



Haberdashers'
ABRAHAM DARBY

Our Natural World Exam (Physical)

Global Hazards

Distinctive landscapes (Rivers and Coasts)

Changing Climate – UK and global impacts

Sustaining Ecosystems



Topic 1 – Global Hazards

Weather hazards:

Case studies of **two** contrasting natural weather hazard events arising from extreme weather conditions. The case studies must include a natural weather hazard from each bullet point below:

- flash flooding or **tropical storms**
- heat wave or **drought**.

There must be **one** UK based and **one** non-UK based natural weather hazard event.

- For each chosen hazard event, study the place specific **causes** (including the extreme weather conditions which led to the event), **consequences** of and **responses** to the hazard.

Tectonic Hazards:

A case study of a tectonic event that has been hazardous for people, including specific **causes**, **consequences** of and **responses** to the event.



Hazards – Tectonic Hazard in a LEDC – Nepal Earthquake, April 2015

Background

Nepal is situated on a collision plate boundary. The Indian plate is colliding with the Eurasian plate – they push together 20mm per year.. The earthquake struck on 25/04. The earthquake was a magnitude 7.8 with a shallow focus (15km deep) and an epicentre close to Kathmandu, a densely populated city located in a valley, surrounded by the Himalayan foothills.

Nepal is an LEDC. It's GNI is only \$730 per person, and 25% of its 30 Million people live below the poverty line.

'SEE' Impacts/Consequences

Primary consequences happen as a DIRECT result of the e/quake

Env: Landslides & avalanches were triggered in the mountains –rocks ended up in the valley where Kathmandu is located.

Social: 19009 injured (HIGH due to the area being densely populated and poor quality buildings that collapsed easily. 8635 killed (demographic) due to high magnitude of earthquake and temperatures dropped at night affecting homeless 180 buildings reduced to rubble in Kathmandu = resulted in homelessness & lack of access to health facilities

Economic: \$10 billion damage

Airport damaged; other transport infrastructure too

Secondary impacts as an indirect result of the earthquake: homelessness, lack of health facilities

Difficult to get help to where needed due to damage

Response

Short-term

NGOs Red Cross & Oxfam sent aid
 India –sent blankets, food, medical supplies
 Cash for Work projects set up –survivors paid to rebuild own communities – makes the scheme more likely to succeed as people see it benefits them.

Long Term

People are now being educated across Nepal to do earthquake drills.
 The Government of Nepal is trying hard to reduce poverty so that people can build homes which could withstand earthquakes.
 BUT: efforts hampered by airport closure and damaged roads and hadn't finished the clear up from the last earthquake

Exam Question

With reference to a tectonic event you have studied, discuss the consequences of the event (6)

With reference to a tectonic event you have studied, evaluate the success of the responses to the event (8)



Hazards – Climatic Hazard in a LIDC / EDC – Typhoon Haiyan, November 2013

Background

The Philippines is located close to the Equator on the Pacific Ocean. It is regularly affected by Typhoons because the sea temperatures are over 27°C

The Typhoons started in the Pacific Ocean, moving west and hit the Philippines on 9th November 2013, then moved North-West towards Vietnam and Laos. Wind speeds reached up to 195mph – the strongest Typhoon ever to make landfall – known as a Super Typhoon

Impacts/Consequences

Demographic/Social: 6300 people killed 27,000 injured
 0.5 mill people are displaced/homeless 130,000 homes destroyed
 Water & sewage systems damaged – disease spread

Economic: Major rice, sugar & coconut oil producing areas destroyed - \$85 million
 Estimated cost to rebuild was \$5.8bn
 Fishing communities severely affected with the storm destroying boats and gear

Environmental: Storm surge reached 20ft at its deepest – people were not prepared for the scale of the storm surge; flash floods; landslides
 Farmland destroyed; a punctured boat leaked 85 000 litres of oil into the sea

People aware of typhoons as they are regularly affected – BUT not warned about the storm surge and so many more died due to lack of evacuation – where could they go in reality?

Response

Short Term:

- UN raised £190 million in aid
- Australia sent \$28 million plus staff, hygiene kits, water carriers
- UK & USA sent helicopter carrier ships, which were used to reach the most vulnerable communities
- Save the Children and charities sent workers over to distribute aid and work with the most vulnerable communities
- The British government gave 8,000 shelter kits
- World Health Organisation co-ordinated health workers who went to help

Issue: airport damaged; looting

Long Term:

- *Homes were rebuilt with the help of the EU, from coco-lumber (wood from the coconut trees which had been destroyed) which helped clear the land. These houses were stronger than other materials
- *Over 100,000 Mangrove trees replanted – they act as a natural barrier to the coastline from strong winds and storm surges
- *People evacuated in December 2014 – very few deaths that time 😊
- *The most vulnerable people affected were given vouchers redeemable for construction materials and small cash grants to pay for labour to rebuild

Exam Question

CASE STUDY – A non-UK based natural weather hazard event
 Discuss the place-specific causes of your chosen natural weather hazard event.
 (6)



Hazards – Climatic Hazard in a AC – UK Drought, 2012

Background

Much of central, eastern and southern England and Wales experienced a prolonged period of below average rainfall from 2010 to early 2012.

Causes:

Areas affected by drought received only 55-95% of usual rainfall between April 2010-May 2012. Unusual wind patterns brought dry winds from eastern Europe rather than usual wet winds from the western Atlantic.

The rainfall from April to July topped up rivers and streams but did not increase the amount of ground water (water stored below the ground). In March UK reservoirs and lakes were at 50% capacity (they should have been at around 90-95% capacity). Warm temperatures increased evaporation from the reservoirs. The UK is leaking huge amounts of water every day in cracked and broken pipes beneath the ground.

A growing demand for water from people and businesses is causing too much groundwater to be extracted (taken).

Primary impacts/Consequences

- Water shortages made it difficult to find water for crops and livestock. The dry ground made it difficult to harvest crops in Autumn 2011. (ec & env)
- Dry areas of moorland caught fire easily with wild fires raging across parts of south Wales, Surrey and the Scottish Borders. River water was used to boost the water supply in some areas, reducing river levels and causing damage to plants and animals. (env)
- Increased death rate amongst vulnerable elderly (soc)

Secondary impacts

- The hosepipe ban meant that 20 million people could not use their hosepipes for recreation use (e.g. watering plants and washing cars). (soc)
- Many sports clubs struggled to maintain the grounds during the hosepipe ban. Golf courses were badly affected. (env)

Responses

- Seven water companies across the UK brought in a hose pipe ban in April 2012 after 2 unusually dry winters
- If people used their hosepipes during a ban and were caught they were fined up to £1000.
- Permits were given to allow water companies to extract water from rivers.
- There were campaigns to encourage people to use less water in their homes. Telling people to turn off their taps whilst brushing their teeth can save 6 litres of water per minute.

Exam Question

Describe and explain the causes of a UK natural weather hazard you have studied (6)



Topic 2 – Changing Climate

UK

Explore a range of social, economic and environmental impacts of climate change within the UK such as the impact on weather patterns, seasonal changes and changes in industry. The impacts studied should relate to the 21st century.

World:

Explore a range of social, economic and environmental impacts of climate change worldwide such as those resulting from sea level rise and extreme weather events. The impacts studied should relate to the 21st century.



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Topic 2 – Changing Climate

UK 'SEE' impacts (enlarge ME! Or check out your own map and add notes here)

Most significant climate impacts

Main consequences & affected sectors

Marine: Warmer waters

Algal blooms, health risks, biodiversity, fisheries

Marine: Melting of Arctic Ice

Opening of Arctic navigation, transport, trade

Flooding, temperature change

Tourism, habitats, biodiversity, agriculture, fisheries

Water availability & aridity, water quality, flooding

Drought, agriculture & food security, species, habitats

Flooding, marine & coastal change

Teeside industries, natural heritage

Flooding, sea level rise

Humber estuary, habitats, urban areas, industry, infrastructure, vulnerable groups

Flooding, sea level rise, summer aridity

Agriculture & food security, energy infrastructure, Peak District

Flooding, summer heat

Urban areas, industry, tourism, Lake District

Water resources, flooding

Large population affected by drought, transport & other infrastructure

Water resources, aridity, sea level rise, flooding

Large population affected by drought, agriculture & food security, biodiversity

Flooding, sea level rise, water resources, heat

Tourism, coastal change, agriculture, business, biodiversity

Flooding, overheating, water availability

Business disruption/costs to financial services, health risks, work force productivity, transport, vulnerable groups

Flooding, heat, coastal change

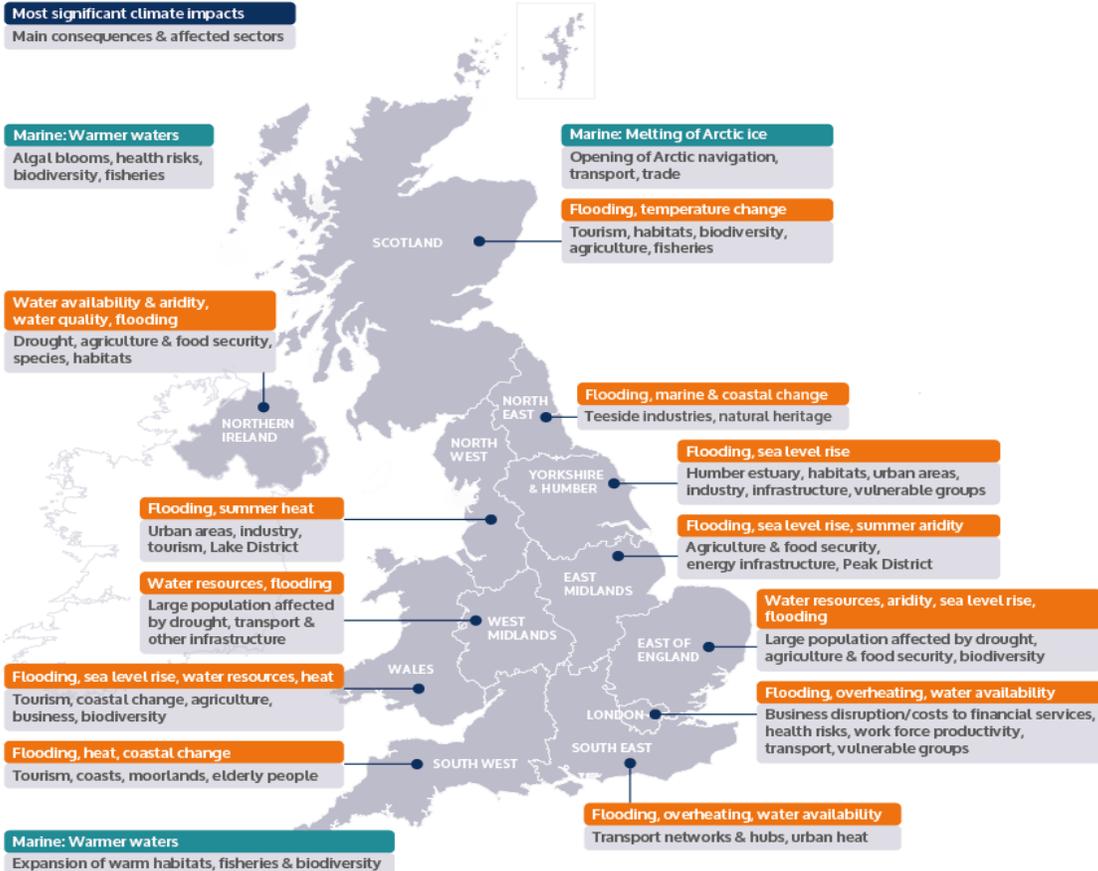
Tourism, coasts, moorlands, elderly people

Flooding, overheating, water availability

Transport networks & hubs, urban heat

Marine: Warmer waters

Expansion of warm habitats, fisheries & biodiversity



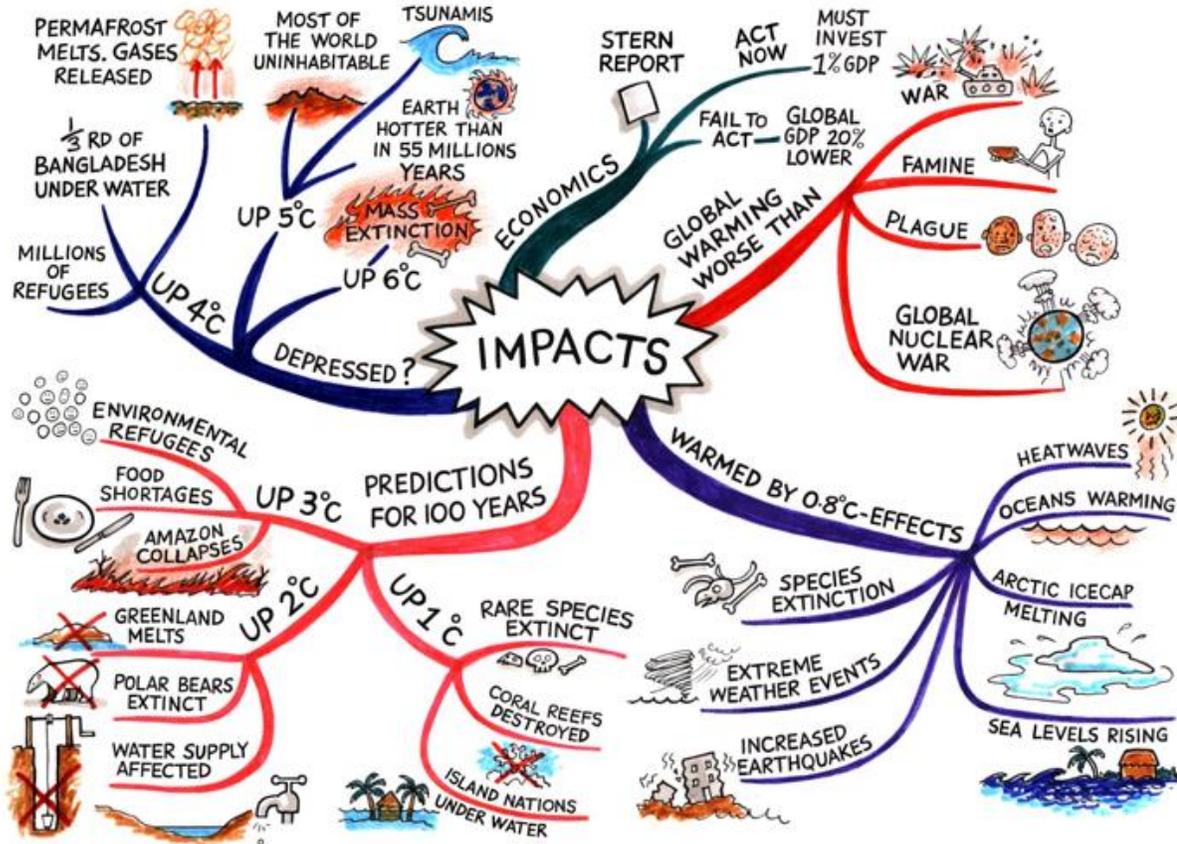


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Topic 2 – Changing Climate

Global 'SEE' Impacts plus learn TUVALU

TUVALU



A small group of islands in the Pacific. Likely to be the first to disappear due to climate change and sea level rises.

Social: people losing land; farmland spoiled due to salt water; homes flooded; climate change refugees. New Zealand has agreed to accept 10 000. Loss of culture and traditional way of life (farming & fishing)

Economic: cost of re-location; damage to roads & runway
Environmental: land salinized by sea water so crop yields drop; drinking water supplies reduced

UNFAIR: this place is carbon neutral but suffering major impacts



Topic 3 – Distinctive Landscapes

Rivers:

- **Landforms** created by geomorphic processes
 - River profile
- Geomorphic processes operating at different scales and how these are influenced by geology and climate
- Human activities influence on the river
 - **Flooding** on the River Severn (**causes** and **impacts**)
 - **Management** of the River Severn

River Severn and Shrewsbury

Coasts:

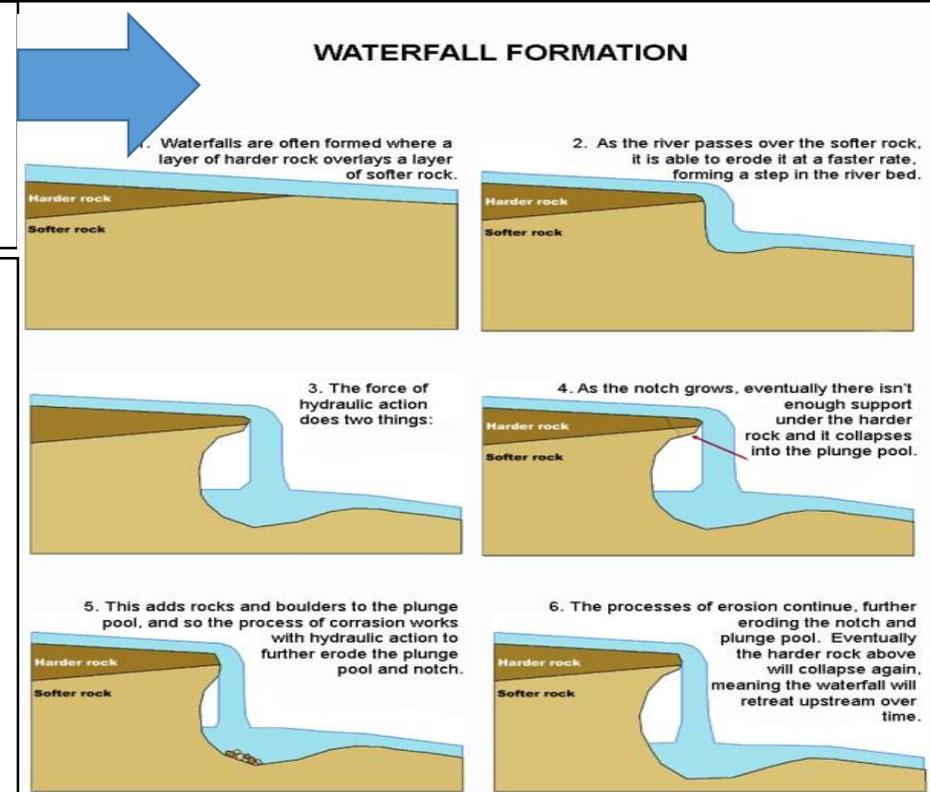
- **Landforms** created by geomorphic processes
 - Headlands and bays
 - Arches, stacks and stumps
 - Spits, estuaries, bars, tombolos
- Geomorphic processes operating at different scales and how these are influenced by geology and climate
- **Human activities** influence on the coastline
 - Why does Poole Harbour need protecting
 - **Management** of Poole Harbour



Rivers and Coasts - River Landforms – River Severn (Carding Mill Valley)

Background - The River Severn flows from the Plynlimon Hills (Wales), through central England and into the Bristol Channel, it contains waterfalls in the upper course, and winding meanders in the middle and lower course of the river.

Lightspout Waterfall
This waterfall is approximately 20 metres high and 5 metres wide. Over thousands of years the waterfall has retreated, creating a gorge.



Human Activity and Geomorphic Processes (Weath Er Dep Trans)

Local: Sheep Farming = approx. 3k sheep in valley = overgrazing = increased erosion and runoff

Tourism – 23k cars/250k visitors = increased erosion of soil, paths and vegetation = increased runoff = river has more erosional power

Stone trap (near entrance) – collects larger stones and pebbles to stop river from blocking downstream = reduced attrition and deposition

Global – climate change increases discharge upstream



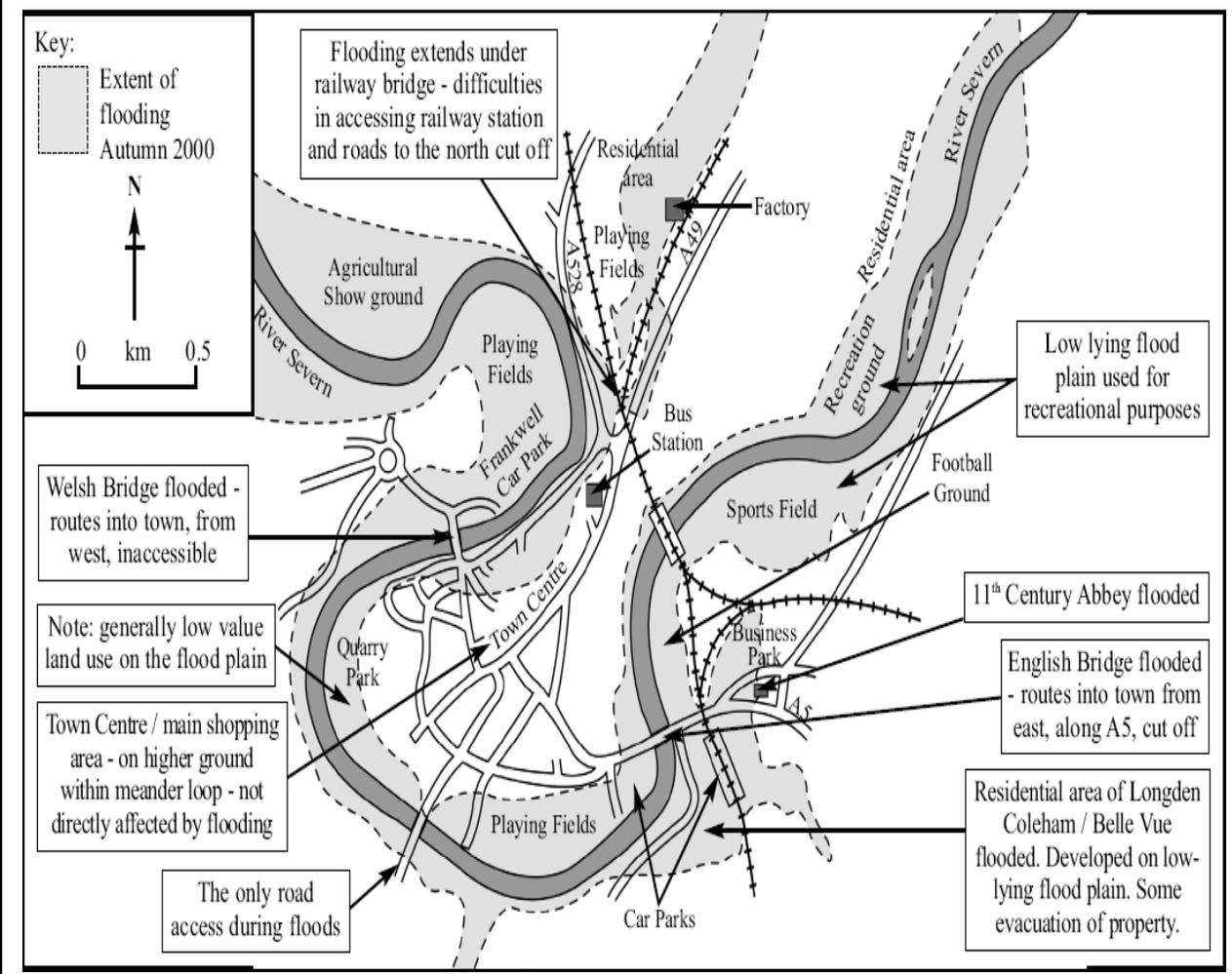
Meanders near school
Lateral erosion on the middle/lower river has created the meanders. These have formed due to the lowland relief creating flow, which causes the river to bend round obstacles. Helical flow also causes the water to corkscrew creating the meanders.

Over time the faster water flow on the outside of the bend has created river cliffs and a deeper river, (deeper water – less friction = faster flow increasing erosion).
On the inside of the bend where the river flow is at its shallowest and slowest, deposition creates a point bar and a slip-off slope. This is due to the river lacking energy creating the deposition.

Exam Question
Explain how geomorphic processes have shaped your chosen river landscape. (6)

Rivers and Coasts – River Severn

Background
Autumn 2000 Shrewsbury was flooded several times by the Severn



Causes of flooding

- Shrewsbury is located on an incised meander
- Wettest Autumn since records began when 14ins (350mm) of rain fell in 3 months.
- Many roads and developments on low-lying flood plain, particularly on lower ground around the Welsh and English Bridges, this land forms part of the natural floodplain of the River Severn and so roads and properties here are inevitably at risk of flooding. Concrete placed by humans reduces permeability & infiltration of soil; causes more overland flow and speeds water journey to river – faster river = more energy = more erosion.

Management and Defences

- >In 2005 new flood defences were unveiled at the Council Offices/Severn Theatre site in Frankwell.
- >Flood Retaining walls have been built next to the river
- >In times of high flow, aluminum demountable barriers are installed to stop the council offices and car park flooding.
- >A flood alert system is in place to stop people parking in vulnerable places.
- >Land Use Zoning (soft engineering) is effective.

Exam Question

Name a river basin in the UK. Explain how human activity has influenced the geomorphic processes in this landscape. (6)



Rivers and Coasts – Coastal Erosion – Jurassic Coast

Background

The Jurassic Coast is an area of coastline located in Dorset, southern England.

Old Harry Stack (erosional)

This is a landform that has been created by erosional processes.

The stack is located on a chalk headland (Handfast Point) which has been created due to being more resistant to erosion than the surrounding clays.

Destructive waves create hydraulic action and abrasion at the base of the headland, and this creates a wave cut notch.

The waves then exploit areas of weakness in the cliff to increase the speed of erosion, creating a cave and then an arch through the cliff.

Continuous erosion widens the arch, and it eventually collapses leaving a stack.

Over time, the stack will continue to be eroded to eventually create a stump.

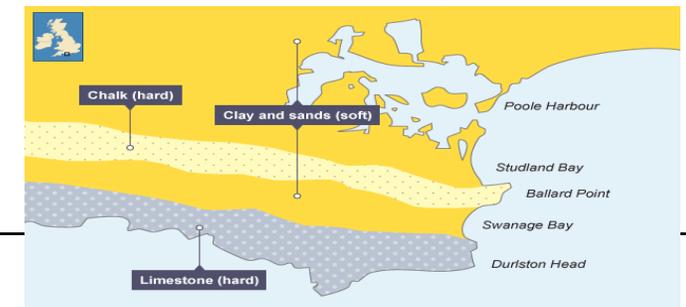
Chesil Beach (tombolo) (depositional)

The prevailing wind moves material west to east along the coast, creating longshore drift.

The tombolo forms at Chesil Beach due to the change in direction of the coastline. As the rate of longshore drift reduces and the land becomes shallower, deposition occurs due to constructive waves and a spit forms.

The spit continues to grow out into the sea and joins the mainland to an offshore island – the Isle of Portland – this is now known as a tombolo.

It is large and strong enough for the A534 road to be constructed on it.



Exam Question

Describe the erosional landforms in one coastal landscape you have studied. Explain how they were formed (6)



Rivers and Coasts – Coastal Management – Poole Bay

<p>Background The Jurassic Coast is an area of coastline located in Dorset, southern England.</p>	<p>Management of Poole Harbour The shoreline management scheme for Poole Harbour combines both hard and soft engineering schemes. Sea walls have been put in place protecting the cliffs, but this has prevented the natural supply of sand meaning beaches require replenishment. Sandbanks is low lying and is also at risk due to sea level change. £1.9million has been spent on 5 rock groynes to reduce longshore drift and build up a more natural beach. £3million has been spent on cliff drainage to prevent slumping from occurring. A beach monitoring scheme is in place to consider coastal management for the long term.</p>
<p>Threats to the coast The area requires protection due to attracting 1.1 million visitors per year spending £107 million in 2008. The area contains a cross-channel ferry port, chain link ferry between Studland and Sandbanks. The area is home to 140,000 people. Contains various wildlife and habitats meaning the RSPB, National Trust and three national nature reserves creating areas of protection. Contains a small fishing fleet of 100 boats and shellfish beds.</p>	<p>Exam Question Assess how far the impacts of human activity on one coastal landscape have been negative. (8)</p>

Effects of coastal protection work at Poole Bay	The sustainability argument
Increased dust, noise and pollution during construction – use of heavy machinery, lorries delivering the rocks	Rocks are local, from Portland, so less fuel is used to transport them, and the groynes blend in.
Disruption to the beach environment and marine life	Rocks in the groynes provide a habitat for marine life.
Tourism affected as the beach could not be accessed during construction	Construction in winter avoids affecting the economy – tourists mostly visit in summer. Local people are still affected.
Sand dredging of Poole Harbour affects marine life, with negative effects on ecosystems like mudflats and salt marshes.	Dredging stops future flooding. The harbour entrance needs dredging so ferries and other businesses can use it – important to the economy.
Dredgers pump sand onto the beach 24 hours a day – noisy and messy.	A quickly improved beach encourages more tourism once the groynes are completed. Income can be used for sustainable projects.
Safety problems with the new groynes – people want to climb on the rocks, swim and do watersports near them.	The rock groynes have walkways so that people can access them safely. Signs warn people of the dangers. Swimming zones are used.
More tourism means crowds and litter.	Ramps can be installed – so wheelchairs and pushchairs can access the beach. Recycling bins can be provided.
Local people have to put up with disruption – increased numbers of tourists cause conflict.	But no sea defences means an increased risk of damage and loss of houses in future.



Topic 4 – Sustaining Ecosystems

Rainforests:

- A case study to illustrate attempts to **sustainably manage** an area of tropical rainforest, such as ecotourism, community programmes, biosphere reserves and sustainable forestry, at a **local** or **regional** scale.

Polar ecosystems:

- A case study to examine **one small-scale example** of sustainable management in either the Antarctic or the Arctic such as sustainable tourism, conservation and whaling.
- A case study to examine **one global example** of sustainable management in either the Antarctic or the Arctic by investigating **global** actions such as Earth Summits or the Antarctic Treaty.



Sustaining Rainforests – Costa Rica

Location & Background

Small country in Central America; home to 6% of the world's biodiversity; gets 6 million tourists a year.

Why did the rainforest need protecting?

1960-1990 Costa Rica experienced rapid deforestation, mainly because of cattle farming. The government decided to act, they made deforestation illegal and began to pay local people to protect parts of the rainforest they owned, 24% of the country's land is now protected in 28 National Parks.

***Advantages:** employs local people (soc) 80 full-time and 40 part-time jobs directly related to tourism (ec); buildings made from local afforested timber (env); drinking water is locally sourced (env); rainwater collected from roofs and re-used eg to flush toilets (env); buildings fitted between trees in forest so no deforestation

***Disadvantages** - Land prices have increased (ec); use of 4x4 vehicles might cause soil erosion (env)

Exam Question

Using a named example of an area of tropical rainforest you have studied, evaluate how successful one sustainable management strategy has been (6) [Tip: totally?partly? Evidence for this = ?]

How is the rainforest sustainably managed?

- **Agroforestry:** this is where trees and crops grow side by side. The roots of the trees stop soil erosion and crops benefit from the nutrients they can get from the tree.
- **Selective logging:** only older trees are cut down, young trees are allowed to grow to keep the canopy later tall.
- **Afforestation:** trees are planted to replace any that are cut down.
- **Monitoring:** the government use satellites to take regular photos of the rainforest, this way they can see if any areas are being cut down.
- **Ecotourism:** Ecotourism is tourism that is directed towards the natural environments & conversation. Samasati* [←see opposite] on the East coast is a popular ecotourism destination in the country.
- **The 'Wildlife Corridor'** The Costa Rican government are currently trying to create a wildlife corridor all the way through central America. The aim is to connect all the different rainforests in the area so animals can migrate freely between the countries.



Polar Management – Small-Scale– Arctic Whaling

Background – Reasons for change
 Inuits - whaling for centuries in small numbers using harpoons and ropes for oil, meat and bones = SUSTAINABLE
 20th century - commercial whaling decimated whale numbers (industrial scale) peaked at 50,000 whales per year in 1930s

Action taken to minimise this threat:

2008 – Clyde River Baffin Bay, Canada – Canada’s first Marine Wildlife Area (12 nautical miles away from coast and 3,000km² in area) was set up – a designated protected area where whales can feed and reproduce in safety

Stop-off point for 2,000 migratory Bowhead whales, one of 17 Arctic whale species , who feed in plankton-rich waters. Polar bears, geese and fish also benefit from the arrangements

1,000 Inuit are allowed by the International Whaling Commission to hunt one whale per year

Sustainability of the development

2014 – **one** Bowhead killed for 1,000 Inuits – take what you need [socially & environmentally sustainable]

Supported by Greenpeace as it fits their agenda for no oil drilling in Arctic [environmentally sustainable]

Helps ensure that the indigenous Inuit population can survive here. [socially sustainable]



Exam Question
 Evaluate the success of your chosen global example of sustainable management in the Antarctic or the Arctic. (8)



Polar Management – Global Scale– Antarctic Treaty

Background – Reasons for change

In 1961, Antarctic environment was under threat from pollution, climate change, mining, whaling and fishing.

People started to become more environmentally conscious – realised it was the last known wilderness area on Earth.

What changed?

The Antarctic Treaty was signed by 46 nations in 1961, the Treaty sets aside Antarctica as a scientific reserve, establishes freedom of scientific investigation and bans military activity.

Basic Principles of the Antarctic Treaty

- Bans mining and resource extraction.
- Prevents territorial disputes of the continent.
- Promotes scientific research and co-operation.
- Protects the fragile environments and its wildlife by preventing and managing waste/pollution.

Sustainability of the development

- One of the most successful international agreements of all time
- Only scientific activities are permitted (e.g. British Antarctic Survey) and a controlled amount of tourism [enviro sustainable]
- Scientific research has helped us understand the Earth and Climate change (e.g. discovery of ozone hole in 1980s) [enviro sustainable]
- Wildlife is protected [enviro sustainable]
- Quotas limit the amount of fishing [enviro & ec sustainable]
- 1998 – a new Environmental Protocol was agreed, further strengthens the original Treaty



Exam Question

Evaluate the success of your chosen global example of sustainable management in the Antarctic or the Arctic. (8)



People and Society Exam (Human)

Urban Futures

UK in the 21st Century

Resource Resilience

Dynamic Development



Topic 5 – Urban Futures

Life in an AC city:

- City **location** and **importance** within the region, country, globally
- **Patterns** of national and international migration and how this is **changing** the growth and character of the city
- **Ways of life** in the city (culture, ethnicity, housing, leisure and consumption)
- **Challenges** that affect life in the city (housing availability, transport provision, access to services and inequality)
- **One** initiative to make it more **sustainable** (e.g. HS2, Mailbox, waste management)

Life in an EDC city:

- City **location** and **importance** within the region, country, globally
- **Patterns** of national and international migration and how this is **changing** the growth and character of the city
- **Ways of life** in the city (culture, ethnicity, housing, leisure and consumption)
- **Challenges** that affect life in the city (squatter settlements, informal sector jobs, health or waste disposal)
- **One** initiative to make it more **sustainable** (e.g. Programa Favela-Bairro, recycling / waste management, pacification)



Life in an AC – Location, importance and patterns of migration in Birmingham

Background – Location

Birmingham is a city with a population of 3.8million. It is located in the West Midlands
 It is located 2 hours 20 mins from London by car, 1 hour 15 mins by rail
 It is located 2 hours from Leeds by car, 2 hours by rail
 It is located 5 hours from 30 mins Edinburgh by car, 4 hours by rail

Importance of Birmingham

Local: England's second largest city, rapidly developed during the Industrial Revolution (WoTW). The Balti curry was located here, with its origins in Kashmir (Pakistan). Cadbury began in Bourneville, an area of Birmingham.

Regional: its economy is dominated by the service sector, which in 2012 a/c for 88% of the city's employment and provides employment across the West Midlands. Its Jewellery Quarter is the largest working jewellery centre in Europe.

Global: 9th most populated city in Europe, has 6 universities (drawing students within the UK and 12,000 globally). Jaguar Land Rover has 2 factories close to the city centre and exports vehicles around the world, it is owned by Tata Motors (Indian company). Cadbury import Fairtrade cocoa from Ghana.

Patterns of migration:

- Rural to urban migration began during the Industrial Revolution. These people were economic migrants moving in search of work and higher wages, having been freed up by farm machines.
- After WWII (1950s and 60s) migrants came from the West Indies and the South Asian countries of India, Pakistan and Bangladesh. They came as economic migrants with right of entry as Commonwealth citizens.
- Since the 1980s there has been a new wave of migrants from Kosovo and Somalia. Many of these people are refugees.
- Migration from Eastern Europe increased after the EU grew in 2004
- Since 2001, the birth rate in the ethnic communities of Birmingham has been higher than that of the rest of the community. Migration has seen white people leaving the city and more people from ethnic minorities moving in.
- Inner city decline saw counter-urbanization occur but regeneration ➡ re-urbanisation

Exam Question

For a city in an AC, explain the challenges which that city faces such as housing provision or inequality (8)

Ethnic group	Population change 1991–2001
White	-70,000
Indian	+5,000
Pakistani	+38,000
Bangladeshi	+9,000
Black	+10,000
Chinese	+3,000
Other Asian	+6,000
Other	-3,000

Figure 5: Changes in the ethnic make-up of the population of Birmingham, 1991–2001



Life in an AC – Ways of life in Birmingham

Culture

- There are 1,000 creative businesses in Birmingham employing 17,000 people which include software design, publishing, performing, music, photography, marketing and broadcasting.
- The ethnic restaurant sector is important, the 'Balti triangle' is a cluster of approximately 50 Balti restaurants and takeaways.
- Redevelopment has focussed around historical aspects of the city, e.g. Jewellery Quarter and Gunsmiths Quarter.
- Popular music destination with many different concerts venues including: National Indoor Arena, National Exhibition Centre, Symphony Hall, Birmingham Hippodrome

Ethnicity

Birmingham is the second most multicultural city in the UK and ethnic minorities make up 30% of the population.

- 86% of the cities population consider themselves British and many of these see themselves as 'Brummies'.
- Ethnic minorities consist of those from Pakistan, India and the Caribbean.

Exam Question

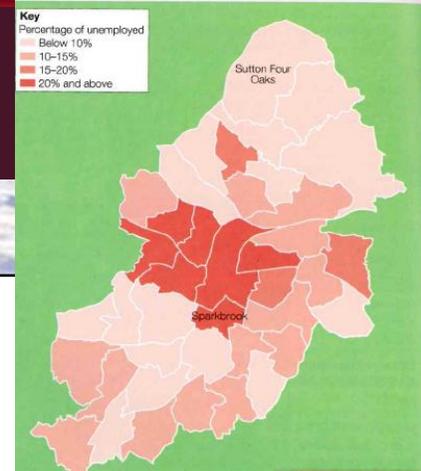
Examine how ways of life vary within one city in an AC (8)

Housing

- Terraced housing built in inner city eg Sparkbrook close to the CBD (Central Business District) to house workers who worked in the factories. Semi & detached homes built in suburbs (more space; cheaper land) eg Sutton Four Oaks.
- As the city centre has been redeveloped since 2000, focus has been on redeveloping the CBD and building new developments, as blocks of flats, close to the city centre.
- In northern Lozells there are some larger houses which were subsequently converted into flats. Urban Living is now re-converting them back into large family homes.

Leisure and Consumption

- Birmingham is home to many entrainment and leisure venues. It is home to Europe's largest leisure and entertainment complex Star City as well as Europe's first out-of-city-centre entertainment and leisure complex Resorts World Birmingham owned by the Genting Group. The Mailbox which caters for more affluent clients is based within the city.
- This indoor shopping centre, costing £530 million, is dominated by the Selfridges building. It is the largest city centre indoor shopping complex in Europe. As well as a three floor shopping area with 140 shops and kiosks, the site contains parking for over 3,000 cars.



Life in an AC – Challenges in Birmingham

Housing availability

As the city grew, the fastest growing areas were in the terraced housing around the city centre. These areas housed large migrant families and had poor quality sanitation in the 1950s.

These terraced housing, in areas such as Sparkbrook, are still poorer quality than those in the north of the city such as Sutton Four Oaks. A two bedroom terraced house in Sparkbrook costs £99,500, with a four-bedroom detached house costing £525,000.

Transport provision

- Birmingham has an extensive road network which includes many motorways around the city (including M40, M42, M5, M6).
- Spaghetti Junction is infamous – a huge road network which connects many roads in many directions.
- Traffic in Birmingham has been a major challenge since the 1990s as the population has grown and more people have been travelling into the city centre each day.
- On every working day, people in Birmingham make 250,000 car journeys that are less than one mile in length. The City Council are promoting walking and cycling to encourage less cars on the road.
- Two-thirds of journeys are made by car and, at peak times, eight out of ten vehicles have just one person in them.

Access to services

- As the population increases, more demand is put on key services such as healthcare and education, e.g. class sizes may increase.
- There is a shortage of doctors in some areas in Birmingham, an increase of 29% more GPs is need to cater for the current population.
- The Council are spending money to update and improve leisure facilities (e.g. gyms, squash courts, swimming pools) for residents.
- Budget cuts in Birmingham mean 4 libraries shut in 2014, with another 2 in 2016. This is particularly a problem for the elderly or young children who benefit from the services they offer.

Inequality

- In 2016, a total of 37% of Birmingham children live in poverty. In inner-city areas in Birmingham, 47% live in poverty.
- One five workers in Birmingham earn less than the Living Wage of £8.25 per hour.
- 167,000 unemployed people in the West Midlands. This is an unemployment rate of 6%, roughly in line with the national unemployment rate of 5.6%.
- 10.9% of people in Ladywood claim benefits, this is the highest in the UK.



You just need to know **one** initiative, remember B'ham is "GREAT"

Life in an AC – Sustainability in Birmingham

HS2
 A high speed rail link planned to run between London & B'ham from 2026. it has 2 branches from Birmingham and Manchester and Birmingham to Leeds (by 2033). Aims to take pressure off existing rail network, reduce journey times between cities (especially for business travel), bring economic benefits of regeneration and jobs to the Midlands, encourage people to travel by pub. Transport train.
Benefits of HS2: create thousands of new jobs in Birmingham, generate £2 for every £1 spent, reduce number of flights within UK, not create extra CO₂ emissions as it will replace other forms of transport.
Problems of HS2: people will commute to London (not benefitting Birmingham), total cost is £42.6billion, existing railways could be improved, increase CO₂ emissions as faster trains use more power.

The New Library
 Opened in 2013 as the largest public library in the UK
 Social – building design reflects heritage (steel rings); 250 construction jobs created; cycle storage space; raises educational achievement
 Economic – part of wider plan to regenerate the city; built on brownfield land; promotes tourism
 Environmental – 95% of waste material during construction was recycled; energy-efficient (natural daylight); harvests rainwater; roof garden for wildlife

The Veolia Waste Factory
 Residents of Birmingham produce 550,000 tonnes of waste each year. Some is recycled and the rest would be sent to landfill. The Veolia factory burns waste which cannot be recycled to produce electricity. This burns 23.5stones of rubbish per hour, creating enough to power itself and send 25MW to the national road. The ash produced during processing is used in road building.

Birmingham Trees for Life
 To improve urban life and make it more sustainable, you can plant more trees which means 'greening up' the urban area. Birmingham City Council. Birmingham Civic Society as well as local businesses and voluntary organisations have been involved in planting trees across the city. The aims are to promote understanding and awareness of the value of trees, raise money to enable trees to be planted, encourage residents to become involved.
 The trees reduce air pollution by absorbing CO₂, provide habitats to animals, reduce flooding by increasing interception and provide shelter and shade so can reduce energy use in buildings.

Exam Question
 For a named city in an AC, explain how one initiative you have studied will help make the city more sustainable (6)



Life in an EDC – Location, importance and patterns of migration in Rio de Janeiro

Background – Location

Rio de Janeiro is located in south east Brazil. It is famous for its carnival and beautiful beaches, as well as the major sporting events which have been held there in recent years.



Importance

- Brazil's second largest city, population of 6.32 million (2010)
- Brazil's busiest city
- Known as a 'global city' because it has global importance economically
- Attracts 2.82 million tourists a year – more than any other city in South America
- Considered one of the main tourist destinations in the southern hemisphere and is famous for its beaches, Carnival celebration and various landmarks such as the statue of Christ the Redeemer.
- Hosted Olympics in 2016 and World Cup games (including final)

Patterns of migration

Rio de Janeiro was settled by Portuguese travellers who arrived in the area in 1565.

Now, 65% of the growth of the city is due to internal migration. People move to cities like Rio from the North East of Brazil where there is:

- Disease (malaria); drought; poor farming conditions leading to a loss of income; lack of healthcare; lack of education and low levels of skill; lack of government support. [PUSH factors]

Whereas in Rio there is:

- Higher levels of government support; a wider range of job opportunities; low-skilled employment available; better quality housing; more opportunities [PULL factors]

Exam Question

Examine how ways of life vary **between** one EDC and one AC city you have studied. (8)



Life in an EDC – Ways of life in Rio de Janeiro

Culture

- Brazilian cuisine varies greatly by region. This diversity reflects the country's mix of natives and immigrants.
- Carnival Brazilians are some of the world's most musical, fun-loving people and the world-famous Carnival in Rio de Janeiro has attracted tourists for decades.

Ethnicity

Although Caucasians are spread out across the city, there is an intense concentration in the affluent, beachside South Zone neighbourhoods.

- The South Zone is 80% white; Rio's richest neighbourhood Lagoa is 90% white.
- This contrasts starkly with the racial profile of the city as a whole, which is 50% black or mixed-race.

The main ethnic group in Rio de Janeiro are the Portuguese



Housing

- Housing areas of Rio are highly segregated.
- The city cannot grow because of physical factors - there are mountains to the north and west, and sea to the south and east.
- The rapid growth of Rio de Janeiro's population has led to severe crowding and a shortage of housing.
- There is a clear divide of the rich housing in the south (close to the CBD) and the informal settlements (favelas) on the outskirts of the city centre.
 - Housing in Ipanema (South) costs \$1,500 a month, with average earnings in the favelas \$240 a month.

Leisure and consumption

- Nightlife is famed in Rio, with numerous nightclubs, discos and bars offering live music and other acts
- Football or Soccer Football is the national sport and the Brazilians are world famous for being the undisputed best players in the world and has some of the world's largest stadiums, e.g. the Maracanã stadium is Brazil's temple of soccer.



Life in an EDC – Challenges in Rio de Janeiro – ‘FIST’

Favelas (Squatter Settlements)

- Lots of people work in the informal sector.
- Poor quality housing which has been built on hillsides, which leads to a risk of landslides and can collapse easily in heavy rains
- Some level of education for children in nurseries and schools
- Overcrowding is an issue



Safety

- High levels of drugs and crime have led to some areas of favelas being run by drug gangs.
- Shootings can be common in these areas.
- Streets are narrow and hard to access – opportunities for theft and mugging by a small minority
- Prostitution



Infrastructure

1/3 of the 10 million inhabitants area live in places that have no connection to a sewerage system and raw sewage is pumped into the sea every day. 37% of water is lost due to leaking pipes
Waste trucks find it hard to access the steep and narrow favela streets
Roads are often unpaved and un-named. This makes getting a permanent job more difficult as residents don't have a formal address.



Transport

Moving people from A to B is challenging, given the amount of people. Congestion, road rage and slow journey times are an issue as is increased emissions.



Exam Question

For a city in an LIDC or EDC you have studied, outline the challenges it faces. (8)



You just need to know **one** initiative

Life in an EDC – Sustainability in Rio de Janeiro

Favelas - Programa Favela-Bairro
 Began in 1995 and included:

- Site and Service schemes where residents are given legal ownership of their land and connected to basic services such as electricity, sewerage and clean water.
- Self-help schemes mean that city authorities provide basic building materials (breeze blocks, cement, roofing tiles etc.) and tools to improve housing standards.
- Improving public services, especially primary schools, technical colleges and libraries. The aim is to give young people the skills they need to escape low skilled, low paid informal employment and escape the poverty cycle.

Infrastructure

Pave the roads; give them names

Install sewage systems

Encourage people to take recycling/rubbish down to the rubbish trucks



Safety

Pacification has taken place in the favelas. This aims to drive the gangs / drugs out of the favelas. This enables the government to formalise and legalise the favelas, but improving access to basic services such as water and electricity.

NGOs have been able to enter the favelas since pacification to help improve social situations. For example, Solar have been working with young people to provide them with training/skills and to reduce drugs and alcohol dependency.

Transport

Cable car system to connect favelas in the north of the city to the wealthy and commercial Ipanema district to transport 30,000 people a day, allowing people in the favelas to get to work.

One free return journey paid for favela residents. Enables safe journey to work

Limited habitat loss as the transport mode is 'in the air'

TIP: Re-visit the details above and be able to classify them as Social, Economic & Environmental – this will help you to structure your exam response in a logical way!!!



Topic 6 – Dynamic Development

LIDC case study: Zambia

- Overview of their economic development
- Link to **Rostow's** model
- Have the **MDGs** been achieved for this LIDC?
- How wider context has influenced their development
 - Political, social and environmental
 - **Trade**
 - Impacts (benefits and problems) of **TNC investment**
 - Advantages and disadvantages of **aid or debt** relief for development
 - Advantages and disadvantages of **one top-down** and **one bottom-up** approach strategy



Zambia – Dynamic Development Case Study

Location

Landlocked in southern Africa



A brief history...

Is rich in minerals like copper but has never developed. It is landlocked and was a British colony in 1888 until 1964. With a population of 14 million, 80% can read and write and the GNI [gross national income] is \$3,000.

Development over time...

- 1970 – the price of copper falls and Zambia has to accept aid.
- AIDS spreads across Zambia.
- 1990 – debt is high. Food is expensive and there are riots.
- 2000 – copper starts to rise again.
- 2006 – the IMF cancel Zambia's debt.
- 2010 – Zambia develops new industries in tourism, farming and hydro electric power through the Kariba Dam.

Foreign investment

In 2012 Zambia started a project called 'Why invest in Zambia?'. The country has been a peaceful democracy since 1964, the economy has been growing since 2000, Zambia borders 8 countries and is part of the World Trade Organisation (WTO) and 50% of its land is suitable for farming.

The Millennium Development Goals (MDGs)

In 2000 world leaders agreed to these MDGs. They are...

1. Halve extreme poverty and hunger
2. Reduce child mortality
3. Improve maternal health
4. Achieve primary education everywhere



Zambia's achievement of these was mixed. The number of HIV infections has dropped, most children attend primary school but child mortality is still high and many mothers still die in pregnancy/childbirth.

- 90% of children attend primary school
- 10% of the population is affected by AIDS
- 140 children per thousand die under 5yrs old

Zambia's reliance on a single commodity – Copper

Zambia relies on the copper metal it has, it makes up 70% of its international export. Between 1970-2000 the price of copper fell and this put the economy into decline and Zambia went into debt. Since 2000 the price has risen but Zambia wants to diversify its economy. China uses the most copper in the world and has therefore invested in Zambia. Over 500 Chinese companies invest in Zambia from mining to tourism to manufacturing. China has expanded the Kariba Dam, built 8,000km of new roads and there are 100,000 Chinese people now living and working in Zambia. BUT: copper is a low value raw material, it would be better if Zambia processed it & turned it into something. Prices ↑😊 but if prices ↓☹️. What will they do when it has run out?



Zambia – Dynamic Development Case Study inc bottom up & top down development

Transnational companies in Zambia

Associated British Foods (ABF) bought Zambia Sugar in 2001. Zambia sugar paid almost no tax in Zambia because profits were sent to ABF in the UK where tax rates are lower. Zambia, like other LIDCs needs taxes to pay for services like education and healthcare, but it also wants to offer tax incentives to encourage TNCs into the country.

Water Aid in Zambia

Water Aid is needed because 5.2m people don't have access to clean water, 5,000 children die every year from water borne diseases. In one year Water Aid provides 54,000 people with safe water and 42,000 people with improved sanitation.

Benefits of TNCs...

- Provide jobs and an income
- The company and workers pay taxes which support the government
- Investment helps the country exploit its natural resources

Problems of TNCs...

- Large companies try to avoid paying tax
- Small companies can't compete
- They pollute and damage the environment



Top down development – ‘The Kariba Dam’

Advantages: power is vital for the copper industry, renewable form of energy, fishing and tourism have developed around the Lake = jobs

Disadvantages: 57,000 local people were evicted from the land and moved to less fertile land; promised electricity for all but hasn't delivered 10 years later

The future...the dam could collapse because of erosion. Mozambique would be flooded within hours, ecosystems and wildlife would be lost and 3.5 million people's lives would be at risk from flooding.

Bottom up development – ‘Room to Read’

Its aims: increase the years of schooling for girls, increase girls self awareness and life skills, increase family and community support for girls education.

Why target girls...higher drop out rate, girls are expected to do chores and parents don't value education for girls. Girls are pushed into early marriage.

Success? More girls in school; reading skill passed down through generations of family (cheap & sustainable); bigger workforce available – could attract TNCs. BUT scheme very small scale so will take a while



Topic 7 – UK in the 21st Century

Identify the changes in one economic hub and its significance to its region and the UK.

Examine the UK's political role in one global conflict through its participation in international organisations.



EITHER: Economic Hub in the UK - London

Background
 Located in SE of England
 Home to 13% of UK population but generating 22% of all of UK's wealth
 2008-2011 over 1/3 of all economic growth occurred in the London region
 Home to many Universities
 Trade and the Docks put London on the map historically; hi-tech and creative media industry has recently grown in the 21st century
 £2281 million was invested in London in 2015.

Benefits of London's hub status for locals :
 463 businesses per 10, 000 population (1st in UK)
 75.5 new businesses per 10,000 population each year
 267, 000 new jobs created in London between 2007-2011*



Silicon Roundabout (SR) Old Street roundabout, Shoreditch, East London
 Silicon – named after Silicon Valley, California – a high tech industry location
 Famous companies @ SR – Amazon, Facebook & Google. Lots of independent start up businesses too

London's hub status is important for the UK: Although economic growth is highest in London and the SE, other areas benefit from this growth. Employees and businesses in London pay taxes which benefit all UK residents BUT * 284 000 jobs were lost around the UK during that time.

Advantages of London
 + Good transport links, including motorways (M25, M1, M2, M3, M4)
 HS rail-links & international airports (Heathrow, Gatwick, Stansted)
 + Graduates provide a highly-educated workforce for local businesses
 + The city offers a good QoL with open space and shopping
 + Businesses network together to share knowledge and develop ideas
 + attracts investment as the capital city; global business stage

Disadvantages of London

- The city is overcrowded and congested – cycling is the easiest way to get around
- House prices are high and still rising, making it expensive to live, especially for graduates
- Rent is high due to competition for space
- Air pollution is high – number of vehicles on the roads

Exam Question
 Evaluate the significance of one UK economic hub to its region and the rest of the UK (8)





OR Economic Hub in the UK - Cambridge

Background
 Located in SE of England
 Heart of London-Cambridge growth corridor
 Home to Cambridge University (800 years old)
 Education **was** main activity, but hi-tech industry has recently grown in the 21st century – 1,500 biotech and IT firms located there
 How has the hub changed? ↑ quaternary jobs. Road network has been improved; ↑ in public transport links; ↑ cycle routes = sustainable; ↑ housing

Silicon Fen
 Silicon – named after Silicon Valley, California
 Fen – flat wetlands drained for building

Abcam
 Short for ‘antibodies Cambridge’ – a biotech company
 Produces antibodies that treat diseases
 Began as a small start-up business, formed by graduates who wanted to stay in the city when they finished university.

Has grown into a successful company
 Now worth £1bn and employed 200 staff with PhD degrees.



Advantages of Cambridge

- + Good transport links, including railway the M11 to London and the international Stansted airport
- + Graduates provide a highly-educated workforce for local businesses
- + Rent is lower because there are few traditional industries to compete for land
- + The city offers a good QoL with open space and shopping
- + Businesses network together to share knowledge and develop ideas

Disadvantages of Cambridge

- The city is overcrowded and congested – cycling is the easiest way to get around
- House prices are high and still rising, making it expensive to live, especially for graduates
- Infrastructure, especially road and rail, need to be improved to speed up connections to other cities.

Exam Question
 Evaluate the significance of one UK economic hub to its region and the rest of the UK (8)



UK's political role in one global conflict through participation in international organisations – Iraq War

Background

Iraq was part of the British Empire until the mid 20th century
 Over the last 50 years the Middle East has seen some of the worst conflict and the UK has had a significant involvement.
 The UK is linked to the Middle East through trade (which is growing, we buy their oil and gas, they buy weapons and aircraft). Very occasionally Islamic extremists threaten the security of the UK)

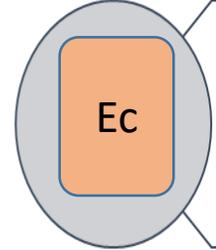
9/11

The **September 11 attacks** (also referred to as **9/11** were a series of four coordinated terrorist attacks by the Islamic group al-Qaeda on the U.S. on the morning of Tuesday, September 11, 2001. These killed 2,996 people, injured 6,000 others, and caused at least \$10 billion in infrastructure and property damage. 67 British citizens died.

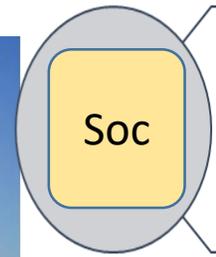
2003 Invasion

Some NATO members (NATO didn't say invade!!), led by the USA and UK, invaded Iraq in 2003. the Iraqi government was overthrown, but since then there has been a struggle. Islamic extremists have spread into Iraq from Syria, hoping to create an Islamic State (IS). The **World Bank** (UK pays into this) provided \$1.2 billion of aid for food, water & shelter for refugees. **UK DFID** pledged \$544 million to help rebuild/reconstruct war damaged Iraq.

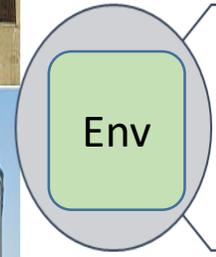
Consequences of the War



Loss of agricultural production Loss of manufacturing output
 Disruption to service provision Significant damage to infrastructure
 Loss of oil revenue Loss of foreign direct investment
 The Iraqi economy shrank by 40%



The dictator Saddam Hussein was caught, put on trial and executed
 12% of Iraqis fled their homes due to violence
 The refugees caused huge problems in receiving countries because of the cost of dealing with the problem
 Iraqis who returned home found their housins had been destroyed or occupied by other people, their town nsafe, poor hygiene and economic uncertainty



Heavy metals were released into the environment – air, soil and groundwater
 Oil spills because of the lanck of infrastructure, mostly on land
 Positive environmental impacts!
 After the invasion, people breached the embankments to allow water back to the area – by 2008 50% of marshlands had been restored



Exam Question

Outline the UK's role in one global conflict through its involvement in **international organisations** (6)



UK Media exports

- The UK exports many different types of media products such as **films, TV and music and books.**
- Exporting media is key to the UK economy as it **employs 1.7 million** people and **generates £17 billion.**
- **Example: Harry Potter sold 400 million copies in 200 territories. 2012 Skyfall 007 – most successful ever; earned £100 million at British Box Office. Top Gear; Peppa Pig**
- Most exports are in English, meaning it **develops** other's **understanding of our language** and our **culture.**
- Many people around the world **copy fashion & styles** seen in UK media.
- UK architecture is often featured, which can lead to demand for these designs in other countries = ££
- Can **attract international tourists to visit** the UK eg to see Buckingham Palace or Lake District

Contribution of ethnic groups to food

UK has become increasingly multi cultural due to in-migration over time; in some cities non-white population is >40% (India, Pakistan, Caribbean)

- >**Chinese** (top choice takeaway) & **Indian** (top choice restaurant visits)
- >**Fusion foods** eg chicken tikka + tomato soup = chicken tikka masala was created!!! (not available in India!!!). We spend £110/month on takeaways
- >**Supermarkets** selling a big range of cook in sauces for other nationalities, UK people benefit from this.
- >**TV** – lots of cookery related programmes for a range of cuisines not just British.
- >UK food sometimes lacks variety (mainly due to war time rationing) **e.g. Balti Triangle** – area of Birmingham (Sparkbrook) with a big concentration of curry houses (46). Brings in visitors from outside Birmingham. Boosts the economy. BUT some restaurants closing down now as everywhere serves balti. Many cities have a 'Chinatown' too.

Exam Question

Discuss the contribution ethnic groups make to the cultural life of the UK through **either** food **or** media **or** fashion [6]



Topic 8 – Resource Reliance

Case study of attempts to achieve food security in **one** country to include:

- Investigation of statistics relating to food consumption and availability over time.
- The success of **one** attempt in helping achieve food security at a local scale such as food banks, urban gardens and allotments.
- The effectiveness of **one** past and **one** present attempt to achieve food security at a national scale such as global food trade, GM crops, 'The Green Revolution' and food production methods.



Tanzania: improving food security PAST ATTEMPT – Tanzania-Canada Wheat Project

Definition of FS: ‘When all people at all times have access to sufficient, safe, nutritious food to maintain a healthy, active life’

Background
 Population – 51m; 44% of country lives in poverty; 98/109 in Global Food Security Index: UN= distribution of food in country
 1967 – President argued country should grow all its own food
 1973/4 – severe drought – 80% of wheat was imported
 1975 – emergency food aid shipments relied upon for first time

How does it work?
 Canada had expertise in growing wheat using modern technology, so President of Tanzania asked for help
 1968-1993 – Canada provided \$95m of aid

34,000 football pitches – size of the project – Hanang Province in northern Tanzania

Canada helped:
 Develop seeds, provide expertise, training, chemical fertilisers and machinery



Effectiveness and Sustainability

Economic + 60% of Tanzania’s wheat provided (less to import); road, rail and electricity networks improved
Economic – low yields (still cheaper to import); cost of machinery maintenance too high (so imported more from Canada!); few jobs created

Social 😊 121 Tanzanians received training in wheat production; 150 new mechanics; 400 farm worker jobs
Social ☹️ Barabaig Tribe (remember them?) were displaced from their land, often raped, beaten and imprisoned – 40,000 livelihoods threatened; Tanzanians could not afford expensive bread made from wheat (food insecurity)

Environmental – created monoculture (one crop) – led to reduced biodiversity; soil erosion following harvesting;



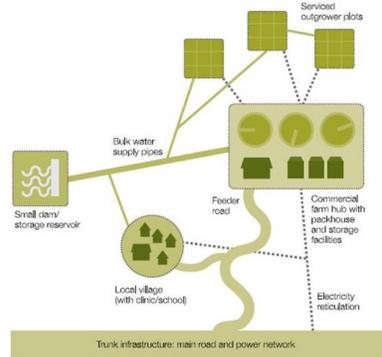
Exam Question
 Describe and explain one past attempt to achieve food security in a country of your choice. (6)
 Tip: define FS; how well did the Canada Wheat project achieve FS?

CASE STUDY: One PRESENT attempt to achieve food security – SAGCOT

Background
 Southern Agricultural Growth Corridor of Tanzania
 Large project – started in 2010
 Growth corridor (remember from economic hubs?) – strip of land that connects west to east; connects fertile land to the port at Dar es Salaam via a motorway and TAZARA railway
 Investors – government, foreign governments (\$39m from China), NGOs, TNCs - \$m's to improve road, railways and irrigation (more than \$1bn invested in infrastructure)

How does it work? The plans...
 Six key cluster areas (188 commercial farms) with connections to national and global food markets = food security
 Create more food = food security
 Annual farming revenues of \$1.2bn
 Year 2030 – 450,000 jobs created and 2m lifted out of poverty

Hub and out-grower model
Hub = attracts commercial farmers who invest in infrastructure
Out-growers = smaller farmers helped by commercial farmers



Early Effectiveness and Sustainability

Economic 😊 Kilombero Plantation – after \$\$\$m investment in infrastructure = doubled rice yield; 7,300 out-growers in 11 villages connected to global markets and achieving better price; other successes – tobacco plant (Morogoro); sunflower processing plant and farm machinery factory 😊;

Economic 😞 Most money invested benefits TNCs and commercial farms; investments promised not yet given

Social 😊 farmers able to sell produce to pay for housing, education, calorie intake has improved ; child mortality has reduced; GHI score improved;

Social 😞 small landowners not involved in planning or decision making; nomadic tribes (not the Barabaig this time) have lost land and access to water

Exam Question
 For a current national food security scheme in a country you have studied, explain two ways in which food security will be improved (4)



CASE STUDY: Food security at a LOCAL scale – Goat Aid

Background

Project runs in northern Tanzania in the Babati District. 90% of the region lives in rural villages and depend on agriculture for their livelihood. Between 1999 and 2006 the British charity Farm Africa ran a goat aid programme with the aim of improving nutrition and income for villagers.

How does it work?



Bottom-Up aid scheme

After discussion with visitors, Toggenburg goats (produce 3L on milk per day) were imported at a cost of £400 each (£200k in total spent).

Villagers were trained in veterinarian skills to look after the goats

Goats given to small groups 'on-credit' – so the cost had to be repaid – avoids people becoming dependent

Effectiveness and Sustainability

Economic + goats were on credit, so incentive to do well and pay off debt; goat manure improved crop yield – sell surplus to buy house and shed for animals, pus send children to school
Economic – expensive veterinary bills

Social + villagers trained in new skills; more nutritious diet
Social – too small scale to solve Tanzanian food insecurity (poverty in Africa has increased on the whole!)

Environmental + goat manure improved crops instead of buying/using chemicals

Environmental – goats require lots of water; grazing leads to desertification

Exam Question

Assess how far food security has been achieved at a local scale in your chosen country. (6)