

Resource Management



A resource is a stock or supply of something that has a value or purpose.

Water in the UK

- Only 2.7% of the world's water is fresh and 77% of that is unavailable. Depending on where you live in the UK your water comes from a river, a reservoir, or groundwater storage.
- Pollution and water quality management is a constant challenge in the UK. Sources of environmental pollution include: nitrates and phosphates from fertilisers, acid rain and metals from industrial waste.
- There is a need for water transfer from areas of water surplus (e.g. Scotland) to water deficit (e.g. London)

Energy in the UK

- The energy mix is the range of energy resources used by a country (renewable and non-renewable).
- There are issues of energy exploitation such as rising energy prices, renewable energy is expensive to set up, oil transportation can cause massive pollution, some people fear radiation leaks from nuclear power.
- In the future it is expected our consumption will decrease and we will use more renewable energy sources. It is considered that shale gas is the potential way for, however different groups of people disagree.

FOOD FOCUS: *supply and demand of food is unevenly spread across the world.*

Global food consumption is increasing due to:

1. **POPULATION GROWTH** - the greatest pressure on our essential resources such as food. World population is increasing at around 80million people per year. The largest population growth is coming from Africa and Asia.
2. **ECONOMIC DEVELOPMENT** - As people in NEEs such as India and China become richer, their diets change. They begin to eat more meat instead of grains such as rice. People can afford more luxury food items and their calorie intake increases as there is more desire for convenience food.

Food security is having access to enough safe affordable nutritious food to maintain a healthy and active life.

Factors affecting food supply:

1. *Climate* – extreme weather events e.g. droughts may destroy crops in many places
2. *Poverty* – if poor one cannot afford enough food, this makes them weak and unable to work – vicious cycle
3. *Technology* – improvements in transport and storage have increased the year round availability of food
4. *Pests and diseases* – pesticides have been applied to crops to kill diseases and increase yield
5. *Water stress* – some places don't have enough rainfall – irrigation can provide water to drier areas
6. *Conflict* – war affects food in many way – farmers may have to leave land, crops can be destroyed etc.

Impacts of food insecurity:

1. *Malnutrition* – not enough protein or nutrients – can lead to Kwashiorkor disease
2. *Famine* - widespread shortages of food often causing **malnutrition**, starvation and death. e.g. Ethiopia 1980s
3. *Soil erosion* –removal of soil, often by wind or rain. Also by deforestation, overgrazing and over-cultivation
4. *Rising prices* – when demand is greater than supply which in turns pushes up prices
5. *Social unrest* – can occur as a result of food shortages and lead to riots and deaths

Increasing food supply:

1. *Irrigation* – can improve crop production by 100 to 400% in LICs. It provides water to drier areas
2. *Aeroponics* (working air) and *hydroponics* (working water)- plants grown without soil using other materials
3. The 'new' green revolution – transfer of farming methods from HICs to LICs countries e.g. use of fertilisers
4. *Biotechnology* – use of science e.g. through genetic modification
5. *Appropriate technology* – when techniques are introduced to an area to match the level of development

Large scale agricultural development: *System of Rice Intensification in Tanzania*

+ve → KPL supplied locals with training and seeds to help improve rice yields (SRI). Improved lives of over 4000 families. –ve → farmers in debt from borrowing money, led to displaced families as KPL taken land.

How can food supply be increased sustainably?

1. *Permaculture*: development of agricultural ecosystems intended to be sustainable and self-sufficient. Food is produced without damaging the environment or causing harm to animals e.g. organic farming.
2. *Organic farming*: uses natural methods to grow crops and rear animals e.g. natural fertilisers such as animal manure, biological pest control, crop rotation to break cycles of breeding, high standards of animal welfare.
3. *Urban farming*: urbanisation leads to loss of farmland. This method uses space in and around cities to grow food. Gardens and allotments can produce up to 15 times more food than equivalent urban area of farmland
4. *Sustainable fish and meat production*: catching fewer fish so that there are enough to repopulate our seas to prevent extinction. Rearing meat uses more resources than growing crops.
5. *Seasonal food consumption*: eating food in season reduces food miles and thus is more sustainable.
6. *Reducing food waste and losses*: buying only what is needed reduces loss and provides more for others.

Sustainable food production: *Urban and Peri-Urban Horticulture (UPH) in Democratic Republic of Congo*

rapidly growing population with high levels of poverty. UPH has been supported by the Ministry of Rural Development. Secured areas of land for urban farming giving out micro-loans. People are eating healthier. 25 schools use the scheme in turn teaching 9500 students to grow food. Project is under threat from new housing.