

1. COURSE NAME & CREDIT LOAD

COURSE CODE: FWM305

COURSE TITLE: Introduction to Forestry and Wildlife Mgt.

NUMBER OF CREDITS: 2 Credits

COURSE DURATION: Two hours per week for 12 weeks (24 hours)

As taught in (2009/2010) session.

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3. COURSE DETAILS:

3.1 Course Synopses:

Organisation of Forest and Wildlife Resources, morphology, taxonomy and ecology of tropical trees and wildlife. Forest and wildlife production activities, forest and wildlife protection and the regulation of harvest for sustained yield. Preparation of management plans. Solving managerial problems. Introduction to operations research in forestry and wildlife.

3.2 Course note:

WRM 305 (Wildlife Management Aspect)

WILDLIFE MANAGEMENT

Wildlife refers to all living things, undomesticated or uncultivated living things, these include plants, animals, micro organism, living in their natural settles.

It embraces all animals in this natural habitat wildlife, include but not limited to insects, spiders, birds, reptiles, fish, amphibians and mammals, if not domesticated.

BIOLOGICAL DIVERSITY – Refers to total variability of living organisms in the planets. It is define in terms of genes species and ecosystems. As a biological concept, biodiversity is essential and necessary for human survival.

ECOSYSTEM – Is the total interaction between living things and non-living environment.

WILDLIFE MANAGEMENT – It entails the application of business method and ecological knowledge to manipulate undomesticated fauna and flora. It could simply be put as a wise use of resources. It also implies the application of ecological principle to the management of wildlife.

TOURISM – Is an act of science that takes care of relaxation, transportation or recreation that enhance psychological devlpt.

AIMS AND OBJECTIVES

GOALS OF WILDLIFE MANAGEMENT

1. The primary aim of wildlife management is the preservation wild species and allowing nature to follow a balance pattern.
2. Direct or indirect manipulation of wild fauna population via cropping culling, and other habitat management tools so as not to exceed the carrying capacity of habitat or ecosystem.
3. Maintenance of useful and desirable species because of genetic values, aesthetic values, financial value, medicinal value etc.
4. Sustained yield management through limiting consumptive utilization of resources.

DEFINITION OF TERMS

CULLING – It is a selective removal of the aggressive, diseased, weak or stubborn spp from the ecosystem. It is also aimed at preventing competition.

HABITAT:- A place where organisms live and its surroundings. It supplies basic requirements for the organisms.

POPULATION:- The total numbers of a group of individuals of all kinds of organisms.

CROPPING:- Refers to a deliberate removal from a population of animals in an environment, especially when there is overcrowding i.e. population has exceeded its carrying capacity.

STANDING CROP:- It is the composition (biomass) of animals supported per unit area.

NATALITY RATE:- Same as birth rate or the number of individuals produced per unit time.

SPECIES:- A group of interbreeding individuals living together in a common environment under similar ecological relationships.

ECOLOGICAL NICHE:- It is the status of an individual animal in an environment. It lives, feeds and interbreeds.

MORTALITY RATE:- It is the rate at which individual animals die at a given period of time. It also refers to death rate.

TOURISM:- Is the act and science that takes care of relaxation, transportation or recreation that enhance psychological development.

CARRYING CAPACITY – The total number of animals that a habitat can sustain without affecting the ecological balance.

CONSERVATION – Is a management or wise use of biosphere resources in a sustainable way without affecting the habitat and ecosystem. Conservation involves preservation, maintenance, sustainable utilization and restoration of natural environment.

CONSUMPTIVE UTILIZATION – Is the extraction of wildlife resources for the production of consumer goods and services. Apart from providing food, other types consumptive value of wildlife resources include production of skin and hides, materials for decoration and crafts, fruits, oil, honey, medicine, sport hunting, farming activities and mineral resources exploitation.

NON-CONSUMPTIVE UTILIZATION – Is the provision of natural amenities and services by wildlife resources for recreational uses such as game viewing, nature trails, swimming and other water related recreational activities in lakes, water falls. It also includes spiritual and religious activities or any psychological recreation/values.

IMPORTANCE OF WILDLIFE MANAGEMENT

1. As a source of animal protein and Bush meat production.
2. Game viewing and Tourism – wildlife reserves, national parks and resources centre have encourage recreation ‘and tourism, it is a non-consumptive value of wildlife. Area whereby human being can relax for life regeneration. Recreational environments include zoological gardens, natural parks, Game reserves, sanctuaries and museum etc.

Nature tourisms have auxiliary components such as Hotels, resort centres, parks and Gardens.
3. Income generation to the Nation or state
4. Education and Research
5. Aesthetic value
6. Employment creation
7. Protection of Biodiversity
8. Genetic conservation

- Revenue is generated from game viewing, Tourism, sales of wildlife products, Export of production. It is also a source of income for farmers and hunters. Also from penalties.
 - Create job opportunities for both skilled and unskilled labour e.g. Researcher, Managers, rangers and market women etc.
9. Pharmaceuticals, Research and medicinal values. Ecological behaviours and knowledge are utilized in research works and also animals are used as testing ground for drugs.

PRESENT STATE OF NIGERIA WILDLIFE

Decades ago, Nigeria wildlife resources were abundant, but now days they have suffered depletion owing to indiscriminate hunting practices with the use of local and sophisticated equipments e.g. dane guns, traps, catapult etc. worst still, the low penalties attached with indiscriminate use of resources (wildlife) are low. This calls for immediate re-orientation of human awareness and conservative instinct or mentality. Government Politics and policies, poverty, predatory instinct of man, etc

REASON FOR THREATENING

1. Poverty
2. Agriculture and mining
3. Use of chemical affect plants
4. Pollution
5. Over population
6. Urbanization.
7. Taste for wildlife animals
8. Technological developments and demands

9. Inefficient and unstable govt policies
10. politics
11. Availability of sophisticated weapons

WILDLIFE CONSERVATION

Rational utilization/Management/protection of natural resources – It is the management or rational utilization of the human use of the biosphere so that it may yield it greatest sustainable benefit or the use / wise use of natural resources.

Protected areas of wildlife animals are broadly divided into two:.

EX-SITU – Conservation of wildlife resources outside their natural environment or habitat. e.g. Zoological gardens, museum/mausoleum, aquariums, laboratories etc

IN-SITU – Conservation of wildlife resources in their natural environment or habitat e.g. Biosphere conservation, national parks, game reserves, sanctuaries etc.

NATIONAL PARK – There is wise use of resources on limit permission.

GAME RESERVE – There is total preservation of resources.

National park contains some ecological features like shrines, old but unique archeological features, landscape areas of unique importance are preserved in NP.

It is a large area or expanse of land controlled by federal government. Game reserve is restricted for game conservation, it is owned by the state government;

STRICT NATURE RESOURCES – It is created by federal government to conserve endangered resources, natural environment or landscape this includes endangered plants and animal spps.

BIOSPHERE RESERVE – It is created by federal government to conserve the living things in the environment. It serves as a field laboratory, for training and research. It is divided into 3 zones.

- (1) **Buffer Zone** – It is the adjoining area around the core area for non-destructive activities. It is restricted and it's like a ranging zone for animals.
- (2) **Core Zone** – It conserve biological resources, no management practices is allowed for exploitation activities.
- (3) **Transition Zone** – There is controlled utilization/permission. Farming is allowed and is also controlled by federal government.

Home range:- Is the basic living area for an individual and sometimes a group. OR

Home range:- Is a more or less limited area within which an animal moves to conduct its activities.

Territory:- Is an defended area. This may be seasonal and thus smaller than the home range.

Preservation:- Is to protect something, that might include endangered animals, to keep them safe.

MAJOR PURPOSE OF CONSERVATION

This is because wild resources are threatened and their habitat is endangered because of the activities of man: there is the need for conservation.

Major management areas in protected areas.

- Resources management
- Management of facilities and services
- Visitors management

HOW CAN WE MANAGE RESOURCES IN A NATIONAL PARK

- Management of vegetation, habitat and or grazing land.
- Control logging
- Regeneration practices where necessary

- Control burning
- Silvicultural practices such as thinning, afforestation, restocking/reseeding.
- conserving soil qualities and encouraging soil fertility
- Application of organic fertilizer.
- Culling and cropping via spot hunting(with hunting permit) where necessary
- Control of predators and pests
- Fencing and enlargement of buffer zone
- Discourage competition/conflict
- Disallow poaching
- Provision of semi-natural water holding areas and salt licks centres
- Enforcement of policies and laws, stiff penalties
- Provision of rangers and guards with sound ammunition
- Encouragement of scientific research to provide detail ecological and compositional bio-data of the resources in the protected area or information to enhance management of the spps and the environment/habitat. Conflict and competitions among animals especially herbivore and the knowledge of the animals to enhance proper management practices.

Habitat involves

- Preservation / protection
- Sustainable utilization
- Maintaining management
- Restoration
- Enhancement of natural habitat

Management of facilities and services

Facilities found within and NP are:

Recreational facilities, catering services, Ammunitions, equipments, transportation facilities, Educational facilities, tours by servicing, keeping a safe environment, repairing spare parts, Good storage facilities and repairing/maintenance routine programmes.

Management of visitors in a N.P

- (1) Safety arrangement – By provision of rangers to guide and guard visitors. control the movement of visitors in areas with carnivores or delicate vegetation/environment e.g deep pools or crocodile valley.
- (2) Provision of recreational facility
- (3) Provision of accommodation
- (4) Refreshment centres

NP is been managed by administration board. The director is responsible for execution of policies of the board of the day and day activities.

PROBLEMS OF WILDLIFE CONSERVATION

1. Poaching (illegal hunting), indiscriminate killing; collection of hatchlings, eggs, etc.; debarking of trees, root/tuber extraction, collection of fruits and leaves and illegal felling of trees.
2. Boundary problems/community conflict
3. Lack of strict laws and regulation and guard against indiscriminate killings, collection of hatchings etc.
4. Fire outbreak
5. Overgrazing
6. Lack of conservation awareness
7. Lack of trained personnel
8. Insufficient funds

9. Land conflict
10. Conversion of forest land to agric with diff agricultural practices.
11. Lack of infrastructural facilities and development
12. poverty
13. govt politics and policies

SOLUTION TO WILDLIFE CONSERVATION PROBLEM

1. Anti-poaching practices
2. Effective law and policy
3. Adequate supply of equipments
4. Adequate public relation
5. Demarcation of ample buffer zone
6. Provision of good infrastructural facilities.
7. Proper training of conservation staff personnel
8. Visitor's facilities should be used outside conservation zones.
9. Wildlife extension and environmental awareness.
10. Encouragement of wild animal domestication practices
11. Enlargement of livestock production to take care of growing demand for meat
12. Creation of job opportunities for teaming jobless population.

STRATEGIES FOR WILDLIFE CONSERVATION

1. Establishment of game reserves as protected areas
2. Reservation of land areas for/ as grazing reserves
3. Enhance and promotion in wildlife awareness and conservation education
4. Establishment and devpt of zoos, wildlife parks etc.
5. Encouragement of wildlife domesticated programmes.

6. Proper devt of livestock and fisheries industries as an alternative source animal protein.
7. Incorporation of wildlife conservation education programme into institutions
8. Develpt of game ranches.
9. Enactment of conservation laws and policies.
10. Devlpt and execution of government policies.

NATIONAL PARKS

Duties of Board of Director

- To maintain co-existence between parks and surrounding communities.
- Ensure implementation of national park policy.
- Also advice government on national park devlpt.
- To conserve and preserve flora and fauna and archeological features of the environment.
- Advice government on adequate and efficient utilization of resources.
- They encourage general education and awareness of the knowledge of wild animals and vegetation.
- Promote ecotourism and other socio-ecological activities within the park

ORGANOGRAM OF NATIONAL PARKS



