

GEOGRAPHY 8.1. COASTS

The British Isles—major coastal locations



Key:

1. London
2. Felixstowe
3. Southampton
4. Brixham
5. Plymouth
6. Newquay
7. Bristol
8. Cardiff
9. Swansea
10. Milford Haven
11. Liverpool
12. Glasgow
13. Aberdeen
14. Edinburgh
15. Newcastle
16. Grimsby
17. Dublin
18. Belfast

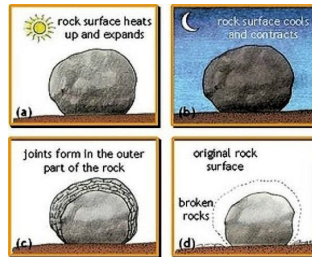
Coasts Key terms

weathering	biological	chemical
freeze-thaw	exfoliation	erosion
hydraulic action	abrasion	attrition
solution	headland	bay
cliff	headland	cave
stack	stump	Wave-cut notch
wave-cut platform	longshore drift	spit
bar	tombolo	defences
Hard engineering		
soft engineering	groynes	recurved sea wall
rock armour	beach replenishment	
managed retreat	dune regeneration	

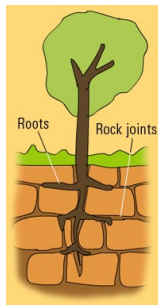
2. Weathering processes

Weathering is the weakening of exposed rocks by the atmosphere (temperature and water) or by living organisms such as plants and burrowing animals. Erosion follows weathering at exposed locations such as the coast and mountains.

Mechanical: exfoliation



Chemical weathering



Acids in water slowly dissolve minerals in some types rocks over time



Mechanical: Freeze-thaw weathering

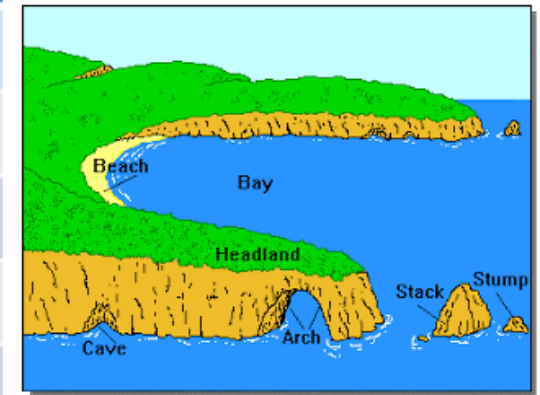


3. Coastal Erosion Processes

The break down and transport of rocks – smooth, round and sorted.

Attrition	Rocks that bash together to become smooth/smaller.
Solution	A chemical reaction that dissolves rocks.
Abrasion	Rocks hurled at the base of a cliff to break pieces apart.
Hydraulic Action	Water enters cracks in the cliff, air compresses, causing the crack to expand.

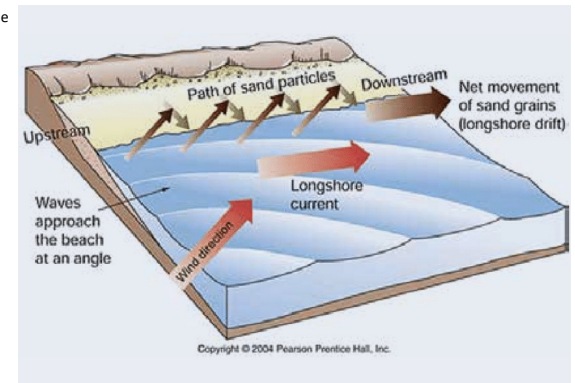
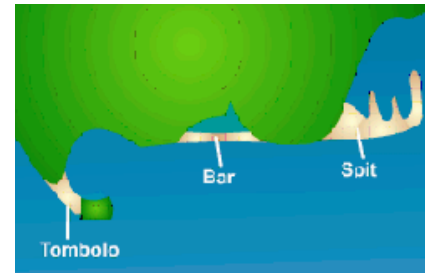
3. Coastal Erosion features



4. Longshore Drift (LSD) - a transportation process

5. Coastal Deposition features

Deposition features are made at the coast when material (like sand, shingle and pebbles) are put down on the sea bed or beach when transportation energy gets low. Spits often extend out across river mouths, bars connect two headlands and tombolos connect an island to the mainland.



1. Factors involved in making waves:

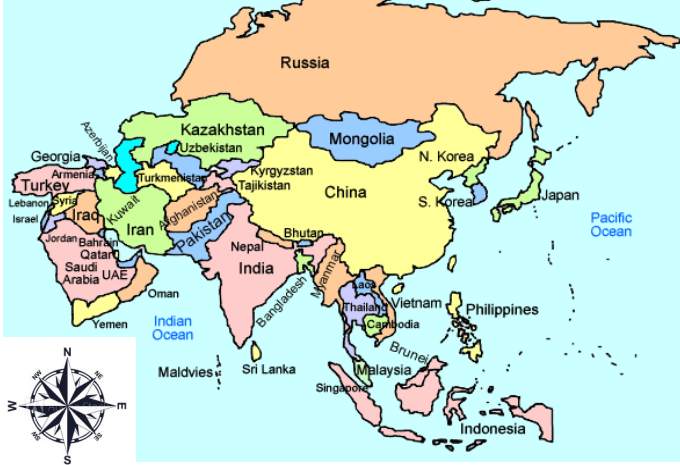
Fetch The amount of open water available for the wind to blow over. Bigger fetch leads to better potential for waves.	Wind Strength The stronger the wind, the greater the potential for waves to form.
Wind direction Consistent wind direction can build a swell of waves lasting many days.	Wind duration The longer the length of time the wind blows for, the more waves can be made.

6. Coastal Defences: Hard and Soft Engineering to protect the coast

Hard Engineering	Recurved Sea wall Curved reinforced concrete wall with a distinct curved face to redirect wave energy out to sea	Groynes Wooden walls built at right-angles to the shore to trap sand and hold the beach in place	Rock Armour Granite boulders piled up to break up the force of incoming waves
Soft Engineering	Dune regeneration Replant sand dunes with Marram grass to bind the soft, sandy soil together to stabilise the dunes	Dune fencing Fences placed in dunes to encourage more sand to be trapped to stabilise the dunes—and keep tourists off!	Beach replenishment Dredged sand from offshore is pumped back onto the beach to make the waves break sooner.

GEOGRAPHY 8.2 Asia Case Study

The continent of Asia



Absolute location

Precise facts about place location. You can use continent, the region within the continent, latitude and longitude and reference to the relative size of the location in question. For example, Russia is the largest country in Asia located across the entire northern edge of the continent.

Relative location

Use neighbouring countries, bodies of water—such as seas and oceans and mountain ranges as references points. Use vocabulary based on compass directions to link to your location. For example, Mongolia is south of Russia and north of China.

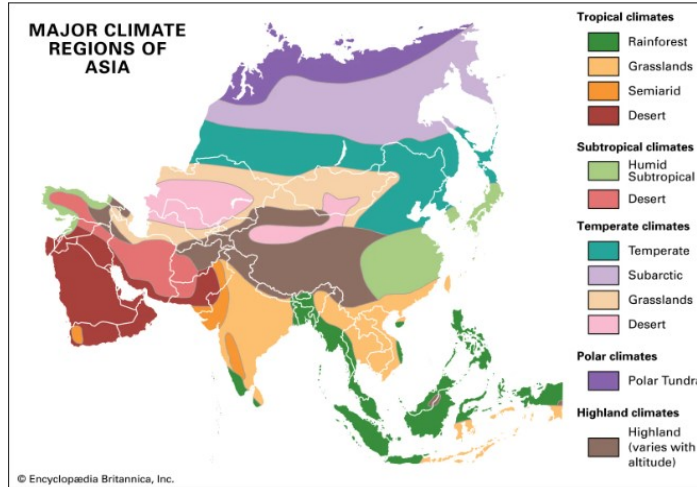
3 & 5 India's growing cities—problems or progress?



India has many megacities—populations of 10 million or more. There are huge inequalities within such cities in India whereby the very wealthy, all the way down to the homeless, live within the same urban area. The city of Mumbai contains the most expensive home in the world—valued at over \$1bn—whilst in the same city, millions of people live in slums. Slums are unplanned, unregulated squatter settlements that sprawl on the edges of cities or occupy any available space within the city. They are often built in areas threatened by floods, landslides and other hazards. Disease is common due to a lack of sanitation. However, Dharavi slum is also a hive of business activity whereby busy locals are working to create products sold to a combined value of over \$1bn. a year! Education access is improving and this makes Dharavi a beacon of hope whereby the next generation of India doctors and teachers are breaking the cycle of poverty.

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1. Biomes of Asia



4. Monsoon Seasons

The monsoons are seasonal wind patterns that affect many countries in the tropical and sub-tropical regions of the world. In India's case, as the northern hemisphere summer begins, the intense sun heat bakes the country and temperatures can soar into the 40°Cs! The hot air over the country rises—which draws the wind in from over the Indian Ocean to the south. (see red arrows on map to left). The tropical maritime air brings moisture and therefore heavy rainfall (see climate graph). As the Autumn sets in, the winds switch direction and the band of heavy rains returns southwards (see green arrows on map), and the monsoon season ends.

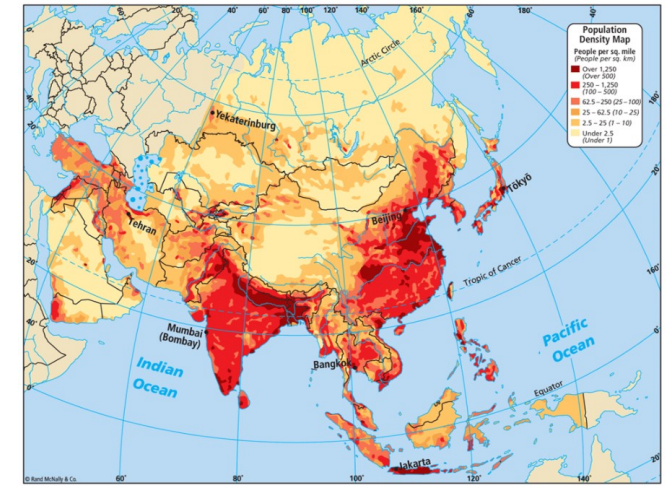
5. Rural to Urban Migration

Many Indian people have done so, or are considering the move to the city. Some people migrate by choice, others by necessity—in the hope of securing a better future. Motivation to leave a place is called a 'push factor', the attraction of an alternate place is called a 'pull factor'. India's urban populations are increasing rapidly and although it take a very long time, a better life can be achieved by a large amount of migrants who make the move to the city.

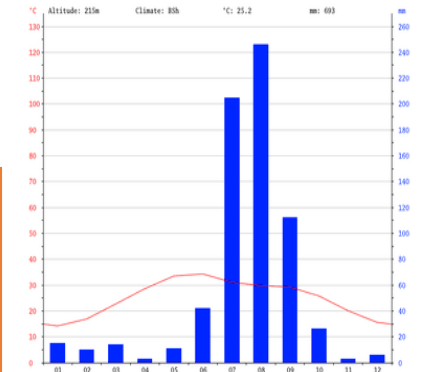


- | Push Factors | Pull Factors |
|--|--|
| <ul style="list-style-type: none"> • few services • lack of job opportunities • unhappy life • poor transport links • natural disasters • wars • shortage of food | <ul style="list-style-type: none"> • access to services • better job opportunities • more entertainment facilities • better transport links • improved living conditions • hope for a better way of life • family links |

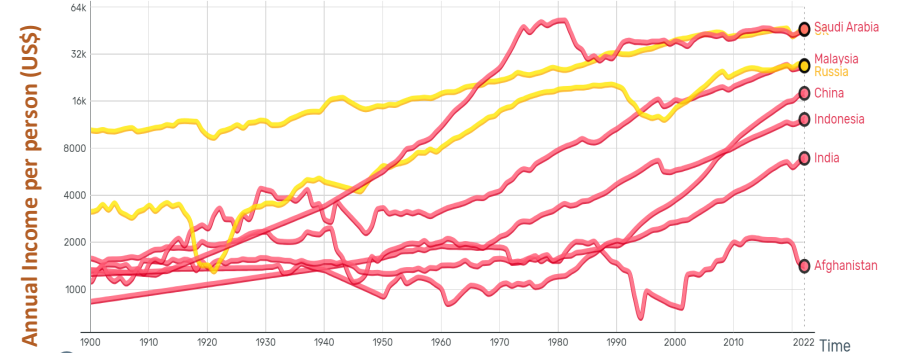
2. Population Distribution



4. Climate graph of Delhi, India



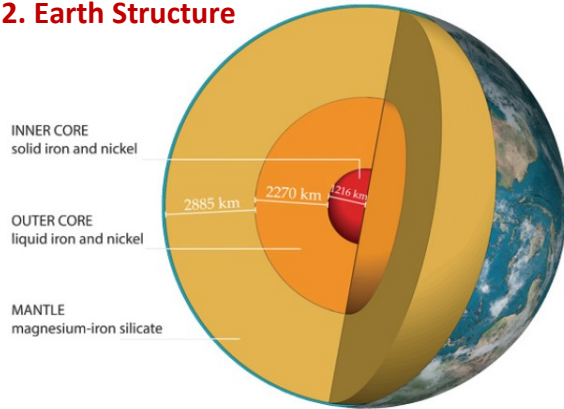
3. and 6. Development Inequality across Asia since 1900



Asia has extreme inequality (compared to Europe for example) with some countries still classed as LICs, yet some are successful HICs. Some countries have vast oil wealth—such as Saudi Arabia, whilst others have been devastated by war (Afghanistan). Many Asian countries are making rapid economic progress since the 1980s - with countries like Malaysia, Indonesia, India and especially China (the fastest growing economy of them all); these are the Newly Emerging Economies (NEEs).

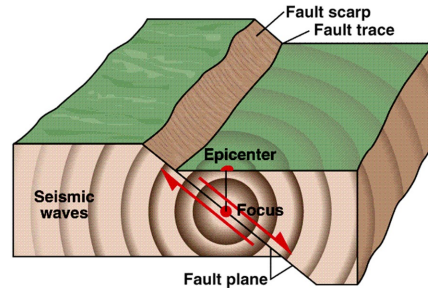
GEOGRAPHY 8.3. HAZARDS

2. Earth Structure



5. Earthquake Concepts

Earthquakes are a violent release of strain energy within the crust of Earth. The constantly churning convection currents in the mantle are responsible for slowly moving the crust around. However, the tectonic plates making up the crust are often being forced together or past each other and get stuck—building up huge amounts of energy; eventually it has to be released!



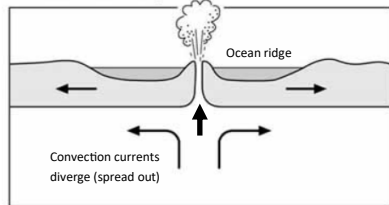
3. Tectonic Plate Boundary map



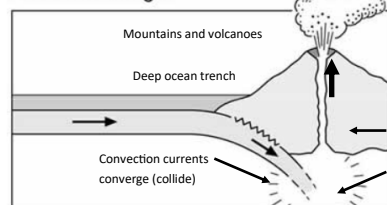
(scale not known)

4. & 5. Tectonic Plate Boundaries

Constructive margin



Destructive margin



Convection currents under the crust in the mantle are slowly dragging the crust apart. To fill the gap, magma bursts up onto the seafloor (or out of volcanoes sometimes above sea level at these margins) and cools as lava forming new crust. This effectively means the seafloor is spreading and the continents on either side are moving apart. Volcanoes and earthquakes are gentle in these locations.

Convection currents here are converging (colliding). The denser oceanic crust sinks and grinds past the thicker, less dense continental crust. The friction destroys and melts the oceanic crust turning it into magma. The buckled and cracked continental crust allows the magma to violently break through out of volcanoes. Huge pressures released along these boundaries when the plates move cause massive earthquakes.

Natural Events

These natural events just happen in nature:

- Volcanic eruption
- tsunami
- Blizzard
- drought
- tornado
- earthquake
- Tropical storm
- wildfire
- Avalanche
- mudslide
- flood

The Human Factor



The actions and locations of people put them at risk. For example, living on floodplains, living near tectonic boundaries, living in poverty and changing the climate all contribute to increased risk to people.

1. Natural Hazards

13km deep focus	Maximum estimates say around 316,000 were killed	Illnesses in refugee camps	Half of the country's schools affected
Magnitude 7.0 on Richter scale	Already was the poorest country in western hemisphere.	A local tsunami added to the hazards of the quake	Thousands of orphaned children
300,000 people injured	Epicentre very close to the capital city Port-au-Prince	1 million made homeless	20% of people lost their jobs as a result
3 million affected	7 years later in 2017, there are still 2.5M in need of aid	\$3.1Bn raised in international aid afterwards	300,000 buildings destroyed

6. Haiti

2010

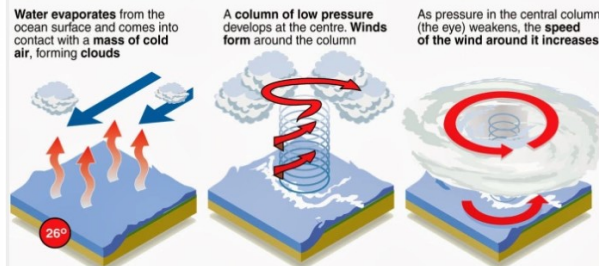
earthquake

example

8. Tropical storm formation

How tropical storms are formed

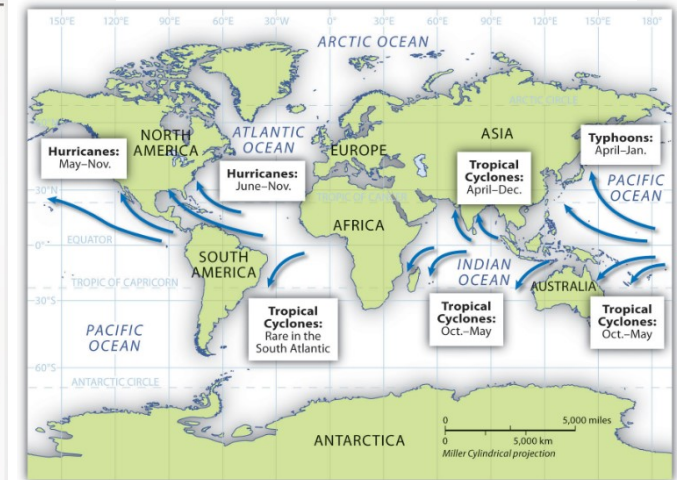
High humidity and ocean temperatures of over 26°C are major contributing factors



Saffir-Simpson hurricane wind scale

Category 1	Category 2	Category 3	Category 4	Category 5
Minimal damage	Moderate damage	Extensive damage	Extreme damage	Catastrophic
Winds 119-153 kph	Winds 154-177 kph	Winds 178-208 kph	Winds 209-251 kph	Winds 252 kph and more

7. Tropical storm names and locations



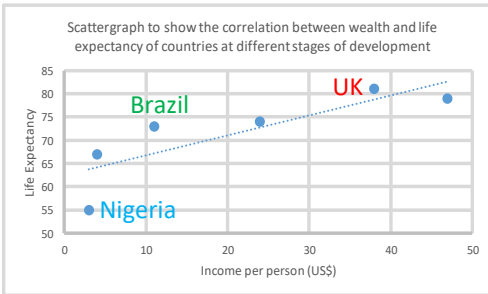
Natural Hazards key terms

Natural event	natural hazard	mantle	oceanic crust	continental crust
tectonic plates	convection currents	converge	diverge	magma
volcano	Earthquake	focus	epicentre	Fault line
Richter scale	constructive margin	destructive margin	tropical storms	
	hurricanes	cyclones	typhoons	Saffir-Simpson scale
	storm surge	low pressure	eye	eyewall
				thunderstorms

Continental crust	Less dense that has the continents one
Oceanic crust	Dense crust under the oceans
Tectonic plates	Slabs of crust making the surface of Earth
Plate margin	A joint in the crust between two plates
Epicentre	The location on the surface above an earthquake
Focus	Origin of earthquake within the crust of Earth
magma	Molten rock in the mantle under the crust of Earth
Fault line	A weakness or crack in the crust
Seismic waves	The shockwaves given off during an earthquake

GEOGRAPHY 8.4. DEVELOPMENT

1. The concept of development

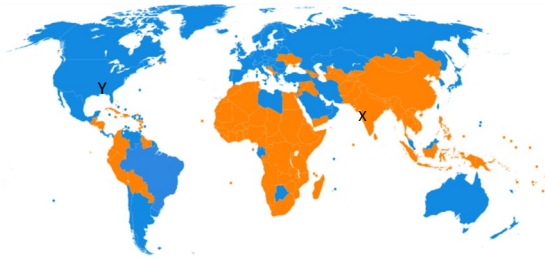


Development is like a race for progress. However, there was no clear start to the race and there is no ending—as new progress will always be made. So some countries, like the **UK** and France, were the front-runners back in the 1800s and remain one of the world's most developed countries today—called **HICs**. However, some countries have only recently started making progress (or had problems holding them back) such as **Nigeria** in Asia; these are **LICs**. Some countries started to develop later but are making rapid progress—such as China, India and **Brazil**; these countries are **NEEs**. The scattergraph to the left shows the different levels of development.

2. & 3. Measuring Development and Key Terms

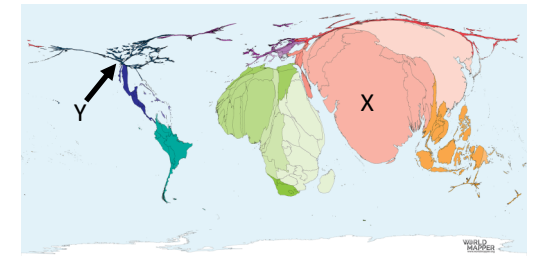
Development	The geographical concept and process of making economic and social progress
Standard of Living (GNI per Capita)	Average income per person. The Gross National Income is the money generated by a country. 'Per Capita' means per head of population. So GNI per Capita is the statistical average income.
Quality of Life	A measure of how contented people are with life. Happiness is subjective (an opinion) so this can only be measured by a range of other factors that influence peoples' opinions about their lives.
Social measure	A statistic to measure the conditions of life for people NOT to do with income or money. So, life expectancy, access to water (%), daily calorie intake or fertility rate would all be examples.
Economic measure	A statistic to measure the financial (money) state people in a country are in—most commonly, the average income per person, per year.
HDI (Human Development Index)	The HDI value is a 'socioeconomic' statistic created by combining 3 other statistics together (average: income, life expectancy and years of schooling) and putting the world's countries in rank order from top to bottom.
HIC	High Income Country—such as the UK—which has high average income
LIC	Low Income Country—such as Kenya—which has a low average income
NEE	Newly Emerging Economies. Countries making rapid economic progress—like China
Birth/Death rate	The number of births/deaths per 1000 of population in a country per year. Countries with high birth rates and low death rates will have a rapidly increasing population
Infant Mortality	The number of infants who are born alive but die before they are one year of age. The higher this value, the harder life is in the country.
Employment Structure	The types of jobs people do from primary, secondary, tertiary and quaternary.
Life expectancy	The average number of years a person is likely to live in a given country.
Literacy rate	The percentage of a population who can read and write. More recently, this measure is moving to 'average number of years of schooling'.
Doctor/Patient ratio	The number of patients per doctor in a country. As a rule, the higher the number of patients, the worse the healthcare system is.

A. Choropleth map of countries above or below average global income



A. Global average global income per person was \$10700 in 2010. The orange countries are below this value, the blue are above. Does this represent the full reality though? (X is India and Y is USA).

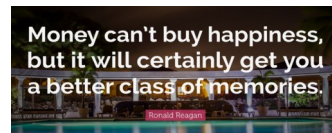
B. Cartogram of poor access to sanitation



B. This cartogram is a 'distorted' map which changes the size of the countries to demonstrate the data value of the title. Country X is India—a NEE. Clearly, many citizens do not have access to toilets or safe water for hygiene. This is shown by the size of the country swelling up. Country Y is USA—a HIC. On the map it has shrunk almost completely, which tells us the people virtually all have access to toilets and safe water supplies for hygiene. Therefore all 'developed countries have shrunk too

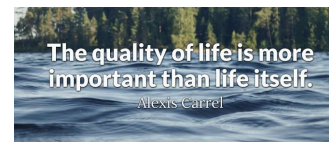
5. Economic measures vs 6. Social measures

Standard of Living	Quality of Life
A quantifiable (objective) measure	A non-quantifiable (subjective) measure
A measure of wealth (income)	A measure of contentedness or wellbeing
A measure of material comforts available to people or a community	Varies according to preference and experience
A measure of possessions and material good you might own	A measurement of mental health and life expectations

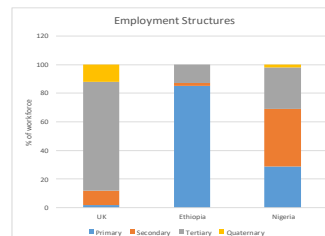


Money can buy a house, but not a home.
Money can buy a bed, but not sleep.
Money can buy a clock, but not time.
Money can buy a book, but not knowledge.
Money can buy food, but not an appetite.
Money can buy you friends but not love.

SoL or QoL?



Presentation: These 'divided bars' below, are an alternate to a pie chart (showing % data)



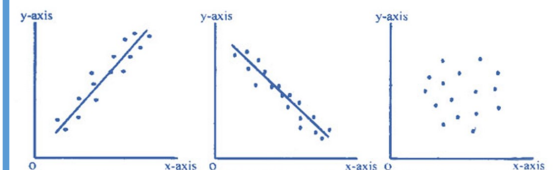
You can tell a lot about a country by knowing what people do for employment. The larger the primary sector is (jobs in farming for example), the less developed the country is. Countries with a large secondary sector (manufacturing) are often NEEs. Countries with big tertiary sectors (the service industry) are generally the HICs; these countries often have a growing quaternary sector too. Jobs in the quaternary sector provide services for other businesses—such as research and development and IT support.

Statistical Analysis Core skills

Mode	The number which appears the most often in a set of numbers (data)
Bi-modal	If there are two modes
Median	The number in the middle of the set when the numbers are put in ascending order
Range	Find the largest and smallest numbers in the set and subtract them
Mean	Add up the numbers and divide by how many there are in the set
Scatter graph	Used to show a relationship between two variables. For example, the average income and life expectancy in a range of countries
Anomaly (Anomalies)	A piece of data that doesn't fit with the pattern shown by the rest of the data. Plural is 'anomalies'
Line of best fit (trend line)	Goes through the directional spread of the data. Has 50% of the plots on either side. Doesn't have to go through the origin (where X and Y axis cross).

Scatter graph correlations

Correlation means a relationship between two sets of variables. For example, a positive correlation could be the harder you try at school, the better your grades will be!



Positive correlation
Both values increase

Negative correlation
As X value increases, the Y value decrease

No correlation
No relationship between X and Y values

4. Employment structures

GEOGRAPHY 8.5. GLOBALISATION

Globalisation is the process by which the world is becoming increasingly interconnected



Transport

In the past, people made epic voyages in boats. Now you can fly direct non-stop to Australia from the UK!

There are nearly 10000 planes in the sky at any given moment. It's never been so easy to travel

Global Brands

From buying Coca-Cola in Afghanistan, to McDonalds in Indonesia, you can be as far from home as you can imagine, and still find familiar things available at home.



Containerisation

The humble container—that you see on the back of lorries that rumble past—has been on an endless journey carrying goods and products around the world; from lorry to port, port to ship, ship to lorry and off again. Container technology has transformed and standardised imports and exports globally.



Migration

As people have moved all across from their country of origin, the world's enormous variety of cultures, traditions, religions, beliefs and languages have never been so interconnected into a global community; this is called multiculturalism.

Communication

Within your parents' life time, communication has changed dramatically...

From letter to landline, car phone to mobile phones and text messages, internet to emails to smart phones technology, and the birth of social media; communication has never been so fast, efficient and accessible.



Buying food

In the past, most food available buy was grown in Britain. Nowadays, you can buy food from all over the world in your local supermarket—at any time of year!



5. Globalisation key terms:

Consumers	People buying and using products
Manufacturers	Companies that build and create products
Retailers	Companies that sell products to consumers
TNCs	Transnational Corporations are large companies that operate in multiple countries
Development	The geographical concept and process of making economic and social progress
HIC	High Income Country—such as the UK—which has high average income
LIC	Low Income Country—such as Kenya—which has a low average income
NEE	Newly Emerging Economies. Countries making rapid economic progress—like China
Economy	The financial position of a country. A wealthy country has a strong economy
Employment	Having a job to earn money
Employment Structure	The types of jobs people do from primary, secondary, tertiary and quaternary.
Exploitation	Taking advantage of someone or somewhere for your gains by not theirs
Sustainability	The concept of managing something successful so that it will last indefinitely

4. & 6. Transnational Corporations (TNCs)

Transnational Corporations are huge companies that operate in multiple countries across the world. Nike for example, are an American company, yet not a single Nike product is manufactured in the USA...

TNC examples:



A choropleth map showing what % of the population accesses the internet

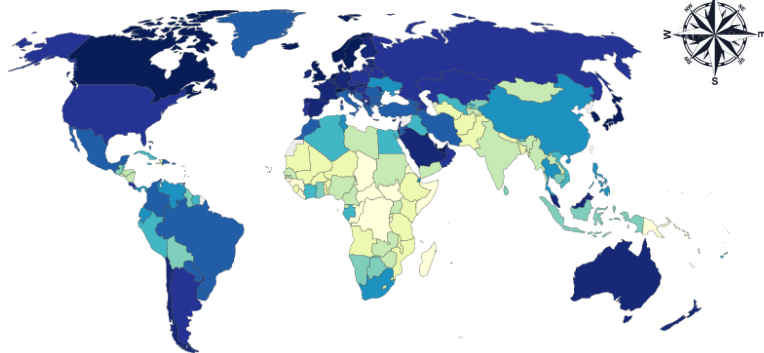
Share of the population using the Internet, 2017

All individuals who have used the internet in the last 3 months are counted as internet users. The internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc.

Our World In Data

A choropleth map uses ever-darker colours to show an increase in a value of something in a given area; in this case, the percentage of people with access to the internet within each country. With the average being known for each country, comparisons can be made across the world.

In an increasingly globalised world, the internet is a clear sign of how information is accessed and shared more easily across the world.



No data 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: World Bank

OurWorldInData.org/technology-adoption/ - CC BY

6. The maker of your trainers earns \$1 a shoe...



JUST DO IT OR ELSE

Contractors are paid an average \$18 a pair by Nike. \$11 Dollars material, \$2 labour, \$4 for other costs and \$1 profit.



Nike sells the shoes to the retailer for \$36. (The mark up accounts for shipping, research, marketing, advertising, taxes and profit.

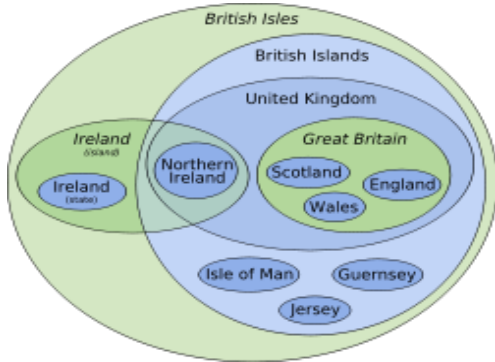
Retailers mark up another 100% to \$72 on average to cover wages, shrinkage, insurance, advertising, depreciation, taxes and profits.

Positives	Negatives
<ul style="list-style-type: none"> Brings huge amounts of employment to NEEs and LICs Generally better pay than most other local jobs Shows other TNCs that the host countries are worth investing in creating more business growth Creates the multiplier effect—news jobs create further jobs when the population gets wealthier and start spending Government of host countries gains more taxes from TNCs and work force to invest in the country—making progress Increases the skill base in the host country 	<ul style="list-style-type: none"> The profits from sales of products returns to the TNC based in the HIC Exploitation of workers with poor working conditions and pay in NEEs Environmental damage in the form of pollution and poor enforcement of laws to protect the environment A lack of job security—the TNC could relocate the factories with very little notice Business decisions made in HICs with little thought to employees working in manufacturing Massive amounts of water and energy used by the host country Local culture can be damaged by global brands changing peoples' ideas

GEOGRAPHY 8.6 UK Case Study

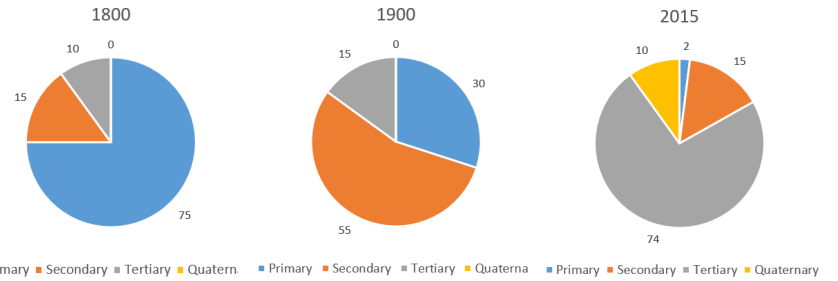
1. & 2. The British Isles and the United Kingdom of Great Britain and Northern Ireland

The **British Isles** is a group of islands off the northwestern coast of Europe. The group consists of two main islands, **Great Britain** and **Ireland**, and numerous smaller islands and island groups, including: the Hebrides, the Shetland Islands, the Orkney Islands, the Isles of Scilly, and the Isle of Man. Some also include the Channel Islands in this grouping.



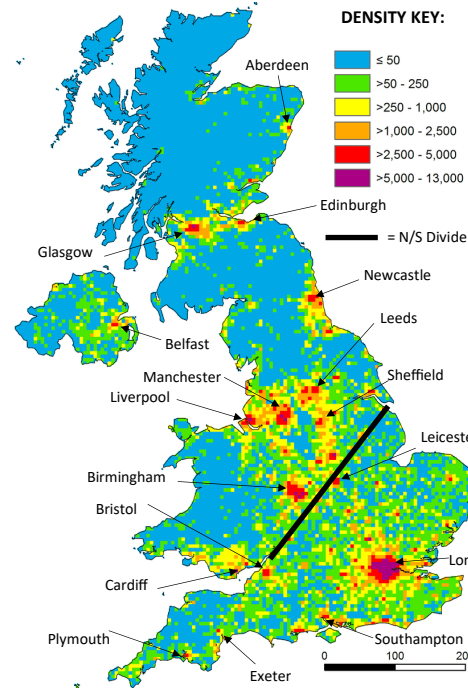
The **United Kingdom of Great Britain and Northern Ireland** is a union, or 'country of countries', made of three countries and a province. The three countries are **England**, **Scotland**, **Wales** from the island of Great Britain, and the province of **Northern Ireland** being the fourth member—located on the island of Ireland.

7. Changing UK economic structures over time



The United Kingdom has experienced a significant change in economic structure from pre-industrial revolution (1800), through the industrial revolution era (1900) and now into a post-industrial era (2015).

4. UK Population Distribution



The UK has an **uneven population distribution**.

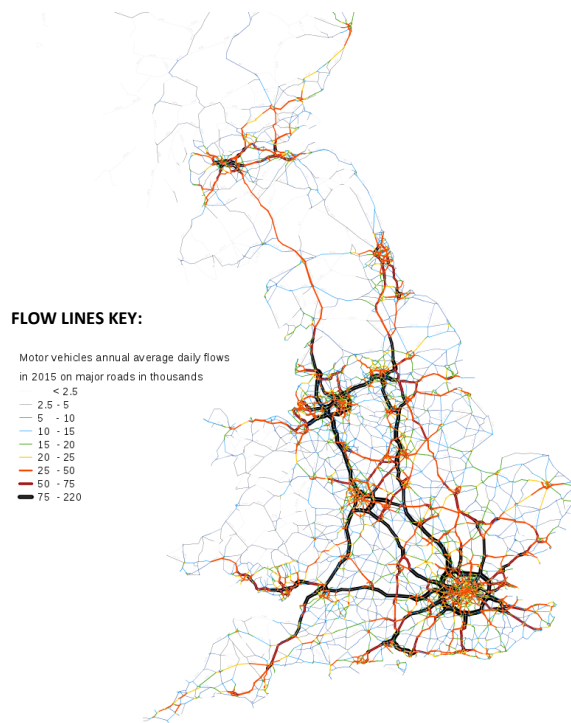
There is a clear correlation where dense population centres are located (as shown as orange up to purple on the **Density** map - left) and flatter, low-lying relief (as shown by the **relief** map - right). At the same time, low density of population occurs in the upland areas of inland Wales, northern Scotland, and inland south-west England.

So, why is the population concentrated into lowland areas and coastal locations? Think: water, building, resources, accessibility and trade links!

3. UK Relief (topographical) map (showing height)



UK Traffic flow lines



6. The UK's links with the wider world

Telecommunications: The UK is the global hub of modern communication via fibre optic cables that spread across the world.

Politics: The UK is an influential global player as part of the G7, UN and NATO.

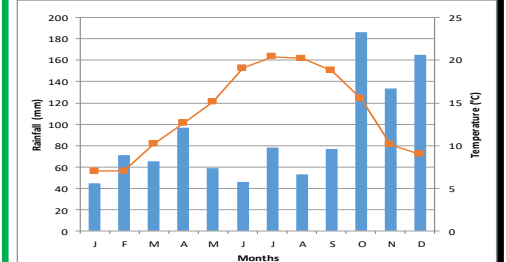
Cultural: The UK has a rich past in global multiculturalism; the leader of the commonwealth.

Trade: Media arts, robotics and aerospace technology along with banking and finance are core to the UK economy.

Transport: London's Heathrow airport is the busiest in the world—link the UK to world

Situated between 50-59° North, the UK has a mild and wet (maritime) climate overall. The prevailing wind (dominant wind direction) comes from over a relatively mild southern North Atlantic Ocean. As such, the UK experiences plenty of rainfall the year round—especially in the west. The relief of the land here, encourages the moisture-rich tropical maritime air to cool, condense and produce rainfall as it is forced to rise over the hills and mountains as it blows over the country from west to east. At the same time, the temperatures are moderated and therefore rarely extreme; staying mild during winter as the North Atlantic still contains warmth from the previous summer, and yet kept relatively cool during summer as the North Atlantic has yet to fully warm during these months, so any wind coming in off the sea brings with it a classic, cool sea breeze.

5. UK Climate (SW Example)



Proportional flow lines show values of data between locations with wider arrows or lines. The above map shows a pattern whereby the lines (along major roads) are a different colour and wider to show a greater value. For example, the M25 circular motorway around London is clearly very heavily used and has the greatest flow of traffic. You'll notice how badly connected the south-west is however (with the exception of the M5), as the traffic-flow values are low as a result of smaller roads