



Geography

Y9 Autumn 2 Resource Management

The demand for resources like food, water and energy is rising so quickly that supply cannot always keep up. Importantly, access to these resources vary dramatically in different locations

1. Population Growth	2. Economic Development
<ul style="list-style-type: none"> Currently the global population is 7.3 billion. Global population has risen exponentially this century. Global population is expected to reach 9 billion by 2050. With more people, the demand for food, water, energy, jobs and space will increase. 	<ul style="list-style-type: none"> As LIDCs and EDCs develop further, they require more energy for industry. LIDCs and EDCs want similar lifestyles to ACs, therefore they will need to consume more resources. Development means more water is required for food production as diets improve.
Growing Demand of Food	Strategies to increase food supply
<ul style="list-style-type: none"> The UK imports about 40% of its food. This increases people's carbon footprint. There is growing demand for greater choice of exotic foods needed all year round. Foods from abroad are more affordable. Many food types are unsuitable to be grown in the UK. Increasing world population Changes to global climate e.g. droughts 	<ul style="list-style-type: none"> - Irrigation - artificial watering of the land. - Aeroponics – method of growing plants without soil where roots are exposed to the air. - Hydroponics – method of growing plants without soil where roots are exposed to nutrient rich water. - Biotechnology – selective breeding and genetically modifying crops to grow with specific traits - Appropriate Technology – involves using suitable machinery and techniques in low income countries.

	Keyword	Meaning
1	Resources	A resource is any physical material constituting part of Earth that people need and value.
2	Food miles	The distance food has travelled before it reaches our plates
4	Food insecurity	When a region does not have enough food to meet the demands of the population
5	Urban farming	The growing of fruits, herbs, and vegetables and raising animals in towns and cities
6	Water scarcity	When a region does not have enough water to meet the demands of the population
7	Water surplus	When a region has enough water to meet the demands of the population
8	Energy surplus	This exists where energy supply is greater than demand
9	Energy deficit	This exists where demand of energy is greater than production.
10	Sustainable	Using resources in a sensible way to ensure there is enough to meet the demands for future generations



Foods can travel long distances (food miles). Importing food adds to our carbon footprint.
 + Supports workers with an income + Supports families in LICs.
 + Taxes from farmers' incomes contribute to local services.
 - Less land for locals to grow their own food.
 - Farmers exposed to chemicals.

Significance of Resources

Resources such as food, energy and water are what is needed for basic human development.

FOOD	WATER	ENERGY
Without enough nutritious food, people can become malnourished . This can make them ill . This can prevent people working or receiving education.	People need a supply of clean and safe water for drinking, cooking and washing. Water is also needed for food, clothes and other products.	A good supply of energy is needed for a basic standard of living. People need light and heat for cooking or to stay warm. It is also needed for industry.

Growing Demand	Strategies to increase water supply
<p>The average water used per household has risen by 70%. This growing demand is predicted to increase by 5% by 2020. This is due to:</p> <ul style="list-style-type: none"> A growing UK population. Water-intensive appliances. Showers and baths taken. Industrial and leisure use. Watering greenhouses. 	<ul style="list-style-type: none"> - Dams and Reservoirs - Dams control and confine the amount of water that flows through and can produce hydroelectric power (HEP) and reservoirs are artificial lakes where water can be stored. - Water Transfer Schemes – When a country has a water surplus in one area and a water shortage in another, supplies can be transferred. - Desalination plants – Desalination plants remove salt from sea water making it safe to drink.

Types of Renewable Energy Sources



1 Hydropower

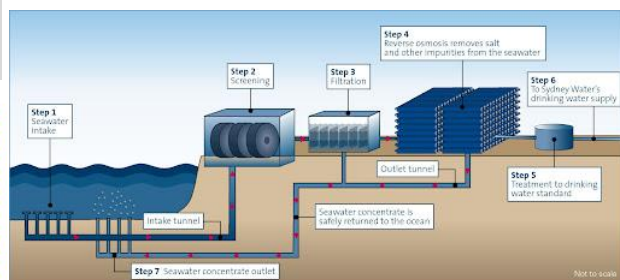
Gravitational potential energy of water converted into electrical energy through a hydraulic turbine

2 Wind Energy

Kinetic energy of wind converted into electricity by wind turbines

3 Solar Energy

The sun's energy turned into electricity heat energy by solar panels/solar heaters



4 Biomass

Energy obtained from plant & animal remains; e.g. burning wood produces heat energy

5 Geothermal Energy

Heat energy trapped underneath the earth's crust converted into electricity by steam turbines

6 Ocean Energy

Oceanic thermal and tidal energy converted into electricity by turbines and other systems

7 Hydrogen

Hydrogen's potential chemical energy converted into electricity by Hydrogen fuel cells

Growing Demand of Energy	Impacts of increased energy demand
<ul style="list-style-type: none"> Rise in global population As wealth increases so does the amount of energy required. Advancements in technology. Manufacturing of goods. Conflict between countries e.g. Russia and Ukraine Historical geology – limited non-renewable energy reserves 	<ul style="list-style-type: none"> - Rise in prices of fuel particularly non-renewables e.g. coal, oil and gas. - Energy shortages and frequent blackouts - Development slowed down and GDP reduced - Conflict – Oil tankers being attacked