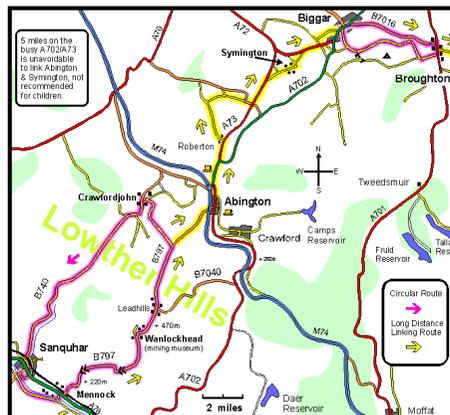


## A river valley and its landforms – River Clyde, Scotland

- Around **160km** long
- **Drops 600m** on its journey to sea
- Source: Southern Uplands region of Scotland
- Direction of flow: **North West**
- Mouth: **Irish Sea**
- The source is in the Lowther Hills – **Daer Water** and **Portail Water (tributaries)** come together to form River Clyde
- **2 interlocking spurs** at Crawford, between **300 and 500m** high
- The **Falls of Clyde** are 4 waterfalls near Lankark
- The **highest** fall is **Corra Linn** – its about **27 metres** high
- Also a **gorge** in the upper course, formed by the waterfall retreating, **red sandstone**
- There is an **oxbow lake** forming near the village of **Uddingston**
- The river **meanders** between **Motherwell** and **Glasgow**
- **Glasgow** is built on the **flood plain** of the River Clyde
- The land is around **5m** above sea level on either side of the river
- The **estuary** is around **34 km** west of **Glasgow**, around **3km wide**
- This is where the river joins the **Firth of Clyde** and eventually becomes the Irish Sea



## LEDC Causes, Effects and Management of river flooding – Bangladesh

- July and August **2007**
- Rivers **Brahmaputra** and **Ganges**

### Causes

- Heavy rainfall – **900mm** fell in **July**
- Continuous rainfall **saturated** soils, **increasing run off** into rivers
- Melting snow from glaciers of **Himalayas** increased the discharge of Brahmaputra river
- **Peak discharge** of both rivers happened at **same time**, increased discharge downstream
- Human causes - **building on floodplains** and **deforestation**
- Land **densely populated**
- **25%** of Bangladesh is **less than 1m above sea level**, easily flooded
- Flooding is an **annual event** as the rivers burst their banks
- This seasonal flooding is **beneficial** - provides water for the **rice and jute** (two main crops in the area), and keeps the **soil fertile**
- Bangladesh also experiences many **tropical cyclones**

| Primary Effects                         | Secondary Effects  |
|---|--|
| Rivers polluted with sewage and rubbish | Children lost out on education – around 4000 schools affected                  |
| 2000+ deaths                            | Around 100,000 people caught water-borne diseases like dysentery and diarrhoea |
| Around 25 million made homeless         |  |
| 44 schools destroyed                    | Flooded fields reduced basmati rice yields – prices rose 10%                   |
| Factories closed                        |  |
| Livestock killed                        | Many farmers and factory workers became unemployed                             |
| 112,000 houses destroyed                |  |
| 10,000km of roads destroyed             |  |

### Management - Flood protection measures

- Bangladesh has Flood Forecasting and Warning System (**FFWS**) and 85 monitoring stations, flood warnings can be issued **72 hours before**, but don't reach **rural communities** as easily/ at all
- **6000km** of man-made **levees** in Bangladesh, but are **easily eroded** and not properly maintained, often breached by flood waters
- And cause **sediment to build up**, raises level of river bed, makes flooding likely
- Instead of trying to stop flooding completely, flooding is allowed in certain areas under controlled conditions – **controlled flooding**
- **Some engineering**, sediment build-up in channels reduced, flooding less likely

- Lake District, Cumbria
- **November 2009**

**Causes**

- A massive downpour of rain (**31.4cm**), over a **24-hour** period
- Long downpour caused by a lengthy flow of warm, moist air from the Azores in the mid-Atlantic. This airflow is common in UK during autumn and winter, known as a **'warm conveyor'**. Warmer air = the more moisture it can hold
- Ground **previously saturated**, so additional rain flowed as surface **run-off**
- Cumbrian **Mountains** helped water to run rapidly into rivers, **impermeable**
- **Relief rain**
- Derwent and Cocker already **swollen** with previous rainfall
- **Not enough space in channel** to hold the high-energy surge of water
- Cockermouth is at the **confluence** of the Derwent and Cocker

**The effects of the flood**

- Over **1300 homes** were **flooded** and contaminated with sewage
- A number of people had to be **evacuated**, including **50 by helicopter**, when the flooding cut off Cockermouth town centre
- Many **businesses flooded**, causing long-term difficulties for the local economy
- People told they were unlikely to move back into damaged homes for **a year**
- Cost of putting right the damage was an average of **£28,000 per house**
- **Insurance companies** estimated final cost of the flood could reach **£100m**
- **4 bridges collapsed, 12 were closed** because of flood damage
- In **Workington, all bridges destroyed** or so badly damaged that declared unsafe – cutting the town in two, people faced a huge round trip
- One man died– **PC Bill Barker**
- Affected **infrastructure** (electrics, telecommunications)
- Point of confluence **likely to flood again**

- Located on the South Coast of England, and the sea part of Atlantic Ocean
- Stretches from **Lyme Regis** in the west to **Bournemouth** in the east
- The Dorset Coast is part of an area of coastline known as the **Jurassic Coast**
- **2001** – designated a **World Heritage Site** in recognition of the variety of spectacular **geological** and **geomorphological features**
- The Jurassic coast is one of the most significant earth science sites in the world
- **95 miles**, near-continuous sequence of rock, from Triassic, Jurassic, Cretaceous
- Some rocks, especially **Portland Stone**, very resistant to erosion (**differential**)
- Weaker sands/ clays e.g. **Oxford Clay**, easily eroded, can retreat 1 metre+/year
- The coast also yields superbly preserved fossil remains

**The Dorset Coast can be divided into two distinct areas:**

Erosional coastline from Portland Bill eastwards towards Poole, ending at Swanage

- Tall, more resistant chalk cliffs being eventually eroded and weathered
- 'Hard' mass movements frequently occur here

Depositional coastline - Chesil Beach (from Lyme Regis to Portland Bill)

- Mostly low clay cliffs and sandy beaches with pronounced Longshore Drift
- 'Soft' mass movements frequently occur here

- Lulworth Cove to Durlston Head the coastline is **concordant** (parallel to coast)
- Moving north, from Durlston Head to Studland Bay, coastline is **discordant**

**1) Chesil Beach** - stretches 18km, made of pebbles and shingle and Britain's longest tombolo. Tombolo is spit that connects mainland to an island (the Isle of Portland) by longshore drift. Behind Chesil Beach is shallow lagoon – **The Fleet**.

**2) Durdle Door** - an excellent example of a sea arch. Erosion by waves has opened up a crack in the outer wall of Portland Stone (limestone) headland, becoming a cave, and rapidly eroded the Purbeck Bed behind, developing into an arch.

**3) Lulworth Cove** - is a cove formed after a gap was eroded in a band of limestone. Behind the Portland Stone is band of softer clay, eroded away to form the cove. The same process is occurring further west along the coastline, at **Stair Hole**.

**4) Bays** – 2 bays with beaches called Swanage & Studland Bay, both areas of softer sock (sandstone/clay). In between is headland called The Foreland formed of hard rock (chalk). Heathland behind Studland is a haven for many rare birds/ wildlife.

**5) Old Harry Rocks** - eastern end of Jurassic Coast towards Studland Bay, chalk headland of **The Foreland** has been dramatically eroded at the end into a stack (Old Harry) and a stump (Old Harry's Wife).

| <b>Responses to the flood</b>  | <b>Management of future floods</b>   |
|--|--|
| Government provided £1 million for clean-up/ repairs and agreed to pay for road/ bridge repairs in Cumbria | £4.4 million management scheme   |
| Cumbria Flood Recovery Fund to help victims of flood, reached £1m in 10 days                               | New flood defence walls will halt the spread of the river                    |
| Network Rail opened temporary railway station in Workington  | Technology helps to predict excess rainfall (sensors in river)               |
| 'Visit Cumbria' website provided lists of recovery services and trades, and emergency accommodation        | River dredged regularly, deepens channel                                     |
|  | Floodgates at back of houses in Waterloo St                                  |
|  | New embankments raise the channel height, reduces likelihood of extra floods |
|  | Funding from gov and local contributors                                      |

An example of coastline management, reasons for protection, measures taken, resulting effects and possible conflicts – Holderness, Yorkshire

### Location

- North East of the UK, Flamborough Head to Spurn Point, stretch of **50km**
- Subject to force of waves of N Sea, minimal energy loss before reaching cliffline
- Dominating waves from the **North East**, also direction of **largest fetch**

### Problems

- Rapid rates of erosion (**1.8m** per year avg.), high energy environment
- Underlying the Holderness coast is a **solid bedrock** made up of **chalk**
- However, in most places this is covered by a **glacial** deposit of a soft rock (**till/ boulder clay**) deposited over 18,000 years ago, which is being rapidly eroded
- **29 villages** have been claimed by the sea in **1000 years**
- **Businesses** are **at risk** of erosion, and so employees will lose their jobs
- Seaside **Caravan Park** in **Ulrome** is losing **10 pitches** a year avg.
- **Easington** gas terminal **25m** from cliff edge, accounts for 25% Britain's supply
- **80,000km<sup>2</sup>** of farmland is lost each year, huge effect on farmers' livelihoods
- Families have had to **abandon living in the community** on Spurn Point

### Management of coastline

- Bridlington – 4.7km sea wall + wood groynes
- Hornsea – sea wall, wood groynes + rip-rap, also beach nourishment
- Withernsea – groynes to create wider beaches + sea wall, some rip-rap placed in front of original sea wall (built 1875) when damaged in severe storms **1992**
- Withersea replaced old straight wall with recurved sea wall costing **£6.3m** (£5000 p/meter). Wall protects Withernsea, has prevented valuable local property falling into the sea, it employs many people in the tourism industry.
- **£2m** has been spent at Mappleton to protect the village with 100 residents, 2 rock groynes built in 1991 to protect village and coast road
- Eastern side of Spurn Point is protected by groynes and rip-rap, which also protects the Humber Estuary behind
- Some of the farmland is left with a 'Do nothing' approach, used when the land value is lower or the cost of defending outweighs the benefits
- For example at Spurn Point the community that lived at Spurn Point have been evacuated and moved elsewhere as this was a cheaper option for the council

### Future/Sustainability

- 1) Groynes protect but cause more erosion/narrow beaches further down (Cowden Farm)
- 2) Less material transported south = flooding Humber Est... (less to slow floodwater down)
- 3) Rate of coastal retreat along Lincolnshire coast increased, less new material being added
- 4) Spurn Point at risk of being eroded away, less material being added (growing 10cm/yr)
- 5) Bays forming between protected areas, protected areas becoming headlands, eroded more heavily (maintaining defences in protected areas becoming expensive)

Strategies to influence natural population change within a country – One Child Policy, China

### China – World's largest population – 1.3 billion

- 1949 – population 540m, families encouraged, produce more food, strong army
- By 1970 – population 830m, China's resources couldn't cope
- 1958-61 – Disastrous famine, many people no access to e.g. water/electricity

### 1970 – Late, Long, Few introduced to reduce natural population growth

- Worked well – fertility rate fell from **5.7 (1970)** to **2.9 (1979)**
- Helped make China's development more sustainable, reduced rapid pop growth
- Resources weren't used up as quickly, less waste produced than without policy
- BUT, the population was still growing

### Reasons for the Policy

1. **Combat population explosion** - *Imbalances between population and available resources. China has 7% of world's agricultural land, 23% of world's population*
2. **To encourage economic development** - *Improving SOL for the population*

- **Anti-natalist government** – encouraging people not to have children
- **1950** – rate of population growth was **1.9%** per year
- China government decided previous strategies – unsustainable
- **Benefits:** Access to education, childcare, healthcare, cash bonuses, improved housing, free birth control and family planning advice
- Those who had more than one child weren't offered these benefits and fined
- Those wishing to have more must **acquire consent** from the government
- Policy was keenly **resisted in rural areas**, traditional to have large families
- Policy enforced strictly in urban areas, **hard to control in rural areas**

| Successes                               | Issues  |
|---|---|
| Current population growth – <b>0.7%</b> | Future ageing population, 4-2-1                   |
| Most success among urban populations    | Current ratio 117 males to 100 females            |
| Policy prevented 400m births (2009)     | Spare branches, males outbalance by 60m           |
| Fertility rate 2.9 (1979), 1.8 (2009)   | Opposition in rural areas                         |
| Reduced pop growth in 90s + GNP rise    | Women 2 <sup>nd</sup> time, coerced into abortion |
| Greater equality for women              | Gender selective abortions, infanticide           |
| Reduces unemployment                    | Little Emperor Syndrome                           |
|   | 2000 – 90% of abortions female                    |

### Amendments

- In rural areas, if first child is a girl or has disability then a couple can have 2nd
- If one parent has a disability
- If both parents are only children

An international migration - its causes, consequences and management – Mexico to USA

- **2000km border** between USA and Mexico
- **1 million+** Mexicans **voluntarily** migrate to the USA **every year**
- Illegal migration is a huge problem for USA and Mexico
- **US Border Patrol** guard the border and try to prevent illegal immigrants
- **850,000** were caught in **1995** and were **deported**
- **2010** – more than **11 million** unauthorised immigrants living in USA

| Push Factors  | Pull Factors  |
|---|---|
| 1800 per doctor   | 400 per doctor  |
| GNP \$16,680 per capita   | GNP \$40,000 per capita)  |
| Literacy rates 55% - poor education prospects                         | Literacy rates 99% - good education prospects   |
| 40% unemployed  | Low unemployment rate (5%)  |
| Lots of poverty (40% of population live below the poverty line)       | Less poverty (12% live below the poverty line)  |
| Low paid jobs – Average wage \$3.49                                   | Higher paid jobs (California \$6.75)  |
| Scarce & polluted water resources in many areas                       | Rural migrant can earn up to 10x more doing the same job in the US, more jobs that require no training or education |
| Small range of jobs available   |   |
| Poor response to natural disasters (such as earthquakes & hurricanes) | Quick and effective response to natural disasters   |

| Impacts on USA   | Impacts on Mexico   |
|--|---|
| Illegal immigration costs USA millions for border control/prisons              | Mexican countryside has shortage of economically active people                  |
| Mexicans seen as drain on economy  | Many men migrate, leave females   |
| Cultural and racial issues in cities   | Working pop migrates = dependency   |
| Drug trafficking   | Migration can break up families   |
| Unskilled Americans – harder to get jobs                                       | Large-scale depopulation of towns and villages (Santa Ines has lost 2/3 of pop) |
| Migrants work for low wages, doing low quality jobs Americans don't want to do | Immigrants send home \$20 billion/year, this money supports better SOL          |
| Mexican culture enriches border states   | Less competition for jobs   |

Management

- 1990 Immigration Act, limits annual number of immigrants to 700,000
- Working Visa
- Border Enforcement, Deportation (illegal immigrants)
- 2002 Enhanced Border Security and Visa Entry Reform Act (More BC agents)
- Fences

An example of migration within one country – Brazil

- Movement of people from the **poor North East** to the **rich coastal cities**
- **Rio** population approximately **11.7 million**
- Caused by **natural increase** and as the result of **urbanisation**
- **65% of urban growth** is a result of **migration**

| Push Factors                            | Pull Factors  |
|---|---|
| Poor working/ living conditions         | Better job opportunities – secondary/ tertiary          |
| Unemployment                            | More employment in general                              |
| Low wages                               | Perceived better quality of life (not always a reality) |
| Poor soil, few crops grown              | Access to reliable water supply                         |
| Drought and famine are common           | Better services (healthcare, education)                 |
| Inadequate water supplies               | Electricity   |
| Poor electricity supplies               | Better social life                                      |
| Mechanisation                           | 'Bright lights' theory                                  |
| Natural disasters (e.g. drought) common |   |

| Rural to Urban Migration effects    |  |
|-------------------------------------|--|
| Urbanisation                        | High unemployment level                  |
| Housing shortage – favelas – unsafe | Poor sanitation and health               |
| Increases pressure on opportunities | Increased crime levels                   |
| Overpopulation and congestion       | Lack of jobs = increased informal sector |
| Provides cheap labour to industries | Slows rate of development of rural areas |
| Dependent rural population          | Migrants can send money home             |

- In Rio **25% live in favelas**, with some facilities but poorly planned
- Usually built on poor land or **steep land prone to landslides and flooding**
- Electricity/ power supplies **illegal**, can easily cause **fire** which spread rapidly
- **Rocinha** is home to **60,000 to 150,000** people (nobody knows, could be more)
- **Self-help scheme** - local authorities help squatter settlements improve homes
- **Grants, loans, materials** offered to make temporary homes more permanent
- Authorities – local councils may improve road surfaces, help with clinics, and provide better drainage, however crime and corruption hamper progress
- **Rural development schemes** (e.g. cheap land is offered)
- **Forced eviction** of squatter settlements – to clear land for formal development
- **Low cost housing** – basic breeze block housing constructed, people rehoused
- Site and service – land cleared, building plots prepared with water & electricity
- **Increasing policing** – to stop new squatter settlements
- **Raise taxes** – on the rich to pay for improved housing for the poor
- Local initiative (e.g Afro-Reggae using music and culture) reduces kids in crime

An urban change with social, economic and environmental planning and its sustainability – London Docklands Development Corporation, 1981

## London Docklands

- In the 1980s in an effort to **reverse the process of inner city decline** the UK government set up Urban Development Corporations (known as UDCs)
- Regenerate inner city areas**, took over planning responsibility from councils
- UDCs had the **power to acquire and reclaim land**, convert old buildings and **improve infrastructure** through the investment of government money
- UDCs **attracted private sector investment** and promoted developments

### Why did the London Docks go into decline?

- 19th century, London **one of busiest** ports, but in **50s significant declined**
- An increase in ship size**, couldn't come as far as the Isle of Dogs
  - Containerisation** meant few dockers were needed, and large cranes used
  - The decline of portside industries and manufacturing**

### What were the problems in 1981 in the Isle of Dogs?

- Population** had declined
- Employment** was in decline (loss of jobs from decline of docklands)
- Access to rest of London was poor** with narrow roads (heavily congested) and lack of public transport (single bus route and no rail/underground service)
- 95%+ of housing rented, **high density terraced houses, large estates**
- Shopping** facilities were **limited**, lack of open space and recreation facilities

### The LDDC was set up to:

- Secure regeneration** by bringing land and buildings into effective use
- Encourage development** of existing/new industry, create attractive environment
- Ensured **housing/social facilities** available, encourage people to live/work

| Environmental Regen.      | Economic Regeneration       | Social Regenerat... |
|---------------------------|-----------------------------|---------------------|
| Pedestrian routes/bridges | DLR 1987, Jubilee stop      | 22,000 new homes    |
| Cycle routes              | City Airport                | £10m on housing im  |
| 150 hectares open space   | Major roads e.g. M11 link   | Shopping malls      |
| 200,000 trees planted     | Unemployment 14-7.4% (1998) | Leisure facilities  |
| 17 conservation areas     | 2,700 businesses trading    | UEL Campus          |

| Successes  | Criticisms   |
|--|--|
| More trade for local shopkeepers                                     | Didn't benefit original 'eastenders'                                     |
| Cheaper rents for large companies                                    | Many locals unable to afford property                                    |
| Addressed once failing land, housing and commercial property markets | Despite new jobs, they required skills that most old dockers didn't have |
| Greatly improved accessibility                                       | Reduced community spirit of old Docks                                    |

Example of how retail service provision changes over time – Meadowhall, Sheffield

- Changes to Transport** – Car ownership increased, people travel further
  - Fewer, smaller convenience stores in rural areas
  - More out-of-town shopping centres, **land is cheaper**
  - There's more available, accessible with on-site parking
- Changing Market Forces** – Changes in supply, demand for goods/retail services
  - Smaller, specialist shops can't meet demand and low prices
  - Therefore, people use larger chain stores and supermarkets
- Social habits and work patterns have changed, people have less time to shop for necessities, want more leisure shopping time
- More **convenient** to use supermarkets, stock different types of products
- Large out-of-town shopping centre on the outskirts of Sheffield
- Built in **1990** as response to **lack of shopping provision** in the area
- Constructed on **brownfield site** (56 hectare site of a former **steelworks**)
- Excellent access to shopping centre and is close to several large urban areas with **9 million people living within an hour's drive** of the centre
- Around **800,000 shoppers** visit Meadowhall **every week**

### Why this location?

- Plenty of **space for expansion** and for providing large **free car parks**
- Rates and rents** are **lower** than in the city centre (shops can be bigger) - i.e. cheaper land on edge of Sheffield
- Near to suburban** housing (provides a **labour force**)
- Near a number of **motorway** intersections (nearby M1/A roads) - great accessibility and access to **large sphere of influence**
- Old brownfield site (was steelworks), plenty of room for **expansion** if required

### The main characteristics of the shopping centre:

- Bright and modern with many different facilities, including leisure centre, cinema, crèche and other attractions for children
- 280 shops**
- Large, free car parks (**12,000 spaces**)
- Super **tram link** with the **city centre**
- 2 new railways stations** built

### The Impact of Meadowhall on Sheffield

- Many shops have moved out and **takings** have been **down** by as much as **25%**
- 15% trade loss** in city centre
- Fewer shops and Post Offices in rural villages (e.g. Hope), people travel to shop
- Sheffield now fighting back, redeveloping, improving parking, using 'CityWatch'

An aid project in an LEDC – **Goat Aid, Tanzania**

- In rural Africa, **9/10** poor families **rely** on their **land to survive**
- **FARM-Africa** goat project/ **Oxfam**
- Poor families provided with goats and training in how to care for them
- **£30** for goat – small price to change community
- Money **effectively returned** when family uses the **goats' resources**

| Short-term Advantages  | Long-term Advantages  |
|--|---|
| Milk readily available – no compromises                      | Improve livelihoods of small-holder farmers through livestock development |
| Goat milk & meat – excellent food source                     | Improve family nutrition/ health  |
| Goats' manure - great fertiliser for family's crops          | Create employment within target communities                               |
| Once it's had young – can be sold for money/ killed for meat | Profits used for housing improvements and education                       |
| Goats eat grass, but also survive on weeds and thorn bushes  | More income   |
|  | More investment locally   |
|  | Reduced infant mortality  |

Disadvantages

- Tend to **overgraze** – grassland and crops lost – **desertification**
- Goats **require** grazing land, water, veterinary care – in **short supply**
- Owners **cannot provide treatment, process stops** if goat ill or dies
- No. of hooved animals has increased from **300 to 650m in 40 years**, in that time, experts have pointed out that **poverty has not decreased!**

Sustainable?

- ✓ **Kids sold** to other families – helps whole community
- ✓ **Birth** of new kids – **process can continue**
- ✓ Knowledge passed on
- ✓ In a **drought**, goats have **higher survival rate** than cows and sheep
- ✓ People can **move away** from **subsistence lifestyle**
- X **Crops** are the current way that families **earn money**, if that is lost, they **have to sell** the goat – **eliminates the point** of Goat Aid
- X Whilst goats survive on almost any vegetation, their **hooves** and **constant vegetation** leads to increasing problem of **desertification**

An example of the factors that affect the location of different types of economic activity in an LEDC - **Tourism in Kenya, East Africa**

- One of the **first LEDC's** to experience **mass tourism**
- Kenya experienced **rapid increase** in no. of tourists during **70's and 80's**
- Tourist numbers increased from **films** 'Born Free', 'Out of Africa', and following production of **larger aircrafts in 80's**, brought **prices of air travel down**
- **1997**, Kenya earned over **\$450 million** from tourism

Attractions

- **Equator**, and tropical climate
- Mountain climbing, e.g. **Mount Kenya** – Africa's second highest peak
- Fabulous sandy beaches (**Mombasa** particularly), coral reefs
- Camel riding, wind surfing on beaches, scuba diving
- Savannas and plateaus, e.g. Rift Valley
- **Safari parks**, wildlife reserves
- Interesting diversity of culture, e.g. **Masai Mara**

Why does Kenya want tourism?

- Tourists from MEDC's **bring money**, to spend **disposable income**
- Brings **employment**, so **taxes** can be **spent** on **improving country**, e.g. roads.
- **Money isn't** being **invested in right way**, e.g. being used for military purposes
- Tourist **attractions** (e.g. resorts, hotels, tourist activities) provide **jobs** and **accommodation** for locals, improve their quality of life and develop lifestyles
- Tourism is **largest employer**, growing by an average of **9% a year**

Reasons for Growth in Tourism

- Improved standard of living, paid holidays, flexible working, early **retirement**
- Improved transport – cheaper **long haul flight/** convenient **package holidays**
- Increased **awareness** – education, TV, newspapers & magazines, fashion
- LEDC's develop tourism as **method of economic progress** – attracts **foreign investment and currency**

| Advantages  | Disadvantages  |
|---|--|
| Jobs for locals, 11% of paid employment comes from tourism      | Leakage of income, only 15% given to Kenya, most profits received by big travel companies and foreign owned hotels |
| Foreign currency and disposable income can be spent by tourists | Safaris disturb animals + soil erosion   |
| Provides 15% of GDP   | Projects for communities sidelined   |
| Infrastructural improvements can be made                        | Masai Mara tribe forced out (safari parks)   |
| Market for local goods  | Coastal areas damaged – coral stolen   |
|   | Foreign companies bring foreign workers  |

**The Solution? Eco-tourism** - areas might not be available to future generations = sustainable, reduces impact of tourism on environment, involves locals with decision making, tourists leave small carbon footprint, benefit local people and tourists (e.g Kigio Conservancy set up 1997 - aim of providing wildlife sanctuary and sustainable eco-tourism destination)

An example of the factors that affect the location of different types of economic activity in an MEDC - **Lucky Goldstar, Newport**

- Overseas investment in the UK
- Secondary industry, Korean company, **TNC**
- Making electrical equipment (Newport specifically TV tubes)
- They wanted to set up in the UK so they had **access to the EU**
- Factory to be **built by LG**, on site provided by **Welsh Development Agency**
- WDA funded development by up to **£200 million = £30,000 per job** promised

**1996** - Plans announced for LG to set up factory in **Newport**

- **6,000 jobs** proposed for area badly **affected by closure of industries**
- **Unemployment** was running at **3x the national average** in Newport
- **18% of the workforce** claimed that they were long term sick

**Why Newport?**

- Half way between Bristol and Cardiff
- M4 corridor
- Available workforce
- Flat, industrial land
- Incentives from government, PM John Major calls it “a vote of confidence”

**19<sup>th</sup>/ early 20<sup>th</sup> Century** coal, iron, steel industry grew in South Wales due to:

- An available workforce
- Available, easily accessible raw materials, coal easy to get to in valleys
- A strong market for the goods, especially in the British Empire

**1998 - Crisis in South East Asia**

- Tiger Economies that developed very quickly in early 1990’s were in trouble
- Companies like LG were forced to look again at their overseas investment – should they continue to invest when there are problems at home?

**The Positive Multiplier – 1,100 jobs** were **created** in total at the plant

- LG development was part of bigger plans for South Wales
- Developments in infrastructure + help from EU brought more business to area
- LG has **2 other plants** at Blackburn and Durham

**2002** - TV tubes are not needed for modern TV’s, talk in the press of job losses

- Rumours say LG’ll set up factories in Eastern Europe, making use of EU funding

**March 2003** - LG announce the closure of the Newport plant, with 870 job losses

- The company blame a change in the market.

**Summer 2003** - The plant closes with 870 jobs lost

- The company and unions can’t agree on how much redundancy pay there is
- There are calls for a public enquiry

**Winter 2003** - LG to pay back £15m of grant and give WDA back their site

- Local unemployment rises

**August 2005** - A development is found for the old LG factory site

- Quinns radiators announce plans for new European Headquarters, 500 jobs
- The company get £10 million assistance from the Welsh Development Agency

A specific development where conflicts exist between economic development and environmental damage – **Palm Oil, Borneo**

- In around **1/10 supermarket goods**, and **disguised** as Vegetable Oil
  - Used as **biofuel** - by 2020, Europe wants 10% of its fuel to be from palm oil
  - Worldwide **demand** allows logging and plantations to destroy natural environment
  - Tropical rainforests are being torn up to provide land for **oil palm** plantations
  - **More wood extracted** from Borneo from **1985-2000** than Africa & Amazon!
  - Commercial logging began 1970s, accelerated in 80s when timber industry concentrated on the island, and now take advantage of Borneo’s natural resources
  - Borneo supplies **half the world’s** tropical timber & other exports (e.g. palm oil)
  - Also a site of increased ecological interest, **rich in biodiversity**
  - UN Environment Programme predicts **98%** Indonesia’s rainforest destroyed by **2022**
  - Also worldwide support for Bornean conservation, **international groups** like WWF
- **2010**, people dressed as orang-utans to **campaign** outside Nestlé headquarters
  - **Nestlé agreed** to stop using palm oil from Borneo after bad publicity

| <b>Environmental Impacts</b>  | <b>Economic Development</b>  |
|---|--|
| In 1997, slash and burn used to clear land, combined with the drought effect of El Niño, resulted in forest fires raging out of control with smoke haze affecting Brunei, Malaysia, Indonesia and Singapore | In the short term, destroying the forests gives more to the economy through export potential than the tourist dollars earned in keeping it   |
| Smoke spreads across South-East Asia, disrupts air travel, damaging to health and costs the region billions of pounds   | New large road routes have been created through the forest, for ease of resource transportation  |
| Disruption of wildlife habitats (orangutan)   | Global demand for timber and plantation  |
| As Dayak lose their land, also risk losing their culture, and eventually their existence  |  |
| Climate change is another concern   |  |
| Removal of trees without adequate regrowth strategies, unsustainable  |  |
| The replacement of natural forest with oil palm and rubber trees reduces biodiversity as the trees are generally from one species   | Oil palms:<br>- Wider range of uses than most other crops<br>- Require less fertilisers/ pesticides<br>- Produce more energy than other biofuels<br>- Absorb nearly as much CO2 as rainforests |
| Soil erosion, land can’t be used for agricul....  | Tourism has increased, but could suffer  |
| As rainforests are replaced with oil palms, it releases large amounts of greenhouse gases into the atmosphere   | Local officials call palm oil ‘green gold’ from potential to help Borneo develop sustainably, create jobs and wealth without destroying environment  |
| Local communities (e.g. Dayak) depend on hunting and forest resources such as rubber, traditional ways of life are also threatened by the spread of plantations   | Many young people have to find work elsewhere rather than continue traditional way of life because of lack of roads, hospitals, schools or paid jobs in Borneo’s remote areas                  |

An MNC investment in a specific area and in an international context – **NIKE, Vietnam**

- Est. 1972
- **2009** – annual revenue of \$19.2 billion
- **34 factories** in **Vietnam**
- Nike’s Vietnam headquarters is in **Ho Chi Minh City**

Anti- globalisation groups targeting Nike for:

- (Sweatshops) **Child labour**
- Hazardous **working conditions**
- Below subsistence **wages**

| <b>Pros</b>  | <b>Cons</b>   |
|--|---|
| Important economic opportunity for workers, and improves skills of local population                            | The company’s image and advertising may help to undermine the culture of Vietnam                |
| Average pay at Vietnam Nike factory is \$54 a month, almost 3x minimum wage for state-owned enterprise         | Concerns of the political influence of Nike and other MNC’s over the government of Vietnam      |
| 1998 – Nike changed minimum age to 17 in all manufacturing countries   | Investment could be transferred quickly from Vietnam to lower cost locations in other countries |
| The success of a global brand has helped attract other MNC’s to Vietnam, and brings a certain economic status  | 2007 & 2008, strikes in number of Nike factories over better pay and conditions                 |
| Sets new standards in efficient production for indigenous companies (e.g. health&safety, wages)                |   |
| Contribution to the tax base helps to pay for improvements to infrastructure                                   |   |
| Nike job comes with regular wage, with free or subsidised meals, free medical services, training and education |   |

Nike in an international context

- Products in **140 countries**
- Contracts to **700 factories** in **45 countries** – **650,000 contract workers**
- More than **75% of workforce** in **Asia**
- Majority of workers – **women under 25**
- Nike aims to produce new shoes on a regular basis to cater for **niche markets** (small markets that deal in a specialised product)
- So it uses a ‘**just-in-time**’ innovation structure (buying in necessary expertise at short notice)
- This involves **short-term subcontracts**, often allocated to firms based near Oregon, USA (where the research and development takes place)
- In response to years of ‘sweatshop allegations’, Nike has written a **policy promoting safe working conditions** in it’s factories
- This was seen as an ‘important step forward’ in improving working conditions in LEDCs by the pressure group ‘**Human Rights First**’