

RESOURCE PERCEPTION AND MANAGEMENT

UNIT 1: THE MEANING AND NATURE OF RESOURCES

SESSION 1: MEANING AND NATURE OF RESOURCES

- ◆ **What is a Resource?**
- ◆ Etymologically, the word “resource” is related to source.
- ◆ The prefix “re” means again
- ◆ The two put together suggests something that is relied upon for the satisfaction of human want.
- ◆ Sources of human satisfaction, health or strength, labour, entrepreneur skills, investment funds, fixed capital assets, technology and cultural and physical attributes may all be referred to as **resources**

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- ◆ **Brian Goodall (1987)**, defined resource as
- ◆ “something material or abstract that can be used to satisfy some human want or deficiency
- ◆ What makes something a resource depends on its value to humans and not its intrinsic value
- ◆ In his book, *The Dictionary of Human Geography*, **Johnston (1994)** defines the word resource as “a concept employed to denote sources of human satisfaction, wealth or strength”

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- ◆ This include: labour, entrepreneurial skills, investment funds, fixed capital assets etc.
- ◆ **Shelley and Clarke (1994)** defined resources as “substances that can transform into artefacts”
- ◆ **Tivy and O’Hare (1981)** have defined resources as a “stock of some material of use or value to humans” – To them these materials may be **organic** or **inorganic**.

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- ◆ **Zimmermann (1972)** dealt extensively on what a dictionary offers as definitions for resources:
 - **That upon which one relies for aid, support, or supply**
 - **Means to attain given ends**
 - **The capacity to take advantage of opportunities or to extricate oneself from difficulties**

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- ◆ **“Resource Management context”**
 - Reserved for substances, organisms and properties of the physical environment (Natural Resources)
 - Human beings evaluate or appraise natural systems, regarding as resources only those elements, which they have knowledge, and technology to utilise and which provide desired goods and services.
 - Natural attributes failing to meet these criteria remain unvalued, **NEUTRAL STUFF** (Zimmermann, 1972)

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- ◆ **Some misconceptions about Resources**
- ◆ Resources are indentified with substances or tangible things as for instance, coal iron, petroleum, copper etc, whiles the intangible things such as health, social harmony is ignored
- ◆ Our focus with the so-called natural resources at the expense of human and cultural resources excludes a clear understanding of the true nature of resources

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- ◆ The tendency to think of resources in terms of a single asset, e.g iron, coal, oil rather than in terms of the whole complex of the substance.
- ◆ Resources are living phenomena, expanding and contracting in response to human effort and behaviour.
- ◆ There are resistances to all resources; resources are not for free, but one needs to overcome some impediments before getting them.

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- ◆ **The nature of resources**
- ◆ Although resources are the products of the physical system, they are defined by human ability and need, not by nature.
- ◆ Human beings evaluate the natural environment and classify those substances that provide value to them.
- ◆ Resources are therefore **dynamic cultural conceptions.**

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- ◆ Because what may be referred to as resource by one community or society may differ and vary among other communities and will also vary with time and the need for them. E.g bauxite only acquired a resource status in 1886 when the commercial extraction of aluminum became feasible.
- ◆ Uranium had a negligible value until they military and economic importance of nuclear power became evident

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- ◆ **What is perception?**
- ◆ It is the process by which an individual acquires information as a result of visual, tactile, verbal, olfactory and auditory contacts with his or her environment, and then organizes and interprets the data available in the light of his or her experiences and attitudes

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- ◆ **Resource perception:**

is therefore referred to as the individual's subjective assessment or conception of substances in the environment for the satisfaction of his or her need.

- ◆ Such assessment are viewed as being formed by:

- The awareness due to the use of reference points in the person's everyday life;

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- That immediate reaction to distinctive or unusual features; and,
- That awareness drawn from past experiences and parallel situations.
- ◆ In effect, what is a resource to one person may not necessarily be a resource to another.

SESSION 2: THE NEW RESOURCE CONSCIOUSNESS

- ◆ **Environment and resource use:**
- ◆ The state of the environment and how our natural resources are used have become political issues at both local, national and international levels... (*Read pg10 of Module about English Clergyman Thomas Malthus' arguments in his text "Essay on the Principle of Population (1798)"*)
- ◆ Two schools of thought have been identified:
 - "Prophets of Doom" of resource use"
 - "Prophets of Complacent Unconcern"

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- ◆ **“Prophets of Doom” of resource use”**
- ◆ This school of thought maintained that if increases in population, industrialization and resource depletion continued unabated, limits to growth would be reached early in the 21st century, causing drastic declines in energy use as well as food and industrial production.
- ◆ Some Prophets of Doom
 - **Anne H. Ehrlich (Stanford Biologist)**

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- ◆ **Some “Prophets of Doom”**
 - **Anne H. Ehrlich (Stanford Biologist)**
 - **Charles Westoff (Princeton University sociologist and demographer)**
 - **Meadows and others (Massachusetts Institute of Technology) – their book was “*Limits of Growth*”**

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- ◆ **“Prophets of Complacent Unconcern”**
- ◆ They argue that although human consumption of global resources has increased, the supply of resources is not in decline and remains abundant.
- ◆ These experts note that due to technological advances, more supplies of global resources are being discovered or conserved.

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- ◆ **Some “Prophets of Complacent Unconcern”**
 - **Julian L. Simon (Economist)**
 - **Stephen Moore (Cato Institute economist)**
 - **Ronald Bailey (*author of co-Scam*) and researchers Michael Sanera and Jane S. Shaw**

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- ◆ **A merger of the two schools of thought**
- ◆ A debate over the effects of population growth on the availability of global resource continues to occur at the local, national and international circles.
- ◆ *Questions:*
 - *Are Global Resources being depleted?*
 - *What agricultural policies should be pursued?*
 - *What agricultural policies should be pursued?*
 - *How can global Resources be depleted?*

SESSION 3: THE FUNCTIONAL OR OPERATIONAL THEORY OF RESOURCES

- ◆ In order to understand the relationship that exist between man and resources, it is important to view human beings as existing on two levels:
- ◆ The first level which is referred to as the animal level “**man**”
- ◆ And the second level, “**MAN**” is used to refer to the super-animal level or human level

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- ◆ **The Creature “man”**
- ◆ Man in the animal level constitutes part of nature as pure biological being.
- ◆ Man at this level existed without the benefit of culture
- ◆ He was capable of drawing support from his environment(nature) and was exposed to the harmful forces and conditions in the environment.

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- ◆ As indicated earlier, those aspects of nature that harm or hinder “man” may be called natural resistances.
- ◆ The extent of want satisfaction is however a function of resources and resistance and not resources alone

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- ◆ **The Cultural “MAN”**
- ◆ “man” after mastering his environment using various tools to overcome it, became “MAN”
- ◆ Man has gained control over many of the living creatures
- ◆ Those aspects of nature which “man” can utilize in the satisfaction of his creature wants without contribution made by “MAN” may be called natural resources.

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- ◆ **Knowledge-the mother of all Resources**
- ◆ In resource literature, knowledge therefore is the incomparably greatest among human resources.
- ◆ It is an intangible resource lodged within individuals and is used to appraise all other resources
- ◆ According to Zimmermann (1972) the original inhabitants of what is now U.S. lived in poverty-stricken environments.

SESSION 4: SOME BASIC CONCEPTS OF RESOURCES

- ◆ **Reserves:**
- ◆ It refers to that proportion of resource, especially minerals, which can be exploited under certain existing conditions and with available technology
- ◆ Reserves are developed from resources through the application of technology, capital and expertise in response to cost and price changes.

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- ◆ Distinction between recoverable reserves and speculative reserves
- ◆ **Recoverable reserves** cover the amount of the mineral likely to be extracted for commercial use within a certain time frame and level of technology.
- ◆ **Speculative reserves** are deposits that may exist in geological basins or terrain where no exploration has yet taken place

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- ◆ **Reserves-Production Ratio (R/P):**
- ◆ It is the ratio between the production rate of mineral and the proven or measured reserves remaining in the ground.
- ◆ It therefore indicates the number of years of production remaining at the current annual rate of production, assuming no other deposits are discovered.

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- ◆ **Resource Base:** It is the sum total of all components of the environment that would become resources if they could be extracted from the environment. The resource base is usually very large compared to the actual resource reserve.
- ◆ Resource base flow or renewable resources could also be conceptualized in terms of reception of solar energy, which is not only the ultimate determinant of biological processes in agriculture and forestry, but is also the driving force for resources such as wind and water power.

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- ◆ **Resource process:** This refers to the total flow of a resources from its natural state, through the production process and period of human use to its disposal
- ◆ **Carrying capacity:** This refers to the maximum intensity of use, at a given level of management, which a natural or people made resources can sustain without an unacceptable degree of deterioration of the character and the quality of the resource or the product.

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- ◆ **Sub-economic resources:**
- ◆ Those resources that can be extracted and used profitably are called reserves.
- ◆ Therefore those that do not qualify as reserves are referred to as sub-economic resources

SESSION 5: RESOURCE VALUES

- ◆ **Resource Evaluation**
- ◆ It is a broad term for assessments which attempt to determine either the value of a resource or the consequences and adequacy of resource management strategies.
- ◆ Resource evaluation has been applied to five areas of work:

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- ◆ **Determination of quantity of resource supplies**
- ◆ For non renewable resources, it is never easy to forecast the quantity that will be available for human use.
- ◆ Proven reserves are those already discovered and known to be economically extractible under current demand, price and technological conditions.

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- ◆ However, new discoveries, changed technologies and altered socio-economic and political circumstances will alter resources availabilities over time.

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- ◆ **Determination of the capacity of the global or individual ecosystems to support human life and economic dev't overtime.**
- ◆ For land, soils and recreational resources the notion of carrying capacity is employed while the ability of environmental medium to absorb waste product can be assessed by considering their absorptive or assimilative capacity.

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- ◆ **The value of the resource in social welfare terms:**
- ◆ There is no absolute measure of value and a host of alternative assessment basis have been employed, for example, market prices, opportunity cost, labour value, social indicators, energy accounting, public preferences and ecological values

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- ◆ Where resources of goods and services are incorporated into the market exchange system, market prices are usually taken as a measure of value, but the identity between price and value will only hold if:
 - The consumer is sovereign
 - Market is free and perfectly competitive
 - The “ability to pay” problem is ignored
 - The price incorporates all cost involved in supplying, using and discarding the product

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- ◆ **Assessment of the likely consequences of resource programmers, projects, policies and administrative changes:**
- ◆ These are obtained from measure such as cost-benefit analysis and environmental impact assessment. Cost benefit analysis is an analytical procedure for the comprehensive, often pro-construction, economic evaluation of major public investment projects

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- ◆ **Assessment Of The Adequacy Or Effectiveness Of Resource Mgt Strategies And Policy Implementations:**
- ◆ The evaluation criteria chosen are crucial to the results of any assessment.
- ◆ Some assessment concentrate on the extent to which stated policy objectives are met.

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- ◆ **Multiple Resource Values:**
- ◆ For any type of resources that provide more than one use of value for humans, their evaluation is based on the attribute which is considered most important or has the greatest demand at a particular time.

B – Biological Values

E – Economic Values

E – Ecological Values

S – Scientific Value

C – Cultural Value

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- ◆ **Biological Values:**
- ◆ The biological value of an organic matter is dependent on the quantity of primary and/or secondary biological production expressed in yields of all or some of the plant matter per unit area, or in stocking rates

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- ◆ **Economic Values:**
- ◆ Organic resources of any kind, however are normally valued or assigned cost in traditional economic terms.
- ◆ Unless the known quantitative and qualitative biological value is sufficient to make exploitation profitable, the material will have little or no economic or commercial value.

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- ◆ **Ecological Values:**
- ◆ It is often difficult to put a price tag on resources with ecological values.
- ◆ These are values not susceptible to quantitative, cost-benefit analysis.
- ◆ The ecological value for odum for instance is dependent upon its contribution to or its effect on the particular ecosystem of which it is a component.

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- ◆ **Scientific Value:**
- ◆ This value depends on such factors as rarity of particular species and/or communities, or its value for scientific experiments whose value may be far more reaching than for the resource itself.

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- ◆ **Cultural Value:**
- ◆ Cultural and aesthetic values are closely interrelated.
- ◆ That is it sometimes impossible to understand the latter without the former
- ◆ For example, some animals are used to portray the powers of some clans in Ghana

SESSION 6: RESOURCES, RESISTANCE AND HAZARDS

- ◆ Resources are not for free, otherwise everyone could have access to the freely.
- ◆ Exploitation of these resources could also lead to hazard.
- ◆ Resistance may be explained as the impediments to obtaining these resources for human consumption.

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- ◆ Resistance to resources could be grouped into two:
 - Primary or original natural resistance
 - Secondary or derived natural resistance
- ◆ **Primary resistance:** their probability in terms of the expected frequency of occurrence is known but their timing is usually unpredictable.
- ◆ E.g are hurricanes, earthquake, volcanic eruptions etc.

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- ◆ **Secondary resistance:**
- ◆ They occur as a result of human interference with or impact on nature

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- ◆ **Environmental hazards:**
- ◆ These are discrete environmental events that are damaging to property or life.
- ◆ They include events such as hurricanes, earthquake, volcanic eruptions etc.
- ◆ In some cases, their probability in terms of the expected frequency of occurrence is known but their timing is usually unpredictable

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- ◆ The incidence of some hazards can be reduced by human action. E.g flood controlling measures such as avoiding putting up structures on waterways.
- ◆ Another approach is to adopt “defensive” strategies such as special buildings in earthquake prone areas
- ◆ A third approach is to avoid prone areas of environmental hazards

The End Unit 1

Hope to see you again for

**Unit 2: Classification of Natural
Resources**

Thank you for you co-operation