

Species Diversity and ecosystems:

Biodiversity reflects how well an ecosystem is likely to function. The higher the species diversity index, the more stable an ecosystem usually is and the less it's affected by change like climate change.

If there is a drought, a community with a high species diversity index is much more likely to have at least one species able to tolerate drought than a community with a low species diversity index.

In extreme environments such as hot deserts, only a few species have the necessary adaptations to survive the harsh conditions. The species diversity index is therefore normally low. This usually results in an unstable ecosystem in which communities are dominated by climatic factors. In less hostile environments the species diversity index is normally high. This usually results in a stable ecosystem in which communities are dominated by living organisms rather than climate.

