Savanna

Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture.

A Savanna is a plain characterized by coarse grasses and scattered tree growth, especially on the margins of the tropics where the rainfall is seasonal.

There is a wet season – extreme high rainfall. There is a dry season – no rainfall at all.

The Masaai tribe in Kenya practice **nomadic farming** (a traditional method of farming allows vegetation to recover from animal grazing whenever the farmers move on to another area).

This has been disrupted:

- Commercial farmers are encouraged by **government policies**, therefore increasing the amount of commercial farmers. They buy the best land and use it for commercial agriculture, removing natural vegetation.
- The **Serengeti's population** has expanded rapidly over the past 30 years. This has resulted in larger herds grazing the grassland and more trees being cut down for fuel. As vegetation is removed there is a risk of soil erosion.

These interventions forced the nomadic Masaai farmers onto marginal land. Their traditional pastoral migration patterns have been disrupted and they have been compelled to use smaller areas of land for their cattle. Overgrazing has been the inevitable result.

Questions:

1. What is desertification?

2. What is a Savanna?

3. Describe the climate of a Savanna region.

4. What is nomadic farming and who practices it?

5. How have the Masaai tribe's farming been disrupted?

6. What is the result for the Masaai tribe?

Baobab Trees:

The Baobab Trees have adapted to the dry season that the savanna experiences and are now able to store water in their large trunks to prepare for the lack of water that the dry season includes. Another way in which the Baobab trees have adapted to this dry season is by only producing small, finger-like leaves wet season. These small, clustered, and finger-like leaves help the tree conserve as much water as possible. The Baobab trees have fire resistant bark.

Acacia Tree:

The Acacia tree has adapted to life in the savanna by growing long roots that reach great depths and in turn are able to reach the underground water sources. These long roots aid the tree's ability to stay alive throughout the dry season. Another adaptation the tree has possessed is its fire resistance which proves extremely helpful for its survival. These trees also protect itself from predators by growing thorns. Within these thorns, live stinging ants which have hollowed out the leaves they inhabit. When an animals take a bite of these leaves, their mouths are filled with thorns and angry stinging ants; thus preventing animals from eating its leaves. One main predator to this tree's leaves is the giraffe. This animal grazes on the tops of the trees, giving them their domed shaped top. The Acacia tree has created a behavioral adaptation to this specific predator by using a chemical defense system that is triggered when the giraffe begins munching on the leaves. A poisonous alkaloid that tastes extremely unappealing is emitted into the leaves. In result, when the giraffes continue to eat, the leaves will get more and more unappealing until the leaves become inedible. After making its leaves inedible, the Acacia then warns the other Acacia trees by emitting a chemical into the air. In response, the other Acacia trees pump the alkaline poison into their leaves too.

Questions.

1. How has a Baobab tree adapted to the lack of water in the Savanna?

2. How has an Acacia tree adapted to the lack of water in the Savanna?

3. How do the ants protect the Acacia tree?

4. How does the Acacia tree protect its self from Giraffes?

5. How does the Acacia tree warn other trees that a giraffe is coming?