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**Case Study: The Thar Desert**

**The Thar Desert** is located on the border between India and Pakistan in Southern Asia.

**Adaptations:**

* Cacti - Large roots to absorb water soon after rainfall.
* Camel - Needles instead of leaves to reduce surface area and therefore transpiration provide supplies and rescue people.

**Opportunities:**

* There are valuable minerals for industries and construction.
* Energy resources such as coal and oil can be found in the Thar Desert.
* Great opportunities for renewable energy such as solar power at Bhaleri.
* Thar Desert has attracted tourists, especially during festivals.

**Challenges:**

* The extreme heat makes it difficult to work outside for very long.
* High evaporation rates from irrigation canals and farmland.
* Water supplies are limited, creating problems for the increasing number of people moving into area.
* Access through the desert is tricky as roads are difficult to build and maintain.

**Desertification** means the turning of semi-arid areas (or drylands) into deserts.

**Causes:** overgrazing, over-cultivation, population growth, deforestation and climate change.

**Management**:Water management**,** Tree Planting, Soil Management and Technology.

**An ecosystem** is a system in which organisms interact with each other and with their environment**.**

**A biome** is a large area of distinctive plant and animal groups, which are adapted to that particular environment. The climate and geography of a region determines what type of biome can exist in that region.

**Abiotic -** These are non-living, such as air, water, heat and rock.

**Biotic** - These are **living**, such as plants, insects, and animals.

**Flora -** **Plant life** occurring in a particular region or time.

**Fauna** - **Animal life** of any particular region or time.

**Food chains** - show only one species at a particular trophic level.

**Food webs** - consists of a network of many food chains interconnected together.

**Case Study: Amazon**

**The Amazon Rainforest** is located across 8 countries, but a large proportion in in Brazil, South America. 60% of Brazil is a tropical rainforest.

**Importance:**

* High biodiversity
* Carbon Sink
* Provide valuable resources such as medicines.

**Deforestation: Causes:**

* Logging – cutting trees down for resources e.g. furniture.
* Agriculture – commercial and substance farming.
* Mineral Extraction – precious metals.
* Tourism
* Energy – Hydro-electricity
* Road building.

**Impacts:**

* Climate change -Trees are carbon ‘sinks’. With greater deforestation comes more greenhouse emissions in the atmosphere.
* Soil erosion
* Loss of habitats = risk of extinction for animals.
* Economic development – jobs, tax = multiplier effect.

**Management strategies:**

* Selective logging- Trees are only felled when they reach a particular height.
* Education - Ensuring those people understand the consequences of deforestation
* Afforestation - If trees are cut down, they are replaced.
* Forest reserves- Areas protected from exploitation.
* Ecotourism - tourism that promotes the environments & conservation
* Protected areas

**KS4 - The Living World**

**Geography**