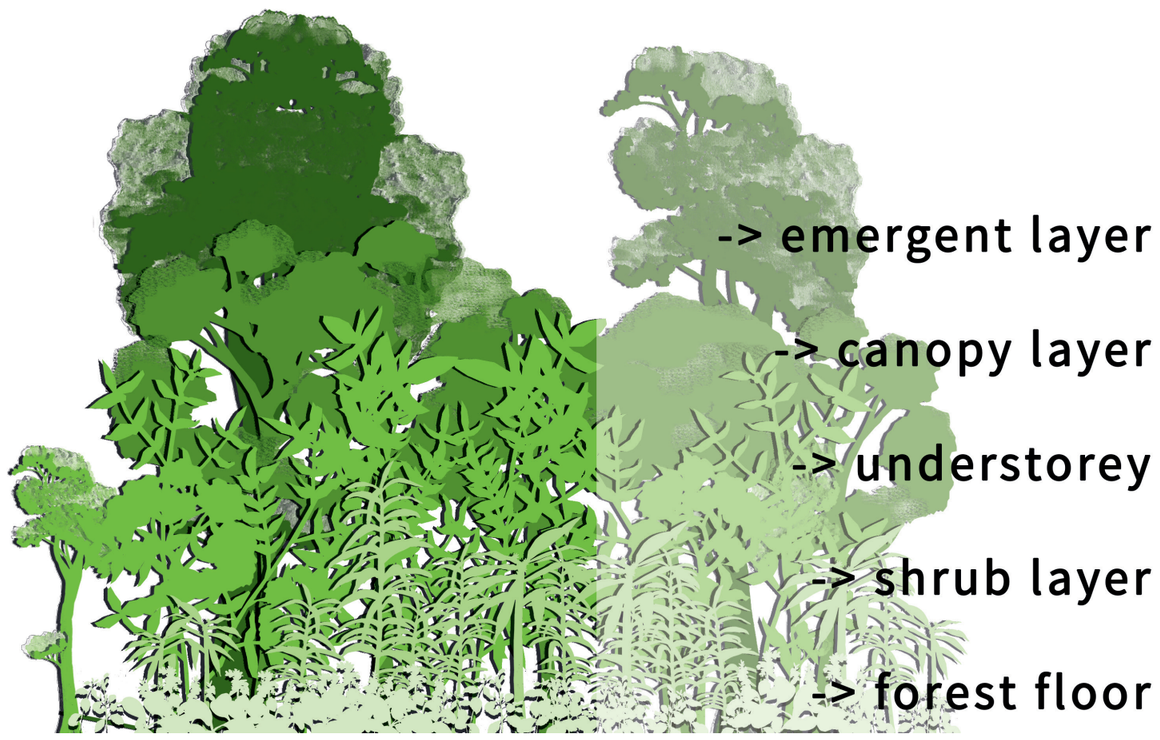
INTEGRATION OF BIODIVERSITY, CONSERVATION AND CLIMATE CHANGE IN SCHOOL CURRICULA
IN KAFA BIOSPHERE RESERVE, ETHIOPIA

FOREST ECOSYSTEMS

An **ecosystem** includes all living things in a given area (plants, animals and organisms), interacting with each other and with their non-living environment (sun, soil, rainfall, water, minerals, atmosphere).

The Kafa Biosphere Reserve is rich in different valuable ecosystems. Most of them are wetlands and forests, which are part of the core and buffer zones of the reserve.

Many **natural forests** in the tropics have a similar structure. Trees and plants of different heights form vegetation layers. Different types of plants and animals can be found in the different layers.



Layers of a natural tropical forest.



Why are forests important for our planet?

- Forests keep the moisture from clouds and are important for maintaining the hydrological cycle,
- The root system of forests prevents the soil from being washed away (erosion),
- All trees and plants store carbon dioxide through photosynthesis (important for our climate) and at the same time produce oxygen (vital for humans and animals),
- Forests are home (habitat) for many plants and animals,
- Forests provide humans with renewable resources for example wood, fruits, honey or animal feed.
- Forests are appreciated for their aesthetic and spiritual values, and are attractive for tourism.

Forest ecosystems in Kafa Biosphere Reserve

Altitudes and climatic conditions form different types of natural forest vegetation. All core zones for conservation of the Kafa Biosphere Reserve are located in natural forests.

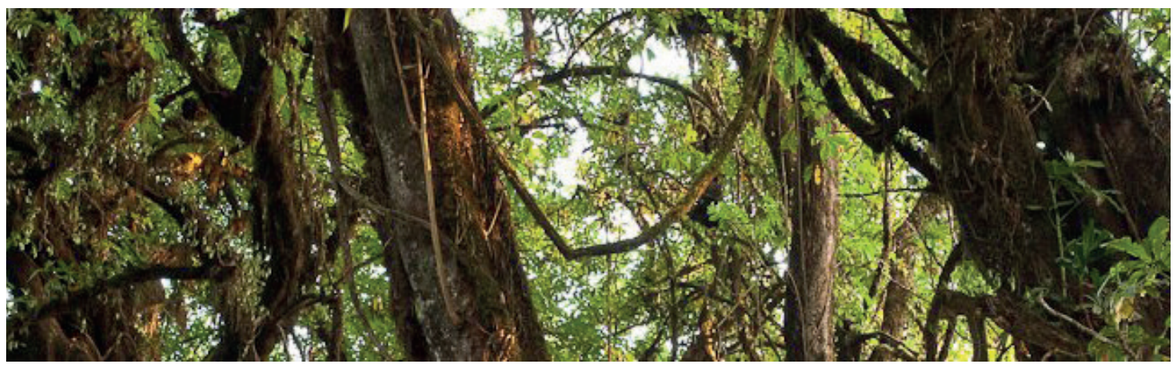
Upland humid forest (cloud forest):

- Found at high altitudes, between 1800m - 2600m above sea level,
- In the wet Upper Dega and Dega zones,
- Characterised by tree and shrub species such as African Redwood, Cape Beech, False Assegai and Winged Bersama.



Upland rainforest:

- Found at lower altitudes, between 1500m – 1800m above sea level,
- In the wet Weyna Dega zone,
- Characterised by species such as Elgon Olive, Euphorbia, Broad-leaved Croton, Forest Long-pod Albizia, Red Stinkwood, Arabica Coffee and False Cardamom.



Bamboo forest:

- Found at higher altitudes,
- In the wet Upper Dega and Dega zones (e.g. Boka Forest),
- Characterised by the bamboo species *Arundinaria alpina.*



KAFA BIOSPHERE RESERVE

NABU

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety