



Canarygeog Worksheet

Tropical Grasslands – Savanna

Answers

1. Why does the savanna biome experience a wet and a dry season every year ?
 - The inter-tropical convergence zone (ITCZ) moves with the changing latitude position of the overhead sun during the year.
 - In the summer the strongest sun is in the northern hemisphere and so the ITCZ also moves north providing the rainy season in the savanna.
 - During the winter the sun and the ITCZ migrate into the southern hemisphere meaning that the savanna is dominated by a high pressure drought.
2. Describe the environmental problems that the savanna vegetation has to adapt to.
 - Winter droughts in the northern hemisphere so the vegetation has to become xerophytic.
 - High temperatures for most of the year encourage high rates of water loss and transpiration from the plants.
 - The rainfall period is not reliable so some areas can suffer prolonged droughts, the trade winds dry the savanna areas severely.
 - The porous soils mean that both water and nutrients can be lost from the ecosystem.
3. What is the correct definition of desertification ?

Desertification is the spreading of a desert into areas that were once productive and fertile in terms of vegetation. The result is a dry barren landscape where plant life cannot find the conditions it needs for life.
4. What is meant by the spiral into desertification ?

The problems of climate change, overgrazing, overcultivation and deforestation can commence and drastically change the characteristics of these places. Climate change is regarded as a natural element while the other reasons are linked to the rapid growth of world population in LEDC countries. Once desertification has been established it is difficult to reverse or stop. As the population establishes in an area they require more food and wood as a fuel source so the cycle of human impact becomes even more severe.

5. To what extent can we consider desertification to have been created by man ?

Although desertification is partly due to natural climate change the rapid increase in population puts pressure on many areas of the planet.

6. What can be done to stop the destruction of the savanna grasslands ?

- Reduce human initiated fires and using organic fertilizer to maintain the quality of the soil.
- Restrict the movement of cattle, especially herd of goats or cattle to prevent massive overgrazing.
- Construction of stone terraces to trap valuable soil from erosion during periods of heavy rain in areas where the vegetation cover has been removed.
- Adopt sustainable approaches to harvesting wood as fuel. For example cutting branches rather than the whole tree to encourage natural regeneration.