

## THE GREAT GREEN WALL

- A \$2 billion scheme sponsored by the World bank, the UN and the countries of the Sahel
- It is planned to build a 8000 km zone of trees along the southern edge of the Sahara desert in the Sahel
- This 15km deep area of trees is designed to stop the southward spread of the Sahara desert
- Using trees adapted to the local drought conditions the scheme aims to restore 50 million hectares of arable land, stimulate local initiatives, help local economies and help prevent out migration of the population
- Rainfall should be boosted and water tables and aquifers recharged

## PLANTING TREES

- Afforestation in general in a response to desertification and as a way to restore the land
- The roots bind the soil together and help prevent it being removed by wind and water erosion
- The leaf fall from the trees also adds nutrients to the soil making it more fertile and more productive
- The trees intercept the rainfall and increase the amount of evapotranspiration leading to less overland flow / runoff
- This allows more water to infiltrate and be retained and less water to be lost to the ecosystem
- It may even increase local rainfall totals



## SOIL REGENERATION

- Reduce overgrazing by limiting cattle numbers
- Use animal manure to help the soil structure and fertility
- Grow crops like millet adapted to dry conditions
- Introduce sustainable farming methods like crop rotation and limit monoculture

## THE EDEN PROJECT : NIGER

- NGO's such as the EDEN foundation bring international funding to the Sahel
- Free seed schemes and seed banks have been set up to promote the use of drought resistant trees, bushes and crops
- Re-introduction of selected plant species that grow naturally in the area and require no irrigation or fertiliser
- The bushes and trees help to shelter the crops
- Acacia or gum trees are grown that produce a commercial crop

## WATER MANAGEMENT

Appropriate technology techniques can be employed :-

- Earth dams can be used to store the wet season rains to irrigate crops in the dry season
- 'Magic' stones or contour stones can be placed to prevent runoff on slopes
- Terracing on slopes to prevent water loss
- Planting pits used for crops to collect and retain water
- Small scale irrigation projects such as 'drip' irrigation from holes in plastic pipes