which favours rich countries. The situation is compounded by the concentration of power and capital in the hands of urban elite and multinational corporations. The fact that such atrocities occur is an indication of the vulnerability of certain groups in developing world

cities, and it highlights the interrelationships between poverty, the environment and basic human rights.

Paradoxically, during the 1990s the environment was placed at the forefront of the international agenda, particularly with regard to the 1992 Rio summit (UNICEF, 1992). Global institutions, national governments and communities have also become increasingly concerned over the future of the environment, many of these organisations having adopted the concept of sustainable development. In its simplest form, there is a fundamental argument which states that a healthy and safe environment is essential for the continued survival of a given population. A population's mental and physical health is directly linked to the quality of the various environments with which its members interact, from the household and workplace to the international scale. Although the figures vary, it has been estimated that approximately 600 million urban dwellers in Africa, Asia and Latin America live in life-threatening environments with respect to overcrowded and inadequate shelter, sanitation and drainage, unsafe housing sites and working conditions, and the absence of primary health care.

Many urban centres in the developing world have been built on ecologically fragile lands, which are vulnerable to natural hazards such as earthquakes, floods, hurricanes and soil erosions. When natural and human -induced hazards occur together, however, it is usually the urban poor who disproportionately bear the costs. Although the extent of the interconnection and interdependence between countries is still open to debate, it is now widely accepted that the actions and activities of all nations inevitably affect the lives of others, whether in relation to acid rain, waste generation or consumer preferences.

While the need for sustainable development is widely supported, current global economic and social trends are leading to further environmental damage which is not sustainable in long term. For example the increased ownerships of private cars, the consumption pattern of a growing disposable society, and increased materialism, are all incompatible with sustainable developments. As developing world countries become wealthier, there is concern that their lifestyles and consumption patterns will start to resemble those of the west. The scale of poverty and failure of previous decades of development have meant the majority still lacks access to basic needs. This begs the question why developing world cities are still encouraged to develop through economic growth when western consumption and resource use patterns are so evidently non-sustainable. If all the poorer nations of the world were to consume the same amount of resources as the United States, our planet would not be able to sustain life for long. On the other hand, if the poorer nations are not encouraged to develop in this way, the richer countries will continue

their exploitation of the natural and human resource base. It appears therefore, that the developing countries have found their ability to react to global environmental problems constrained by their concern over the daily survival of their populations.

There are many contradictions between the intentional call for sustainable development and the current global economic trends. Neo-liberalism and the new international division of labour are leading to increased privatisation of public resources, the exploitation of workers through deregulation of rights and safety conditions, and the spread of 'footloose' multinationals, which are able to avoid local environmental legislation in countries without the finance, means to enforce tighter controls. Increased privatisation and deregulation is also occurring at a time when the state needs to be centrally involved in environmental planning.

### **3.2 Cities and Environmental Sustainability in the Developing World**

The concept of sustainable development has dominated development both the environmental and development literatures since the early 1980s, when decades of mismanaged growth in the name of development were manifested in environmental degradation at a global scale. 'Sustainable development' is a popular catch-all phrase which endeavours to encapsulate growing concerns over the future of the planet by highlighting the inextricable links between environment and development. Despite its global popularity, there is no universally agreed definition of sustainable development because the term expresses different views of development itself.

Since the Brundtland Commission published its report *Our Common Future* in 1987, the sustainability debate has revealed major differences in thinking about development, economic growth, social change and environment conservation (World Commission on Environment and Development (WCED)). For example, environmentalists who argue from a 'green' perspective identify natural resource base as the focus of the sustainability debate which must be protected at all costs. Other writers take the view that it is more important to consider sustaining present and projected future levels of production and consumption in order to enhance development. In this respect, sustainable development can imply a radical change in lifestyle to manage existing resources in a more sustainable manner. However, the economic goal is 'to increase the new welfare of economic activities while maintaining or increasing the stock of economic, ecological, and socio – cultural assets over time.

While advanced capitalist static communities might be more concerned with the natural environment and conservation, the development debate in some other societies often prioritizes human development, which as Barbier (1989) argues, 'is directly concerned with increasing the material standard of living of the poor at the "grassroots" level the emphasis here is meeting social and economic objectives, with a focus on improving access to basic needs. In particular, there is a need to ensure that the poor have access to sustainable and secure livelihoods as it is the poor that often have no option but to choose short – time economic benefits at the expense of the environment.

The contradictions between different ideological views require attention to be paid to the structural inequalities of the global system. In developing areas, environmental struggles are often about basic needs rather than enhancing already comfortable lifestyles.

According to WCED (1987), the main components of sustainability are environment, equity and growth, although some practitioners would question the role of growth. Although the notion that human development needs, including cultural and social ones, must go hand in hand with long – term environmental consideration has gained much support over the last decade, there is still a fundamental problem concerning the global agenda for sustainable development. The 1992 Rio Summit highlighted the lack of consensus over the sustainability debate between the 'developed' and the 'developing' nations, particularly with respect to different environment priorities as well as concerns over the financing of this new agenda.

Essentially, many developing countries failed to appreciate the need for a global approach to the problem, as it insisted on greater efforts by the more advanced nations; to conserve essential resources, such as rainforests, without giving consideration to the poverty of many countries and the financial constraints imposed by the debt crisis. For many countries, long-term environmental objectives are difficult to comprehend when short-term problems pose the most serious risks. Despite the heightened awareness of environmental factors, there has been no move to assist poorer nations to reduce their debt burden, thereby enabling them to reduce the exploitation of their natural and human resources for foreign exchange.

The levels of environmental degradation found in many cities in the developing world clearly indicate that the global system and the trend towards westernised living are far from sustainable, and overall are particularly damaging. However, an immediate agenda for radical change has so far been obscured by failing to face the fact that satisfying

basic needs is a necessary step to ensuring the viability of any policy aimed at sustaining the environment. Thus, the environment has become, at least to some extent, the unacknowledged victim of inequitable development and political power.

### **SELF ASSESSEMENT**

Discuss how the city could be a source of environmental degradation

## **4.0 CONCLUSION**

Although the need for sustainable development is widely supported but the current global economic and social trends are leading to further environmental damage. Increasing number of private car ownerships, the consumption pattern of a growing disposable society, and increased materialism, are all incompatible with sustainable developments. This begs the question why developing world cities are still encouraged to develop through economic growth when western consumption and resource use patterns are so evidently non-sustainable. To this end, it can be assumed that the developing countries have found their ability to react to global environmental problems constrained by their concern over the daily survival of their populations. The sustainability debate has revealed major differences in thinking about development, economic growth, social change and environment conservation. In developing areas, environmental struggles are often about basic needs rather than enhancing already comfortable lifestyles.

Although the notion that human development needs, including cultural and social ones, must go hand in hand with long – term environmental consideration has gained much support over the last decade, there is still a fundamental problem concerning the global agenda for sustainable development.

## **5.0 SUMMARY**

In this unit, you have learnt that:

- cleaning the urban environment is just one extreme example highlighting the perceptions held by urban municipalities over the causes of environmental degradation and aesthetic blight
- when natural and human-induced hazards occur together, it is usually the urban poor who disproportionately bear the costs
- the concept of sustainable development has dominated both the environmental and development literatures since the decades of mismanaged growth in the name of development were manifested in environmental degradation at a global scale

- sustainable development endeavours to encapsulate growing concerns over the future of the planner by highlighting the inextricable links between environment and development
- environmental struggles are often about basic needs rather than enhancing already comfortable lifestyles.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Assess the impact of the expanding urban influence on the sustainability of the human environment.

## **7.0 REFERENCES/FURTHER READING**

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## **UNIT 2 WASTE GENERATION AND DISPOSAL SYSTEM IN URBAN CENTRES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 A. Objectives
  - B. How to Study this Unit
- 3.0 Main Content
  - 3.1 The Meaning of Waste
  - 3.2 Types, Nature and Volume of Waste
  - 3.3 Waste Disposal Methods
  - 3.4 Effects of Poor Waste Disposal Systems
    - 3.4.1 Gender Differences and Inequalities on Waste Disposal
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The consequence of expansion of cities and continuous influx of migrants from rural areas is a rapid rate of garbage accumulation, coupled with a low rate of removal leading to foul air and bad smells within the city. One of the most critical issues in our cities today is overcrowding, which in turn results in poor living and poor sanitary conditions. These issues have not only become a reoccurring issue in the media, they had also attracted scholars and researchers in their studies. Urban decay connected with overcrowding is almost entirely a large town problem in Nigeria. Waste disposal constitutes nuisance and a source of embarrassment to many nations particularly visitors to the country who assess the state of health environment from this angle. All these problems, as manifested in urban sprawl, poor access to dwellings, bad drainage, housing congestion, uncontrolled and increasing density of physical development among many other problems, characterise the high-density areas of Nigerian cities.

### **2.0 A: OBJECTIVES**

At the end of this unit, you should be able to:

- define and explain the concept of wastes;
- name the types and the nature of wastes;
- discuss the methods of waste disposal;
- explain the effects of poor waste disposal systems; and
- highlight the differences in gender attitudes to waste disposal.



## **2.0 B: HOW TO STUDY THIS UNIT**

1. You are expected to read carefully through this unit twice before attempting to answer the activity questions. Do not look at the solution or guides provided at the end of the unit until you are satisfied that you have done your best to get all the answers.
2. Share your difficulties in understanding the unit with your mates, facilitators and by consulting other relevant materials or internet.
3. Ensure that you only check correct answers to the activities as a way of confirming what you have done.
4. Note that if you follow these instructions strictly, you will feel fulfilled at the end that you have achieved your aim and could stimulate you to do more.

## **3.0 MAIN CONTENT**

### **3.1 The Meaning of Waste**

Waste is an unwanted or undesired material or substance. It is also referred to as rubbish, trash, garbage, or junk depending upon the type of material and the regional terminology. Waste, according to Oguniyi and Folasele (2003), may be defined as unwanted material that is no longer needed and is thrown away. Waste disposal is a process of getting rid of waste. Materials such as food wastes, paper, plastic, metal containers, leaves, glass, leather, rubber, textile, wood and bulky items e.g. boxes, refrigerators etc added to the growing mountain of wastes are scrap of tyres. Under the Waste Framework Directive (European Directive 75/442/EC as amended), the European Union defines waste as an object the holder discards, intends to discard or is required to discard. Once a substance or object has become waste, it will remain waste unless it is fully recovered and does not pose any threat to the environment or human health.

On the 28th of October 2003, Environmental Protection Agency (EPA) published proposed revisions to the definition of solid waste in the Federal Register (68 FR 61558). The 2003 proposal provided an exclusion from the definition of solid waste for hazardous secondary materials, which are generated and reclaimed in a continuous process within the same industry. In this regard, what was once regarded as waste is now considered as raw materials in the light of recycling process possibility. Thus, the term "waste" is assuming a new meaning in recent time, which differs from one place to another, depending on the environmental policies of the place(s) concerned.

The challenge of waste disposal system in urban areas is neither a new thing nor peculiar to the developing nations alone but rather, a global issue. In every part of the world, it has been observed that for every consumption attempt, waste generation is inevitable. This is evident in every production process, and one cannot shy away from the fact that waste is being generated at the end of it all. The UK Environmental Protection Act 1990 indicated that waste includes any substance which constitutes scrap material, an effluent or other unwanted surplus arising from the application of any process or any substance or article which requires to be disposed of which has been broken, worn out, contaminated or otherwise spoiled. This is supplemented with anything which is discarded otherwise dealt with as if it were waste shall be presumed to be waste unless the converse is proved. This definition was amended by the Waste Management Licensing Regulations (1994) defining waste as "any substance or object which the producer or the person in possession of it, discards or intends to discard but with exception of anything excluded from the scope of the waste directive".

To this end, since consumption is the essence of production, and human lives are sustained by consumption of goods and services, then waste generation becomes necessary, however, it can be minimised if an appropriate waste management system is adopted in spite of the increasing urban population.

### **3.2 Types, Nature and Volume of Wastes**

Nwadike (2000) identified a long list of hospital wastes which can be grouped as hazardous component, infectious sharp objects, pharmaceuticals, chemicals, genotoxic and radioactive wastes. While consumers of sachet water, commonly known as "pure water" litter the landscape with empty sachets, the adolescents add empty tubes of cream and lotions to the heaps of 'dunghills' in our urban centres. With improvement in road transport, abandoned dilapidated vehicles are common sights in Nigerian cities; used tyres have become a feature of the landscape.

Generally, waste exists in three main states - solid, liquid and gas. Gaseous type of waste is rarely found in homes, it is usually peculiar to large-scale industries, while liquid and solid wastes are part of common domestic waste. Of course, industrial waste could also be in solid or liquid form. It has been observed that the nature of waste generated in urban areas is usually different from that of rural areas. Perhaps socio-economic factors should be held responsible for the variance. In the rural areas, organic materials such as leaves/vegetables/plant materials, kitchen waste, etc constitute larger percentage of their disposed waste. While urban waste is usually characterised with a balance of organic and

inorganic waste; depending on the disposable income, taste, habit, status, educational level, and other relevant factors of the average individual in the areas concerned. Organic waste does not take much time to get decomposed and this includes leaves, vegetables, leftover food, kitchen waste and the like. On the other hand, inorganic waste usually takes longer period to get decomposed, some take several years, while others do not decompose until they are retrieved and recycled mechanically or with the aid of chemicals and this includes used tyres, plastic, heavy metals, vehicle/machine scraps, computer scraps, etc.

Even within the urban areas, there is little variation in the nature of waste disposed of. The sector theory popularised by Homer Hoyt (1939) holds that the different income groups and classes of a city tend to be found in distinct areas describable in terms of sectors of a circle centred on the Central Business District (CBD). The theory identifies high rent class (high-income group), medium rent class (medium-income group), and low rent class (low-income group) residential areas, each of which occupies a unique sector.

In relation to the nature and volume of urban waste, particularly solid waste, there are variations among the three residential sectors identified by Homer Hoyt. Relatively, the areas occupied by high income group is likely to have the highest inorganic waste component and total waste volume/day, followed by the medium income, which is invariably followed by the medium income households. The reason for this is traceable to the relative differential standard of living among the income groups identified; as high-income group is presumed to have more to spend on canned and bottled food/drink item, which sometimes come in cartons. Consequently, it is expected that more cans, bottles, and cartons are generated in their waste awaiting disposal.

Moreover, the CBD identified in the theory is expected to generate more volume of waste to be disposed of relative to the three categories of residential areas; perhaps due to the function it performs. CBD is usually characterised by various natures of businesses, each of which contribute to the high volume of waste generated in urban areas. At the CBD, where retailers of goods predominate, one should expect breaking of bulks and disposal of useless containers from which bulks were broken and sold. The consequence of this is usually the multiplication in the volume of CBD waste.

### **3.3 Waste Disposal Methods**

A rising urban population, in some cases coupled with a rising quality of life, and high rates of resource consumption patterns have had an unintended and negative impact on the urban environment - generation

of wastes far beyond the handling capacities of urban governments and agencies. Cities are now grappling with the problems of high volumes of waste, the costs involved, the disposal technologies and methodologies, and the impact of wastes on the local and global environment.

At this juncture, it is pertinent to elucidate that waste disposal system is not the same thing as waste management system, though they are somehow related. The former is one of the processes or stages involved in the latter, and vary in practice for urban areas in developed and developing countries. The reasons for the variation include type of waste material, nearby land uses, and the area available.

Historically, efforts in the management of waste have focused primarily on the disposal part of the waste. While there is now a general move towards the recovery of resources from waste, disposal is still the most common form of managing waste. Dumping, land filling of waste and incineration are some of the most common methods of waste disposal.

**a. Dumping**

This system of waste disposal involves literal dumping of waste - solid and liquid in open dump site. This type of waste disposal method does not require any special design and so does not have any particular design characteristics. Open site dumping is very common in urban areas where the law enforcement agents are too relaxed in the execution of waste and environmental related laws.

Observations have shown that long abandoned building sites, nearby bushes, unkempt public drainages, etc are usually converted to dumping sites for urban waste; perhaps due to a number of reasons which include inefficiency on the part of local authorities. Good examples of such areas are found all over Nigeria. In Lagos State, the commercial capitals of Nigeria, there are several open dump sites which include Oshodi, Maroko, Ojota, Cele-Ijesa, Abule-Egba, etc. In Ibadan, the capital of Oyo State, the largest city in Africa, there are dumping sites in areas such as Bodija Market, Beere-Oje Market, etc. If these strategic urban areas, despite their socio-economic, political and geographic significance are still harbouring open dump site, even in the hearts of the cities, the urban areas of less relative importance cannot be exempted - perhaps in a worse situation.

The current state of New Market, Sabo in Ile-Ife, Mulero Canal and Abattoir Canal in Lagos State are proofs of another dimension of open dump site, in which case, solid and liquid waste from the market and neighbouring residence is dumped in a nearby open drainage. The negative impact of this on the

environment goes beyond pollution, extending to blockage of drainage system - a major factor responsible for the recurrent flooding in the area.

**b. Landfill**

This method of waste disposal involves burying waste to dispose of it, and this remains a common practice in urban areas of most countries. Rectory reveals that landfills were often established in disused quarries, mining, and void or borrow pits. A properly designed and well-managed landfill can be a hygienic and relatively inexpensive method of disposing of waste materials. Design characteristics of a modern landfill include methods to contain leachate such as clay or plastic lining material. Deposited waste is normally compacted to increase its density and stability, and covered to prevent attracting vermin (such as mice or rats). Many landfills also have landfill gas extraction systems installed to extract the landfill gas. Gas is pumped out of the landfill using perforated pipes and flared off or burnt in a gas engine to generate electricity.

**c. Incineration**

Incineration is a controversial method of waste disposal, due to issues such as emission of gaseous pollutants. Incineration is a disposal method that involves combustion of waste material. Incineration and other high temperature waste treatment systems are sometimes described as "thermal treatment". Incinerators convert waste materials into heat, gas, steam, and ash. In this regard, Incineration is a controversial method of waste disposal, due to issues such as emission of gaseous pollutants. Incineration is carried out both on a small scale by individuals and on a large scale by industry. It is used to dispose of solid, liquid and gaseous waste. It is recognised as a practical method of disposing of certain hazardous waste materials (such as biological medical waste). Incineration is common in countries such as Japan where land is relatively scarce, as these facilities generally do not require as much area as landfills. Waste-to-energy (WtE) or energy-from-waste (EfW) is a broad term for facilities that burn waste in a furnace or boiler to generate heat, steam and/or electricity.

### **3.4 Effects of Poor Waste Disposal**

Indiscriminate dumping of wastes on the slopes of streams and river courses can lead to flooding, destruction of lives and property. The Ogunpa flood disasters in Ibadan in the early 1980s are still fresh in the memories of those who were affected in one way or the other. Such

dumping according to Botkin and Keller (2000) spoils scenic resources, pollutes soil and water resources, and is a potential health hazard to plants, animals and people. In sum, careless dumping of waste usually results into the following:

- a. **pollution of water:** both rural and urban drinking water sources come largely from surface streams and rivers. This makes them susceptible to easy pollution and contamination.
- b. **outbreak and wide epidemic:** outbreak of epidemiological diseases such as cholera, typhoid fever, guinea worm infections, hepatitis, dysentery etc
- c. **poor sanitary conditions of urban areas:** invasion of residential, institutional and commercial housing units by such pests as flies and rodents leading to food poisoning.
- d. other notable problems include shortage of fish resources, shallowness, siltation and drying of streams, blocking roads, alleys and pavements.

### 3.4.1 Gender Differences and Inequalities on Waste Disposal

Gender differences and inequalities can affect various aspects of waste disposal, and these include household responsibilities relating to waste and waste disposal. Given women's primary responsibility for cleaning, food preparation, family health, laundry, and other chores; women and men may view domestic waste and its disposal differently. They may have different definitions of what is waste or garbage. They may also manage waste differently and put different priorities on its disposal.

**Household Resources and Waste Disposal:** Women do not always have equal input into the allocation of family finances. For example, although a woman might be willing to spend scarce household resources on waste disposal, her spouse may not agree. As well, women's heavier workloads mean that they often have less available time. Thus, men and women can assign different values to time spent on waste disposal. For example, men may think that one central disposal point is sufficient, while women may prefer a greater number of smaller, yet more accessible disposal sites.

**Views and Priorities Related to Waste Disposal:** Given different responsibilities and resources women and men may set different public health priorities and have different environmental standards. For example, in one community where untrained storm water caused problems, the neighbourhood committee was given a choice between

two types of drainage systems: a sophisticated one that would take three years to become operational or a simple one that could be operational before the next rainy season. The committee chose the sophisticated one while the women, consulted separately, would have preferred the simple system which would have solved their problems immediately.

**Participation in Community Decision-Making about Waste Disposal:** Despite women's relatively high involvement at the local level, men are more likely to have access to institutions that set priorities and make decisions regarding municipal infrastructure. Community consultation processes often fail to take gender inequalities into consideration and thus neglect women's preferences. Unless explicit measures are taken to ensure women's participation, their priorities, responsibilities and needs will not be heard.

**Employment Opportunities in Waste Disposal or Sewage Treatment:** In some urban centres, solid waste management has evolved into an organised system of collection, trade and recycling. There is often a marked division of labour in these various tasks between women and men (see the example on the overleaf). With a consideration of the specific barriers faced by women, waste disposal initiatives could offer improved employment possibilities for women.

All of these differences have implications for the design and implementation of waste disposal programmes: who to target, who to involve and who to listen to regarding preferences. These broad issues need to be explored in each situation. Studies have also shown that other factors such as age, class, race, or religion would influence people's responses to waste and their ability to participate in initiatives. For example, daughters may view waste recycling differently than sons (given their responsibilities for different household tasks). A woman from a wealthy household may be able to pay for a private sewage treatment system that is not an option for a poorer woman. Participatory approaches can assist in both the understanding of gender equality dynamics and the design of gender-sensitive interventions.

### **SELF ASSESSEMENT**

Explain the concept of water

## **4.0 CONCLUSION**

Waste disposal is a consequent of the industrialisation process in both developed and developing countries. Whereas the developed countries have put in place policy measures to contain the waste problems, developing countries are still battling with the mountains of waste generated daily. In many parts of the world, people are facing a serious

waste disposal problem. The problem results because too much waste is produced and there is too little acceptable space for permanent disposal.

## **5.0 SUMMARY**

In this unit, you have learnt that:

- waste is an unwanted or undesired material or substance
- waste exists in three main states - solid, liquid and gas
- efforts in the management of waste have focused primarily on the disposal part of the waste
- hazardous waste materials are disposed of by literal dumping;
- gender differences can affect various aspects of waste disposal
- solid waste management has evolved into an organised system.

## **6.0 TUTOR-MARKED ASSIGNMENT**

Discuss the evils of waste disposal systems in Nigerian urban centres.

## **7.0 REFERENCES/FURTHER READING**

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