

## **PHOTOGRAPHIC INTERPRETATION.**

A photograph is a picture, an image of an object within the environment taken with a camera representing the physical and human features found in a given place at a particular time.

This may either cover a large region for example taken by a satellite or a small area/place taken by the usual cameras.

Photographic interpretation is a branch of Geography, which involves the skill of analyzing, identification and interpretation of geographical features (physical and human features) that are represent in the photography. I.e. one is required to indentify the geographical features and at the same time determining the geographical interrelationship or significances.

### **Note**

A. Photographs enhance the understanding of the reality in a geographical area. I.e. they generate interest, illustrate certain features, activities and processes and give the geographical interrelationship between phenomena.

B. In photographic interpretation, it is important to identify, analysis the interrelationship or their respective significance between

1. physical and physical features,
2. physical and human features
3. human and human features/activities

### **ACTIVITY.1**

Compare and contrast between photographs and maps.

## **Types of photographs**

Photographs are determined depending on the viewpoint from which they were taken, either from the ground or from the air.

There are two types of photographs namely.

1. Ground photographs.
2. Aerial photographs.

### **1. GROUND PHOTOGRAPHS.**

Ground photographs are taken at the ground level when the cinematographer (camera operator) is standing or connected to the ground. They tend to give the horizontal view of features taken.



*An illustration of ground photograph of part of Ndejje Senior Secondary School.*

### **Characteristics of Ground photographs.**

- \* Ground photographs show the landscape in detail i.e. the variations in size and heights of the different objects on the photographs.
- \* They cover a small area as compared to other types of photographs.
- \* They usually show one dimension of the object. Features in the photograph, which are near the camera, can be seen clearly but those ground beyond are hidden from the camera by the tall

images. I.e. in front of the building features are seen clearly but behind it they cannot be seen hence (dead ground).

- \* In some close-up photographs especially on the open landscape, the objects would show things on a progressively smaller scale hence **Principal of perspective** (features near the camera appear bigger than those that are distant from the camera).

In this case, the interpreter will easily have no problem in identifying features closer the camera than those at a far away.

- \* Ground photographs appear in their right shape of size.

### **Demerit.**

- \* Limitation of Ground photograph is tall features such as buildings, tall trees etc often obstruct that person's view.

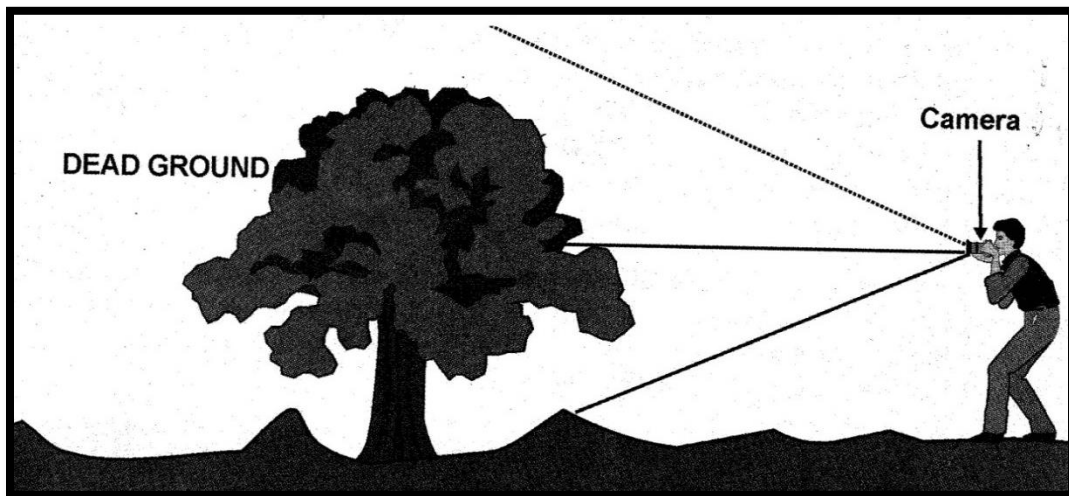
### **Types of Ground photographs.**

This depend on the angle at which the camera was held by the cinematographer.

- a) Group horizontal photograph
- b) Ground oblique photograph

### **Ground Horizontal Photographs.**

Taken at a ground level where the Camera operator is standing on the ground in a horizontal view. I.e. Camera is held at a horizontal level view to the object. The images /objects are seen in perspective view.



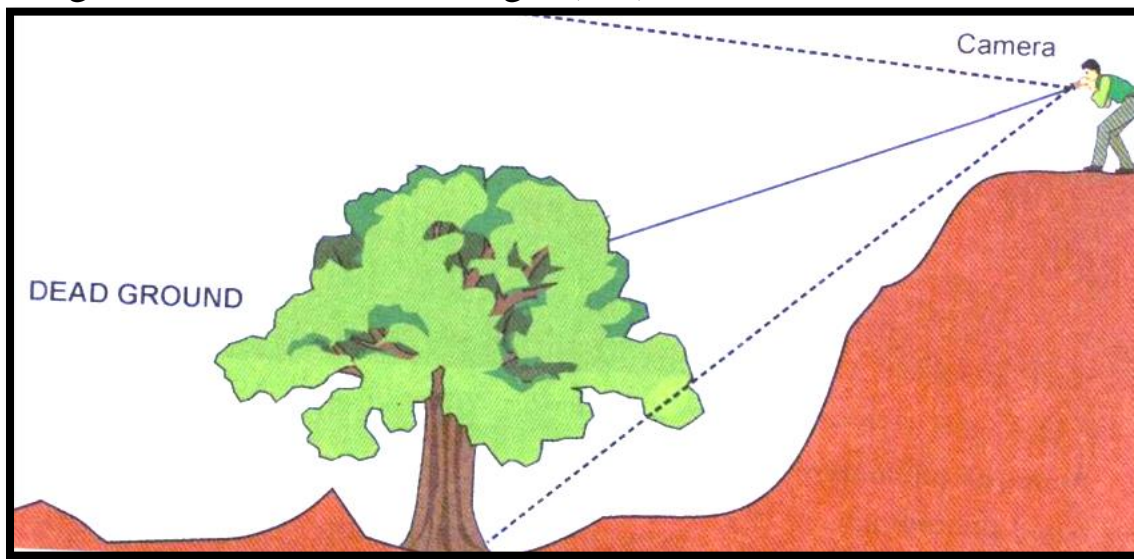
*An illustration of a ground horizontal photograph*

## Note

- Objects especially in the foreground (near the camera) are seen and appear bigger in size plus height than that far way.
- Features in the background may be hidden behind those in the in front especially those which are tall or high.

## Ground Oblique Photographs

These are taken when the camera operator is standing on a raised ground than the object at angle about  $45^0$  e.g. on a hill/tall building overlooking the ground level at a tilted angle ( $45^0$ ).



*An illustration of ground oblique photograph.*

## Characteristics of ground oblique photo

- The size plus height of objects are greatly reduced. i.e. the photograph taken appears bigger in the foreground and reduces towards the background.
- Show the panoramic view of the dry side/features.
- Objects are shown in three dimensions.
- Tops of objects are seen.
- Skyline/horizon is seen.
- Relatively large area is seen.



## **2. AERIAL PHOTOGRAPHS.**

These are photographs taken from above/ air by aircrafts, satellites or any other flying objects.

They are used to in making topographic maps and usually cover a wide area and are useful in studying distant places. The higher the camera from the ground, the wider the coverage and the smaller the features on the photograph and the vice versa.



*An illustration of a low oblique aerial photograph of part of Ndejje Senior Secondary School.*

### **Types of Aerial Photographs**

- i. Oblique aerial photographs,
- ii. Vertical aerial photographs.

### **Oblique Aerial Photographs**

These are photographs taken at an angle from a flying aircraft with camera tilted at an angle.

They are subdivided into

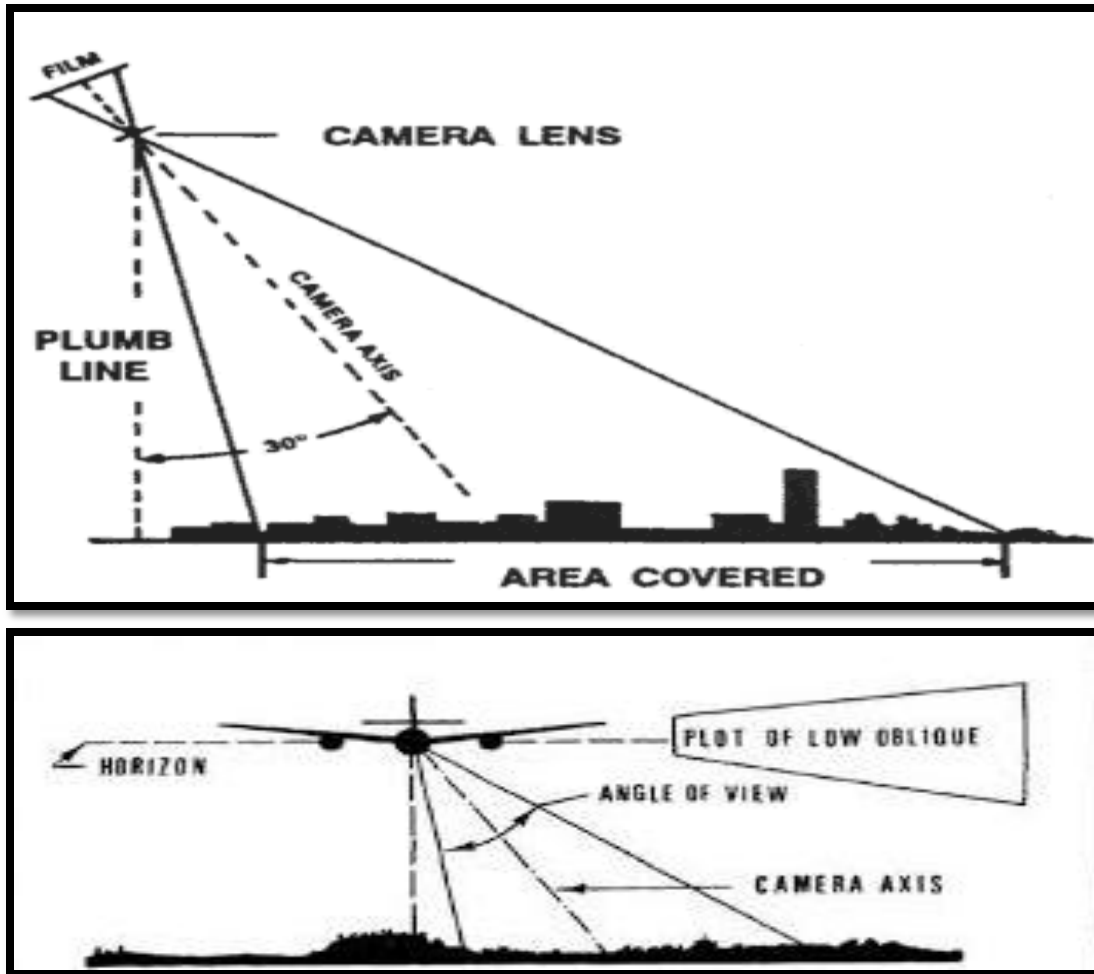
- i. low aerial oblique
- ii. high aerial oblique

### **Low Aerial Oblique.**

This is a photography taken with a camera that is inclined at about  $30^{\circ}$  from the vertical.



*An illustration of a low aerial oblique photograph of part of lake Kigeri in Fort Portal Western Uganda.*



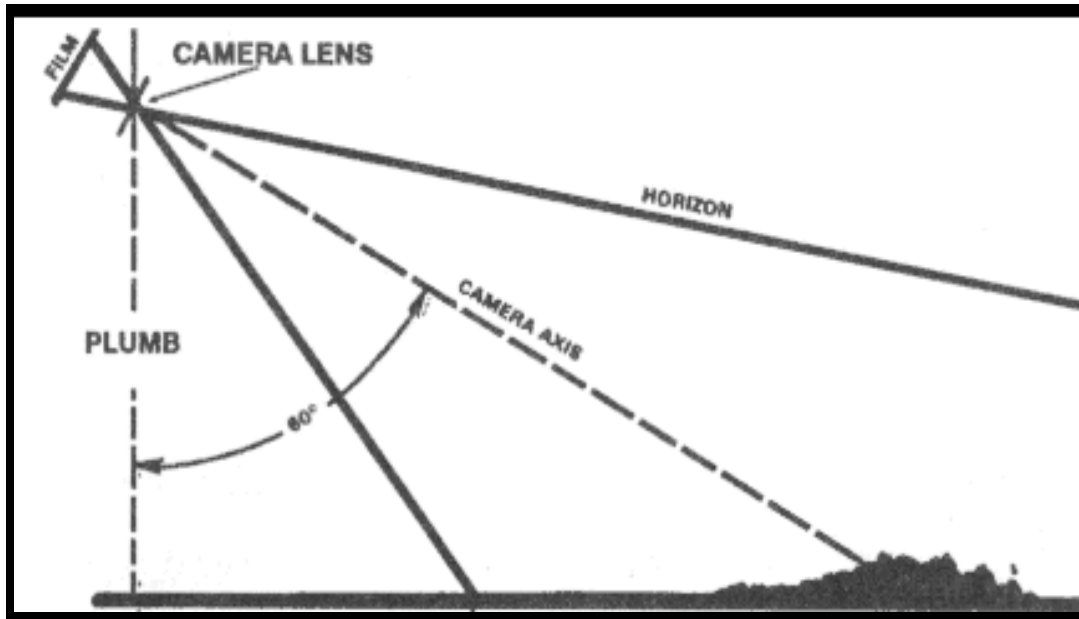
### Characteristics of Low Aerial Oblique

- It covers a relatively smaller area.
- The objects have a more detailed view, compared to high oblique.
- Relief features can be still be indentified although they are generally distorted.
- It may not show the horizon.

### High Aerial Oblique

This is taken with the camera inclined at about 60° from the vertical.





*An Illustration of a high Aerial Oblique of settlement in western Uganda*





*High Oblique Aerial Photograph – Barcleos city in USA*

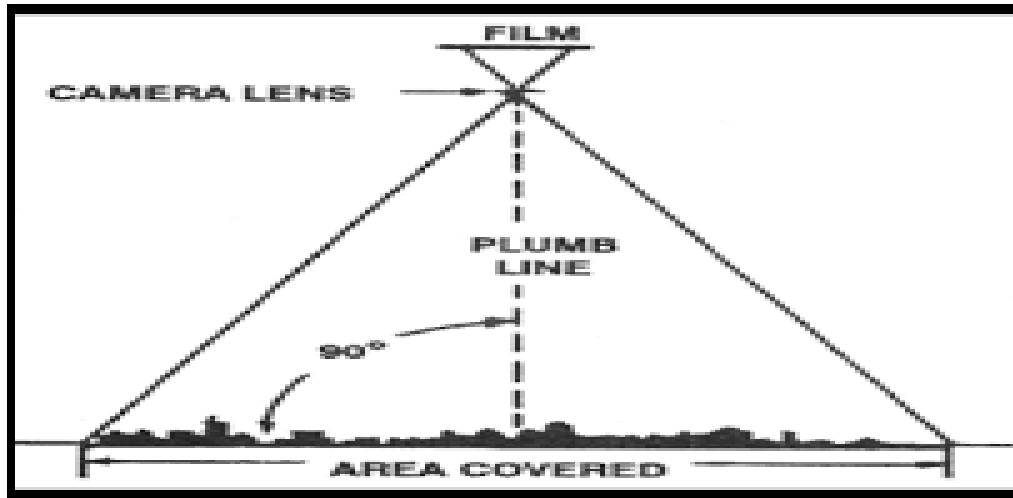
### **Characteristics of High Aerial Oblique**

- It covers a large area
- The views varies depending on the height at which the photograph is taken
- The horizon is always visible.

### **Aerial vertical photographs.**

Taken from the space by satellite with camera pointing directly at  $90^0$  pointing the area covered.





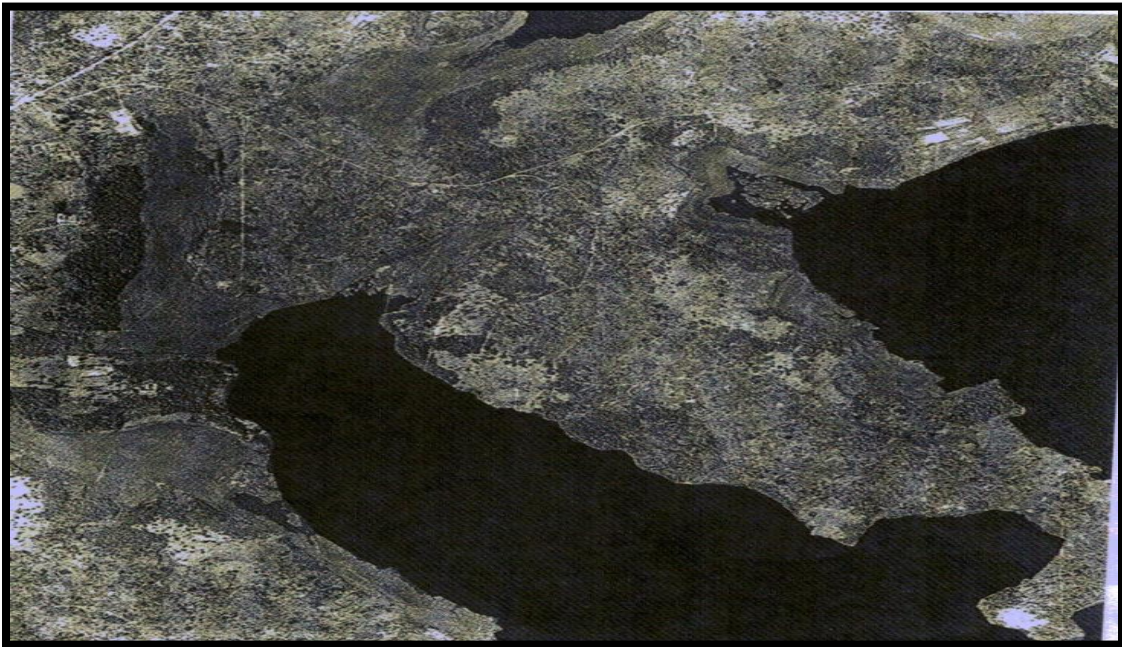
*An illustration of vertical Aerial Photograph-Netherlands*

### **Characteristics of Vertical Aerial photos.**

- Cover a very wide area than ground photos, but smaller than that of oblique aerial.

- Features are reduced in size, height and appear flattened both the ground and its objects.
- Usually show one dimension of the objects mainly the top.
- Features are generalized unlike that of ground photo hence requires technical skill to interpret.
- No horizon is seen.

### **IDENTIFICATION OF FEATURES ON VERTICAL AERIAL PHOTOGRAPH.**



*A satellite vertical aerial photograph of a peninsula.*

In identifying feature on a vertical Aerial photograph (a black and white satellite photograph), the following is noted.

| <b>Colour</b>         | <b>Features</b>  |
|-----------------------|--|
| White                 | Clouds, bare or sandy ground, paved road, settlements.                               |
| Light (Bright)        | Sub-urban lawns, parks, young crops, ploughed fields.                                |
| Dark (coarse texture) | Forests, shallow water , healthy vegetation, crops rainforests, mangrove and swamps. |
| Grey                  | Urban areas, river blood, plains, vegetation.  |
| Dark (blue-black)     | Deep water, oceans; shadows created by clouds.                                       |

## PARTS OF A PHOTOGRAPH

There are three main parts of a photograph.

|               |
|---------------|
| Background    |
| Middle ground |
| Fore ground   |

**i. Fore ground**

Refers to the part of the photograph nearest to the observer or camera man.

**ii. Middle ground/central ground.**

Refers to the central part of the photograph between the fore ground and the ground.

**iii. Back ground**

Refers to the part of the photograph that is furthest from the viewer.

**Horizon:** is the most distant part of photo i.e. it is the line in the farthest distance of the photo where the land or sea seems to meet the sky.  
(Skyline)

In describing the interrelationship between the physical features plus human activities on the photography, it is further sub divided.



### **An Illustration of the subdivision of the photograph.**

|                    |  |                     |
|--------------------|--|---------------------|
| Left Back ground   | Central /Middle Back ground<br><b>Back ground</b>  | Right Back ground   |
| Left middle ground | Central / middle ground<br><b>Middle ground</b>    | Right middle ground |
| Left Fore ground   | Central / Middle fore ground<br><b>Fore ground</b> | Right fore ground   |

### **DRAWING A LANDSCAPE SKETCH FROM A PHOTOGRAPH.**

A geographical sketch is a freehand schematic drawing of the main elements that make up a landscape eg buildings, landforms, major rivers and highways, etc.

Sketch photo refers to a freehand schematic drawing of the area in a photograph representing various main elements (physical features and human activities) that make up a landscape in the photograph given; reflecting their proportional size of relative, respective positions as they appear in the original photograph.

The sketch diagram/landscape sketch of the photo must have;

- \* Title in relation to the question/ outlining what the sketch represents.
- \* A frame/boundary of the same size as that of the photograph.
- \* All features drawn in their proportional size, relative positions as they appear in the original photograph.
- \* Mark/label all the features drawn on the sketch.
- \* Key to explain the symbols which are used in the photographs.

### **Steps taken when drawing the landscape sketch of the photograph.**

- \* Measure the size (length and width) of the photograph and draw the sketch frame with the same size on paper.  
**N.B** Where the size of the photo is too large to reduce it proportionally.
- \* Sub divide the photograph into 3 equal sections/part horizontally, vertically using a pencil.ie fore ground, middle ground, back ground and then further into left foreground, middle foreground, right foreground etc.
- \* Sub-divide the frame in the answer sheet /work book into three sections as done on the photograph in order to be in position to locate and place the features in their correct positions.
- \* Observe and study the features in the photograph in their rightful position as they appear.
- \* Start drawing the features the way they appear on the photograph from the background using a clear single pencil line; then to middle ground and later in the foreground.
- \* Mark and name the features in question within the photograph.

### **NB**

- \* Avoid unnecessary shading and including details that are not required.
- \* Avoid congesting the sketch with too many labels and features. A key can also be used when the labeling would over crowd the photograph.
- \* May also draw a sketch landscape of a photograph using a tracing paper.

### **Aspects to note in photographic interpretation.**

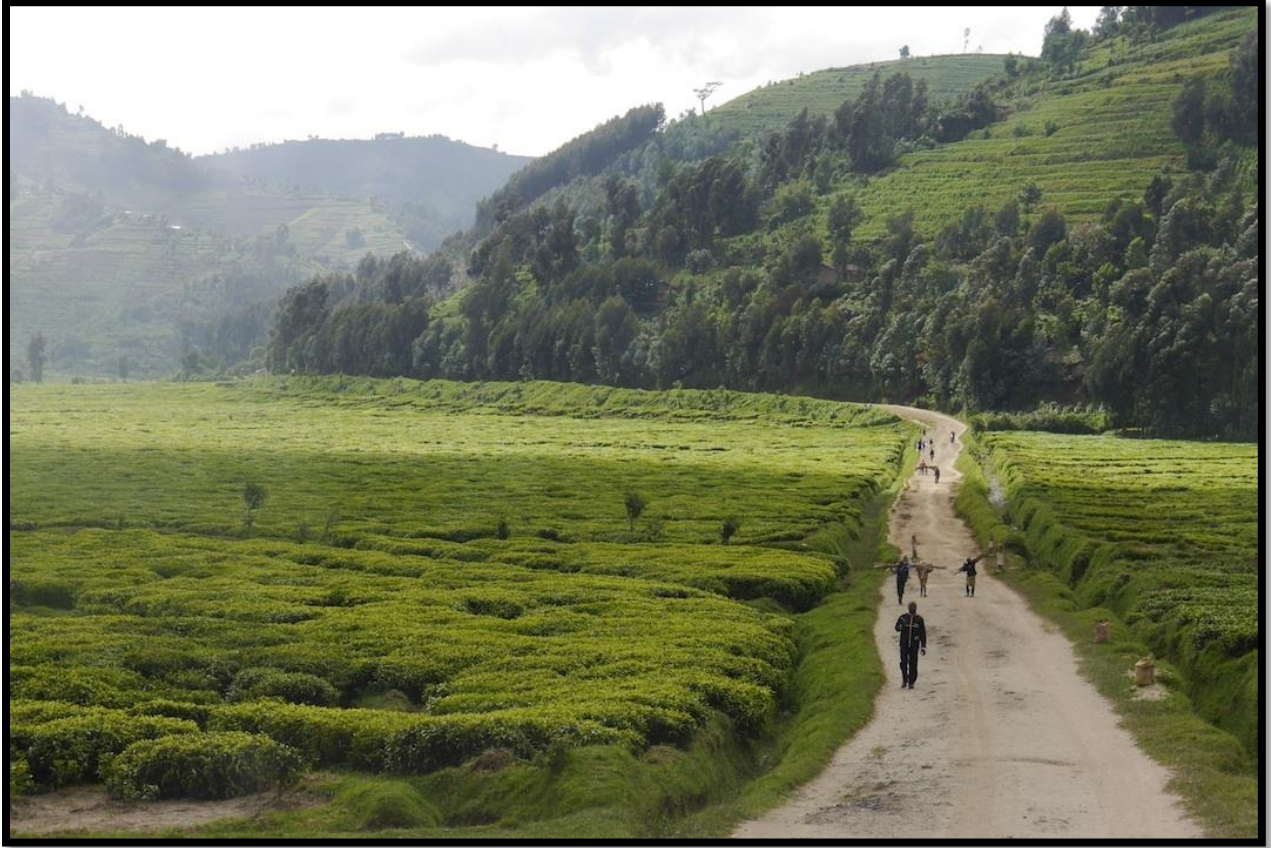
#### **Vegetation types.**

- Include trees, grass, shrub, thicket, papyrus not savanna vegetation, desert, mountain vegetation and equatorial vegetation.
- Always give evidence from the photograph e.g. there are trees in foreground or in left foreground.
- Never use direction e.g.in the centre of the photo or east etc



## **ACTIVITY 2**

**Study the photograph provided and answer the questions that follow.**



**Draw a landscape sketch of the photograph on it mark and name**

- i. highland**
- ii. lowland**
- iii. vegetation type**
- iv. road**
- v. plantation**

**Aspects to note in photographic interpretation.**

**Vegetation types.**

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- Never use direction e.g. in the centre of the photo or east etc.

### **Description and identification of relief and land use activities on the photograph.**

Relief features that can be identified on the photograph include, valleys, highlands, gentle slopes, mountains low levels, flat lands, insellbergs.

Land use patterns/activities refer to what the land/area is being used for e.g. ranching, dairy farming, manufacturing industry, trade, tourism, fishing, crop growing, farming/crop harvesting, mining, quarrying, lumbering, subsistence pastoralism, settlement, papyrus harvesting, transport and communication etc.

When identifying and describing the relief and land use activity, always point out.

- \* Land use activity or relief in the photograph.
- \* Give the evidence by pointing out where it is found on the photograph in relation to the three regions.
  - i. Fore ground (left, middle, right)
  - ii. Middle ground (left, middle, right)
  - iii. Back ground (left, middle, and right).

### **Identification of land use types / economic activities on the photographs**

When identifying the economic activities on the photographs, it is important to give evidence and point out where they are found in relation to the three regions of:

- i. Fore ground (left, middle, right)
- ii. Middle ground (left, middle, right)
- iii. Back ground (left, middle, and right).

The following are some of the economic activities and evidence that can be seen on the photograph.



| <b>Economic Activity</b>          | <b>Evidences on the Photograph</b>   |
|-----------------------------------|--|
| Tourism                           | <ul style="list-style-type: none"> <li>i. Large herds of animals seen in fenced or vegetated area</li> <li>ii. Many birds in cages, /fenced areas/ open vegetated area</li> <li>iii. Tourist facilities</li> </ul>   |
| Fishing                           | <ul style="list-style-type: none"> <li>i. fishermen with fishing gears like nets, fishing rods, baskets etc</li> <li>ii. boats with fish or fishermen inside</li> <li>iii. net laid across the river</li> </ul>  |
| Manufacturing industry            | <ul style="list-style-type: none"> <li>i. tall buildings with chimneys</li> <li>ii. nucleated / planned settlements</li> </ul>   |
| Ranching / dairy farming          | <ul style="list-style-type: none"> <li>i. paddocks / fencing for rotational grazing</li> <li>ii. channels for draining water/ watering the animals</li> <li>iii. exotic species of animals like Friesians</li> <li>iv. milking parlour/ shed</li> <li>v. cattle dip</li> <li>vi. water tank / tap</li> <li>vii. planted trees for providing shade to the animals.</li> </ul> |
| Trade /commerce                   | <ul style="list-style-type: none"> <li>i. market place where goods are displayed either on stalls or containers like tins/ woven baskets.</li> <li>ii. sellers' standing/ sitting behind the displayed goods</li> <li>iii. buyers standing or bending in front of goods displayed.</li> <li>iv. sellers standing with their commodities</li> </ul>                           |
| Cropping growing/ crop harvesting | <ul style="list-style-type: none"> <li>i. crops seen in the photograph</li> <li>ii. Farmers seen in the farm with farm implements like hand hoes, slashers and pangas.</li> <li>iii. people picking/ plucking tea</li> <li>iv. People harvesting / planting sugarcane.</li> </ul>  |

|  |  |
|--|--|
| Mining<br>/quarrying                       | <ul style="list-style-type: none"> <li>i. open cast mines/ a quarry seen in the photograph</li> <li>ii. presence of rock outcrop</li> <li>iii. shafts/ drillers for adit mining</li> <li>iv. lorry carrying large loads of rocks</li> <li>v. large excavators</li> <li>vi. people carrying mining equipments like mechanical shovels ,hammers etc</li> </ul> |
| Lumbering                                  | <ul style="list-style-type: none"> <li>i. many tall stands of trees and large forest cleared with tree stumps</li> <li>ii. logs piled</li> <li>iii. logs being loaded on the truck</li> <li>iv. men splitting the logs using either hand or electric saw.</li> </ul>   |
| Traditional/<br>subsistence<br>pastoralism | <ul style="list-style-type: none"> <li>i. presence of a kraal</li> <li>ii. presence of large herds of local cattle</li> <li>iii. dry savanna/ semi arid vegetation type.</li> </ul>  |
| Transport and<br>communication             | <ul style="list-style-type: none"> <li>i. roads with or without automobiles, bicycles, pedestrians.</li> <li>ii. telephone lines / communication masts</li> <li>iii. railway lines with or without a train</li> <li>iv. an airport/ airstrip with aplane.</li> </ul>   |
| Settlement                                 | <ul style="list-style-type: none"> <li>i. rural settlement with huts/ semi permanent buildings</li> <li>ii. urban settlement with permanent structures/ regular streets patterns / storeyed buildings / all weather roads /bound surface with many automobiles.</li> </ul>   |
| Papyrus<br>harvesting                      | <ul style="list-style-type: none"> <li>i. cleared portion of papyrus vegetation</li> <li>ii. people cutting down papyrus</li> <li>iii. people collecting cut papyrus in the photograph.</li> </ul>   |

### **Factors that influence the economic activities / land use types carried out in the photographs.**

When explaining the factors influencing the economic activities, evidences have to be given from the photograph. It is important to point out where the evidence(s) are found in relation to the three regions of the photograph;

- i. Fore ground (left, middle, right)
- ii. Middle ground (left, middle, right)
- iii. Back ground (left, middle, and right).

The following are some of the major economic activities and factors that influence them.

| <b>Economic activity / land use type</b> | <b>Factors that influence the economic activities / land use types</b>  |
|--|---|
| Tourism                                  | <ol style="list-style-type: none"> <li>i. presence of flora like forested vegetation</li> <li>ii. presence of fauna like lions, monkeys etc</li> <li>iii. availability of reliable market evidenced by tourists</li> <li>iv. cheap and adequate supply of labour if game wardens are seen</li> <li>v. positive government policy encouraging diversification of the economy</li> <li>vi. Strong capital base to purchase construction materials for the tourist facilities .</li> </ol> |

### **ACTIVITY.3**

- 1. Make research on the factors that may influence the existence of the following economic activity in any given photograph.( a minimum of six factors on each economic activity )**

| <b>Economic activity</b> | <b>Factors that influence the economic activities / land use types</b> |
|--------------------------|--|
| Fishing                  |  |
| Manufacturing industry   |  |
| Ranching / dairy farming |  |

|  |  |
|--|--|
| Trade /commerce                            |  |
| Cropping growing/<br>crop harvesting       |  |
| Mining /quarrying                          |  |
| Lumbering                                  |  |
| Traditional/<br>subsistence<br>pastoralism |  |
| Transport and<br>communication             |  |
| Settlement                                 |  |
| Papyrus harvesting                         |  |
| Lumbering                                  |  |
| Traditional/<br>subsistence<br>pastoralism |  |
| Transport and<br>communication             |  |
| Settlement                                 |  |
| Papyrus harvesting                         |  |

**2. Explain the problems that could affect the people carrying out the economic activity stated above.**



**3. Study the photograph provided and answer the questions that follow.**



- a) Identify the economic activity taking place in the foreground of the photograph.
- b) Describe the conditions that have favoured the economic activity identified in (a) above
- c) Explain the problems faced by the people carrying out the economic activity shown in the photograph .
- d) Giving reason for your answer, suggest an area in East Africa where this photograph could have been taken.

**END**