GCSE Geography Revision Guide

Unit 2: People and the Planet

1. Population Dynamics
2. Consuming Resources
3. Living Spaces
4. Making a living

CORE TOPICS

OPTION TOPICS

5. Changing Countryside
7. Development Dilemmas
Topic 1: Population Dynamics

What you need to know:

- What has happened to the global population - historical, current and future trends?
- Role of socio-cultural and economic factors affecting birth and death rates
- Factors driving recent changes in fertility and mortality rates
- How and why population change varies
- How and why population structures change
- Issues relating to youthful and ageing populations
- Why some countries wish to control their population?
- The impact and effectiveness or polices to control population
- Differing policies that exist to manage migration
- Why countries adopt different migration policies
- Tensions that arise as a result of migrations
**Key terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>the amount of babies born per 1000 of the population per year</td>
</tr>
<tr>
<td>Death rate</td>
<td>the amount of deaths per 1000 of the population per year</td>
</tr>
<tr>
<td>Population balance</td>
<td>birth and death rates are almost equal and the population remains level</td>
</tr>
<tr>
<td>Natural Increase/decrease</td>
<td>the difference between birth and death rates</td>
</tr>
<tr>
<td>Fertility rate</td>
<td>the average number of children born to a woman</td>
</tr>
<tr>
<td>Immigrants</td>
<td>people moving into a country</td>
</tr>
<tr>
<td>Emigrants</td>
<td>people moving out of a country</td>
</tr>
<tr>
<td>Migration</td>
<td>movement of people into and out of an area or country</td>
</tr>
<tr>
<td>Migration balance:</td>
<td>• <strong>Positive</strong> more immigrants than emigrants - increase population &lt;br&gt; • <strong>Negative</strong> decrease population - less immigrants than emigrants - decrease population</td>
</tr>
<tr>
<td>Replacement Level</td>
<td>the amount of babies needed to be born for the population to remain the same</td>
</tr>
<tr>
<td>Pro-natalist policy</td>
<td>A population policy that encourages births to increase the population</td>
</tr>
<tr>
<td>Anti-natalist policy</td>
<td>A population policy that tries to reduce the birth rate and therefore reduce population growth</td>
</tr>
<tr>
<td>Open door migration policy</td>
<td>A population policy that encourages international migration</td>
</tr>
<tr>
<td>Points based migration policy</td>
<td>A population policy that only allows skilled people to migrate to that country.</td>
</tr>
</tbody>
</table>
What has happened to the global population – historical, current and future trends?

- The world population is growing at an alarming rate in 2008 at least another 65 million people were added to the global total of 6.6 billion.
- Since 2000 the rate of growth has begun to slow down
- Exponential Growth has been occurring (the amount of time taken for the population to double e.g. in 1804 it had taken the population 300 years to double from $\frac{1}{2}$ billion to 1 billion. In 1999 the doubling time had fallen to 39 years)

Role of socio-cultural and economic factors affecting birth and death rates

How and why is population changing?

Key terms
Birth rate - the amount of babies born per 1000 of the population per year
Death rate - the amount of deaths per 1000 of the population per year
Immigrants - people moving into a country
Emigrants - people moving out of a country
Migration - movement of people into and out of an area or country
Migration balance:
  - Positive more immigrants than emigrants - increase population,
  - Negative decrease population - less immigrants than emigrants - decrease population
Natural increase - birth rate is higher than death rate = population increase
Replacement Level - the amount of babies needed to be born for the population to remain the same

**Why has population been increasing?**

Mainly due to a decline in death rates and infant mortality rates:
1) Development of modern medicines. This has meant that more and more people are kept alive due to modern practices.
2) Introduction of vaccination and immunisation programmes e.g. smallpox vaccination that helps people to live longer.
3) Cleaner drinking water and better sewage disposal, a lot more people have access to clean drinking water than before.
4) Better healthcare - more doctors, nurses and hospitals, means that people can be treated and not die.
5) More hygienic housing.
6) Better diets, e.g. promoting eating '5 a day'

**How and why population change varies**

**Demographic Transition Model**

![Graph showing demographic transition model]

**Stage 1: High fluctuating**
- High birth rate due to no birth control and high infant mortality
- High death rate due to disease and famine

**Stage 2: Early expanding**
- High birth rate
- Falling death rates due to improved health care and nutrition

**Stage 3: late expanding**
- Falling birth rates due to birth control and wanting smaller families
- Falling death rates

**Stage 4: low fluctuating**
- Low birth and death rates due to working women delaying age to start their families

**Stage 5: Decline**
- Death rate higher than birth rate due to a ‘grey’ population

**Factors driving recent changes in fertility and mortality rates**

Population pyramids show important features of a population - age and gender. The diagram below shows how to read one:

![Population Pyramid Diagram]

Population pyramids can be seen to link to the DTM

**What do population pyramids look like for different stages of the DTM?**

![Stage 1 to Stage 5 Diagrams]
Population pyramids can be also used to work out the dependency ratio (is a relationship between those who are and are not working in an area (usually a country).

\[
\text{Dependency Ratio} = \frac{(\% \text{under 15}) + (\% \text{over 65})}{\% \text{between 15 and 64}} \times 100
\]

**Issues relating to youthful and ageing populations**

Countries often suffer from problems due to the structure of their population.

**Youthful population** - This is when there are a very high percentage of people under the age of 15.

Problems:
- **Pressure on housing** - not enough housing, people living in slums. This is very common around the big cities (New Delhi), where millions of people live in shanty towns with no running water, roads, sewage of any kind.
- **Pressure on schooling** - illiterate population. *India's literacy rate is 60%, Cambodia's literacy rate is 69%*
- **Pressure on food supplies** - famine, food distribution difficulties. Natural disasters accentuate this problem e.g. droughts.
- **Pressure on health services** - a growth in diseases being spread around and not being dealt with adequately to stop the spread.

**Ageing population**

- This is when a country has a large number of people over the age of 65 in their country.

Problems:
- **Health care**
  - Provide more health care e.g. retirement homes, hospital beds, more undertakers, etc.
  - Skilled health care workers, e.g. nurses, doctors, etc.
- **Pensions**
  - 3 solutions
• Increase tax - not popular
• Raise retirement age - not popular
• Abolish state pensions - not popular

Contrasting countries Japan vs. Mexico

Ageing Population – Japan

<table>
<thead>
<tr>
<th>Facts</th>
<th>Causes</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 20.8% of population aged +65</td>
<td>- People living longer (79 for men &amp; 85 for women). Due to healthy</td>
<td>- Increase cost of pensions as fewer workers</td>
</tr>
<tr>
<td>- 26.8 million pensioners</td>
<td>diet and high GDP</td>
<td>- Government raised retirement age from 60 to 65</td>
</tr>
<tr>
<td>- Birth rate below replacement level</td>
<td>- Birth rate declining due to increase age of first child (2006 29.2 years) and number of marriages has decreased</td>
<td>- Increase in numbers in nursing homes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Increase cost of medical care</td>
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Youthful population: Mexico

<table>
<thead>
<tr>
<th>Facts</th>
<th>Causes</th>
<th>Effects</th>
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</thead>
<tbody>
<tr>
<td>- 31% of population under 15</td>
<td>- Low death rate at 4.78 deaths per 1000. due to vaccinations and</td>
<td>- Increase need for school places</td>
</tr>
<tr>
<td>- Population grew 50</td>
<td>doctors</td>
<td>- Young people unable to find work so emigrate to USA</td>
</tr>
<tr>
<td>million in 40 years</td>
<td>- falling birth rate but large % of young people</td>
<td>- Growing manufacturing industry</td>
</tr>
<tr>
<td>- Average age in 26</td>
<td>- Will take 50 years for Mexico to loose it's youthful population</td>
<td>- Strongly catholic but abortion has been</td>
</tr>
<tr>
<td></td>
<td></td>
<td>legalised to reduce number of children</td>
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</tbody>
</table>
Why some countries wish to control their population?
Countries often need to manage their population to gain an optimum population (when resources and population equally balance = sustainable). Governments often step into manage their populations to stop them passing the tipping point that leads to overpopulation.

Case Study: Anti-Natalist – China’s one child Policy

<table>
<thead>
<tr>
<th>What?</th>
<th>Why?</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduced in 1970s - couples not allowed to have more than one child.</td>
<td>- High growth rate of population - Pressure on land and food supplies due to large population</td>
<td>- Birth rate fell from 34 per 1000 in 1970 to 13 per 1000 in 2008 - Annual population growth rate fell from 2.4% to 0.6% - Total population grown from 996 million in 1980 to 1,320 million today - Chinese tradition to prefer sons so sex selective abortions occurred (120 males to 100 females - Shortage of women at marrying age</td>
</tr>
<tr>
<td>Couples with one child were given benefits e.g. cash bonuses, better childcare and improved housing. Unauthorised pregnancies pressured to have abortions</td>
<td></td>
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</tbody>
</table>

Pro-Natalist: Estonia

<table>
<thead>
<tr>
<th>What?</th>
<th>Why?</th>
<th>Effects</th>
</tr>
</thead>
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<tr>
<td>Introduce 'mother’s salary' where women were paid to have children</td>
<td>- Estonia became independent from Russia in 1992 - Falling population due to fertility rate declining from 2.2 in 1988 to 1.4 in 1998</td>
<td>- By 2006 fertility rate rose to 1.5 (still below replacement level)</td>
</tr>
</tbody>
</table>
Differing policies that exist to mange migration

UK Case Study

*Open Door*
- Post War immigrants came to UK from colonies in the Caribbean due to an Act of Parliament giving all Commonwealth (ex-colonial) citizens free entry into the UK. (1950-1960s ¼ million people came from the Caribbean).

+ve = Met shortage of unskilled and semi-skilled labour
  = Helped with the reconstruction of the country post war

-ve = public money spent on meeting needs of the immigrants e.g. housing etc
  = 1970s recession, the immigrants lead to increased unemployment

*Point Based system*
If you wish to come and work to settle down you need to gain a certain amount of points. This was established 2008 and contains 5 tiers of migrants. Tier one has highly skilled workers such as scientists, down to Tier five who are temporary workers e.g. musicians playing in a concert.

In 2004 eastern European countries of Czech Republic, Estonia, Hungary, Poland, Latvia, Lithuania, Slovakia and Slovenia joined the EU (A8 - Accession countries). This meant that citizens of these countries are free to move and work in other EU member countries. In most cases these economic migrants stay only until they feel they have made enough money to take home

<table>
<thead>
<tr>
<th>Source advantages</th>
<th>Host Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Immigrants send money/remittances home to their families</td>
<td>- meets need of shortage of unskilled and semi-skilled labour</td>
</tr>
<tr>
<td>- Less pressure on resources and jobs in places like Poland etc</td>
<td>- helped to reconstruct UK after the war</td>
</tr>
<tr>
<td>- Immigrants bring skills back to their country</td>
<td>- Increases culture in the UK</td>
</tr>
<tr>
<td></td>
<td>- Immigrants contribute to the UK economy</td>
</tr>
<tr>
<td></td>
<td>by the taxes they pay</td>
</tr>
<tr>
<td>Source disadvantages</td>
<td>Host disadvantages</td>
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<tr>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>- Loss of working population from Poland for example</td>
<td>- public money spent on immigrants e.g. housing and healthcare</td>
</tr>
<tr>
<td>- Decline in birth rate as most migrants are young men</td>
<td>- during the 1970s recession the immigrants added to the number of unemployed</td>
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<td>-</td>
<td>- Increased hostility towards the immigrants</td>
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**Tensions that arise as a result of migrations**

The UK immigration of ethnic groups lead to conflict as there was hostility towards them. These ethnic groups banded together into particular areas to reduce the risk of being victimised. The UK government stepped in and stated that all citizens regardless of ethnicity should enjoy equal opportunities. Today much more harmonious as people have begun to realise the positives of having them; they add to country’s skill base and culture.

**They come over here ...**

... take our jobs, eat our carps and lose all our £50 notes. They even steal our unwanted clothes. But can all that is written about eastern Europeans really be true? Tim Dowling looks at the outrageous claims made about Britain’s newest arrivals.

Tim Dowling - *The Guardian*, *Tuesday* November 22 2007

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**Economist.com**

Eastern Europeans are saving Scotland’s economy

MAREZIA ZUCCHOWSKA, a 26-year-old Pole, arrived in Inverness Scottish Highlands, in June. When a week, she was packing salmon, and feeling quite at home. “Scotland reminds me of Poland, the mountains and the pine trees and the cold,” she says.

She might have added “the Poles”, for they have headed for the Highlands to do low-paid jobs Scots have turned their noses at tourism, construction and food-processing. At Strathpeffer Salmon, one-third of the 400-strong workforce is Polish. A Polish presiding throughout the Highlands: from the costs of hiring express vans to municipal libraries to courteous Polish waiters in rural hotels.

As elsewhere in Britain, the only big European country so far to welcome workers from the EU’s eight new members, no one knows how many eastern Europeans there are here. Highland Council puts the figure at around 3,000—70% of them Polish—but Robert Wright of the University of St Andrews suspects the real number may be twice that. Either way, in a sparsely populated region that has been losing young Scots since the 19th century, the eastern Europeans are welcome. Businesses would have collapsed without the Poles,” says Mark Sutherland-Fisher, who runs, a fish company, that employs most Polish workers. “Employers are doing everything they can to welcome them, producing vocabulary leaflets, learning Polish themselves, and offering accommodation.”

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Since the first immigrants from the new European Union member states of the old Eastern bloc arrived in 2004 (actually, June 1st, before that, when they were known collectively as the “large acquis members”), eastern Europeans — Poles, Lithuanians, Latvians, Slovaks, etc. — have been blamed for virtually every crisis that has hit this nation, and a good few that haven’t. Many of these problems have been proven not to be their fault, some have proven not to be problems, but a lot of the myths and prejudices still persist. Poles, then, are just a few of the things that the media has blamed eastern Europeans for recently.

**Catching all our carps**

This is becoming a lot of an annual story, largely because carp is a traditional Christmas dish in Poland. Eastern Europeans are treating our Scottish a food source rather than a bit of hard-earned sport. But as one sometimes hears that greedy immigrants are eating our fish, for the state of wild brown trout, there are claims that organised gangs armed with spearguns are filling their bags with carps. These stories are always long on outrage and anecdote and short on fact: a recent survey claimed that 3 out of 5 Derbyshire owners thought that by fishing, “we are losing a major asset to the area. Today, most people understand the positives of having them; they add to country’s skill base and culture.
Topic 2: Consuming Resources

What you need to know:

- How resources can be defined and classified
- The impacts of obtaining and consuming one renewable, sustainable and non-renewable resources
- Inequalities in supply and consumption of one global resource
- Future pressures on both supply and consumption of this resource in view of recent global economic growth
- Theories about the population-resource equation
- How well these theories stand up to current global resource supply and demand
- How resource demand might be reduced
- The potential for alternative and renewable resources
- Whether technology can 'fix' the problem
## Key Terms

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<td><strong>Alternative energy</strong></td>
<td>Energy sources that provide an alternative to fossil fuels</td>
</tr>
<tr>
<td><strong>Boserupian theory</strong></td>
<td>The view that when population grows it stimulates technological changes that produce increases in output, ensuring that living standards can be maintained for the growing population</td>
</tr>
<tr>
<td><strong>Carbon footprint</strong></td>
<td>A measurement of all the greenhouse gases we individually produce, through burning fossil fuels for electricity, transport etc.</td>
</tr>
<tr>
<td><strong>Human resource</strong></td>
<td>The skills and abilities of the population</td>
</tr>
<tr>
<td><strong>Malthusian theory</strong></td>
<td>The view that population growth is the main reason why a society would collapse</td>
</tr>
<tr>
<td><strong>Material resource</strong></td>
<td>A natural substance that humans choose to use</td>
</tr>
<tr>
<td><strong>Natural resource</strong></td>
<td>Those materials found in the natural world that are useful to man, and that we have the technology and willingness to use</td>
</tr>
<tr>
<td><strong>Non-renewable resource</strong></td>
<td>Those resource - like coal or oil - that cannot be remade, because it would take millions of years for them to form again</td>
</tr>
<tr>
<td><strong>Renewable resource</strong></td>
<td>Resources, such as forests, that can be maintained by</td>
</tr>
</tbody>
</table>
Sustainable development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Sustainable resource

Resources - such as wood - that can be renewed if we act to replace them as we use them

<table>
<thead>
<tr>
<th>How resources can be defined and classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are three main types:</td>
</tr>
<tr>
<td>1) Natural resources e.g. wood</td>
</tr>
<tr>
<td>2) Human resources e.g. skills of a population e.g. Doctors</td>
</tr>
<tr>
<td>3) Material or capital resources e.g. good and equipment already in society)</td>
</tr>
<tr>
<td>You can also define resources via their availability</td>
</tr>
<tr>
<td>- Non-renewable resources - cannot be remade because they take millions of years to form again e.g. coal or oil</td>
</tr>
<tr>
<td>- Sustainable resources - Can be deliberately be renewed so that it can last into the future e.g. planting trees</td>
</tr>
<tr>
<td>- Renewable resources - renew themselves so do not need to be managed e.g. solar and wind power</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The impacts of obtaining and consuming one renewable, sustainable and non-renewable resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
</tr>
<tr>
<td>management</td>
</tr>
<tr>
<td>Non-renewable e.g. Tar Sand oil</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Sustainable and renewable e.g. Bio fuels</td>
</tr>
<tr>
<td>Sustainable but limited e.g. Solar energy</td>
</tr>
</tbody>
</table>

**Inequalities in supply and consumption of one global resource**

**Uneven patterns of oil supply and demand**

![Map of world reserve of oil (%)]

- **Saudi Arabia** (22.3%)
- **Iran** (11.2%)
- **Kuwait** (9.7%)
- **UAE** (8.3%)
- **Venezuela** (6.5%)
- **Russia** (6.3%)
- **Kazakhstan** (3.4%)
- **Libya** (3.3%)
- **Nigeria** (3.0%)
- **USA** (1.8%)
- **China** (1.4%)
- **Canada** (1.4%)
- **Qatar** (1.3%)
Current production is focused in the Middle East, especially Saudi Arabia. However many of these countries have reached ‘peak oil’ (production of relatively cheaply obtained oil has reached its maximum so there is now a fall in production).

Consumption is largely related to the wealth of a country and its reliance on cars. 70% of the world’s oil is used transporting goods and people within and between countries.

The USA has less than 5% of the population but uses 25% of the oil mainly due to:
- Lack of public transport systems
- Low density urban settlements so need long journeys to work, school etc
- History of low petrol prices

Future pressures on both supply and consumption of this resource in view of recent global economic growth

China and India are continuing to grow rapidly with a combined population of 1,400 million using 71 million cars. In most cases as the population grows the demand for cars will increase as the hope to get ‘the American Dream’. To achieve this Tata Motors based in India has begun production a car priced at £1500, this increasing the demand for oil and adding to CO2 emissions.

Theories about the population-resource equation

Population and resources

- **Malthus Theory (1766–1834)**
  - Population increases faster than food supply so there would come a time when the world could not cope.
  - Population increases geometrically (1, 2, 4, 8, and 16)
  - Food supply increases arithmetically (1, 2, 3, 4, and 5)

This means that there will be a short fall in the amount of resources available for the growing population.
- Population would outgrow the amount of food available leading to famine, war and disease

Malthus argued that there were ways to prevent population from extending beyond the food supplies necessary to support it (optimum population). This includes a combination of
1. ‘Negative’: Methods people choose to reduce human fertility e.g. China’s one child policy, sterilisation
2. ‘Positives’: Anything which increases mortality: e.g. low living standards, disease

Malthus argued that this would kept the carrying capacity in check the Number of plants, animals or human which can be adequately supported (carried) by the land

Boserup Theory 1965
- Population growth has a positive impact on people as it forces them to invent a way out of a problem when resources start to run out e.g. GM crops
- Overpopulation leads to innovation and higher productivity in use of land (irrigation, weeding, crop intensification, better seeds) and labour (tools, better techniques) e.g. GM Crops and the Green Revolution

‘Limits to Growth’ – Club of Rome

They concluded that is current growth trends continued along side industrialisation, pollution, food production and resource depletion the limits to growth on the planet will be reached in the next 100 years.
The result of this will be sudden and uncontrollable decline in population and industrial capacity.

How well these theories stand up to current global resource supply and demand
Malthus predictions turned out to be wrong as food production has increased rapidly. In the 19th and 20th Century the population increased but alongside the quality of life and living standards rose across the globe. Neo-Malthusians suggest that the theory has some truth due to the high levels of famine in the world today.

How resource demand might be reduced
Reducing the dependence on oil

- Plastic water bottles are made from oil and then oil is used to transport them across great distances.
- Now carrying refillable bottles of water and recycling the bottle
- Switch to hydrogen run cars as they release no harmful emissions. E.g. The Ford Edge car is first alternative fuel car to be able to travel similar distances to traditional petrol cars.

Individual action

- changing habits e.g. using public transport and switching to energy efficient light bulbs etc.
- Recycling and conservation
- Buying food from local farm shops to reduce 'food miles'

Corporate Action:

- Example of Interface Carpets based in the USA has identified various goals to improve its environmental performance e.g. eliminating waste in all areas of the business and using renewable energy resources such solar and wind power.
- Google Headquarters uses hydrogen cars which are renewable and also provides a bus shuttle to pick up its employers to reduce their car usage.

The aim is to achieve 'SUSTAINABLE DEVELOPMENT':

'This is development that meets the needs of the present without compromising the ability of future generations to meet their own needs'

The potential for alternative and renewable resources

In 1995 the UK generated 2% of its electricity from renewable sources compared with the EU average of 14%. The government set its target of reaching 10% by 2010. This they believe is achievable as the average costs for wind, hydro, landfill gas and waste-burning fell dramatically during the 1990s. However, UK government achieved only 6% by 2010. There is still however a huge market for the UK to switch towards more renewable resources of energy.

Whether technology can ‘fix’ the problem

Technological fix is the idea that we can resolve problems we might have by inventing solutions to them. The problem of finding alternative fuels to replace ‘cheap’ oil would need high amounts of effort from governments, corporations and researchers to cope with the issue of ‘peak oil’.
Topic 3: Living Spaces

What you need to know:

- Defining a ‘good living space’ and how it may vary with age and stage in the life cycle etc
- The processes that lead to variations in the quality of living spaces
- Perceptions of living spaces and how these vary spatially between urban and rural
- How personal choices about living spaces are affected by age and life cycle
- Pressures on rural areas in developed countries to provide more living spaces
- The pressures on living spaces in urban areas, their impacts, and the compromises made in creating good quality living space
- The need for more affordable quality living spaces in urban and rural areas
- The links between quality of living spaces and economic wealth
Attempts to create high-quality living spaces in urban and rural areas for all urban populations

**Key Terms**

<table>
<thead>
<tr>
<th>Accessible rural areas</th>
<th>Countryside within easy reach of urban areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural background</td>
<td>The origins of an individual’s or group’s belief system</td>
</tr>
<tr>
<td>Economic status</td>
<td>The position held by an individual, group or country in terms of their economic power</td>
</tr>
<tr>
<td>Expatriate community</td>
<td>Overseas communities made up of non-national’s e.g. the British living in Spain</td>
</tr>
<tr>
<td>Global city</td>
<td>A major urban area that has a significant role in controlling the international flows of capital and trade</td>
</tr>
<tr>
<td>Global hub</td>
<td>A major centre of global communications, such as an international airport</td>
</tr>
<tr>
<td>Greenfield sites</td>
<td>A piece of land that has not been built on before, but is now being considered for development</td>
</tr>
<tr>
<td>Inner city living space</td>
<td>Residential areas within city centre areas</td>
</tr>
<tr>
<td><strong>Organic agriculture</strong></td>
<td>Farming systems that use no artificial chemicals</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td><strong>Pull factor</strong></td>
<td>Something that attracts people to a location</td>
</tr>
<tr>
<td><strong>Push factor</strong></td>
<td>Something that makes people wish to leave a location</td>
</tr>
<tr>
<td><strong>Redevelopment</strong></td>
<td>Development which aims to stimulate growth in areas that have experienced decline</td>
</tr>
<tr>
<td><strong>Regeneration</strong></td>
<td>Growth in areas that have experienced decline in the past</td>
</tr>
<tr>
<td><strong>Remote rural areas</strong></td>
<td>Rural areas that are distant from and thus little affected by urban areas and their populations</td>
</tr>
<tr>
<td><strong>Rural Idyll</strong></td>
<td>The common perception that rural areas are quiet and attractive - and therefore good places to live</td>
</tr>
<tr>
<td><strong>Sustainable living space</strong></td>
<td>Living spaces that are designed in such a way to have a small impact on the environment and thus more durable than others</td>
</tr>
<tr>
<td><strong>Urban sprawl</strong></td>
<td>Urban growth, usually weakly controlled, into surrounding rural and semi-rural areas</td>
</tr>
</tbody>
</table>

**Defining a ‘good living space’ and how it may vary with age and stage in the life cycle etc**

People’s idea of what makes good living spaces tends to vary due to age and their economic background. You tend to form a strong bond with a living space if it meets your needs and it has access to the things you like doing.

**Factors affecting how we view places:**

<table>
<thead>
<tr>
<th><strong>Age</strong></th>
<th>Younger people seek out more variety in their social lives and this makes cities more attractive. Older people or those with families tend to find rural areas more attractive.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility</strong></td>
<td>Personal mobility will affect how isolation we feel. Rural areas tend to have more problems with mobility with a</td>
</tr>
</tbody>
</table>
**The factors that lead to variations in the quality of living spaces**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural background</td>
<td>This impacts on how we see places and how attractive we find them</td>
</tr>
<tr>
<td>Knowledge and perception</td>
<td>Highlights the 'idea' of a place without people actually knowing the area e.g. crime rates etc</td>
</tr>
<tr>
<td>Economic status</td>
<td>Areas that offer job security are deemed more attractive</td>
</tr>
</tbody>
</table>

**Perceptions of living spaces and how these vary spatially between urban and rural**

The rural idyll is an image that people have of the rural life in developed countries e.g. less traffic, crime and villages shops etc. This idea creates high demand for housing meaning that there is an increasing amount of poverty 3% in rural areas, compared to 1% in urban areas.

Rural areas are often used as weekend retreats for urbanites who venture to the countryside each weekend. The village’s population also grows during the summer months due to holiday homes. However during the winter the population declines leading to closures of pubs etc.

**LEDC: Rush for the cities**
On the other hand in developing countries there is a rush for the cities as young people search for jobs and schools for their children. This is called ‘rural-urban migration’. The idea of the ‘bright lights syndrome’ attracting rural people to the cities has lead to slums developing in the cities of the LEDC’s.

**How personal choices about living spaces are affected by age and life cycle**

20 are moving back to the city:
This process is called ‘re-urbanisation’ where young people (25-35) who are relatively well off move back into the cities for:
- good night life
- close to work
- close to high quality shopping
- good public transport so no need for a car
- culture and leisure facilities close by

Retiring to the sun:
Many older people are choosing to retire to eastern and southern Spain:
- warmer climate than the UK
- Modern health facilities
- House prices are lower than the UK
- Lower heating costs and household bills than the UK
- Cheap to fly home to see friends and family

Pressures on rural areas in developed countries to provide more living spaces

With the growing populations there are pressures to build on ‘Greenfield sites’ (areas which have not been built on before e.g. countryside).

**Increasing housing demand and supply in North Wiltshire:**

- In 1996 the county of Wiltshire were expected to need 60,000 more homes by 2016 in order to attract more businesses and grow
- Land use in the area is 81% rural and only 19% urban
- The government has emphasised the reuse of Brownfield sites (areas that have previously been built on e.g. abandoned factories)
- The new homes are to be built 44% on Brownfield sites and 56% on Greenfield sites as long as they are not close to areas of outstanding natural beauty or there are physical issues e.g. flooding
The pressures on living spaces in urban areas, their impacts, and the compromises made in creating good quality living space

**Why urban areas are in demand?**

Tokyo: in 2007 the population was 12.8 million (10% of Japan). The main issue is living in the city due to fact that a typical Japanese home is less than 100m² with a flat taking up 40m². This is because the land prices in Tokyo are very high at £1000 per m².

Solution: Building underground cities which are underground spaces connected by trains and roads under the surface. Solution: Urban Geog-grid - vast network of underground city spaces linked by tunnels. Cost = £40 billion, will house 0.5 million.

**USA: Las Vegas**

Located in the state of Nevada with 1.6 million living their. The main issue is that due to its location the climate is very hot and dry. In order to supply Las Vegas with the millions of litres water required, it is pumped from Lake Mead and the ground water. This means that the area is running out of water as it is not being replenished:

Impacts:
- Las Vegas used more water per person than any other city in the world
- Groundwater levels have dropped by more than 90m
- Off-road vehicles are damaging the desert and local wildlife
- Urban temperatures are 5° above the average in Las Vegas

Attempts to create high-quality living spaces in urban and rural areas for all urban populations

**MEDC Examples:**

1) **Barcelona (Spain)**

Created a scheme called ‘bicing’ where people buy a year’s membership for £30 which allows them to pick up a bike from one of the 400 stations that are located around the city. There are over 6000 bikes and more than 175000 members.

2) **Martin (Hampshire)**
Looked to control their food system so that it could become less dependent on supermarkets etc. Residents have joined Future Farms which is a community allotment of 3 hectares growing vegetables and raising animals. It is sold by the villagers for profit as well as for their own food.

3) Compact Communities
Attempts to reduce the environmental impact of our living spaces by making the best use of space. Transport systems are located within the housing areas so there is less need to travel. Housing is dense so it provides enough people to support the local services and use public transport.

**LEDC Examples:**

1) Masdar (United Arab Emirates)
A new settlement for 50,000 people has been built 17km outside the capital. It is claimed to be the first ‘zero-carbon, zero waste’ city. For example wind towers are placed on top of buildings to suck cool air in and warm air out. Rooftops are covered with solar panels and the city will be car free due to extensive public transport.

2) Eco-villages in Brazil
Ecoovila is a small eco-village located in the city of Porto Alegre. The aim was to develop affordable housing for everyone and use eco-friendly building materials. All houses face the sun so they soak up its energy, houses are cooled by underground chambers in the homes, grass roofs reduce inside temperatures and help to insulate. They have used local material such as clay bricks and sewage is treated in a biological reed-bed system.

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**Topic 4: Making a Living**

What you need to know:

- Understand how the balance between employment sectors is changing
- Process of industrialisation and deindustrialisation and the impacts of these
- Factors leading to diversification of rural economy in a developed country
- Understand the environmental impact of employment change in urban areas of a developing country
➢ Understand the environmental impact of de-industrialisation and economic diversification in one area within a developed country
➢ Identify the potential for regeneration and environmental change on Brownfield sites
➢ Identify the potential for greener growth in urban areas.

**Key Terms**

<table>
<thead>
<tr>
<th><strong>Brownfield site</strong></th>
<th>A piece of land that has been used and abandoned, and is now awaiting some new use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clark fisher model</strong></td>
<td>A generalised description of how societies’ employment structures change as they develop</td>
</tr>
<tr>
<td><strong>Deprived area</strong></td>
<td>An area in which there is a damaging lack of the material benefits that are considered to be basic necessities e.g. employment, housing etc.</td>
</tr>
<tr>
<td>Derelict land</td>
<td>Land on which factories or houses have been demolished</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Employment structure</td>
<td>The proportions of people who work in primary, secondary, tertiary or quaternary jobs</td>
</tr>
<tr>
<td>Formal sector</td>
<td>Work where people are formally employed, with permanent jobs and regular pay</td>
</tr>
<tr>
<td>Green sector</td>
<td>The part of economic activity that pays attention to environmental issues</td>
</tr>
<tr>
<td>Industrial Stage</td>
<td>The economic stage when manufacturing industry develops</td>
</tr>
<tr>
<td>Informal sector</td>
<td>Forms of employment that are not officially recognised e.g. people working for themselves on the streets of developing cities</td>
</tr>
<tr>
<td>Post-industrial stage</td>
<td>Period in the development of a society when manufacturing industry declines in importance and is replaced by other forms of employment</td>
</tr>
<tr>
<td>Pre-industrial stage</td>
<td>That period in development of a society when manufacturing industry has yet to develop</td>
</tr>
<tr>
<td>Primary employment</td>
<td>Working in the primary sector – extracting and exploiting raw materials e.g. miner</td>
</tr>
<tr>
<td>Quaternary employment</td>
<td>Working in jobs that are related to ICT and research</td>
</tr>
<tr>
<td>Regeneration</td>
<td>Growth in areas that have experienced decline in the past</td>
</tr>
<tr>
<td>Secondary employment</td>
<td>Working in the secondary sector, making things</td>
</tr>
<tr>
<td>Sustainable</td>
<td></td>
</tr>
<tr>
<td>Telecommuter</td>
<td>Person who works away from the office through the use of the internet</td>
</tr>
<tr>
<td>Tertiary employment</td>
<td>Working in the service sector, producing 'intangible goods' e.g. teacher</td>
</tr>
</tbody>
</table>

**Understand how the balance between employment sectors is changing**

Employment can be divided into four main groups or sectors:
- **Primary industry** - people extract raw material from the land or sea e.g. farming
- **Secondary industry** - people are involved in manufacturing e.g. house building
- **Tertiary industry** - provide a services e.g. selling goods or nursing
- **Quaternary industry** - provide information and expert help e.g. IT
Employment structures: The proportion of people working in each of the primary, secondary and tertiary sector

**Triangulation graphs**

These are a method of showing employment structure and should be read in the direction of the arrows

**World Employment Structures**

Globally LEDC's such as Nigeria and Kenya have high amounts of primary industries due to the fact that there is a lack of education and they are mainly subsistence farmers. MEDC’s such as UK and USA tend to focus on Tertiary activities due to higher education rates and tertiary jobs are higher paid. Primary is low due to the fact that most MEDC’s have taken to importing food stuffs etc as it is cheaper.

Tertiary services support and promote quaternary services
In the pre-industrial stage low-income countries are mainly employed in primary production, middle income countries are focused on secondary industries and finally high-income countries are dominated by the tertiary sector.

This model tell us how employment changes over time and how the balance of employment changes as a country develops. However it does assume that there is a simple straight development path from LEDC's to MEDC's.

**Process of industrialisation and deindustrialisation and the impacts of these**

Industrialisation is a social and economic process which changes pre-industrial societies (farming) to industrial ones. The industrial output is a good way of measuring how industrialised a country is.

Deindustrialisation is the decline in manufacturing (secondary) industry and the growth in tertiary and quaternary industries.

**Mexico: an industrialising country**

Mexico was originally mainly focused on agriculture but the growth of industry meant many people moved from the rural areas to the cities. In 1950s manufacturing became the biggest provider of wealth. Manufacturing has been attracted here due to:

- Reduced demand for traditional products due to new technologies
- Greater competition from countries such as China and India
- Mechanisation has increased productivity and reduced the number of workers needed
- a large and highly skilled workforce
- large consumer market (plenty of people to buy the products)
- Low distribution costs
- Close to government who make the decisions

Re-export businesses have sprung up which are located close to the USA boarder, they are owned by foreign companies who process goods imported from the USA and re-export duty free (no tax!). This has caused many problems such as the growth of the 'informal sector' e.g. shining shoes.

**Germany: a de-industrialised country**

Germany has the 4th largest economy in the world. Deindustrialisation in the 1980s forced manufacturing to move to lower-cost sites (many abroad) and the growth of service industries. The decline in manufacturing meant that Germany had to act to save its economy by setting up small manufacturing businesses. Germany now has 31% of people employed in manufacturing but many people are now involved in knowledge-based industries.

**Factors leading to diversification of rural economy in a developed country**

Diversify = create more variety in jobs and industry so that people are not dependent on just one activity e.g. farming.

Challenges for the countryside

- Lack of affordable homes due to purchasing of second homes in rural areas = increasing house prices
- Lack of transport links
  - Public transport is infrequent and expensive

There has been a decline in farming which has meant that farmers have had to diversify their livelihoods in order to survive:

- Food Festival e.g. Ludlow Food Festival = celebration of local food that attracts lots of people
- Rural sports e.g. Trout fishing in Cumbria. Includes ideas such as paintballing, shooting etc

- Local depopulation
  - Younger people move out of rural areas due to lack of jobs etc

- Disappearance of local services e.g. bus services, health services have declined

Change in farming:
- Low wages, increasing mechanisation, cheaper imports
- Supermarkets have driven prices down
- Farm diversification e.g. Runnage Farm Dartmoor has accommodation. Increase of 40% to UK farm incomes due to diversification.

**Understand the environmental impact of employment change in urban areas of a developing country**

Mexico City has seen the growth of its manufacturing industries which in turn attracts over 1000 people per day to the city. The growth of industry has created many problems:

1. Pollution of the air by both factories and cars. Mexico City is surrounded by mountains so the air cannot move freely around and this means pollutants such as nitrogen oxides become trapped becoming 'photo-chemical smog'.
2. The new firms and around 20 million people all demand fresh water. Providing this is an issue as the city takes water from underground aquifers which are becoming empty. As they empty the land also sinks (9mm per year).
3. Water supply is polluted by firms who dump chemical waste into rivers
4. Waste disposal system cannot cope. Although the authorities collect 10,000 tones per day, the city produces 11,000 tonnes per day; the rest is thrown into the streets.

**Understand the environmental impact of de-industrialisation and economic diversification in one area within a developed country**

<table>
<thead>
<tr>
<th>Economic impacts</th>
<th>Social Impacts</th>
<th>Environmental Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>- UK use to be a large shipbuilding area but has declined over the years</td>
<td>- Family breakdown</td>
<td>Positive:</td>
</tr>
<tr>
<td>- Loss of personal income</td>
<td>- Alcoholism and crime</td>
<td>- More available land</td>
</tr>
<tr>
<td>- Loss of taxes to national and local governments</td>
<td>- Permanent unemployment</td>
<td>- Less water used in industrial processes</td>
</tr>
<tr>
<td>- Rising demand for income support services</td>
<td></td>
<td>- Less energy required for machines</td>
</tr>
<tr>
<td>- Loss of income in the local areas due people's lack of spending power (can't afford to buy things)</td>
<td></td>
<td>- Reduced traffic congestion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reduced noise and air pollution</td>
</tr>
</tbody>
</table>

**Identify the potential for regeneration and environmental change on Brownfield sites**

Brownfield site = an area of land which has been built on before and is suitable for redevelopment
Greenfield site = an area of land that has not previously been built on before
Developing Brownfield sites does have some negatives:
- Often more expensive to develop because of clean up costs
- Regulations for reclaiming the sites can often be a barrier to new development
- Some of these sites can be important wildlife habitats

Example: Birmingham - Fort Dunlop
The West Midlands Regional Development Agency has helped to support the regeneration of the city areas affected by industrial decline.

Fort Dunlop in its prime employed 12000 people and in 1816 a village known as ‘tyretown’ was developed around the site to meet the workers needs. The factory closed in 1980s when Dunlop moved its manufacturing abroad. It was empty for 20 years and then in 2002 it received planning permission to redevelop into a mixed-use sustainable 24-hr community.

Identify the potential for greener growth in urban areas.

Green employment is ‘attempts to improve air and water quality, recycle and reduce waste, promote conservation and to improve the environment’. It includes the following:
- Making ‘green’ products from natural renewable materials or recycled goods
- Constructing green buildings that use less energy, recycle water and are built from natural materials
- Offering ‘green’ services e.g. ecotourism
- Quaternary services e.g. architects designing green buildings

Examples
1) Eco-tourism
   Tries to respect the environment and local people, but reduce the impact of tourisms. It is growing on an average of 5% per year. Uluru (Ayers Rock) in Australia offers eco-tourism by the local Anangu people. They offer guided tours to cultural sits and teach about their desert life.
   - ‘High cost-low volume’ which means it costs £280 per night at the hotels
   - Most tourists arrive by air - increasing environmental impact
   - Located in the remote desert so everything has to be brought in by road

2) Recycling
   Curitiba in located in SE Brazil. Its population has grown rapidly to 1.6 million creating the normal problems of unemployment, poor housing etc. In 1989 it was the first city in Brazil to introduce separation and recycling of its waste. Today 2/3rds of the city’s waste is processed creating employment sorting organic and
inorganic waste. Recovered materials are then sold to local factories and the money is used to fund social programmes e.g. schooling.

**Topic 5: Changing Countryside**

What you need to know:
Issues facing rural areas in developing countries, e.g. rural isolation, economic decline, depopulation.

Pressures on rural areas in developed countries.

The impact of changes to the national and global economy on rural areas in developing economies.

Urban-rural links and their impact on rural areas in one developed country, and the pressures created.

Initiatives taken in rural areas in developing countries can help to address issues of isolation and economic decline.

Declining rural areas can develop more sustainably if appropriate action is taken.

Initiatives taken in rural areas under pressure in developed countries can help to address the issues.

Rural areas under pressure can develop more sustainably in future if appropriate action is taken.

Key Terms

| Accessible countryside | Countryside within easy reach of urban areas |

Accessible countryside | Countryside within easy reach of urban areas
Chocolate box village | A rural settlement that appears to match the picturesque image sometimes used on boxes of chocolates

Commuter belt | A residential area within relatively easy reach and often surrounding a city, where many residents travel to and from the city daily

Counterurbanisation | The movement of people and employment from major cities into smaller settlements and rural areas located just beyond the city

Diversification |

Environmental degradation | Negative impacts of the natural environment, generally through human action

Globalisation | The process, led by transnational companies, whereby the world’s countries are becoming part of one vast economy

Grassroots scheme | A scheme that originates within a local community rather than being imposed from above

Honey pot | A place of special interest or appeal that attracts large number of visitors and tends to become overcrowded at peak times

Rural depopulation | The decline of population in rural areas and regions

SSSI | Site of Special Scientific Interest - a small area that has officially been protected because of its wildlife or geology

Telecottageing | Working from home in the country, using computer communication

Urban Fringe | The countryside surrounding an urban area

Issues facing rural areas in developing countries, e.g. rural isolation, economic decline, depopulation
**Spiral of Decline**

**Physical and human processes affecting developing areas:**
1. Environmental degradation → due to deforestation and desertification → clearance of vegetation in order to farm means soil erosion increases → increasing droughts → lack of food
2. Population change → high rates of natural increase → pressure on natural resources
3. Urbanisation → more people are leaving the countryside as they are attracted to the cities for jobs → only elderly and females left in the countryside to do the farming
4. Human hazards → diseases and wars cause higher death rates → less people to produce the food
5. Globalisation → land can be turned into exotic crop growing for people thousands of miles away

**Named Example: Malawi**

**Key Facts:**
- Annual GSP $800
- 50% of the population lives below the poverty line
- 33% are underfed
- Owes $1.8 billion in debt

Problems faced:
1) Rural isolation in southern Malawi
   - Only 1 for every 139 people have access to a telephone
   - Rural economy has hardly grown as it is poor infrastructure e.g. during wet season it takes hours to travel 20 km

2) Rural Poverty
   - Every day farmers spend 43 minutes collecting wood, 48 minutes walking to farm plots and 128 minutes walking to market
- Rural areas have fewer healthcare facilities
- Primary schooling is free, but secondary schooling costs a family most of their year’s income

3) Depopulation
- More people are leaving the countryside as they are attracted to urban areas for jobs, education and healthcare. This results in the elderly and female population being left behind.

The impact of changes to the national and global economy on rural areas in developing economies

Named Example: Malawi

Growth of large estates created during the 19th Century colonisation of Malawi by Britain. They estates plantations for tea, coffee and tobacco. They hire local landless farmers and the get paid 1p per kg of tea leave picked.

Tobacco Tenants- Malawi has 1.4 million child labourers. These farmers are allocated a plot of land by estate owners to produce a specific amount. Many tenants lack medication, proper housing and safe drinking water.

Small holders – the majority of farmers in rural areas, 1.8million families and produce 80% of its food. They are using subsistence farming as they only produce enough food for themselves.

Pressures on rural areas in developed countries

1) Decline in agricultural employment
   The amount of land being farmed has decreased, but what it produces has increased. The UK now grows around 60% of its food. Farming has also declined in the urban fringe as more land is converted into building plots

2) Farm diversification
   Due to the decline in farming, many farmers are not making enough profit from food production alone. So they are finding other ways of making money out of the farm or turning their farms into completely different businesses. Examples: farm buildings turned into cottage industries e.g. making greeting cards or renovated into second homes.

Spiral of decline in rural areas

People become dissatisfied with worsening quality of life  →  People leave for better opportunities elsewhere
Urban-rural links and their impact on rural areas in one developed country, and the pressures created

****Named Case Study: Lake District ******

The Lake District, in Cumbria, is one of the UK’s most popular National Parks. (National Parks are outstanding areas of natural beauty). Due to its popularity and accessibility it has a variety of problems:

1) Accessibility - under pressure due to how easy it is to get to the Lake District e.g. Motorways bring people from Preston, Manchester etc
   - UK car ownership has risen
   - Rail access is good and improving
2) Traffic Congestion is a major problem e.g. 85% of people arrive by car causing congestion on the narrow rural lanes
3) House prices are high due to summer homes pushing the prices of housing higher beyond the reach of local people
4) Second homes - 40% of houses are second homes which destroys the local communities
5) Seasonal unemployment - jobs in tourism are seasonal and low paid
6) Footpath erosion - 7 million visitor days each year cause footpaths to become trampled and plants died.

Initiatives taken in rural areas under pressure in developed countries can help to address the issues: LAKE DISTRICT CASE STUDY CONTINUED!

Making farming greener:
- Arable rotation = rotating vegetables e.g. peas etc can fix nitrogen and reduce the amount of fertiliser needed
- Organic Farming = Relies on crop rotation, compost and biological pest control to maintain the soil and control pests. Does not use chemical fertilisers so it is environmentally friendly.
- Hedgerows = these control livestock and help to prevent soil erosion and water run-off.
**Housing problem in the Lake District**
- charge second home owners more than 100% council tax to raise money
- Limit second home ownership
- Convert disused farm buildings into affordable housing
- Stop the Right to buy, to preserve the amount of council housing.

**Traffic problem in the Lake District**
1) Build Bypasses around key towns e.g. Ambleside - would improve journey times and increase road capacity
2) Park and Ride at key towns - reduce town centre traffic
3) Limit car parking = reduce the number of parking spaces to put visitors off arriving by car
4) Charge vehicles entering the national park = could use the money raised to maintain the parks

**Initiatives taken in rural areas in developing countries can help to address issues of isolation and economic decline**

***Named Case Study: Ethiopia***

**Crops and a shop:**
Ethiopia is one of the poorest and least developed countries in the world. Due to its location the climate is hot and arid making farming extremely difficult. FARM-Africa is a non-governmental organisation which works with local rural communities in Eastern Africa. The organisation helps them to built canal to channel water into the fields, received starter kit of seeds and loans to open a small shop to sell items like soap and salt.

**Ethiopia’s millennium villages**
Millennium Promise is a non-governmental organisation who aims to end rural hunger, disease and poverty. It is a 'bottom-up' approach which uses the following ideas:
- building micro dams and safe water points
- refurbishing classrooms in local schools
- Distributing insecticide-treated bed nets to tackle malaria

**Fish Farming**
World Vision has set up a project to develop fish farming in Malawian families affected by HIV/AIDS. It helps farmers to dig small, rain-fed ponds designed for common freshwater fish. Kitchen waste is used to feed the fish and provides a good source of income to the families. It has helped reduce children malnutrition from 45% to 15%. It has also doubled the income of 1200 households.
Topic 7: Development Dilemmas

What you need to know:

- Economic development can lead to regional economic differences in developing countries
- Disparities can develop between urban and rural areas in the same country
- Development models in developing countries are usually ‘top-down’ or ‘bottom-up’
- The impact of top-down development in a developing country
- Characteristics of bottom up development
- Impacts of bottom up development in a developing country
- The characteristics of sustainable development in rural areas
- Are top-down or bottom-up schemes more appropriate for rural areas in developing countries in future?
### Key Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate Technology</td>
<td>Equipment that the local community is able to use relatively easily and without much cost</td>
</tr>
<tr>
<td>Bottom-up approach</td>
<td>Development projects that come from local communities rather than central government or external agencies</td>
</tr>
<tr>
<td>Core region</td>
<td>The most important social, economic and political area of a country or global region - the centre of power</td>
</tr>
<tr>
<td>Disparity</td>
<td>A great difference - between parts of a country in terms of wealth</td>
</tr>
<tr>
<td>Environmental Impact Assessment</td>
<td>A method of evaluating the effects of plans and policies on the environment</td>
</tr>
<tr>
<td>Hydro-electric power</td>
<td>The use of fast flowing water to turn turbines which produce electricity</td>
</tr>
<tr>
<td>Human Development Index</td>
<td>A measure of development that uses four economic and social indicators to produce an index figure that allows comparison between countries</td>
</tr>
<tr>
<td>Micro-Hydro Schemes</td>
<td>Small-scale HEP that generate electricity locally</td>
</tr>
<tr>
<td>Millennium Development Goals (MDGs)</td>
<td>The development goals agreed by the world governments at the UN summit in September 2000</td>
</tr>
<tr>
<td>Non-government organisations</td>
<td>Charities such as WaterAid who do not report back to a specific government or country</td>
</tr>
<tr>
<td>Periphery</td>
<td>The outer limits or edge of an area, often remote or isolated from the core</td>
</tr>
<tr>
<td>Poverty</td>
<td>A state of shortage of money and goods, usually measured in terms of average wealth and income in society</td>
</tr>
<tr>
<td>Poverty Cycle</td>
<td>A set of processes that maintain a group or society in poverty</td>
</tr>
<tr>
<td>Top-down approach</td>
<td>Approach in which projects are set up and organised by governments, often with little consultation with local communities</td>
</tr>
</tbody>
</table>
Economic development can lead to regional economic differences in developing countries

Development means improvement for people and the economy. Within a country there tends to be disparity between the core areas (urban areas with the majority of people and services) and the periphery (rural remote countryside).

Upward spiral caused by Multiplier effect

Measuring Development:

1) Economic Wealth
   Measured as **Gross Domestic Product** (GDP) per capita = the total value of goods and services in a nation measured over a year
2) **Human Development Index (HDI)** gives a country a score between 0 and 1 and is based on life expectancy, education and income.
3) **Birth rates** - The number of babies born per thousand per year
4) **Death rate** - The number of deaths per thousand per year
5) **Infant mortality rate** - The numbers of babies who die before the age of 5 per thousand per year
6) **Access to clean water**
7) % **rural population** - The amount of people who live in peripheral/countryside areas
8) **Types of employment** - amount/percentage of people employed in primary, secondary, tertiary etc
9) **Level of literacy** - the numbers/amount of people who can read and write
Disparities can develop between urban and rural areas in the same country: India

**Core area: Maharashtra**  
Is India’s richest core region with the highest GDP and contains India’s largest city, Mumbai. It has grown due to various reasons:
- Services e.g. banking, IT and call centres. Mumbai’s universities produce English speakers who are employed by large Western companies e.g. BT.
- Manufacturing: cotton, food processing, steel, engineering and cement are commonly exported.
- Entertainment: Mumbai has the world’s largest film industry – Bollywood
- Leisure and business services – hotels and restaurants

**Periphery area: Bihar**  
Bihar is India’s poorest state with 86% of population live in rural areas with most working in farming.
- Average incomes are only 6000 rupees (£75) per person per year. This is 33% of India’s average income
- 55% of households live below the poverty line and 80% of people work in low-level jobs
- It gets very little investment from companies because its people cant afford basic services
- In 2003, only 58.5% had electricity and 12% water-flushed toilets
- School attendance is low with only 35% of children attending primary school and 8% reached upper primary.

**Development models in developing countries are usually ‘top-down’ or ‘bottom-up’**

There are different ways that a country can prompt development:

**Top Down Decision Making**  
Decisions are made by the national government and new regulations/laws are put into place. Local people are not involved in the process or decisions being made. E.g. Dams for Hydro-Electric Power (HEP)

**Problems:**  
- Country gets into debt as it borrows large amounts of money from the World Bank  
- Conditions are often attached to the loans  
- Uses lots of energy and is expensive to operate after being built
Often take resources away from peripheral areas that need it

Local people are fully involved in the process and decision-making and therefore the development scheme are often more appropriate to the local needs of the people.

E.g. Building a biogas digester

The impact of top-down development in a developing country: Santo Antonio Dam in Brazil

Background:
- Part of the Madeira River Project
- Madeira River Basin covers 1.5 million km² and the dam is located 5km upstream from Porto Velho
- Cost $5.3 billion to build and will produce 3,150 MW of electricity

<table>
<thead>
<tr>
<th>Social</th>
<th>Economic</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td><strong>- 20,000 jobs created</strong>&lt;br&gt;- Attracted 100,000 people to the area&lt;br&gt;- Health, education etc have improved&lt;br&gt;- Education and training centre for immigrants created**</td>
<td><strong>- Produce the cheapest electricity in Brazil&lt;br&gt;- Will supply 8% of Brazil’s electricity&lt;br&gt;- Better infrastructure (roads and waterways) in centre of S. America</strong></td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td><strong>- Dam built despite local opposition&lt;br&gt;- 3,000 people forced to leave their homes&lt;br&gt;- Indigenous peoples’ land at risk of flooding&lt;br&gt;- Increase in malaria due to greater water</strong></td>
<td><strong>- cost $22 billion&lt;br&gt;- Too much reliance on HEP (76% of electricity)&lt;br&gt;- High sediment loads can block turbines reducing their effectiveness&lt;br&gt;- commercial fishing at</strong></td>
</tr>
</tbody>
</table>
Impacts of bottom up development in a developing country: Micro-hydro schemes in Peru

Micro-Hydro schemes are those with an electricity generating capacity of less than 100KW. The water is diverted from a stream to a high point of the valley side and then down a pipe to turn a turbine.

These are considered appropriate for the local skills level and help spread technology to the rural periphery. They are low cost and involve the local people.

In the poorest area of Peru 44% of people live on less than $2 a day. Rainfall in the area is high so a charity called 'Practical Action' helped install 50 schemes providing electricity for 30,000 people.

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<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td>- Cheaper electricity than a large HEP scheme</td>
<td>- Avoids flooding large areas of land</td>
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<td></td>
<td>- Scheme uses local skills and cheap technology</td>
<td>that would take away farmland</td>
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<tr>
<td>- Local people involved in all stages of the scheme</td>
<td>- 60% of people in the area said that their income had increased</td>
<td>- Avoid the need to burn wood from local trees for fuel</td>
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<td>- Health care is improved as electricity allows storage of medicines</td>
<td></td>
<td>- Replaces fossil fuel use</td>
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<td>- Electricity for schools</td>
<td>- Cheaper electricity than a large HEP scheme</td>
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<tr>
<td>- Training of local people to operate the technology gives them skills</td>
<td>- Demand for electricity is variable</td>
<td>- Small storage dam is needed which alters the flow of the river and spoils the scenery</td>
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<tr>
<td></td>
<td>- Initial capital cost is high for a poor village e.g. £500 per household</td>
<td></td>
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<tr>
<td></td>
<td>Some specialised equipment had to be imported</td>
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<td><strong>Disadvantages</strong></td>
<td>- Poor people have to pay for the electricity which is metered</td>
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<td>- Some villages have doubled in size creating population pressures</td>
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The characteristics of sustainable development in rural areas

Are top-down or bottom-up schemes more appropriate for rural areas in developing countries in future?

Achieving sustainable development can become a problem for developing countries as they are stuck in a cycle of poverty. Large top-down schemes that focus on national problems (e.g. Santo Antonio Dam) may overlook the rural poor and do very little to improve the lives of local people living in the periphery. Small-scale, bottom-up schemes are often more appropriate and more sustainable in the long term.

**Cycle of Poverty**

- Subsistence farming
- Little or no surplus farm produce
- Little or no income
- No investment in land improvement, machinery or materials

**Features of Sustainable Schemes**

1. Social – long term benefits for the local population e.g. education, energy etc
2. Local Decision making – local people involved in all stages of planning and choice
3. Nature-small overall impact on the natural environment
4. Affordable – initial cost and maintenance is low enough for local people to afford them
5. Appropriate technology – method and equipment used are at a level people can understand and use
It is hard for developing countries to improve the well-being of the population whilst still ensuring the conservation of ecosystems and resources.