## 1. CHANGES IN AGRICULTURAL SYSTEMS

- extreme weather events are likely to increase; floods / droughts
- cyclones likely to be more extreme, more frequent and more widespread
- some areas will receive more rainfall
- some areas will be significantly drier

## Introduction of

- quick maturing seed varieties
- drought resistant seed varieties
- · genetically modified crops
- seed banks and education
- diversification of agriculture, reduction in monoculture, more crop rotation
- better and more efficient irrigation systems (SAHEL)
- reduce soil degradation / soil erosion (SAHEL)
- effective use of fertilisers and pesticides to increase crop yields
- use of cooperatives to share costs, equipment and marketing
- precision farming, using GPS and GIS based on satellite technology to control and make inputs of fertilisers and pesticides more efficient

ADAPTATION TO DEAL WITH THE IMPACTS OF CLIMATE CHANGE / GLOBAL WARMING
TO REDUCE VULNERABILITY
MAKE SYSTEMS MORE RESILIENT INCREASE THE CAPACITY TO ADAPT

#### 2. ADAPTING WATER SUPPLIES

- water security is likely to decrease
- some areas to become wetter and others drier
- water is likely to become scarier in fragile areas such as the SAHEL
- increased population and demand for resources is likely to increase soil degradation and desertification
- more affluent lifestyle related to development bring more intensive water use

## Introduction of

- water saving techniques in the home and education eg water meters and water saving equipment
- · reduce reuse recycle programmes
- efficient and appropriate irrigation techniques
- more water storage, dams, reservoirs, wells

# 3. REDUCING THE RISKDS FROM RISING SEAS LEVELS

- sea level may rise by up to 40 cm by the end of this century
- beaches, salt marshes and low lying land will be under threat
- coastal towns, tourist resorts, refineries and industries will be under threat
- low lying farmland will be inundated cutting food supplies
- damage to coastal facilities will have an economic and insurance cost
- costs of coastal defence will spiral
- coastal land may need to be abandoned as managed retreat is undertaken
- Shoreline Management Plans may, using cost-benefit analysis, see the value in paying more to protect the coast
- Holderness is an example of this, some land is being abandoned to rapid erosion while more valuable land and towns are being protected by hard engineering schemes including sea, walls, revetments, rock armour and groynes
- Soft plans such as beach nourishment and sand dune management will cost
- Large expensive schemes such as the Thames Flood Barrier and the Hull Tidal Barrier will be more common