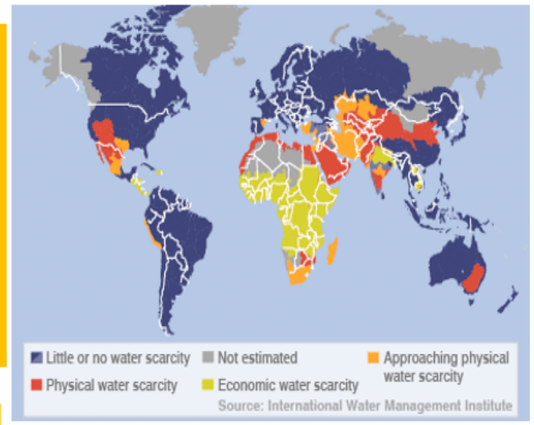
Subject: Geography : Yr9 Topic: Resources

What are Resources?

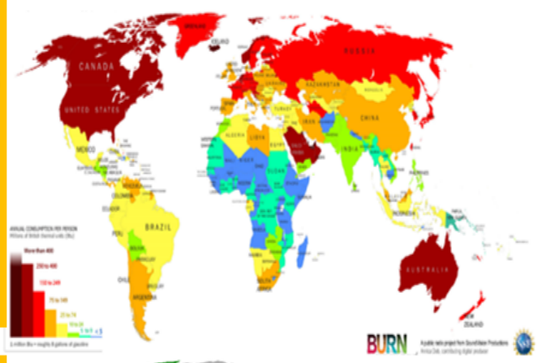
Key term	Definition
Resources	Materials that have value for people. They may be needed for basic survival e.g. water, or appreciated as something that improves quality of life e.g. coffee.
Resource management	The control and monitoring of resources so they don't become depleted or exhausted.
Surplus	When there is more of a resource than is needed to meet demand.
Deficit	When there is not enough of a resource to meet demand.

Project:
Research how the demand for food, water or energy is creating a challenge within the UK. Explain the challenge and what solutions are being proposed to solve it. Which do you think is the best solution? Justify your answer fully.

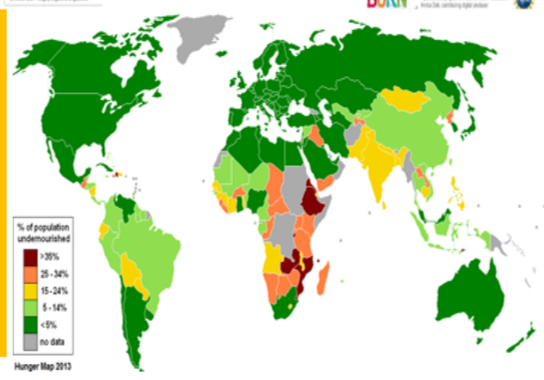
Distribution of water scarcity



Distribution of Energy Used



Distribution of malnourishment



Changing demand for food in the UK creates opportunities and challenges

The growing demand for high value food exports from LICs and all year demands for seasonal food and organic produce.	• Food used to be seasonally and locally sourced. Now we eat globally sourced foods all year. • In 2013 47% of UK food was imported. • More disposable income has led to an increased demand for greater quantities and wider choice. • Not all foods can be grown the UK, and some foods can only be grown at certain times e.g. strawberries in July and August. • High quality products are five times the price of similar products e.g. Madagascan vanilla, gourmet coffee. • Positive impacts : Jobs and wages for those in LICs, more tax income leads to a better quality of life. • Negative impacts – less land for locals to farm for themselves, high water use and exposure to chemicals (pesticides and fertilisers). • Organic – no pesticides or fertilisers used. Since the 1990s there has been an increase in demand. Now worth £2 billion a year in the UK.
Larger carbon footprints due to the increased number of food miles travelled.	• Food can be grown more cheaply elsewhere. • Production and transport create a carbon footprint. • 17% of the UK's carbon footprint is due to food. • Tomatoes have less of a carbon footprint being grown in Spain and imported to the UK than if we grew them in the UK where greenhouses would have to be heated. • Annual food miles travelled by UK food imports is 18.8 billion miles. • 68% of food imported to the UK is from within the EU, 32% from the rest of the world. • UK are now encouraging buying local and having an allotment.
A trend towards agribusiness.	• Agribusiness is a farm run as a business with the main aim being profit. • Agribusiness has significant impacts on the environment as they are associated with heavy use of pesticides and fertilizers leading to reduction in wildlife and eutrophication. • East Anglia has a lot of agribusinesses.

The significance of food, water and energy to economic and social well being

Water food and energy are key for human wellbeing. All lead to social and economic benefits, which all increase the standard of living and quality of life.

Food	• Calories provide energy. • Availability of food depends on climate, soil and level of technology. • Malnourishment leads to disease and death. In children it can lead to underperforming at school which decreases economic wellbeing in life. In adults they will be less productive (less able to work). • Globally more than 1 billion people are malnourished. • 2 billion are undernourished (poor diet). • Obesity is an issue in some areas, mainly HICs.
Water	• Used for survival, washing, food production, industry. • Clean, safe water enables development and allows people to break free from the cycle of poverty. • Globally 2 billion people drink from contaminated water sources. Over 500,000 people a year die because of diarrhoeal diseases ana linked to contaminated water supplies.
Energy	• Traditionally we get energy from oil, coal and wood. • Many different sources are generated by changing technology. • Used for electricity production, heating, transport and for water supply (e.g. wells). • Supports industrialisation and development.

Global inequalities in the supply and consumption of resources

Food 	• Average UK calorie consumption is 3200 calories per person per day. • Average calorie consumption in Mali is 2590 calories per person per day. • Areas of greatest population growth have highest levels of undernourishment. • Demand depends on changing diets and increasing population. • Supply depends on climate, soil and level of technology.
Water 	• Fresh water is unequally distributed. • Water footprint is the amount of water used per day. • Global average is 1240 litres per day • Bangladesh is 896 litres per day, USA is 2483 litres per day. • Water scarcity (where demand is greater than supply) can be physical e.g. reduction in rainfall or economic e.g. lack of money to enable access to water. • 1 in 5 (more than 1.2 billion people) live in areas of water scarcity. • 1 in 3 (2.4 billion people) have no access to clean drinking water.
Energy 	• The richest 13% of people globally use 50% of the world's energy. • The poorest 13% of people globally use 4% of the world's energy. • Countries import and export energy. • Some countries do not have their own sources of energy.

Fracking – Opportunities and Challenges

Opportunities
- Shale gas is readily available in UK.
- Will act as a bridging fuel until alternative technologies are developed.
- Increased cost of fuel makes fracking now affordable.

Challenges
- Contaminated water is pumped back into the ground and can affect water supplies.
- Fracking uses a lot of energy.
- 3% of gas extracted is lost to atmosphere; this is methane, a greenhouse gas.