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Introduction to Environmental Studies (SENG 101)

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Unit 6: Contemporary Issues in Environmental Management

CONTEMPORARY ISSUES IN ENVIROMNETAL MANAGMENT

- ❖ **Environmental Laws in Ghana**-This comprise of the policies, directives, principles and regulations enacted and enforced by *local*, *national* or *international* entities to regulate human treats of the environment .

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Why the need for environmental laws?

- Buying unfriendly environmental products is common
- Improper disposal of waste especially in our urban towns
- Improper storage and use of chemicals,
- Pollution and harmful emissions are widespread.
- Destruction of natural vegetation is common during construction,
- Buying products that are not environmentally certified

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- Building on unauthorized sites (e.g. building in water ways and farm lands) are regular

Environmental laws in Ghana

- This dates back prior to independence among the certain tribes in Ghana

Pre-independence

Traditional laws on the protection of water sources

- Not farming or fishing on certain days
- Sacred grooves to protect forest and wild life

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- When the **British** colonized the country they tried to make several laws to protect humans and the environment. These include
- **Towns ordinance** calling for proper planning in **4th Nov 1892**
- **Beaches** obstruction ordinance **29th Jan 1897**
- **Land** Planning and soil conservation **1953**

Post independence

- Public nuisance **Act 29** of **1960**
- **Oil** in navigation water **Act 235** **1964**
- **Ghana water** and **sewage** cooperation **Act 301** of **1965**
- Formation of **EPC** to advice government in **1974**
- National investment code of **1985** to assess the impacts of investments projects

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- In chapter six, article 41 (k) of the 1992 constitution of the
- fourth Republic of Ghana, citizens of Ghana are required to protect and safeguard the environment.
- **Act 462** of **1993** establishing the Districts Assemblies to manage waste and environmental Health
- **1994 Acts 490** establishment of **EPA**
- Water resources Act of **1996** investing water resources in resident, charging for water obstruction etc.

Other environmental policies

- Environmental Protection Agency- Guideline
- Environmental Sanitation Policy

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- Growth and Poverty Reduction Strategy (GPRS II) (2006- 2009)
- National Action Programme to Combat Drought and Desertification
- National Irrigation Policy
- National Land Policy
- National Water Policy
- National Wildlife Policy

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| 1. AIR POLLUTION |
| Environmental Protection Agency Act, 1994(Act 490), Management of Ozone Depleting Substances and Products Regulations,2005 |
| 2. COASTAL & MARINE ENVIRONMENT |
| Fisheries Act, 2002, Maritime Zone(Delimitation) Act,1986, Wetlands Management (RAMSAR Sites) Regulations,1999 |
| 3. ENERGY AND MINERAL RESOURCES |
| 1. Atomic Energy Commission Act,2000, Diamonds Act,1972, Energy Commission Act, 1997, Ghana National Petroleum Act,1983 , Mining and Minerals Act,1986, Minerals Commission Act,1993, Minerals Export Duty(Abolition) Act,1987, Minerals Health Areas Act,1925 , Small Scale Gold Mining Act,1989, Volta River Development Act,1961, West African Gas Pipeline Act,2004 |
| 4. FLORA AND FAUNA |
| 1. Animals (Artificial Insemination)Act,1955, Animals (Control and Importation)Act,1952 , Control and Prevention of Bush Fires Act,1990, Economic Plants Protection Act,1979, Forest Plantation Development Act,2000, Timber Resource Management Regulation Act,1998, Timber Operations Act, Tree and Timber Act,1974, Timber Resource Management Regulations,1998, Timber Industry and Ghana Timber Marketing Board Act,1977, Wild Animals Preservation Act 1961(Act 43) |
| 5. HAZARDOUS SUBSTANCES/CHEMICAL |
| 1. Mercury Act,1989 |
| 6. HUMAN DEVELOPMENT AND SETTLEMENT |
| 1. Concessions Act,1939,Concessions Act,1962, Copyright Act,2005, Centre For Scientific and Industrial Research Act,1996, Centre For Scientific Research into Plant Medicine Act,1975, Confiscated Assets (Recovery and Disposal) Committee Act,1979, Food and Drugs Board, Administration of Lands, Act 1962, Ghana Ports and Harbors Authority Act,1986, Ghana Maritime Security Act, 2004,Ghana Maritime Authority Act,2002, Ghana Shipping Act,2003, Ghana National Fire Service Act, 1997, Ghana Meteorological Agency Act,2004, Ghana Tourist Control Authority Act,1973, Ghana Standards Board(Food, Drugs and Other Goods)General Labelling Rules,1992, Infectious Diseases Act,1908 Seeds(Certification and Standard)Act,1972, Local Government Act, ,Local Government Service Act, Standards Authority Act,1973, Telecommunications(Frequency Registration and Control) Act,1977, Town and Country Planning Act,1945, Towns Act,1992, Traditional Medicine Practice Act,2003, Vaccination Act,1919, Weights and Measures Act |
| 7. HEALTH AND SAFETY |
| 1. Factories, Offices and Shops Act of 1970 |
| 8. LAND MANAGEMENT |
| 2. Lands Commission Act,1994 , Lands Miscellaneous Provision Act,1963, Land Planning and Soil Conservation Act,1953, Landed Properties of Ghana, Rubber Estates Limited and Fire Stone Act,1977, Land Registry Act,1962 Irrigation Development Authority Act,1977, Lands(Statutory Wayleaves) Act,1963 , Land Title Registration Act,1986 |
| 10. SOLID WASTE MANAGEMENT |
| 1. <u>Abandoned Property(Disposal)Act ,1974, Environmental Assessment Regulations 1999, (LI 1652) , Layout Designs, Local Government Act (1994), Act 462</u> |
| 11. WATER MANAGEMENT AND POLLUTION |
| 1. Beaches Obstructions Act,1897 , Environmental Protection Agency Act, 1994(Act 490) Part I & II, Ghana Water and Sewerage Corporation Act 1965 (Act 310), Rivers Act,1903, Water Resources Commission Act, 1996 (Act 522) |

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Protection Agency, 2014)

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Ghana's Environmental Protection Bureau

- Ghana's attention was focused on environmental issues at the
1972 Stockholm conference on human environment
- In **1974**, the Environmental Protection Council (EPC) was formed
- This become the first governing body to focus on environmental management and to coordinate all environmental issues in Ghana
- In **1985**, a draft investment code was published to consolidate existing legislations relating to investments in Ghana

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- EPC become EPA by an act of parliament **ACT 490** in **1994**

What is Environmental Impact Assessment (EIA)?

- EIA is used to identify the environmental and social risks and impacts of a project prior to decision-making
- It EXAMINES project alternatives
- It IDENTIFIES ways of improving project selection, siting, planning, design and implementation
- By using EIA, both environmental and economic benefits can be achieved, such as reduced cost and time of project

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implementation and design, avoided treatment/clean-up costs and impacts of laws and regulations

Environmental Assessment

➤ This is pre-determination of the extent of pollution or environmental degradation a proposed project seeks to present

➤ EIA is now a statutory requirement for undertaking any major project in Ghana

➤ Elements of EIA include the following

➤ **Executive Summary**

➤ **Project Description and Legal framework**

(i) **Screening**-Involves initial environmental effects identification

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- (ii) **Scoping**-Which examines and identify the major environmental effects which needs to be studied
 - Description of the existing environment

The EIA Process

Before permit is granted for any undertaking, the following steps must be completed:

1. **Registration**: Special forms used by the proponent for registering the undertaking or development. The responsibility for determining what constitutes an impact on the environment with respect to the development lies with the EPA.

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2. *Screening*: The EPA with the assistance of a crosssectoral technical committee will make a decision by placing the development at the appropriate level of assessment.
- In making this decision at this stage consideration is given to (1) location, size and output of the development, (2) technology to be used, (3) concerns of the general public, (4) land use consideration, (5) other factors relevant to the development.

The EPA will take a decision which could be one of these:

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- Objection to the development
- No objection to the development, hence Permit is issued
- Preliminary environmental assessment required
 - Environmental impact assessment required.

Criteria for Screening Sub- Projects

- Potential impacts and environmental significance
- **Minor:** standard construction/ operation practices to address such impacts
- **Moderate:** standard construction practices to take care of these impacts but mitigation measures may also be required

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- **Major** : alternatives required otherwise mitigation measures to be adopted with strict monitoring protocols
3. *Scoping*: whenever the screening of the initial registration or a subsequent Preliminary Environmental Report indicates that a significant adverse environmental impact may result from the development of the project, the proponent will be required to submit an Environmental Impact Statement (EIS)
- The process identifies all the key issues to be addressed in the EIA

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- This will require the proponent to commission a thorough fact finding evaluation of the proposed development and to conduct adequate consultation to determine stakeholders' concerns as well as the general public to be addressed in terms of reference for the EIA.
- In the event of strong public concerns, the EPA will hold a public hearing relating to the assessment.
- On approval of the terms of reference by the EPA, the proponent may then proceed to prepare the EIA.

EIA major implementation steps

The EIA comprises a series of nine steps which includes:

1. Preliminary activities,
2. impact identification,
3. scoping,
4. baseline study,
5. impact evaluation,
6. mitigation measures,
7. Assessment (comparison of alternatives),
8. documentation,
9. decision-making and post auditing

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Reporting- Which include a description of the project

- ❑ Location,
- ❑ Raw materials,
- ❑ Transportation,
- ❑ Services,
- ❑ Manufacturing process and waste produces

- Analysis of the alternative
- Environmental issues of the project
- Mitigation measures
- Environmental management and training
- Environmental monitoring plans

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Procedure to safeguard the environment - EPA

- New developments are to register with the EPA,
- Conduct an environmental assessment of their proposals
- Submit an environmental assessment report to the EPA for review.
- Environment Permit is granted for the development to start when EPA is satisfied with the assessment conducted and the mitigation measures proposed
- Industries are required to submit monthly returns of their environmental parameters monitored to the EPA. Comments are expected in cases where values exceed certain limits and what measures are in place to check the discrepancy.

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- Industries are also required to submit Annual Environmental Report to the Agency, indicating how they have performed environmentally, what have been achieved, what went wrong and what needs to be done.

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| | INDUSTRY | CONSTRUCTION RELATED ACTIVITY |
|----|-------------------------------------|--|
| 11 | CRUDE OIL AND NATURAL GAS | a. Facilities for crude oil or petroleum production; b. Facilities for natural gas production. |
| 2 | QUARRIES AND SAND PITS | a. Where the total area is greater than 10 hectares, or where any portion is to be located within an environmentally sensitive area. b. Sand and gravel pits where the total area is greater than 10 hectares, or c. Where any portion is to be located within an environmentally sensitive area. |
| 3 | CHEMICALS AND CHEMICAL PRODUCTS | a. Plastics and synthetic resins; b. Paints and varnishes. c. Other chemical products |
| 4 | CONSTRUCTION | a. Construction of pipelines for the transmission of oil, natural gas and other related products from the source to the point of distribution, where – • any portion of the pipeline is to be located at a distance greater than 500 meters • from an existing right-of-way; or • any portion of the pipeline is to be located in an environmentally sensitive area; b. Diesel electric power generating plants having a capacity greater than 1 megawatt; c. Gas turbine electric power generating plants having a capacity greater than 1 megawatt; d. Nuclear electric power generating plants. |
| 5 | HIGHWAYS AND HEAVY CONSTRUCTION | a. roads b. waterworks and sewage system – c. construction of trunk pipelines for transmission of water from the source to distribution; d. construction of trunk sewer pipelines; e. construction of trunk sewer pipeline outfalls. f. hydroelectric power plants and related structures – g. construction of dams and associated reservoirs; a. inter-or intra-basin water transfers; b. construction of hydroelectric power developments |
| 6 | UTILITIES | a. establishment of waste disposal sites; b. establishment of facilities for the collection or disposal of hazardous waste materials |
| 7 | ACCOMMODATION SERVICES | c. Establishment of recreation and vacation camps. |
| 8 | AMUSEMENT AND RECREATIONAL SERVICES | a. Commercial spectator sports – • establishment of horse racetrack operations; • establishment of racetrack operations for motorized vehicles sports and recreation clubs and services; b. Establishment of facilities, including trails c. Establishment of outdoor firearm ranges; d. Establishment of marina operations e. Establishment of facilities, including trails, for motorized recreational vehicles f. Other amusement and recreational services. |

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from the Environmental Assessment Regulations (1999)

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Undertakings for which environmental impact assessment (EIA) is mandatory

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| | INDUSTRY | CONSTRUCTION RELATED ACTIVITY |
|---|-------------------------------------|---|
| 1 | AIRPORT | a. Construction of all airport or airstrips as well as the enlargement of existing airports or airstrips. |
| 2 | HOUSING | a. Human settlement development undertaking; b. Housing development. |
| 3 | INFRASTRUCTURE | a. Construction of hospitals b. Industrial estate development c. Construction of roads and highways d. Construction of new townships e. Construction of railways |
| 4 | PORTS | a. Construction of ports b. Port expansion involving an increase of 25 per cent or more in handling capacity per annum |
| 5 | PETROLEUM | a. Oil and gas fields development b. Construction of off-shore and on-shore pipelines c. Construction of oil and gas separation, processing, handling and storage facilities d. Construction of oil refineries e. Construction of product depots for the storage of petrol, gas or diesel which are located within 3 kilometres of any commercial, industrial or residential areas |
| 6 | RESORT AND RECREATIONAL DEVELOPMENT | a. Construction of coastal resort facilities of hotels with more than 40 rooms b. Hill top resort or hotel development c. Development of tourist or recreational facilities in national parks d. Development of tourist or recreational facilities on islands in surrounding waters. |
| 7 | WASTE TREATMENT AND DISPOSAL | a. Construction of incineration plant b. Construction of recovery plant (off-site) c. Construction of wastewater treatment plant (off-site) d. Construction of secure landfills facility e. Construction of storage facility (off-site) f. Construction of composing plant g. Construction of recovery/recycling plant h. Construction of waste depots i. construction of marine outfall j. Night soil treatment |
| 8 | WATER SUPPLY | a. Construction of dams impounding reservoirs b. Groundwater development for industrial, agricultural or urban |

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Risk Assessment

- This is simply a **careful examination of activities** in ones work place that could cause harm to necessitate weighing options whether or not to **take precautionary measures** to prevent harm
- Risk assessment is important in protecting one's business as well as employees

Steps in Risk Assessment

- (i) Identify the **hazards**
- (ii) Decide **who is at risk** and **how**
- (iii) Evaluate **the risk** and **the necessary** precautions

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- (iv) Record findings and implementation
- (v) Review of assessments and up date if necessary

THANK YOU