**Land degradation in semi-arid areas**

**Causes**

**Physical**

Water shortages, caused by major drought can lead to a drop in the water table meaning many plants die as their roots cannot reach the water. This leads to [desertification](http://www.bbc.co.uk/education/guides/z9rbb9q/revision/4#glossary-zx4f4wx) as roots can no longer anchor the soil which in turn is easily blown away. Flash floods also wash away the exposed top soil.

**Human**

Population growth means an increased demand for food. This results in farming on marginal land and also farmers decreasing the fallow period. This means the land does not have time to recover or regenerate. Increased demand for firewood also leads to deforestation.

Frequent water shortages lead to the need for more wells, lowering the water table further. Overgrazing destroys the vegetation cover, leading to soil erosion and poor irrigation methods lead to evaporation of stagnant water, leaving a salty infertile crust.

**Consequences**

**Environmental**

As vegetation is removed the roots are no longer able to bind the soil together and the soil becomes vulnerable to wind erosion. The fertile topsoil is easily blown away. The land becomes infertile, turning to desert, eg the expansion of the Sahara desert.

**Social**

People are forced to migrate, with many people - young men in particular, leaving to work in cities and towns. This puts pressure on already limited urban resources.

Disputes occur over land between herdsmen and farmers. Food shortages lead to malnutrition and famine, eg in Ethiopia. This also results in increased movement to refugee camps.

**Economic**

As the land becomes unproductive, farm income falls. This leads to widespread poverty and an increased reliance on overseas aid.

**Management**

Management strategies to prevent or reverse land degradation include:

* restore natural vegetation cover
* improve small-scale irrigation projects
* plant drought resistant shrubs and grasses to help bind the soil and prevent further soil erosion
* plant more trees
* control grazing
* build more dams, eg in Kenya
* crop rotation by farmers to allow soil to recover