GEOGRAPHY FOR JUNIOR CYCLE

Living Geography

Dermot Lucey ■ Jimmy Condon

SAMPLE MATERIAL

CJFallon

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INTRODUCTION

Living Geography covers the complete Junior Cycle geography specification in an engaging and enjoyable way. It has been written and designed to be student-friendly, with easy-to-read text and the appropriate language level for Junior Cycle.

***Living Geography* will:**

- Help students become **geographically literate** by developing a greater understanding of people and place.
- Guide self-directed learning and **critical thinking**.
- Encourage students to become more **active** learners.
- Stimulate greater **geographical interest**.
- Help students gain experience in research through **collaborative** and **individual** work.
- Link class content to current world events, allowing students to analyse them through a **geographical lens.**

Features of the textbook include:

- **Key geographical skills** developed throughout the book.
- **Learning outcomes (LOs)** unpacked into units of learning and aligned to the **new Junior Cycle geography specification**.
- A **non-linear** linking of the course content.
- **Geoliteracy** explored through the use of **mind maps** at the end of each chapter.
- New and up-to-date ***Focus on*** feature.
- **Classroom-based assessment 1 Geography in the News** explored in most chapters through a ***Geography in the News*** feature.
- Dedicated unit of learning on **classroom-based assessment 2 My Geography**.
- **Inclusive content** for all students, with **extension activities** for more-able students.
- **Active-learning activities** at the end of each section encouraging students to develop geographical, literacy and numeracy skills through both individual and **collaborative** work.
- **Up-to-date** and well designed maps, tables, graphs, statistics and infographics, together with interesting images, including aerial photographs.

Features of the workbook:

- The accompanying **workbook** complements both formative and summative assessment strategies used in the textbook. It contains ***Focus tasks*** to continue with enquiry-based learning and to broaden geographical knowledge.
- **Reflective learning is** encouraged through the inclusion of a **learning log** called ***Map my learning journey*** at the end of each unit of learning in the workbook. This will help with the reflective aspect of the **Assessment Task (AT)**.

Dermot Lucey and Jimmy Condon

Guide to icons

Learning Outcomes

Patterns, Processes, Systems, Scale

PPSS: Patterns

PPSS: Processes

PPSS: Systems

PPSS: Scale

Geographical Skills

Sustainability

Geoliteracy

Focus Task

Workbook

Web Resource

Focus Task

Overview of Junior Cycle geography

Junior Cycle geography encourages the development of geoliterate students (who have a clearer understanding of the world through greater exposure to geographical thinking and reasoning).

Junior Cycle geography has **twenty-eight learning outcomes** divided into **three strands**:

- Strand 1: Exploring the physical world (10 LOs).
- Strand 2: Exploring how we interact with the physical world (9 LOs).
- Strand 3: Exploring people, place and change (9 LOs).

Action verbs are used to clarify how the content of the Learning Outcomes should be explored. The content is experienced by students through **three elements**:

- Processes, Patterns, Scale and Systems.
- Geographical Skills.
- Sustainability.

Junior Cycle geography encourages the development of all **eight Junior Cycle Key Skills** and **seven** of the twenty-four **Statements of Learning** assigned to geography.

Junior Cycle geography will be assessed through:

- **Two classroom-based assessments** (CBAs):
  - Geography in the News – second term of second year.
  - My Geography – first term of third year.

Both will be assessed in school.

Junior Cycle geography will also be assessed through:

- An **assessment task** (10%) (based on CBA 2).
- A **final examination** (90%) to be assessed by the State Examinations Commission.

CONTENTS

Unit of Learning 6 Weather and Climate

Unit of Learning 7 Resources and Economic Activities

Unit of Learning 8 Population

Unit of Learning 9 Settlement and Urbanisation

Unit of Learning 10 Economic Development and Globalisation

Chapter 14

The Work of Glaciers

Key learning: you should be able to:

- Explain how glaciers erode the land
- Explain how glacial erosion and deposition shaped the landscape
- Identify how the glacial landscape influences the development of human activities

LO 1.5, 1.10, 2.3, 2.7, 2.9

Glaciation in Ireland

During the Ice Age, Ireland was covered a number of times by huge **glaciers** or **ice sheets** that advanced from the Arctic, as well as by **valley glaciers** from the mountains.

Glaciers create features on the land by **erosion** of the landscape and by the **transportation** and **deposition** of the eroded material elsewhere.

The **erosion** occurs mainly in **upland areas**, while **deposition** occurs mainly in **lowland areas**.

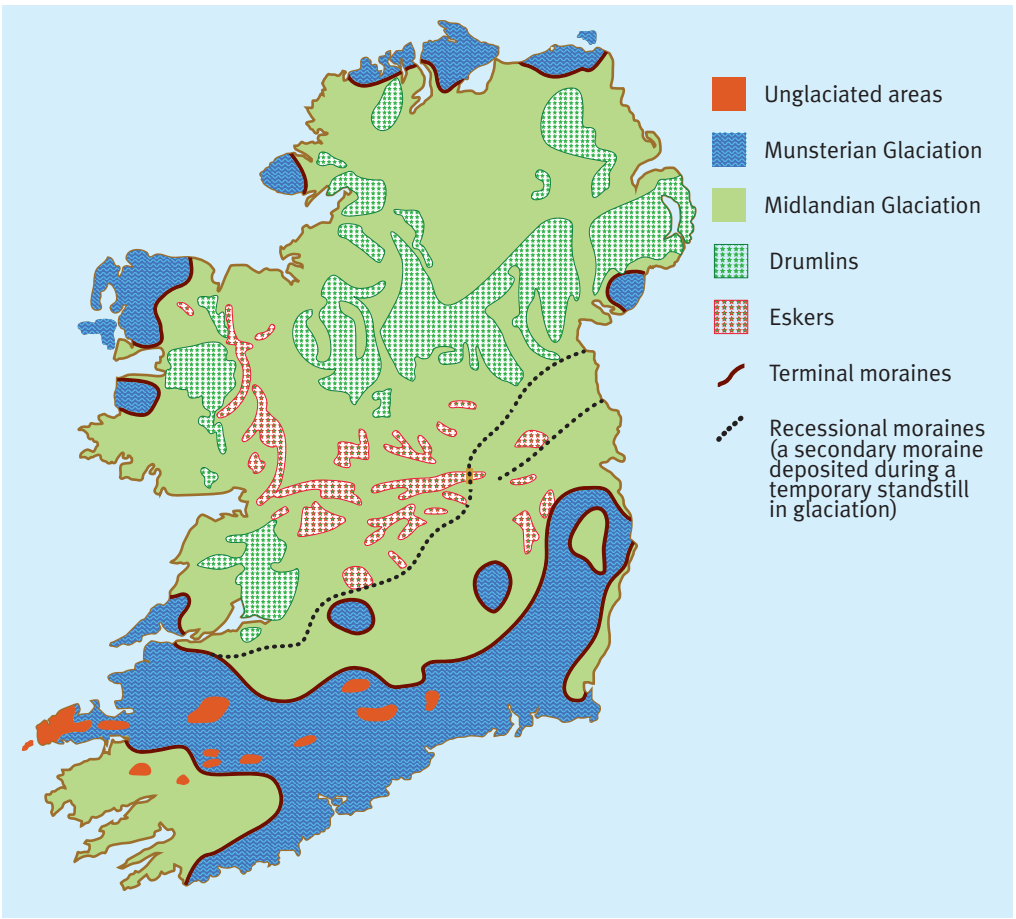


Fig 14.1 *The process of glaciation in Ireland.*

A glacier in Greenland.

How do glaciers erode?

Glaciers erode by **plucking** and **abrasion**.

Plucking is where meltwater enters cracks in the bedrock. When this is frozen, the rock becomes part of the glacier and is plucked (or torn out) when the glacier moves on. This plucked rock becomes part of the **load** of the glacier.

Glaciers also wear away or erode by **abrasion**. The glacier uses its load of rock to scrape or wear away the valley floor and sides.

What are the landforms of glacial erosion?

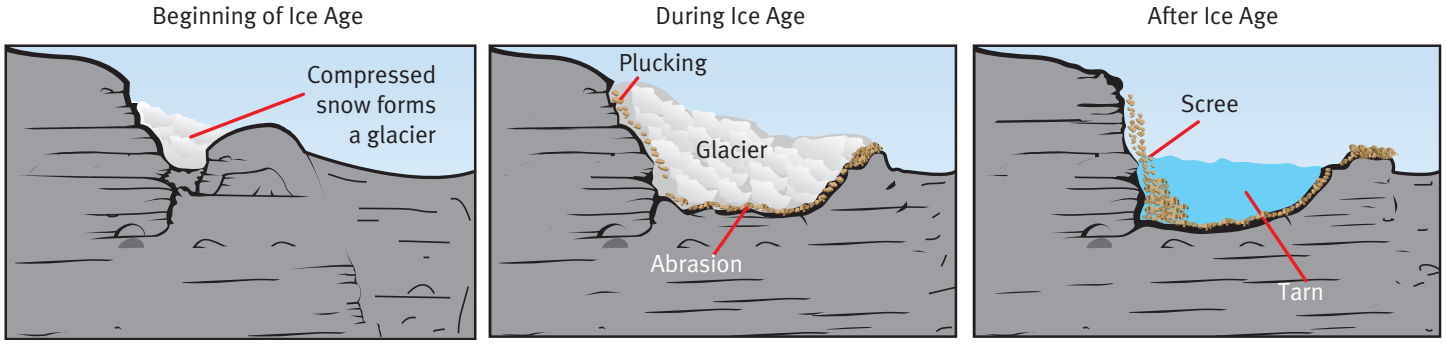
Cirque

A **cirque** is a hollow in the mountains where a glacier was formed. The glacier wears out the hollow by plucking the rock underneath and by abrasion.

Cirques are also known as **corries** or **cooms**. Sometimes after glaciation a lake called a **tarn** forms in the cirque.

Examples: Coumshinguan, Comeragh Mountains, Co. Waterford; Devil's Punchbowl, near Killarney.

Fig 14.2 *Explain the formation of a cirque.*



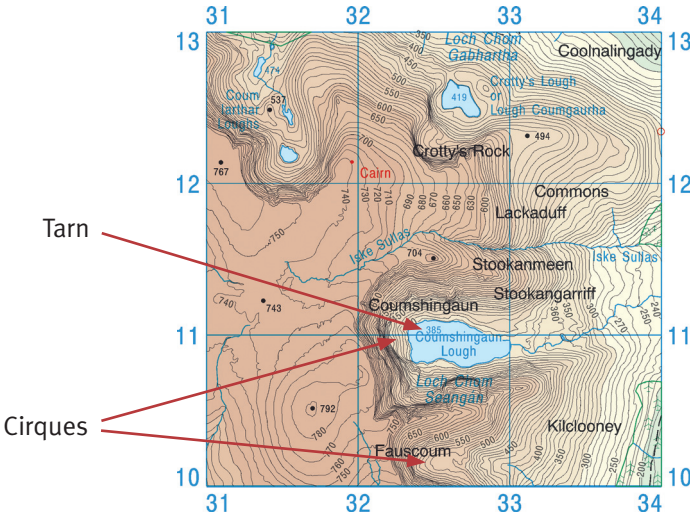


Fig 14.3 *Coumshinguan, Comeragh Mountains, Co. Waterford. An example of a cirque and a tarn. Compare the features of the OS map with the features in the satellite photo.*

Satellite photo of Coumshinguan, Comeragh Mountains, Co. Waterford.

Coumshinguan, Comeragh Mountains, Co. Waterford. Notice the steep back and side walls of the cirque.

Pyramidal peak

A **pyramidal peak** is a sharp peak where a mountaintop has been shaped or sharpened by **glaciation** and **freeze–thaw action**. The pyramidal peak is formed when three or more cirques or corries are eroded back to back to form the peak. Above the glaciers, freeze–thaw action has weathered the rock, making the peak sharper.

Arête

An **arête** is a sharp or pointed ridge formed where two glaciers have eroded the valleys on either side.

Examples: around Carrauntoohil in the Macgillycuddy's Reeks, Co. Kerry; the Matterhorn in the Alps.

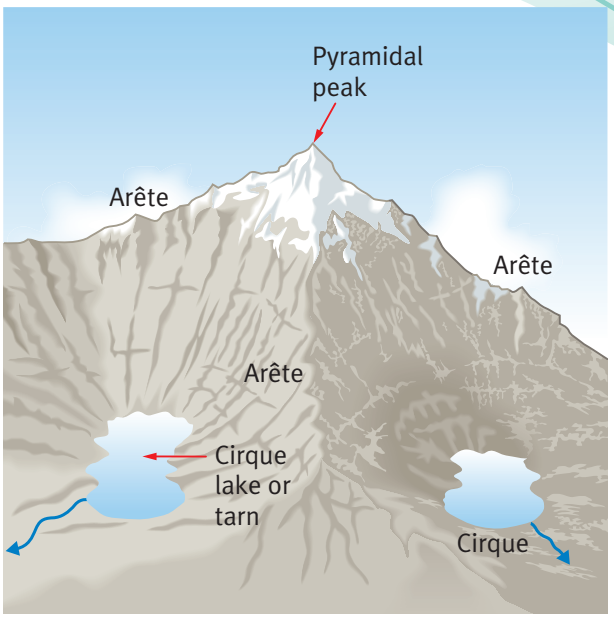
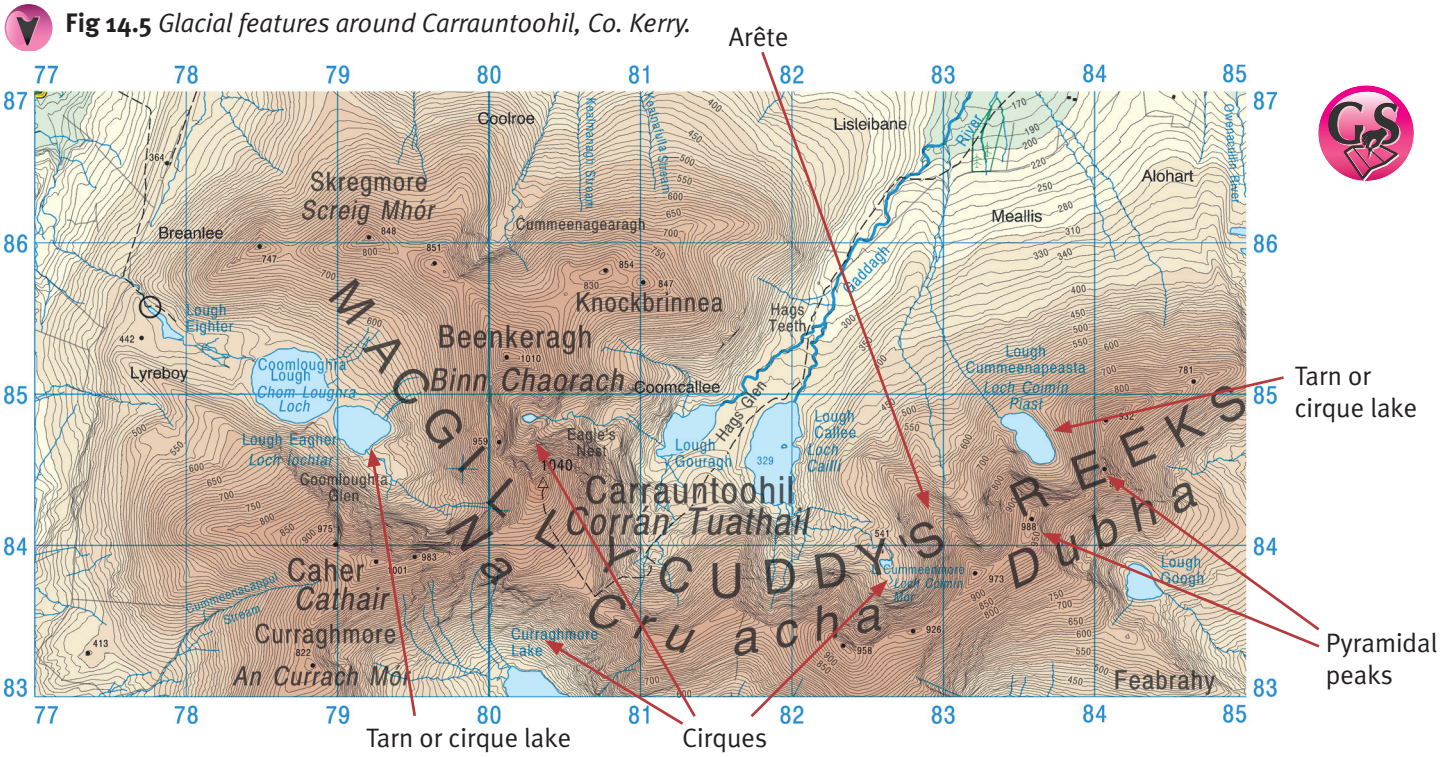


Fig 14.4 *Pyramidal peak, cirques and arêtes.*

Fig 14.5 *Glacial features around Carrauntoohil, Co. Kerry.*



Glacial valleys – U-shaped valleys

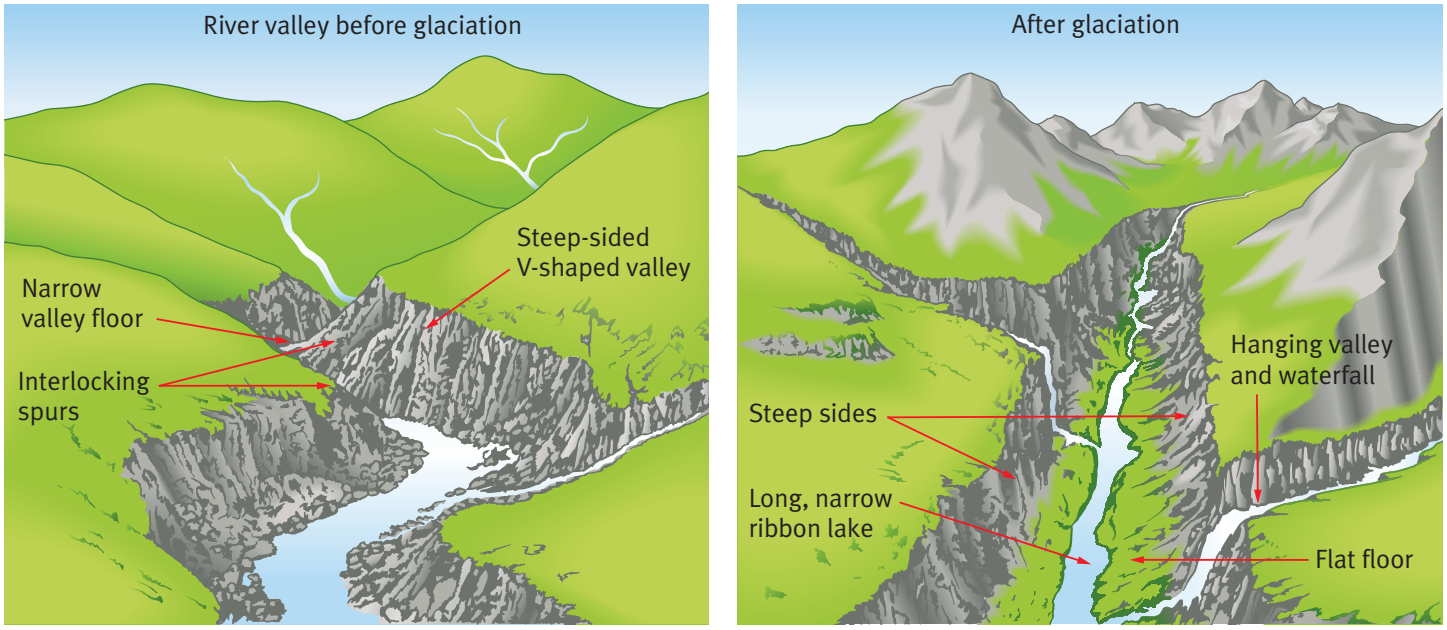


Fig 14.6 *U-shaped valley – before and after glaciation.*

A **U-shaped valley** has steep sides and a wide valley floor. U-shaped valleys are formed when a glacier moves down a V-shaped (or river) valley. As the glacier moves, it cuts off interlocking spurs in a river valley and straightens, widens and deepens the valley. The glacier uses **plucking** and **abrasion** to wear down the floor and sides of the valley.

A **hanging valley** is a tributary valley that is higher up than the floor of the main glacial valley. A hanging valley is formed because the glacier in the main valley erodes a deeper valley than the smaller glacier in the hanging valley. As a result, the tributary valley is left hanging above the main valley. A **waterfall** is created when a river flows from the hanging valley onto the main valley.

A **ribbon lake** is a long, narrow lake in a U-shaped valley. It is formed when a glacier wears away (plucks, abrades) softer rocks to create a hollow in the valley floor, which fills with water after the glacier melts. When a number of ribbon lakes are connected by a river, they are called **paternoster lakes.**

Examples: Glendalough, Co. Wicklow; Gap of Dunloe, near Killarney.

Overlooking the U-shaped valley of Glendalough.

Fjords

A **fjord** is a long, narrow **sea inlet** with steep valley sides. It is the drowned mouth of a **glacial** (or **U-shaped**) **valley**. This happened when sea levels rose after the glaciers melted.

Examples: Killary Harbour, Co. Mayo; fjords in Norway.

A fjord. Describe the features of a fjord (as seen here).

Glacial valley and features

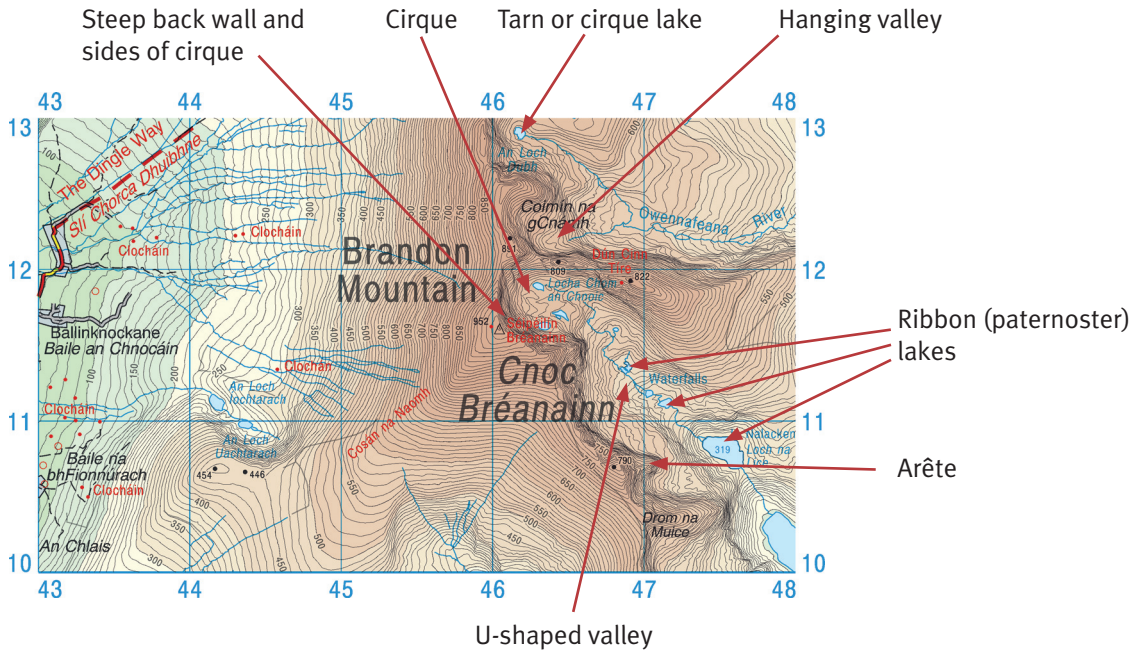


Fig 14.7 *Features of a glacial valley near Brandon Mountain, Co. Kerry.*

What are the landforms of glacial deposition?

Moraines

Moraines are deposits of boulder clay (rock and earth) that have been laid down by glaciers. The moraine is carried along (**transported**) on top, inside and under the glaciers.

Glacial valley, Alaska, US.

- A **lateral moraine** is deposited along the sides of the valley. Freeze–thaw action breaks off rock and earth on the mountainside, which fall down on the side of the glacier.
- A **medial moraine** is deposited in the middle of the valley. It is formed when two glaciers join up and their lateral moraines become a medial moraine.
- A **terminal** (or **end**) **moraine** is deposited at the end of the glacier, where it stops or melts. It is formed by the moraine that has been carried along on top and inside the glacier.
- An **outwash plain** is formed in front of the glacier as streams flow out and deposit material. The plain is a flat area formed from the deposits of clay, gravel and silt that are laid down. The **Curragh of Kildare** is an example of an outwash plain.

Boulder clay is composed of earth and rocks transported by glaciers.

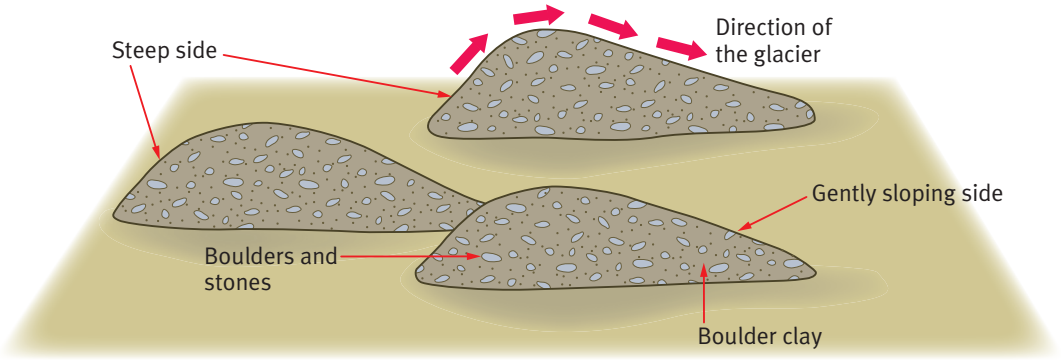
Moraine at the Tasman glacier and lake, New Zealand.

Drumlins

A **drumlin** is a long, low hill formed of **boulder clay** that has been deposited by a glacier. A drumlin has a steep side and a gently sloping side. The steep side faces the direction from which the glacier came. Drumlins are often found together in a 'basket-of-eggs' landscape.

Examples: the islands in Clew Bay, Co. Mayo and hills in the counties from Co. Mayo to Co. Down (see Fig. 14.1).

Fig 14.8 *Drumlins.*



The islands in Clew Bay, Co. Mayo are drumlins.

Eskers

An **esker** is a ridge of sand and gravel that was deposited in a tunnel under the glacier. The tunnels are formed by rivers of meltwater under the glacier, and they deposit the sand and gravel on the bed of the river to form the esker. The tunnel shapes the deposits into a ridge.

Example: Eiscir Riada in the midlands, which was used as a route way across the centre of Ireland in the Middle Ages.

An esker.

Erratics

An **erratic** is a rock that was transported and deposited by a glacier. It differs from the rock on which it rests – e.g. a granite erratic on limestone. Erratics provide information on the direction glaciers move.

An erratic. How do erratics provide information on the movement of glaciers?

How does glaciation interact with human activity?

How does glaciation help human activity (advantages/benefits)?

- **Tourism:** beautiful valleys and scenery created by glaciers attract tourists – e.g. Glendalough in the Wicklow Mountains, the lakes of Killarney and the mountains of Connemara.
- **Skiing:** ski resorts in the Alps in France, Switzerland, Italy and Austria are very popular. These resorts are built on **glacial landscapes**.
- **Recreation:** glacial lakes are used for boating and fishing, while the mountain paths are suitable for walking.
- **Communications:** glaciers cut routes through the mountains that are used for roads and rail because the valley floor is wide and straight.
- **Hydroelectric power (HEP):** steep slopes and deep valleys are ideal for hydroelectric dams. The dam is built across the valley to block the water. The high sides of the valley contain the water in the lake. In Ireland, **Lough Nahanagan** is a cirque lake in Co. Wicklow used for storing water as part of an ESB station for generating electricity (Turlough Hill Power Station).
- **Fertile land:** glacial deposits on the lowlands created fertile land for agriculture.
- **Sand and gravel:** sand and gravel deposits by glaciers are used by the construction industry. The deposits are found in many parts of the country, including the Lee Valley in Cork and Blessington in Co. Wicklow.
- **Forestry:** coniferous trees grown on the thin mountain soil are used for fuel and for building.

A post-glacial landscape. Lough Nahanagan, Co. Wicklow (a cirque) is now used as part of an ESB power station (Turlough Hill).

How does glaciation hinder human activity (disadvantages)?

- **No soil:** glaciers stripped the land of soil, usually on mountainsides, making them suitable only for sheep or growing coniferous trees for forestry.

  Examples: Connemara, Co. Galway; The Rosses, Co. Donegal.

- **Bad drainage:** bad drainage created by glacial deposits formed blanket bogs on the mountainsides, particularly in the west of Ireland. There is also poor drainage in drumlin areas of counties Cavan and Monaghan.

Focus on winter and summer tourism in the Alps

Key learning: you should be able to:

- Investigate the interrelationship between the physical world and tourism. LO 2.9

The Alpine mountain range stretches from France through Switzerland into Italy and Austria.

- **Soft, powdery snow** falls in the Alps from November onwards and stays on the ground until the following April or May.
- During these months, when the weather is settled, it can be **sunny** and **warm** during daytime. This is **ideal weather** for skiing and snowboarding.
- Skiing and snowboarding are catered for in many resorts in the Alps, including Davos (Switzerland), St Moritz (Switzerland), Chamonix (France), Lermoos (Austria), Courmayeur (Italy) and Livigno (Italy).

Snowboarder in the Alps.

Skiing in Davos, Switzerland

- **Davos** in Switzerland is one of the highest alpine resorts in Europe. It is situated in a **typical glacial valley** with a flat floor and steep mountain slopes. Close to Davos is a glacial lake.

Fig 14.9 *Map showing Alpine ski resorts. Note the location of Davos and Klosters (encircled).*

- There are five mountains with 300km of slopes divided into eighty-five descents, making this resort one of the biggest snow-sports regions in the Alps.
- There is skiing, snowboarding, tobogganing and ice skating available. Local buses and railways are used to move people around the valley, while chairlifts and cable cars take skiers up the mountains.

Alpine mountains tower above Davos, which sits on the valley floor below. Davos is home to the World Economic Forum, where world political and economic leaders meet each year.

- A range of other facilities cater for tourists. These include climbing-walls, squash, indoor golf and swimming. There are also museums, concerts and many shops and restaurants. The towns also cater for skiing and ice-hockey championships.
- In **summer** the resort offers more than seventy activities free of charge (a total of 800 activities all summer long) in the categories of sports and adventure, kids and family, arts and culture, and sightseeing and excursions. These include hiking, biking, trail running, paddling and family rafting. Cable cars provide access to high altitude paths, while Davos lake is used for swimming, sailing and surfing.

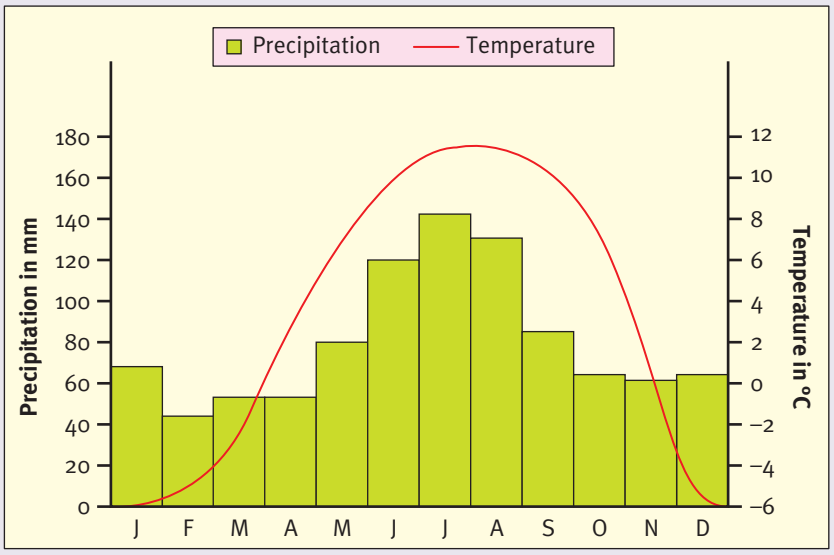
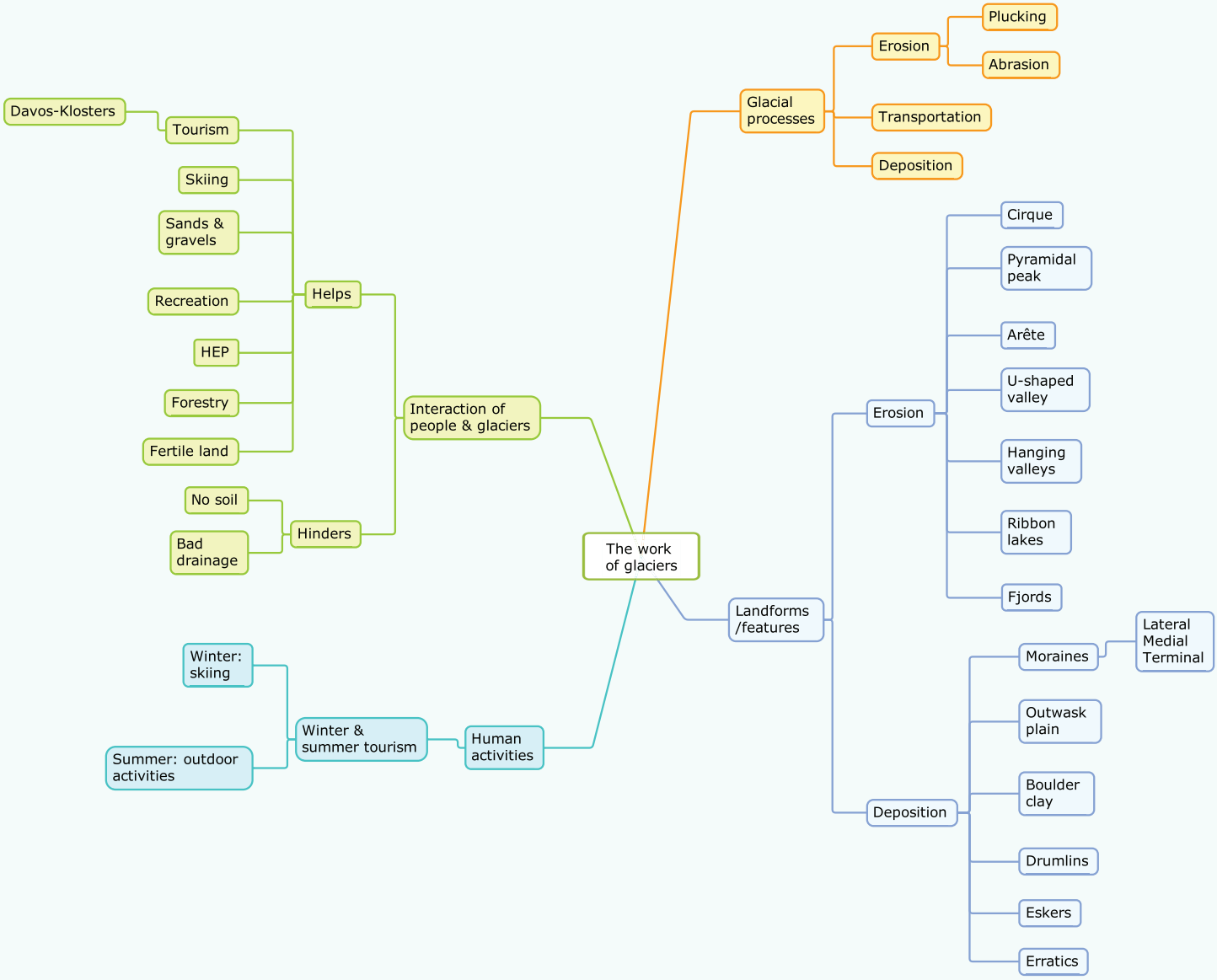


Fig 14.10 *Climate graph for Davos, Switzerland.*

60 KEY IDEAS: 60-SECOND SUMMARY



Focus task

Research glacial features around the Macgillycuddy's Reeks, Co. Kerry (e.g. using Google Earth, Google Maps or Apple Maps) to identify glacial features. List the latitude and longitude and/or local place names of the features you find.

ACTIVE LEARNING

Review

1. Explain each of the following terms on the work of glaciers:
   - Plucking
   - Abrasion
   - Cirque
   - Fjord
2. Explain how each of the following landforms were formed:
   - Pyramidal peak
   - Arête
   - Hanging valley
   - Ribbon lake
3. Identify places in Ireland where you would find the following landforms:
   - Cirques
   - Ribbon lakes
   - Drumlins
4. Explain the differences between lateral, medial and terminal moraine.
5. Which of the following are features of glacial deposition: U-shaped valleys, drumlins, eskers?
6. List four ways glaciation helps human activity.
7. List two ways glaciation hinders human activity.
8. How does glaciation benefit tourism in Davos, Switzerland?

Write like a geographer

Using the labelled features on the map Fig. 14.5 (and others you can identify), write an account of how glaciation has affected (impacted on) the MacGillycuddy's Reeks in Co. Kerry.

Work like a geographer

Draw a labelled diagram to explain how medial and lateral moraines are formed.

Living geography

Investigate how tourism in Austria, Killarney, Co. Wicklow or Co. Donegal benefits from the effects of glaciation.

Key words

You should know the meaning of the following words and terms:

plucking
abrasion
cirque (corrie, coom)
tarn
pyramidal peak
arête
hanging valley
ribbon lake
paternoster lakes
fjords
moraine (lateral, medial, terminal)
boulder clay
drumlin
esker
erratic
tourism

Geography in the news *Independent*, 19 May 2017, Chloe Farand

Miles of Antarctic ice are collapsing into the sea as scientists try to understand speed of change

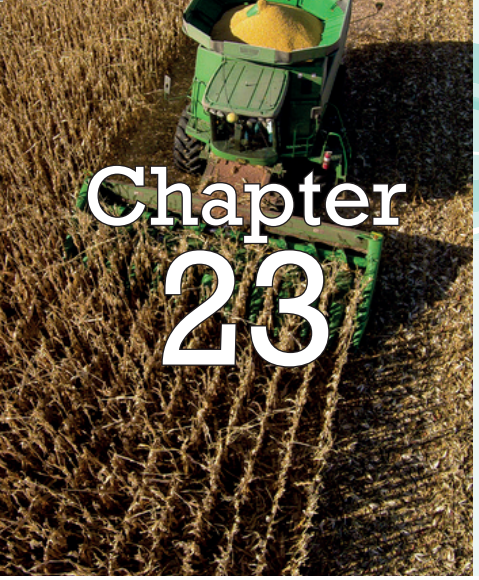
Miles of ice sheets in the Antarctic are collapsing into the sea in a trend that scientists fear may indicate the early stage of an unstoppable disintegration (break-up). The collapse of the most vulnerable (weakest) parts of the ice sheet would cause the rising of the sea level, threatening some of the world's biggest coastal cities such as Miami, New York, Mumbai and Shanghai.

While the melting of the ice cap is widely known, scientists are trying to gather information about the rate at which it is occurring. Although the predictions are worrying, The New York Times reports scientists still lack information over the future course of the climate in Antarctica.

Computer forecasts suggested that if emissions continue at this rate to warm up the atmosphere, parts of Antarctica could break up rapidly, which could see the ocean rise six feet or more by the end of this century. This would be double the maximum increase that an international climate panel projected four years ago. Since 1950, temperatures in the Antarctic Peninsula have risen by about half a degree Celsius each decade, which is much faster than the global average.

With the ocean getting warmer and speeding up the ice flow, American and British scientific agencies are now working together to get a better understanding of the rate of the collapse in the most vulnerable areas. It could be years before this study brings a set of answers but urgent insight into the potential speed at which sea level could rise is crucial.

1. What do scientists fear is happening in the Antarctic?
2. What cities are threatened by a rising sea level?
3. What are scientists unsure about in relation to the melting ice?
4. How fast have temperatures risen in the Antarctic?
5. Why do you think it 'is crucial' to have 'urgent insight into the potential speed at which sea level could rise'?



Chapter 23

Primary Economic Activities

Key learning: you should be able to:

- Understand how primary economic activities (e.g. farming) can be examined as systems
- Investigate local and national examples of primary economic activities
- Understand how the over-exploitation of resources (e.g. fish) can lead to their depletion (exhaustion)

LO 1.4, 1.10, 2.3, 2.4, 3.4, 3.5

Primary economic activities elsewhere in this book

Farming
Chapter 23

Fishing
Chapter 23

Forestry
Chapter 12

Mining
Chapters 9, 23

Peat bogs
Chapter 12

What is a system?

A system is an activity that uses **inputs** and **processes** (changes) them into finished products called **outputs**.

Farming

Farming is a **primary economic activity** – it produces the raw materials that will be processed elsewhere.

Farming is a **system** that uses inputs, processes and outputs.

- The **inputs** include grass and fertiliser.
- These are used in the **processes** – the work carried out by the farmer – to produce the **outputs**.
- These outputs are the products of the farm and may include milk, calves, wheat and vegetables, depending on the type of farm.

There are different types of farms – poultry farms, tillage farms, stud farms, dairy farms, market gardening farms and beef farms – which all produce different outputs.

Input = resources put into the farm to produce outputs.

Processes = work carried out on inputs to produce outputs.

Output = something produced by the farm using inputs.

Local example: Focus on a mixed farm in Fermoy, Co. Cork

A mixed farm is a farm that combines **different farming activities** in one farm. – e.g. dairy and tillage (crop growing).

Inputs

- John owns a **farm** in Fermoy, north Cork. It is eighty hectares of good-quality, level land. John has a mixed dairy and cattle farm and he grows barley. He has eighty cows and he also rears cattle.
- Plenty of **rain** and **sunshine** encourage good grass growth and the sun ripens the barley.
- John provides most of the **labour** on the farm. His wife is working in a local town and his teenage sons and daughters help out at weekends and holidays. John sometimes hires a **relief milker** at the weekends in the summer. He also hires a **contractor** to cut the barley.
- John has **sheds** for storing machinery (tractors, trailers, slurry spreader and fertiliser spreader) and for storing fertiliser.

Processes

- The work on John's farm (the **processes**) varies from season to season.
- In the **spring**, he spreads fertiliser on the grass, cares for newborn calves and ploughs the fields he needs for tillage.
- In the **summer**, he milks his cows, cuts the hay and makes silage. He also lets his cows out in the fields for grazing in the grass.
- In the **autumn**, he reaps the harvest of barley. He greases and repairs machines. He cleans his milking machine.
- In the **winter**, he does repairs to fences and buildings and he feeds his animals.

Total rainfall in millimetres for Moorepark, 2015–17 and means for 1981–2010

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2017	85.3	108.4	115.8	19.3	72.4	93.3	54.1	72.3	115.7	102.2	65.5	110.4	1014.7
2016	168.4	153.1	47.3	104.1	56.3	79.3	50.8	72.0	98.6	27.9	44.5	84.7	987.0
2015	109.0	61.3	77.5	18.5	111.3	34.0	97.0	104.0	92.3	70.0	110.1	324.3	1209.3
Mean, 1981–2010	111.0	80.1	85.5	65.6	69.3	70.2	62.0	83.6	79.5	113.3	105.4	103.9	1029.4

Mean temperature in degrees Celsius for Moorepark, 2015–17 and means for 1981–2010

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2017	6.3	6.6	8.3	9.0	12.0	14.8	15.7	14.6	12.9	11.5	7.2	6.3	10.5
2016	6.1	5.1	6.0	7.4	12.3	14.8	16.0	15.5	13.9	10.6	5.2	6.7	10.0
2015	5.5	4.7	6.4	8.6	10.4	13.3	14.3	14.2	12.2	10.4	9.9	9.0	9.9
Mean, 1981–2010	5.7	5.8	6.9	8.6	11.0	13.8	15.8	15.3	13.1	10.4	7.7	5.8	10.0

Mean 10cm soil temperature for Moorepark, 2015–17 and means for 1981–2010

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2017	5.3	5.9	7.3	9.7	12.8	16.0	17.4	15.9	13.6	11.4	7.3	5.2	10.7
2016	5.3	4.5	5.2	7.3	13.0	16.6	16.9	16.1	14.0	9.9	5.0	5.8	10.0
2015	4.7	3.9	6.0	9.2	11.8	14.6	15.4	14.8	12.2	10.2	9.1	8.2	10.0
Mean, 1981–2010	4.8	4.8	5.9	7.9	11.3	14.1	15.7	15.2	13.0	10.0	7.2	5.6	9.6

Focus task

Visit the website of Met Éireann to find weather data from your nearest weather station (http://www.met.ie/climate/monthly-data.asp). Compare the data with that of John's local weather station in Moorepark, Fermoy, Co. Cork. Using your knowledge and understanding from Unit 6, consider the effect your local weather has on primary economic activities in your area.

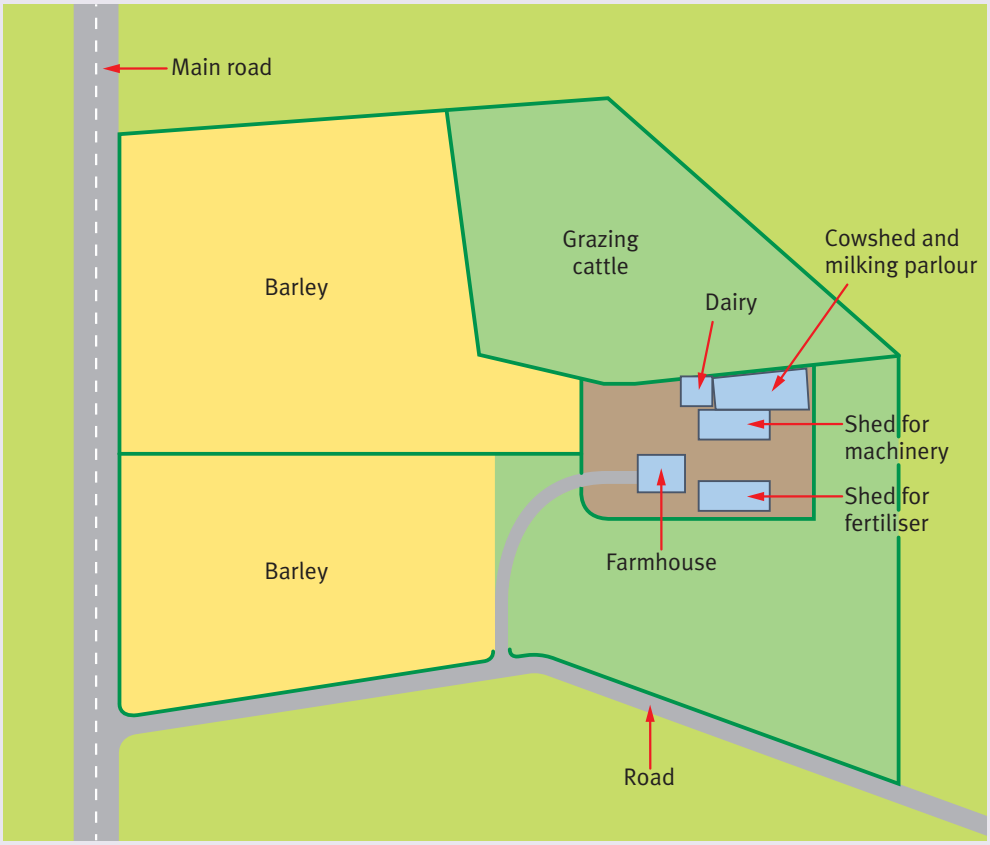
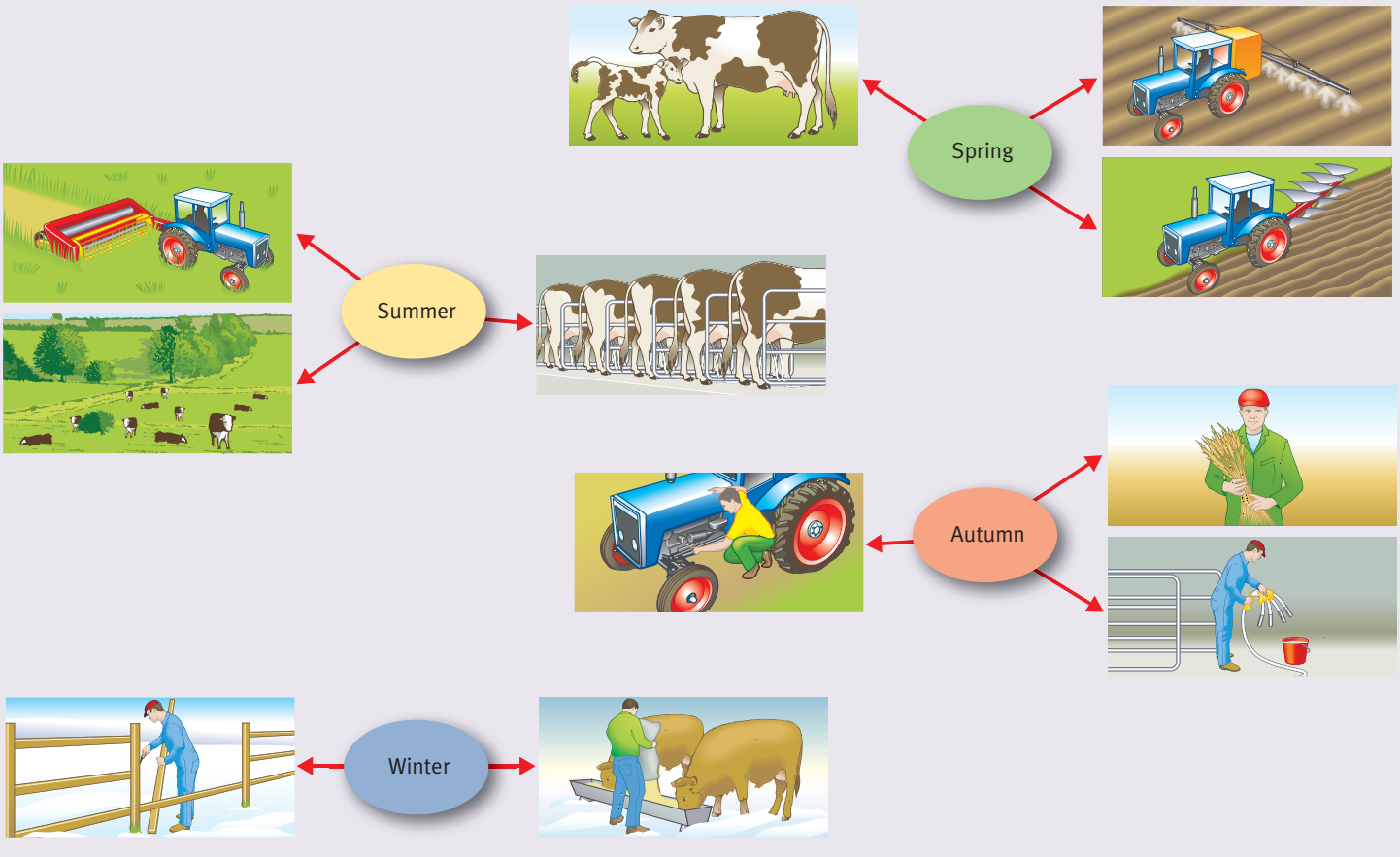


Fig 23.1 *The layout of John's mixed farm.*

Outputs

- John's main **output** is milk. It is stored in cooling tanks and regularly collected by the dairy co-op's refrigerated milk lorries.
- Some **calves** are kept on the farm to be fattened or to replace some in the dairy herd, while surplus calves are sold off.
- The fattened **cattle** are later sold to a local butcher with a chain of shops. John's **barley** is sold for animal feed and he uses the straw for animal bedding.

Fig 23.2 *How does the work on John's mixed farm change each season?*



Questions

1. Can you identify mixed farms on this aerial photograph?
2. How many can you see?
3. What evidence can you use to prove that they are mixed farms?

The tables to the right are based on statistics published on the website of the Central Statistics Office and relate to the area where John's farm is located: Rural District, Fermoy. Answer the following questions in your exercise book.

1. Having read the tables, write down three things you have learnt about farming in the area.
2. What was the most interesting thing you learnt from the three tables?
3. Draw a suitable graph to represent the data in Table 2.

Visit the website of the Central Statistics Office to find your own agricultural area (http://census.cso.ie/agrimap/).

Compare the data in the three tables to that of your local area under these two headings:

- Similarities with my local area
- Differences to my local area

Table 1: Number of farms classified by farm size

Farm size (hectares)	1991	2000	2010
Farms less than 10	159	125	125
Farms between 10 and less than 20	187	129	147
Farms between 20 and less than 30	240	187	152
Farms between 30 less than 50	360	296	274
Farms between 50 less than 100	252	266	302
Farms greater than 100	43	43	52
Total farms	1,241	1,046	1,052

Table 2: Area farmed and area under selected crops

Crops (hectares)	1991	2000	2010
Total cereals	6,630	5,772	4,751
Potatoes	330	111	115
Total crops	8,769	8,537	6,249
Silage	11,235	11,866	12,157
Hay	2,618	1,822	2,098
Pasture	22,724	20,281	23,673
Rough grazing	1,711	1,395	1,251
All area farmed	47,058	43,901	45,429

Table 3: Number of selected livestock

Livestock (head)	1991	2000	2010
Bulls	427	591	474
Dairy cows	28,111	23,865	25,307
Other cows	3,811	5,323	6,890
Other cattle	62,542	59,204	60,032
Total cattle	94,891	88,983	92,703
Rams	581	338	178
Ewes	18,222	10,514	4,143
Other sheep	17,403	8,330	3,751
Total sheep	36,206	19,182	8,072
Horses	2,059	1,399	2,107

National example: Focus on fishing in Ireland

Fishing is a **primary** economic activity. In Ireland, sea fishing is largely based along the west and south coasts, where boats have access to the Atlantic Ocean.

Fish is a **renewable resource**, but it can be overused or overfished. This means that stocks of fish can be reduced to very low levels (depleted). The volume of fish caught in Irish waters has more than trebled between the 1950s and the beginning of this century. The biggest increase in the fish catch came after Ireland joined the EU in 1973 as Ireland had to share its waters with other EU countries.

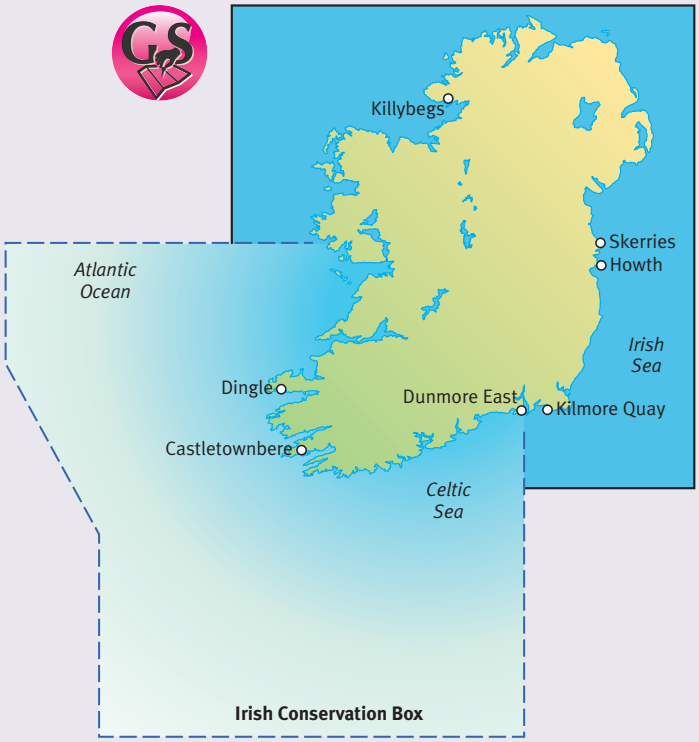


Fig 23.3 *Large Irish fishing ports and the Irish Conservation Box, where fishing by non-Irish registered boats is restricted under the EU Common Fisheries Policy.*

Why is there overexploitation (overfishing)?

Overfishing occurs when fishing activities reduce fish stocks below an acceptable level. This happens for a variety of reasons.

Improved technology

1. **Bigger ships**: super trawlers operate in fleets. Their refrigeration systems can store large quantities of fish. Transport ships then take the fish to markets while the trawlers continue fishing. There are also large factory ships that can process the fish while at sea.
   - EU subsidies have been used to increase the size of ships.

A supertrawler, which can hold large catches.

PPSS Scale

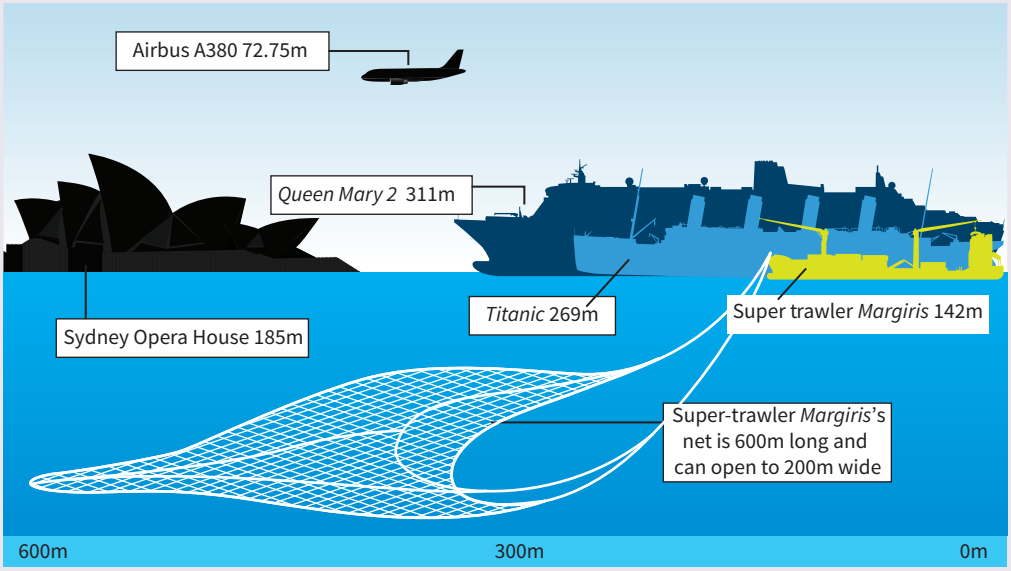
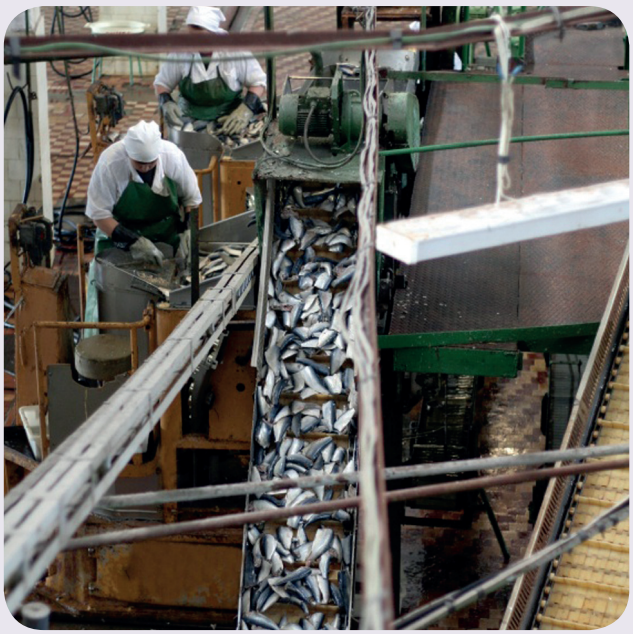


Fig 23.4 *How big is the super trawler?*

2. **Fishing equipment**:
   - **Detection**: the ships have echo sounders and sonar equipment to find fish, and radar for navigation.
   - **Nets**: they have large nets, drift nets and trawl nets, to catch increased amounts of fish.
   - They have **winches** and cranes to haul the fish on board, so these large nets can be used.



A *Fish being processed.*

Increased demand

1. There is increased demand for fish from consumers at home and in restaurants. Much of the fish is converted into fish meal as **animal feed**, for which there is also an increased demand.
2. To satisfy demand, trawlers will sometimes exceed their quota of fish. Fines and punishment vary across the EU for boats that are fishing illegally.

Quota: a fixed limit or total of fish that may be caught.

The seas around Ireland are good fishing grounds because of the **continental shelf** – a shallow seabed off our coasts with a plentiful supply of plankton for the fish to feed on.

Why has herring been almost wiped out in the Irish Sea?

Herring move slowly in huge numbers and go to the same places each year to spawn. The spawning grounds are in sheltered shallow waters near the south Irish coast. As a result, fishermen know where to find them. Herring are in their best condition before spawning, so prices are high. Therefore, many are caught before they have a chance to spawn. The boats use the latest technology to find and catch the herring.

Regulating fish catches – conserving fish stocks

Methods to prevent overfishing in the Irish Sea

The EU Common Fisheries Policy is trying to regulate fishing so that fish stocks can be maintained. **Sustainable fishing** is the goal – that is, ensuring there are enough fish stocks for future generations.

- Only Irish trawlers may fish within 10km of the Irish coast.
- Only EU trawlers may fish within 20km of the Irish coast.
- Fish quotas are imposed and sea areas may be closed to fishing to allow stocks to recover.
- Fishing fleets are being reduced in size.
- Surveys are undertaken to ensure fish stocks do not get too low.
- Nets are made to allow small fish to pass through without harm.
- More farmed fish is being produced.
- Fishery-protection ships patrol the sea to prevent overfishing.
- The practice of 'discarding' fish will be phased out by 2019.
- Fishing in EU waters will be managed at maximum sustainable yield (MSY) levels, and setting of quotas will respect scientific advice. By 2020, all EU fish stocks will be managed at MSY levels.

European Commission

The new Common Fisheries Policy: sustainability in depth

What?

MSY
Maximum Sustainable Yield is the best possible objective for renewable and profitable fisheries, harvesting the maximum amount of fish on a long term basis.

Regionalisation
Natural resources and the socioeconomic fabric vary greatly from one place to another. A balanced representation of local stakeholders knows best how to apply EU rules in their respective areas.

$$C=\frac{F}{F+M}\left[1-e^{-(F+M)T}\right]N_0$$

Fisheries science
Scientific advice is the basis for good policy making, setting fishing opportunities according to the state and productivity of fish stocks.

Multiannual plans
Contain the goals and tools for fish stock management and the roadmap to achieving the objectives in a sustainable and inclusive way.

How?

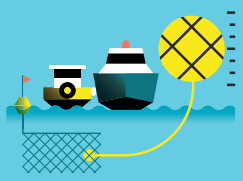
Rules
Because fishing is an activity that exploits common natural resources, it needs to be regulated to safeguard fair access, sustainability and profitability for all.

- **Total Allowable Catches**
- **Fishing licenses**
- **Boat capacity management**
- **Reducing environmental impact**
- **Minimum fish and mesh sizes**
- **Design and use of gears**
- **Closed areas or seasons**

Discards
The landing obligation (to be gradually introduced from 2015 to 2019), prohibits this wasteful practice and will provide more accurate data on real catches, and will be a driver for more selectivity and better planning.

Targeted funding
For low impact, small scale local fleets: important for employment, marine stewardship and holding together the coastal communities.

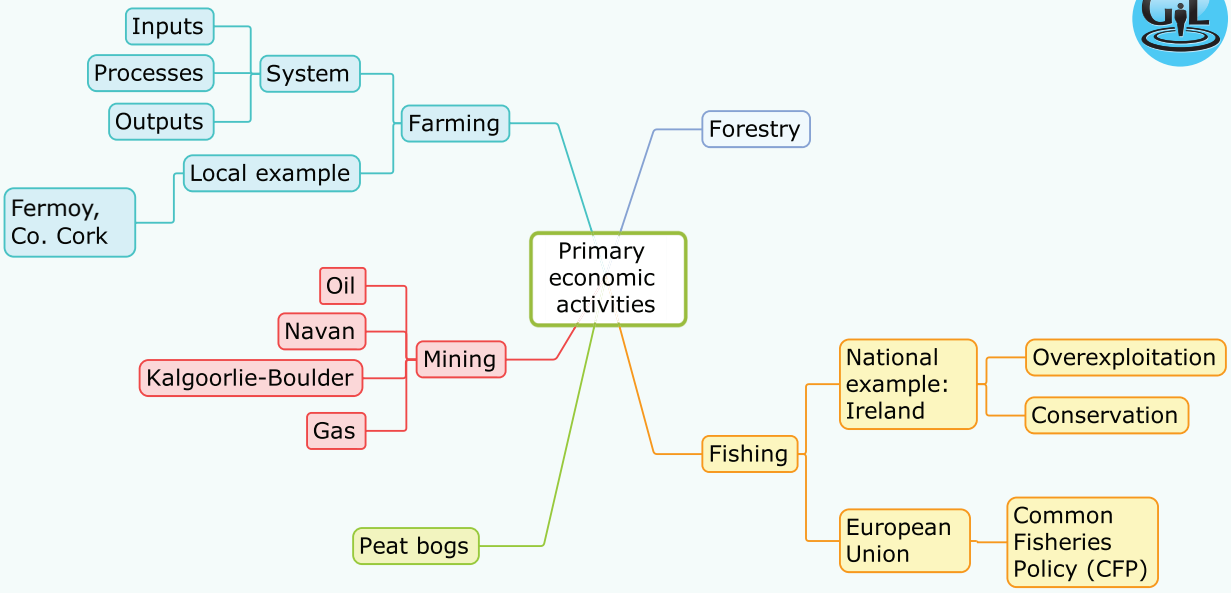
Aquaculture
With wild fish no longer able to supply the world population, sustainable aquaculture is called to meet the growing demand for seafood.



Control
Good management relies on awareness, compliance and enforcement. Sufficient and reliable data must be collected, managed and supplied by Member States.

Fig 23.5 *EU Common Fisheries Policy, published 2015.*

KEY IDEAS: 60-SECOND SUMMARY



ACTIVE LEARNING

Review

1. What is a mixed farm?
2. Explain each of the following terms:
   - Inputs
   - Outputs
   - Processes
3. Describe some of the work that takes place on a mixed farm.
4. 'Many primary economic activities can be examined as systems. Farming can be examined as a system involving inputs, processes and outputs.' Explain what is meant by this statement
5. What is overfishing?
6. Why is there overfishing?
7. What is being done to control overfishing?
8. Why has herring been almost wiped out in the Irish Sea?

Write like a geographer

Use as many of the key words as possible (from the box to the right) to write a detailed paragraph on primary economic activities.

Work like a geographer

Using information from other chapters in this book, complete a mind map on each of the following:

- Forestry
- Mining
- Peat bogs

Living geography

Draw a sketch map of your local area. Show and name examples of primary economic activities.

Key words

You should know the meaning of the following words and terms:

system	fishing
inputs	forestry
processes	overfishing
outputs	exploitation
mixed farm	continental shelf
mining	Irish Conservation Box

Geography in the news *Donegal Democrat*, 27 December 2018, Pat McArt

Fishing for money

According to last Thursday's *Democrat*, Killybegs was Ireland's busiest fishing port in 2017. A report published by Bord Iascaigh Mhara disclosed that the total value of landings at the port amounted to €125m, up €37m on 2016. And the really good news was that unlike most other ports the vast majority of fish landed – 84% – was by the Irish fleet. Donegal is also leading the way in the fishing industry at national level with Greencastle, in Inishowen, along with Killybegs claiming almost 35% of the total value of landings in the country. In terms of trade sales fishing contributed more than €1bn to the Irish exchequer.

1. Where was Ireland's busiest fishing port in 2017?
2. Which county is leading the way in the fishing industry at national level?
3. How much money did fishing contribute to the Irish exchequer in 2017?

Geography in the news *Guardian*, 27 November 2015, Jonathan Watts

Amazon deforestation report is major setback for Brazil ahead of climate talks

Trees covering an area more than seven times the territory of New York City have been cleared in the Brazilian Amazon over the past year, in a major setback for government efforts to combat deforestation.

The grim statistics from Brazil's environment ministry, which were released on Thursday, underscore the growing climate threat posed by deforestation ahead of a United Nations conference in Paris that aims to reduce global carbon emissions.

Satellite data revealed that 5,831 square kilometres of land was cut down or burned in the Brazilian Amazon in year to 1 August: a 16% increase on the destruction of the previous 12 months.

This is the second acceleration (quickening) in three years, following almost a decade of impressive declines. That suggests the state's efforts – which include high-tech monitoring, stiffer financial penalties and boots on the ground – are having a diminishing impact.

Going into the Paris conference, that is bad news for Brazil and a worrying trend for the planet. Deforestation accounts for about 15% of greenhouse gas emissions.

The increase is the result of weaker government regulation, particularly the relaxation of the Forest Code; dams, roads and other infrastructure projects; the growing strength of the agricultural lobby; and the faltering economy, which is driving more people to illegally log timber and clear land for cattle and crops.

Mato Grosso, Rondônia and Amazonas have been the focus of operations against illegal loggers by public prosecutors and federal police. But despite a flurry of arrests, investigators admit that the system of monitoring is undermined by corruption and legal loopholes.

Government officials stress the overall improvement in the past decade. Average rates of deforestation over the past four years have fallen by 80% compared to the peak in 2004. This is a far better trend than those in Amazonian countries such as Peru, Bolivia and Ecuador, or other nations with giant forests, such as Indonesia or Russia.

Brazil, which is home to 65% of the Amazon forest, is committed

to zero illegal deforestation by 2030, though conservationists say much of the Amazon will have been cleared by then.

The impact of deforestation is not limited to carbon emissions. Earlier this month, researchers warned that 57% of the 15,000 Amazonian tree species – including Brazil nut, wild cacao and açai – face extinction at current rates of land clearance.

'Deforestation continues to erode the world's most important biome for biodiversity, and remains a major source of greenhouse gas emissions. The Brazilian government should boost efforts to protect the country's irreplaceable forests', said Damian Fleming, head of Amazon programmes for the World Wildlife Fund.

1 How large an area of Brazil was deforested in the year before this report?

2 How does the Brazilian government know how much deforestation occurred?

3 Why is this bad news for Brazil?

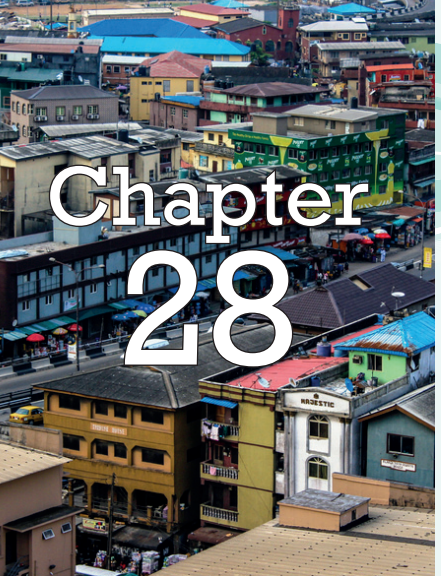
4 What has caused the increased deforestation?

5 How does Brazil compare with other South American countries in relation to deforestation?

6 Locate the Brazilian states mentioned in the report.

7 Why is reducing deforestation important for climate change?

8 Is it important for any other reasons?



Chapter 28

Population Change in a Developing Country: Nigeria

Key learning: you should be able to:

- Examine population change in Nigeria over time, using population facts, figures and pyramids, and using key terminology
- Examine the reasons for population change in Nigeria
- Suggest possible future trends in Nigeria's population

This chapter provides an opportunity to work on geographical skills

LO 3.1, 3.2, 3.3, 3.7, 3.9

Background

Nigeria is a country in Africa located on the Gulf of Guinea. It borders four countries: Benin, Niger, Chad and Cameroon. It is the seventh most-populated country in the world and was once a **British colony**.

Although classed as a **developing country**, it is can also be considered a **newly emerging economy** (NEE). It has been called an NEE because it has experienced rapid **economic growth** in recent years. Much of this growth has been based on the presence of **oil** in the country. It currently supplies 3% of the world's oil needs.

Much of Nigeria's economic growth has been based on oil revenues, but it has also **diversified its economy** into areas such as financial services and telecommunications. The farming industry also employs many people in Nigeria, and it has the highest **farm output** of any African country.

Fig 28.1 *Where is Nigeria located in Africa?*

Population

Over the past half century Nigeria has experienced **rapid population growth**. Furthermore, it is predicted that its population could grow to 392 million by 2050, making it the fourth most-populous country in the world.

Nigeria's population compared: 1990, 2017

Year	Population	Change	Urban population
1990	95 million		30 million
2017	190 million	49%	93 million

What does the population pyramid of Nigeria tell us?

1. The base is wide here because the **birth rate** is not only high but also increasing.
2. There is a lower percentage of the population in the working population, which means that the government will find it more difficult to support those of the population in the **dependant** section.
3. Not a very high percentage of the population live beyond sixty years of age, indicating a **poor healthcare system.**
4. Men have a longer **life expectancy** than women.

PPSS Patterns

See Chapter 43: Life chances of a young person. See also Lagos in Chapter 45: Globalisation and its Impact.

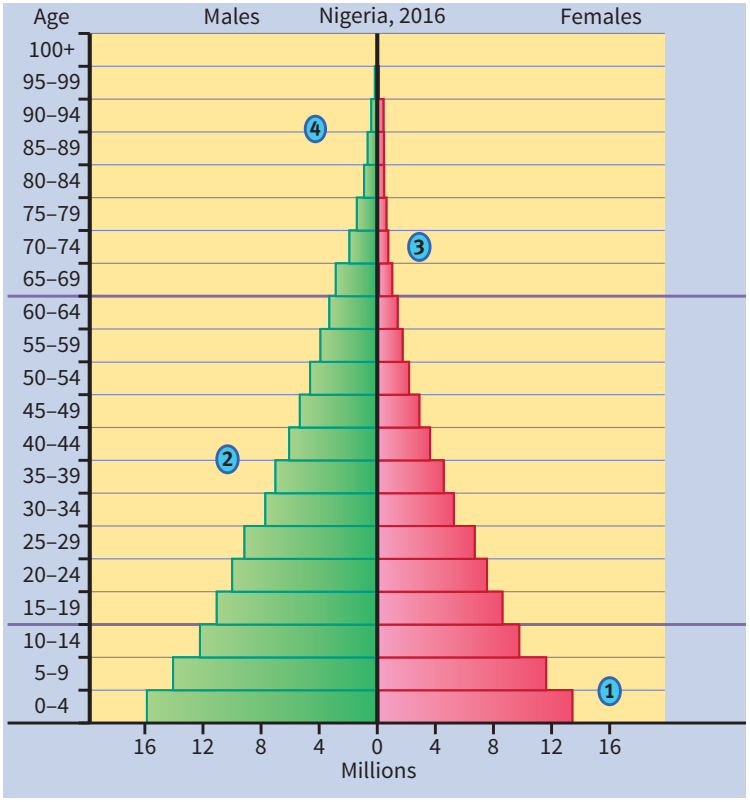


Fig 28.2 *Nigeria: population pyramid, 2016.*

Fig 28.3 *What are Nigeria's key population facts?*

Dependency ratio	88%
Population growth rate	2.43% (31st in the world)
Birth rate	36.9 per 1000 population (13th in world)
Death rate	12.4 per 1000 population (19th in world)
Rate of urbanisation	4.3% annual rate of change (2015–20 est.)
Mother's mean age at first birth	20.3 years
Maternal mortality ratio	814 deaths per 100,000 live births (4th in the world)
Infant mortality rate	69.8 deaths per 1,000 live births (8th in the world)
Life expectancy at birth	54 years old (214th in the world)
Total fertility rate	5.07 children born per woman (13th in the world)
Health expenditure	3.7% of GDP (2014)
Doctor density	0.38 doctors per 1,000 population (2009)
People living with HIV/AIDS	3.2 million (2016 est.) (2nd in the world)
Obesity (adult)	8.9% (2016) (145th in the world)
Literacy (age 15 and over can read and write)	59.6% (2015)
School life expectancy (primary to tertiary)	9 years (2011)
Unemployment rate	14% 2016
GDP per capita (PPP)	$5,900 (2016 est.) (162nd in the world)
Net migration rate	-0.2 migrants per 1,000 population (2017 est.) (107th in the world)
Human Development Index (HDI)	0.527 (2015) (152nd in the world)

Fig 28.4 *Nigeria: population change over time.*

Year	Population	Change (number)	Change (%)
1955	41 million	NA	NA
1960	45 million	4 million	8.8%
1970	55 million	10 million	18%
1980	73 million	18 million	24.6%
1990	95 million	22 million	23%
2000	122 million	27 million	22%
2010	158 million	36 million	22.7%
2017	190 million	32 million	16.8

Focus task

Draw a suitable graph or chart to represent some or all of the data in this table.

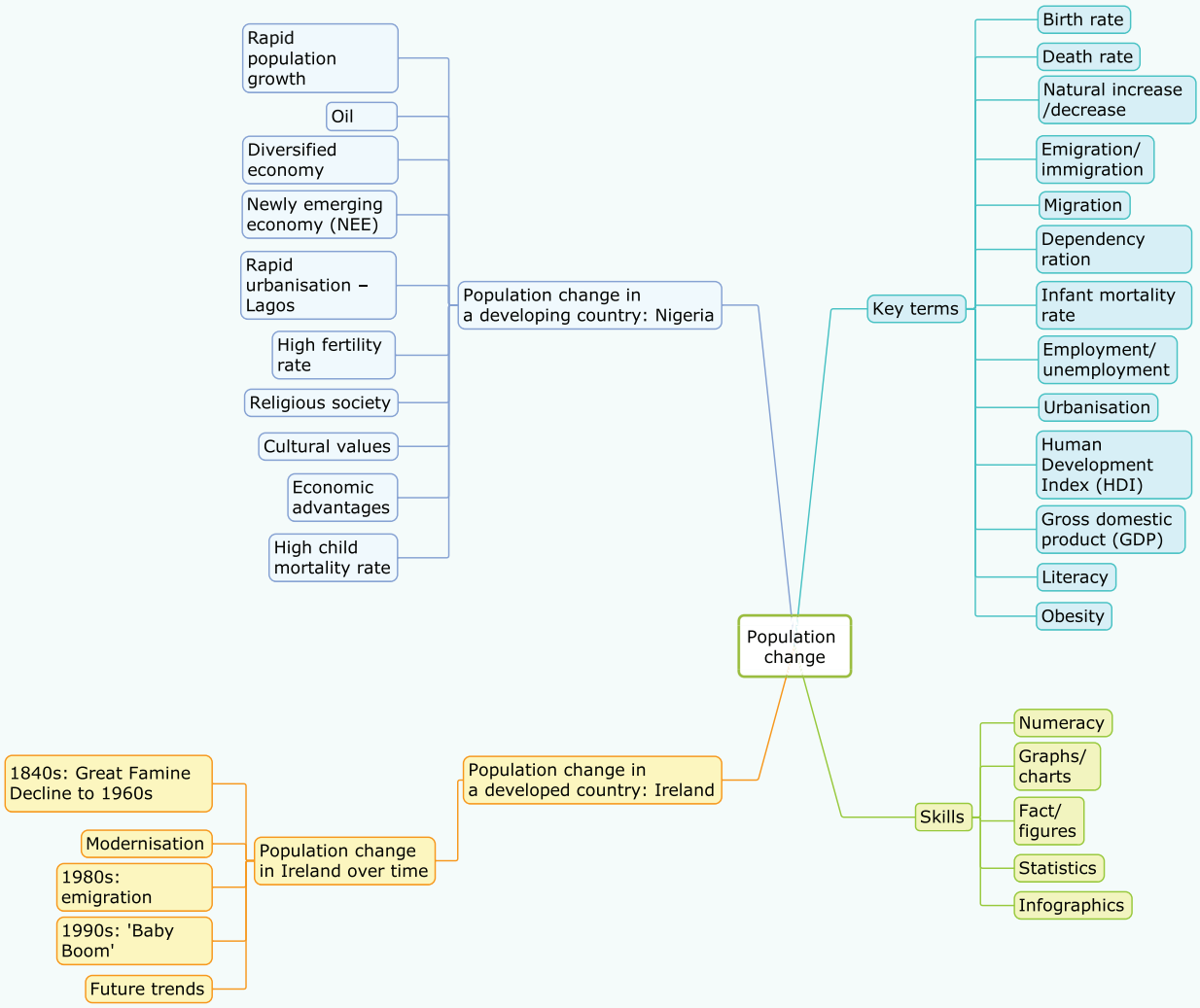
Reasons for population change in Nigeria

According to the United Nations, Nigeria experienced annual **population growth** of about 2.7% between 2010 and 2017. It is home to one of the world's fastest-growing cities – **Lagos**. High fertility rates, high infant mortality rates, and the cultural value of large families have all been cited as factors driving Nigeria's population boom.

Lagos, the chief city of Nigeria.

- Nigeria's **fertility rate** is approximately five children per woman, making it the thirteenth highest in the world. The Nigerian government has been making efforts to reduce the rate to limit population growth. However, to date these attempts have proved unsuccessful. These attempts include:
  - Making contraceptives free. However, in a **religious society** like Nigeria, their use is often frowned upon.
  - **Campaigns** aimed at encouraging people to have smaller families. However, these campaigns have failed as they are at odds with Nigerian cultural values.
- Many people in Nigeria place a strong **cultural value** on having large families. It is a sign of prestige. In some Nigerian villages, families with fewer than ten children are considered small and incomplete. Many people also believe that there is an **economic benefit** in having larger families.
- In Nigeria and in much of the developing world, children are considered to offer an economic advantage as they can help the family earn extra money by taking up **employment** at a young age while also helping with work at home or on a family farm.
- Considering the high **child mortality rate** – forty-six deaths of children aged five or under per 100 births in 2013 – many families in Nigeria still feel the need to have more children in case some children do not make it to adulthood.

60 KEY IDEAS: 60-SECOND SUMMARY



ACTIVE LEARNING

Review

1. Name the four countries that border Nigeria.
2. Why is Nigeria considered a newly emerging economy?
3. What commodity has much of Nigeria's economic growth been based on?
4. What might Nigeria's population grow to by 2050? How does this figure differ from its current population?
5. Nigeria is home to one of the world's fastest-growing cities. What is that city called?
6. What is Nigeria's fertility rate?
7. What was Nigeria's child mortality rate in 2013?

Write like a geographer

Choose six key words (from the box to the right). Define each of them. Then write six sentences that each include one of the selected key words.

Work like a geographer

Draw a graph or chart of your choice that shows population change in Nigeria over time.

Living geography

- Go to this website: www.countrymeters.info
- Select Nigeria from the drop-down country menu.
- Write down the date/time and the population of Nigeria at that exact date/time.
- Compare your answers with those of your classmates.
- Discuss how the population changed between the date/time both of you accessed the information.

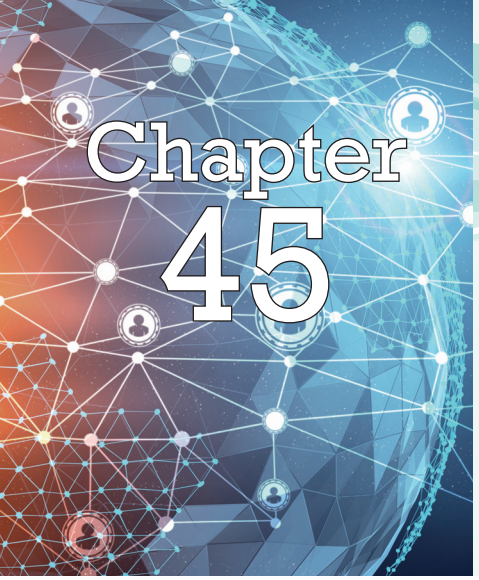
Key words

You should know the meaning of the following words and terms:

colony
newly emerging economy (NEE)
oil
agriculture
foreign direct investment (FDI)
birth rate
death rate
natural increase
natural decrease
baby boom
life expectancy
dependency ratio
population growth
urbanisation
mean
mortality rate
literacy rate
fertility rate
obesity
gross domestic profit (GDP)
Human Development Index (HDI)
migration
employment
unemployment
emigration
immigration
healthcare
education
religious beliefs
cultural beliefs

Geography in the news

Write a headline and introductory paragraph for an article in a national newspaper examining Nigeria's population change since the 1950s.



Globalisation and its Impact

Key learning: you should be able to:

- Explain 'globalisation'
- Show how and why globalisation is developing
- Understand the connections between different aspects of globalisation
- Understand the advantages and disadvantages of globalisation
- Show how globalisation affects population, settlement and human development

LO 3.6, 3.7, 3.8, 3.9

What is globalisation?

Globalisation is the process by which the **world economy** is becoming more **connected**. As part of globalisation, people, goods, services, money and ideas are able to move around the world faster. In the process, the people and countries of the world are brought closer together.

The **features** of globalisation are:

- Greater international trade in goods and services.
- The growth of **multinational corporations** (MNCs) (or **transnational corporations** (TNCs).
- The development of **global brands**.
- The greater use of **outsourcing** of products with **global supply chains**.
- Greater **labour migration**.

Multinational corporation (MNC): a large company that operates its business in many countries.

How has globalisation developed?

- The greater integration of people began largely with the **Age of Exploration** in the fifteenth and sixteenth centuries. However, it was not until the **Industrial Revolution** of the eighteenth and nineteenth centuries that globalisation was speeded up. Then the development of the steamship, the railways and the telegraph led to the greater linking together of people, as markets were opened up in many parts of the world.

- Further developments in **transport** – cars, lorries and especially aeroplanes – and **communications** – the phone, radio and television – in the twentieth century brought people closer together. By the end of the twentieth century and into the twenty-first, computers, the Internet, cheaper and faster air travel, satellite television and mobile phones had all contributed to the greater linking together of people.
- By the 1970s the term **globalisation** was used to describe this process of linking the world's economic, cultural and political systems.

What are the different aspects of globalisation?

ECONOMIC | CULTURAL | POLITICAL

Economic

Economic globalisation brings the economies of the world closer together through the rapid increase in international trade – i.e. movement of goods, services and capital (money).

Features of economic globalisation

- **Free trade areas** for the freer movement of goods, services, capital and people.
- **MNCs**, which use global supply chains to manufacture products.
- Greater links created by **growing international trade**.
- **Greater labour migration** as people move from poorer areas to areas with more jobs.

Cultural

Cultural globalisation is the spread of ideas, values, language, music and religion around the world

Features of cultural globalisation

- Domination of world cultures by **Western (US, European) culture**.
- The development of social **media** – e.g. Facebook, Twitter, Instagram.
- The spread of **global brands**.
- The spread of **tourism**.

Political

Political globalisation is the development of international organisations that replace the functions of national governments.

Features of political globalisation

- Reduced importance of **national governments and nation states**.
- Growth of **international organisations** – e.g. World Bank, International Monetary Fund (IMF), World Trade Organisation (WTO), EU, G8.

Global brands – the development of multinational corporations (MNCs)

An important feature of globalisation is the development of **global brands**, which are recognised the world over.

Global brands.

How does globalisation affect you?

Where do these products come from? Can you name some other products that are Irish-produced or are acquired through international trade?

Coffee
Beef
Cornflakes
Oranges
Bananas
Spices
Wine
Dairy
Tea

The smartphone – the global supply chain

Products are developed and produced by multinational corporations (MNCs) in different parts of the world – i.e. the **global supply chain** – before being **assembled** in one place. The **Apple iPhone** is an example of the use of the global supply chain.

From which countries do the brands listed here originate?

- Philips
- Lenovo
- Huawei
- Hisense
- Samsung
- Hyundai
- LG
- Toyota
- Sony
- Panasonic
- Nikon
- McDonald's
- Coca-Cola

What are the advantages and disadvantages of globalisation?

Advantages

- The development of the **world economy**.
- **Greater exchange** of goods, services, people and ideas, which benefits the world.
- Trade boosts **economic growth**.
- **Reduction of poverty** by sharing of resources and provision of inexpensive goods.
- **MNCs** outsource jobs to developing countries (where labour is cheaper), which can benefit them,
- Cheaper products are available to everyone.
- Greater **spread of economic prosperity** over a greater number of countries.
- **Poorer developing countries** benefit from growing free trade.
- Greater **understanding of cultures** and acceptance of diversity.
- Creates pressure for **improved human rights.**

Disadvantages

- Damage to **cultural identities**.
- Spread of **most powerful cultures** – e.g. Americanisation of world culture, often spread through cinema, television and music.
- Fear that traditional way of life in many countries is in danger.
- **Money values** dominate globalisation – other values lose out.
- **Greater economic inequality** between richer and poorer people and countries, as some benefit more than others from international trade.
- Economic competition can lead to the **closure of local industries**.
- Greater economic development leads to a greater use of the earth's resources, causing **difficulties for sustainable living**.
- **Exploitation of cheaper labour** to produce goods for richer societies.
- Growth of **xenophobia** (dislike of people from other countries) in opposition to movement of migrants and spread of cultures.

How has globalisation affected Ireland?

POPULATION — SETTLEMENT — HUMAN DEVELOPMENT

- Ireland is an open economy that depends a great deal on its **imports and exports**.
- Ireland is an important base for **foreign multinational corporations** to export goods and services into larger markets in the EU. Ireland has attracted these companies since the 1960s.
- **Foreign direct investment** (FDI) helped the Irish economy recover from the economic crash of 2008. Between 2009 and 2013, €125 billion of FDI came into Ireland. Some of this contributed to the growth of a new IT sector in Dublin, largely based on the new social media – Facebook, Google and Twitter – along with online services, such as Airbnb and LinkedIn.

Dublin Port – a busy hub for imports and exports.

Homelessness has increased due to the high demand for property and high rents in Dublin.

- This growth also attracted **new workers** to Dublin – either through rural-to-urban migration from other parts of Ireland or immigrant workers coming to work in the new industries. Over recent decades, Ireland as a whole has become more **ethnically diverse**. This can be clearly seen in the Dublin region, with foreign-born people accounting for 20% of the total population. In 2011, for example, 250,000 foreign-born people lived in Dublin, up 51% since 2002.
- The **increased demand** for houses and apartments in Dublin and the shortage of housing stock caused by the recession are major problems. Rents have increased significantly, and so have house prices. Both of these factors have contributed to the rise in **homelessness** in the city.

- This concentration of population growth and industry has led to an **imbalance** in Ireland. The imbalance between Dublin and the rest of the country is even greater than that of London compared to the rest of England.
- The Greater Dublin Area accounts for **49% of Irish GDP**, whereas London accounts for **32% of UK GDP**.

Economic development in Ireland is centred on Dublin.

Focus on globalisation, population, settlement and human development in Lagos, Nigeria

- Lagos is the largest city in Africa. It is considered a **megacity**, with a population of about twenty-two million in the larger urban area. It has grown very rapidly – its population in 1980 was 4.3 million. The population of the city has grown because of the **huge influx of migrants** from other areas of Nigeria – these migrants hope to make a better life.

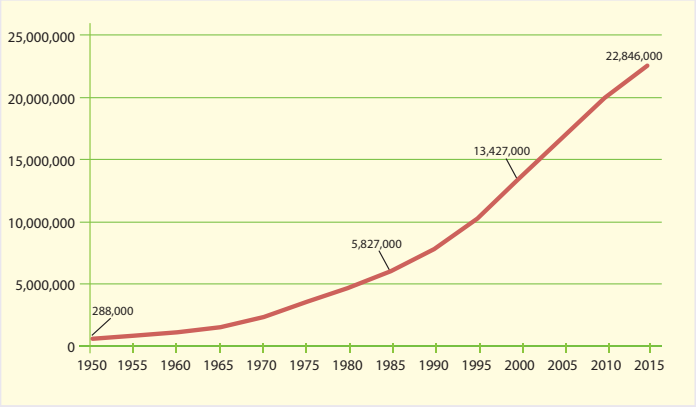


Fig 45.1 *Lagos population, 1950–2015.*

- Lagos is the **main port** for Nigeria and much of West Africa. Lagos Port handles 80% of Nigeria's imports and 70% of exports. Nigeria's main exports are petroleum and petroleum products, cocoa and rubber. Its imports include machinery, chemicals, transport equipment, manufactured goods, food and live animals.
- The **central business district** (CBD) of Lagos hosts the **headquarters** of the country's banks, other financial institutions and major international corporations. The growth of industry and traffic has caused **air pollution**.

What products are produced by these MNCs?

Unilever

Chevron

Nestlé

Shell

Mega-city: a very large city, typically with a population of over ten million people.

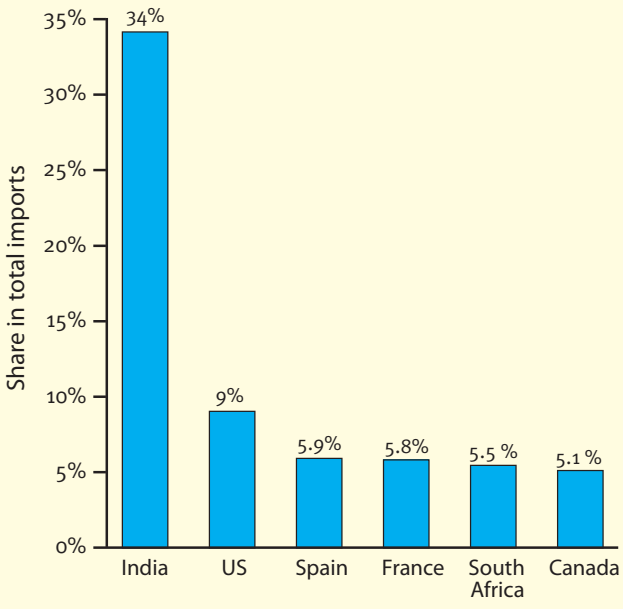


Fig 45.2 *Nigeria's most important **export** partners, 2016.*

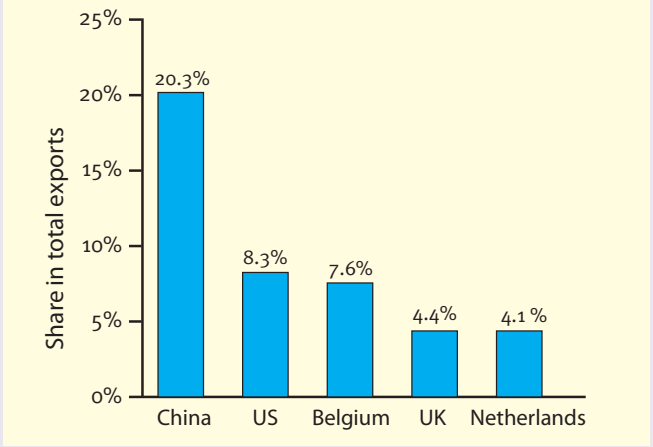


Fig 45.3 *Nigeria's most important **import** partners, 2016.*

- The rapid growth in population has led to **urban sprawl**, occupied in large part by **slums**. The increased population has caused huge problems for housing, transport, water and sewage systems. About two thirds of the city's population live in these slums, without running water and with poor sanitation. These conditions lead to **disease** and **high crime rates**.
- It is not surprising that in 2000 Nigeria was regarded as among the **least developed countries** in terms of wealth and education. However, it has made significant improvements in recent years. In the first decade of the twentieth-first century (2001–10), Nigeria had one of the largest improvements for any country in the **Human Development Index** (HDI). However, it still has a long way to go to close the gap with countries of the rich North.

Slums in Lagos, Nigeria.

HDI, Nigeria and Ireland, 2010–15

Nigeria		Ireland	
2010	0.500	2010	0.909
2011	0.507	2011	0.895
2012	0.513	2012	0.902
2013	0.521	2013	0.910
2014	0.525	2014	0.920
2015	0.527	2015	0.923

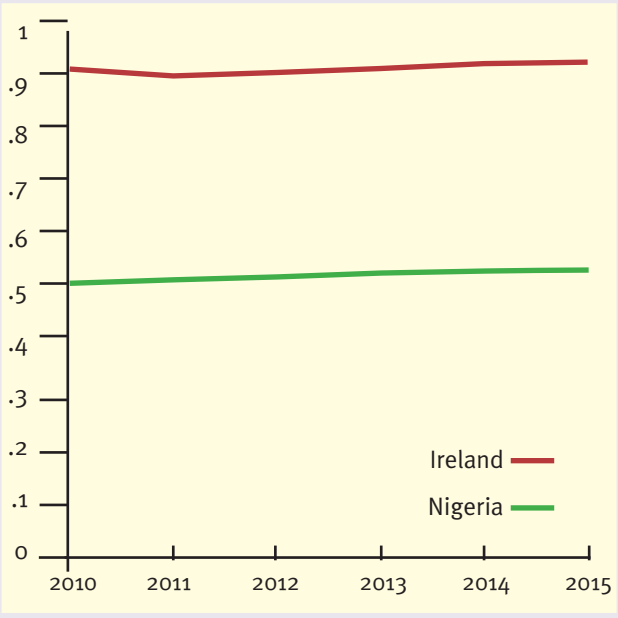


Fig 45.4 *Comparison of Nigeria's and Ireland's HDI.*

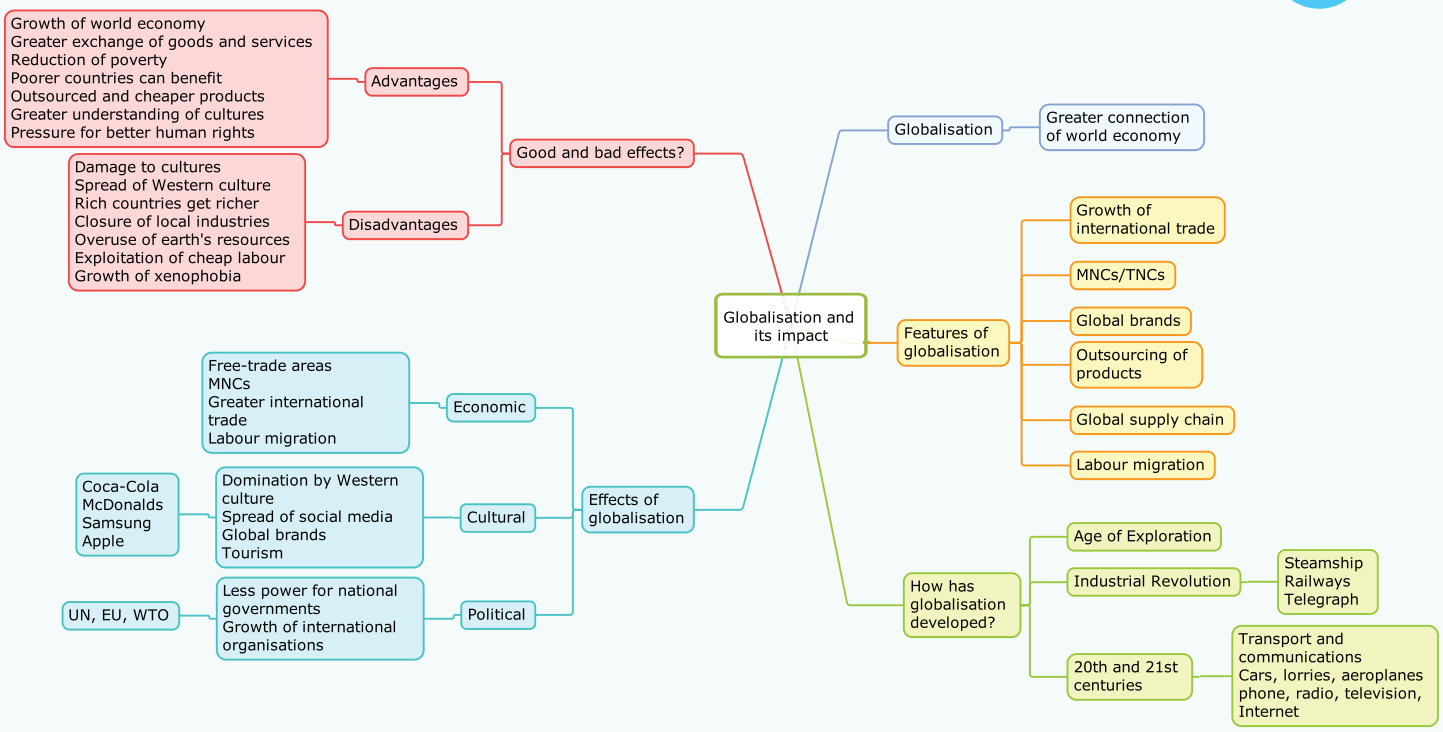
The features of urban sprawl in Lagos

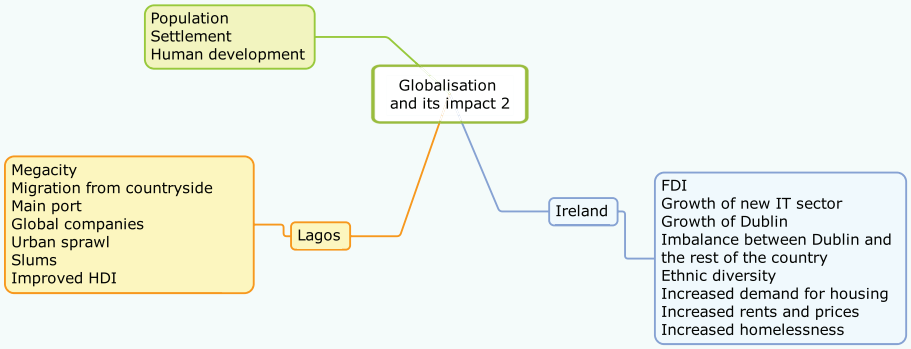
- Squatter settlements.
- Water, sanitation and other services cannot keep up with the growing population.
- The largest rubbish dump in Africa is located in Lagos.
- Waste is often dumped by the roadside.
- Traffic congestion is a serious problem.

Slums are called by different names around the world:

- Shanty towns: Caribbean
- Barrios: Venezuela
- Favelas: Brazil
- Townships: South Africa
- Bidonvilles: French-speaking countries

KEY IDEAS: 60-SECOND SUMMARY





ACTIVE LEARNING

Review

1. Explain 'globalisation'.
2. List two of the main features of globalisation.
3. What factors have influenced the spread of globalisation?
4. Explain 'economic globalisation', 'cultural globalisation' and 'political globalisation'.
5. How is your supermarket influenced by globalisation?
6. What are global brands?
7. How does the global supply chain work?
8. Select what you think are the three most important advantages and the three most important disadvantages of globalisation.
9. How has globalisation affected Ireland's population, settlement and human development?
10. How has globalisation affected the population, settlement and human development of Lagos?

Write like a geographer

Write a speech for a **debate** on the motion 'Globalisation has more advantages for Ireland than disadvantages'. You may choose to propose or oppose the motion.

Work like a geographer

List the global brands that you can find in your home.

Living geography

Select **one** multinational corporation (MNC) based in Ireland and briefly report on its operations here.

Key words

You should know the meaning of the following words and terms:

- globalisation
- multinational
- transnational
- economic globalisation
- cultural globalisation
- political globalisation
- global supply chain
- human development
- megacity
- GDP
- slums
- urban sprawl
- diversity

Geography in the news BBC News, 21 August 2017, Alastair Leithead

The city that won't stop growing: how can Lagos cope with its spiralling population?

A thick layer of acrid (bitter), blue smoke hovers just above the waterfront slums that skirt Lagos lagoon, filtering out sunrise and sunset.

This man-made mist that clings to the rusted shack rooftops comes from the countless fish-smoking cabins that drive the slum economy.

There's an uninterrupted view of the city's dramatic sprawl of poverty from the road bridges that carry daily commuters between the islands and the mainland.

Fishing and sand-dredging boats drift to work, heading deep into the lagoon.

Many of the slums' wooden huts are on stilts, others are just basic shacks shoddily built on the unstable ground of trodden-down rubbish dumps.

Nobody knows exactly how many people live in Lagos, but they all agree on one thing – Nigeria's biggest city is growing at a terrifying rate. The UN says 14 million. The Lagos State government thinks it's nearer 21 million, as rural Nigerians are drawn by the hope of a better life to one of Africa's few mega-cities.

By 2050 Nigeria will have twice the population it has today (190 million), more than half will live in cities, and about 60% of them will be under 25.

Questions

1. What is the man-made mist?
2. What can you see from the road bridges?
3. Describe the slums huts.
4. Why do you think 'Nobody knows exactly how many people live in Lagos'?
5. Why have rural Nigerians moved to Lagos?
6. How large will the population of Nigeria be in 2050?
7. Where will most of them live?

Incorporating project and team work, this exciting new textbook by highly experienced Geography teachers – **Dermot Lucey** and **Jimmy Condon** – addresses the curriculum in a vibrant, dynamic and skills-based way. The new specification for Junior Cycle Geography promotes 'structured inquiry' and an interactive approach to learning.

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