

Winter Rainfall Region consists of the eastern escarpment of the western highlands, middle rift valley, the Afar and Eritrea. It is represented by Mitswa, Assaita and Djibouti stations. The north easterlies are the moisture-bearing winds. It is represented by the letter "D".

Spring, Summer and Spring rainfall region is the smallest in the country consisting the western foothills of the SE highlands. The rainfall varies from 1500mm to 1000mm covering the Corridor from Sidama highlands to Hararghe plateau. It is represented by the letter "C". (etc)

Natural Vegetation & Wild Animals

Natural vegetation refers to any original plant grown in an area. The distribution is influenced by different factors.

1. Altitude
2. Climate
3. Soil type
4. drainage

The type is strongly determined by temperature and rainfall. The natural vegetation of an area is a good indicator of the climatic conditions of an area.

Relationship of Altitude, Rainfall and natural vegetation.

In Eth., the natural vegetation is highly correlated with altitude and rainfall. The lowlands have harsh environments due to low R.F. and are characterized by xerophytic plants, while the highlands are characterized by different tree stands and forests.

The natural vegetation of Eth. is classified based on altitude.

1. Afro-alpine
2. Forests
3. Woodland Savanna
4. Steppe vegetation
5. Desert vegetation

Afro-Alpine vegetation is found at very high altitude (3300m). It is similar to European alpine vegetation. The sub-alpine vegetation is found at higher altitude of 3000 - 3300m. It is found in the highlands of Semien and Bale. It consists of tussock grasslands, serules, scattered mosses and lichens. Sub-alpine is dominated by woodland scrubs. Gebra (*Lobelia rhynchopetalum*) and Asta (*Erica arborea*).

Forests are characterized by broad altitudinal ranges (450 - 3300 m) and 200 - 2200 mm of rainfall. This results in the formation of highland and lowland forests.

A. Highland Forests (1500 - 3300 m)

1. Kerkela (Arundinaria) 2800 - 3000 m of altitude
2. Ted (Juniperus Procera) or Coniferous trees - 2200 - 2800 m of altitude
3. Zigba (Podocarpus) 1800 - 2200 m of altitude
4. Wolra (Olea Africana) and Kosso (Hygenia Abyssinica) 1500 - 1800 m -

B. Lowland Forests (below 1500 m) These forests are known as gallery or riverine forests. They grow along the banks of the Awash, Wabishebele and Genalle rivers. Sholla and Warka are the predominant trees. Where mean annual rainfall exceeds 500 mm, Baphia forests predominate.

C. Woodland Savanna. are found in both highlands and lowlands with altitudinal range of 250 - 2300 m and mean annual rainfall range of 200 - 1400 mm. eg. acacia and grass. Savanna grasslands are found in areas where mean annual rainfall is more than 1000 mm ~~scattered~~ forming attractive park-like. Areas with acacia, wild fig, sycamores and kosso trees (It is found around Ziway, Langano, Abiyatta and Hawassa. (see figure 3.16)

D. Semi-desert and desert vegetation

It consists of short acacia, thorn bushes, succulent plants tough grasses. It is found in the eastern, northwestern and south eastern lowlands with annual rainfall below 500 mm

Wild Animals

The diversity in topography, climate and vegetation has given Eth. a wide variety of wild animals. Eth. has 277 species of mammals and 862 species of birds. Seven species of mammals and twenty-five species of birds are endemic.

Types of Wild Animals

1. Common wild animals are commonly found in many areas
eg. hyena and jackal
2. Game animals are animals killed for sport. It includes herbivores and carnivores
eg. Herbivores $\begin{cases} \rightarrow \text{browsers} - \text{giraffes} \\ \rightarrow \text{grazers} - \text{wild asses and zebras} \end{cases}$
Carnivores - lions, leopards, cheetahs
3. Arboreals - tree climbers - eg. Colobus monkey, baboons
4. Aquatic animals - animals that live in lakes and rivers such as fish, crocodiles and hippos
5. Birds - endemic and migratory birds - eg. pelicans and flamingoes
6. Endemic (Rare) Animals - found only in Ethiopia
 - Walia Ibex (wild goat) - in Semein highlands
 - Mt. Nyala (Dega Agazen) - in Bale mts
 - Gelada / Chelada baboon - Semein highlands
 - Menelik Bushbuck / Dikulat - in Shoa and Bale highlands
 - Swayne's Hartbeest (Korkay) - in Nechisar park and Sankalla sanctuary
 - Semein Fox (Key Keberol) - in Bale and Semein highlands
 - Wild Ass (Yemeda Ahiya) - in Afar & SE lowlands

Causes of Extinction of Wild Animals

- expansion of farmland, settlement, industry
- expansion of grazing land
- illegal hunting for meat, skin, fur, horn and ivory
- wild fire

Conservation Measures

- establishing parks, game reserves and sanctuaries
 - administering the areas properly
 - implementing strong laws
 - educating the public
 - protecting the habitats
 - encourage local communities to protect their animals' habitats
- National parks are conservation areas for wild animals
(see carefully Table 3.7 and Table 3.8)

Sanctuaries - hunting is strictly prohibited, e.g. Afari Gewane
(see Table 3.9)

Human Intervention

The deforestation rate was alarming. Ethiopia loses 100,000 - 200,000 hectares of forestland every year.

Causes of deforestation

- unwise tree cutting
- Overgrazing
- slash-and-burn practices
- fuel wood
- furniture
- construction

Mitigation (maximizing) measures

- Conservation
- capacity building
- institutional development