SENIOR FOUR WORK

14**. SUSTAINABLE USE OF FISHERIES RESOURCES IN EAST AFRICA**

**The fishing grounds of East Africa.**

Fishing is the extraction of valuable resources like fish from Water bodies. There are various fish species caught from different water bodies in East Africa like Tilapia, Nile perch, silver fish etc.

Finding out the location of major fishing grounds in East Africa.

The major fishing grounds include lakes, rivers, oceans etc.

**A SKETCHMAP SHOWING MAJOR FISHING GROUNDS OF EAST AFRICA.**

**SPACE FOR THE MAP**

**The major fishing grounds**

Fishing grounds are areas where fish is caught from. Fishing grounds are categorized into two i.e. Inland grounds and Marine fishing grounds.

Inland fishing grounds include lakes, rivers, ponds, and swamps.

Marine fishing grounds include oceans and seas.

**Major fish species caught in East Africa include;**

Inland fisheries include Nile perch, lung fish, catfish, tilapia, mud fish, silver fish and major marine fish species include Sardines, cod, Mackerel, Tuna, Anchovy, Haddock, and Halibut.

The Indian ocean is where pelagic and demersal fish is caught at the coast. Pelagic fish is a type of fish which lives near/closer to the surface of the ocean for example sardines, Mackerel, Herrings, Anchovies.

Demersal fish is a type of fish which swims at the bottom of the oceans/seas for example Plaice, Haddock, Tuna, Hake, Halibut, Cod etc.

**METHODS OF FISHING**

In East Africa, there are a combination of traditional and modern methods of fishing. The methods of fishing used depends on the level of technology and skills needed. Therefore, sustainable fishing involves use of traditional methods and commercial fishing involves use of modern methods.

**Traditional methods of fishing**

These include the use of spears, hooks, baskets and poisoning but these can only be used for subsistence fishing, (for home consumption).

**Exploring traditional methods of fishing**

Woven baskets**:**

The baskets are used to catch fish using bait. The baskets are lowered into shallow waters and left for a period of two days. The fishermen come and haul the baskets containing fish. The baskets are woven from dry papyrus stalks which have a funnel with a shaped opening facing in ward not allowing the fish to come out as illustrated below;

SPACE

The other traditional methods include Hooks, barrier trap fishing, fish Traps etc.

**Modern methods of fishing**

These involve improvements made in technology involving manufacturing of fishing gears. These include: gill netting, Trawling, long lining, Drift netting, Purse seining and these methods are used for commercial fishing.

1. **Line and hook method;**

This is a method of fishing by means of an “angle’’ hook. The kook is attached to a line and weighed down by a sinker so it sinks in the water i.e. the hook, line and sinker arrangement and hook is baited as illustrated below;

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1. **Trawling method**

This involves pulling a fishing net through the water behind one or more boats. A trawl net is a net shaped like a bag with one end open. The net is kept open by otter boards. At the top of the open are floats and at the bottom are weight. The trawl net is normally dragged at the bottom of the ocean floor by a trawler. This method is suitable catching demersal fish (fish found at deep levels of the ocean) like Haddock, Cod etc. as illustrated below;

1. **Purse seining method**

The nets are kept floating vertically in the ocean. The nets have weights at the bottom to keep them stretched and corks at the topknot keep them floating. A shoal of fish is surrounded by the net. The net has long ropes attached to two fishing boats. Once a shoal of fish is at the center of the net, the ropes are then drawn to a stationary boat or ship as below;

1. **Drift netting method**

In this method, nets hang vertically like those of lawn tennis. The upper side of the net has floats and the lower side has weights which makes the net hang vertically. The net is placed across the sea and as a shoal of fish tries to swim through the net, they are entangled by their gills and fins and remain trapped in the net as below;

1. **Gill Netting**

These are nets which are kept upright in the water using floats at the surface and weights at the bottom of the lake. The fish swims into the net and gets their fins and gills trapped in the mesh. The fish stay there until the net is hauled by the fishermen. This is commonly used on the coastal waters and on lakes like Victoria and Tanganyika as below;

**SPORT FISHING**

Is an adventure that visitors enjoy while on their stay in East Africa. It is carried out in Murchison falls National park, Lake Victoria and Lake Mburo National Park. Methods are used by casting lures, spinning and catching fish on live bait and fish species caught are Nile perch, catfish, Tiger fish etc.

**Preservation methods of fishing**

Fish is a perishable product, therefore it should be prevented from getting spoilt, thus it should be preserved well preservation methods are categorized into traditional and modern methods.

**Traditional preservation methods;**

These include; smoking, salting and sun drying.

**Modern preservation methods;**

These include; canning/tinning, Refrigeration etc.

**Factors favoring fishing in East Africa**

Factors favoring fishing in East Africa are both physical and human. The physicals are natural while human are influenced by human activities.

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| --- | --- |
| **Physical factors** | **Human factors** |
| Drainage features :lakes, Rivers, oceans, seas etc. | Presence of Capital |
| Vegetation-swamps, papyrus | Skills of fishing/labor |
| Cool climate | Market |
| Indented coastline | Fishing gears/equipment |
| Forests-timber-fishing boats | Transport |
| Off shore islands | Advanced technology |
| A variety of fish species | Government policy |
| Extensive continental shelf | Research |
| Presence of planktons | Political stability |
|  | Processing industries |
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|  |  |

**Benefits of the Fishing in East Africa**

The fisheries benefits are grouped into economic, social, institutional and environmental. These benefits have led to economic diversification to reduce on the over reliance on the agricultural sector. The benefits include;

* Provision of government revenue through taxation used in the development of infrastructures.
* Provision of employment opportunities thus improved standards of living.
* Infrastructural development like roads, railways, schools, health centers etc.
* Diversification of the economy to reduce over reliance.
* Urbanization with related advantages i.e. developed infrastructures
* Source of food in form of proteins/fish to the population.
* Source of foreign exchange through exportation of fish to outside countries.
* Promotion of international relationships especially through international trade.
* Industrialization that use fish as a raw material in fertilizers, fish.
* Source of income to people hence improved standards of living.
* Provision of raw materials to fish processing industries.

**Problems faced by the fishing industry**

* Over fishing leading to decline of fish in fishing grounds.
* Inadequate capital limiting investment in the fishing industry.
* Stiff competition with other fishing countries.
* Increased pollution of water bodies due to dumping of chemicals and waste products leading to death of fish.
* Presence of water weeds on the water bodies leading to death of fish and destruction of the nets.
* Underdeveloped transport network causing delays in movement of fish to market centers.
* Limited market for fish leading to high perishability of fish.
* Inadequate skilled labor limiting work in the fishing sector.
* Price fluctuations which discourages fishermen.
* Inefficient methods of fishing leading to massive fish destruction.
* Traditional methods of preservation of fish leading to high post-harvest losses.
* Limited planktons leading to death of fish.

**Ways to improve the fishing sector in East Africa (solutions)**

* Legislation /use of the law to control fishing against over fishing.
* Sensitization programs for fishermen to adopt better fishing methods.
* Increased market research to widen the market base for fish export.
* Regular restocking of fish to introduce new commercial fish species.
* Anti-pollution laws/treatment of industrial wastes before disposal to reduce pollution.
* Regular patrolling of the water bodies to avoid encroachment.
* Improvement on transport network like roads to access the market centers.

**Fish Farming;**

This involves the artificial rearing of fish in a controlled environment such as tanks, ponds or cages for food or sale.

The types of fish commonly reared in East Africa include Tilapia, Nile perch, silver fish and cat fish.

Fish farming is practiced on limited land, increases on the fish stock, reduces dangers associated with fishing in rivers and lakes.

**Marketing of fish.**

The marketing of fish in East Africa takes place through various stages i.e.

-fishermen offload their catch and sell to traders, processors and consumers.

-fish can also be sold directly on the water to those operating collection boats.

-sometimes fish is sold as soon as they leave the nets.

**Conserving fishing grounds.**

Human activities along lakes are threatening Africa’s fresh water resource i.e. lakes,

Oceans, swamps etc. This is always done through the poor garbage disposal, poor

disposal of industrial wastes and draining of water bodies, overfishing through use

of poor fishing methods like poisoning.

Therefore, conserving fishing grounds should be done through restricting encroachment on fishing grounds, providing security on fishing grounds, avoiding over fishing and preventing dumping wastes in the water bodies.

**15 WILDLIFE CONSERVATION AND TOURISM IN EAST AFRICA**

Wildlife is the major tourist attraction in East Africa because wildlife is conserved in their natural habitats.

**Conservation areas.**

These are areas set aside for conservation of wildlife e.g National parks like Queen Elizabeth, kidepo, Lake Mburo in Uganda. Tsavo, Lake Nakuru, Masai mara in Kenya and Serengeti National Park, Gombe, Katari, Lake Manyara and Tarangire National Park in Tanzania.Others include; Game parks/Reserves and Sanctuaries.

**Meaning of the following terms.**

-Wildlife

-National park

-Game reserve

-Wildlife conservation

**TOURISM:** Is an act and process of spending time away from home in pursuit of relaxation recreation, pleasure while making use of commercial provision of services.

Tourism is the movement of people from one place to another for relaxation, leisure or study purpose. It’s an invisible export where governments earn a lot of foreign exchange.

A tourist is a person who travels with an aim of studying physical features, economic activities,

**Reasons why tourists came to East Africa.**

-Tourists come for pleasure.

-Tourists come for business.

-Tourists come for study purposes.

Most tourists come to tour the natural environment. The environment involves wildlife, mountain scenery, lakes, rivers, historical sites, climate etc.

**Origin of tourists.**

Many tourists to East Africa come from industrialized countries with no wildlife habitats found in East Africa. Many of them come from Europe i.e. Germany, France, Italy, Sweden, UK and others come from North America, China, Japan and South Korea.

**The table below shows number of visitors to Uganda on short term basis in 2019.**

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| --- | --- |
| **Country** | **Number of visitors** |
| China | 162,538 |
| Rwanda | 1,634 |
| Tanzania | 1,527 |
| Burundi | 299 |
| DRC | 351 |
| United Kingdom | 40,852 |
| South Sudan | 836 |
| United States | 166,009 |
| India | 17,914 |
| Kenya | 2,049 |

1. identify the country with the;

(a)Highest origin of visitors

(b)Lowest origin of visitors

2.Draw a bar graph to show arrivals and origins of tourists to Uganda.

**Factors favoring development of tourism in East Africa.**

East Africa has conducive conditions that attract tourists from outside. The factors that have led to development of tourism in East Africa are social, political and economic and these include;

1.**Wild animals and birds**-In Different National parks i.e. hippos, leopards, elephants, giraffes and birds like ostriches, flamingoes, crested cranes for research, viewing, photography etc.

2.**Climate**-cool sunny islands to warm dry. Sunny Coast-Carry out activities like sun bathing, swimming e.g. at Mombasa, Lamu etc.

3.**Drainage** –lakes, rivers, hot springs around L.Navisha, Nakuru attract tourists for swimming, deep diving, research and photography on the beaches.

4.**Historical sites**-like Fort Jesus, Isimila, Archaeological site,

5.**World heritage** sites-e.g. Olduvai Gorge, Kasubi tombs, Fort Jesus etc.

6. Presence of developed transport and communication networks –roads, railways, water, air transport.

7. Improved accommodation facilities like hotels and lodges e.g. Serena.

8.Hospitability of the host countries-people are so friendly i.e. tour guides, hotels, banks.

9.Presence of unique cultures of East Africa-dressing, foods, dances etc.

**Tourism in the local area.**

We are surrounded by many features not recognized as tourist attractions in our localities because we take them to be usual features. These features include vegetation, swamps, rivers and lakes, hills, valleys and mountains.

**Challenges facing tourism in East Africa.**

The challenges are social, political and economic and these include;

-Political instability from rebels e.g. at schools.

-Hostility from some tribes.

-Illegal hunting of wild animals/poaching leading to their extinctions.

-Inadequate accommodation facilities.

-Inefficient infrastructure.

-Poor transport network.

-Shortage of skilled man power.

-Limited government support.

-Language barrier.

-Most tourist attractions are found in remote areas and under developed.

-Dangerous pests and diseases.

- Inadequate capital.

-High levels of corruption.

-Seasonal nature of tourists-winter season in their home countries.

-Existence of natural calamities i.e. floods, drought, landslides discourage tourists.

**Solutions to the above problems.**

-Sensitizing the masses to be interested to reduce ignorance.

-Creating a peaceful political environment.

-Re-settling of people to prevent encroachment.

-Disarming hostile tribes.

-Putting strict laws against poaching, encroachment etc.

-Improved accommodation facilities.

-Discouraging burning and clearing of vegetation.

-Training of man power to work in the industry.

**Contribution of tourism to development of East African countries.**

Tourism has contributed towards the growth and development of East African countries this both socially and economically.

-Foreign exchange to governments of East Africa.

-Provision of government revenue through taxation and issuing operation licenses to hotels and transport company owners.

-Provision of employment opportunities to people as tour guides, game rangers which helps to an income and thus improved Standard of living.

-Development of infrastructures in form of roads linking to tourism center.

-Created international relationships between East Africa and other countries.

-Diversification of the economy hence reducing over dependence on one economic activities.

-Urbanization with better infrastructures, trading activities, better social services, security and employment opportunities.

-Acquisition of skills by the local people i.e. interpreters, bankers, researchers acquiring skills in management of tourism sector.

-Made the use of idle land in the country e.g. marginal areas like dry areas, forested, mountainous areas etc.

**Problems brought by the tourists to East Africa.**

-Spread of diseases.

-Erosion of African culture-importation of foreign culture.

-Encourages environmental degradation in areas like beaches, forests, National parks.

-Development of urban centers with associated problems i.e. prostitution, increased crime rates, drugs etc.

-Displacement of people and reduction of land for settlement and agriculture.

-Encourages poaching and smuggling of valuable animals and birds.