Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Tuesday 21 May 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **1GA0/01**

Geography A

Paper 1: The Physical Environment

You must have:
Resource Booklet (enclosed)
Ordnance Survey Map Extract (enclosed), Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section A answer Question 1 and **two** questions from Questions 2, 3 and 4.
- In Section B and Section C answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question*.
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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Pearson

SECTION A

The Changing Landscapes of the UK

Answer all parts of Question 1. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 The UK's physical landscape is made up of different rock types.

(a) Study Figure 1 in the Resource Booklet.

Identify rock type **X**.

(1)

- ☒ **A** Chalk
- ☒ **B** Granite
- ☒ **C** Sandstone
- ☒ **D** Limestone

(b) State **one** characteristic of a sedimentary rock.

(1)

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(c) Explain **one** reason why areas of igneous rock are usually upland.

(2)

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(d) Study the Ordnance Survey (OS) map extract.

(i) Identify the main type of woodland in grid square 9047.

(1)

.....

(ii) Identify the six figure grid reference for the summit of Bossington Hill.

(1)

- ☒ **A** 901487
- ☒ **B** 904485
- ☒ **C** 908487
- ☒ **D** 909485

(Total for Question 1 = 6 marks)

Answer only two questions from Question 2 (Coastal Landscapes and Processes), Question 3 (River Landscapes and Processes) and Question 4 (Glaciated Upland Landscapes and Processes).

Question 2: Coastal Landscapes and Processes

If you answer Question 2 put a cross in the box ☒ .

2 Coastal landscapes are constantly being changed by different physical processes.

(a) Define the term **mass movement**.

(1)

.....

.....

(b) Name **one** type of coastal landform created by deposition.

(1)

.....

(c) Explain **one** way rock type leads to the formation of headlands.

(2)

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(d) Study Figure 2 in the Resource Booklet.

Examine how coastal retreat has affected people and the environment in the landscape shown in Figure 2.

(8)

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(Total for Question 2 = 12 marks)

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Question 3: River Landscapes and Processes

If you answer Question 3 put a cross in the box ☒ .

3 River landscapes are constantly being changed by different processes.

(a) Define the term **river discharge**.

(1)

(b) Name **one** way sediment is transported by a river.

(1)

(c) Explain **one** way that deposition leads to the formation of levees.

(2)

(d) Study Figure 3 in the Resource Booklet.

Examine how land use affected the storm hydrographs for River A and River B shown in Figure 3.

(8)

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(Total for Question 3 = 12 marks)

Question 4: Glaciated Upland Landscapes and Processes

If you answer Question 4 put a cross in the box ☒ .

4 Glaciated upland landscapes are constantly being changed by different processes.

(a) Define the term **relict glacial landscape**.

(1)

(b) Name **one** type of mechanical weathering process that operates on glacial landscapes.

(1)

(c) Explain **one** way that farming can have an impact on glaciated landscapes.

(2)

(d) Study Figures 4a and 4b in the Resource Booklet.

Examine the role of erosional processes in the formation of the corrie shown in Figures 4a and 4b.

(8)

(Total for Question 4 = 12 marks)

TOTAL FOR SECTION A = 30 MARKS

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SECTION B

Weather Hazards and Climate Change

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 The Earth's atmosphere is constantly in motion.

(a) Study Figure 5a below.

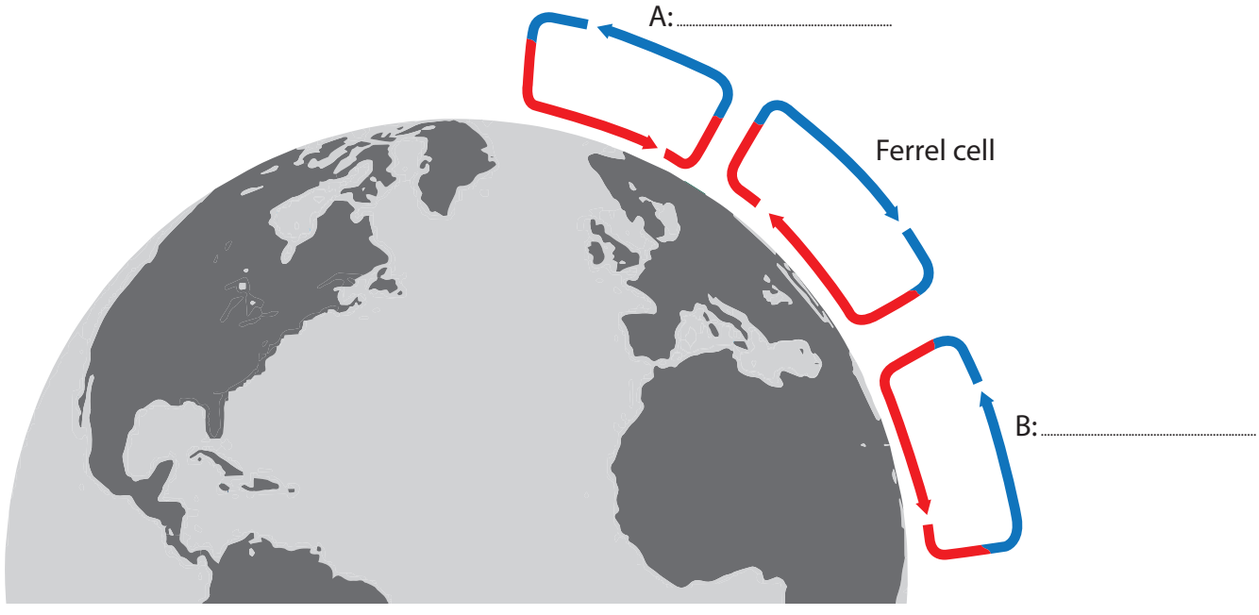

Figure 5a

The global atmospheric circulation cells in the northern hemisphere

Complete Figure 5a by labelling cells A and B.

(2)

(b) Study Figure 5b in the Resource Booklet.

(i) Identify the month with the highest heat energy at 60 °N.

(1)

- ☒ **A** February
- ☒ **B** March
- ☒ **C** April
- ☒ **D** June

(ii) Identify the maximum monthly heat energy at 0°N (equator).

(1)

- ☒ **A** 110W/m^2
- ☒ **B** 390W/m^2
- ☒ **C** 430W/m^2
- ☒ **D** 470W/m^2

(c) Explain **one** reason why more heat energy is received at the Equator than at the poles.

(3)

(Total for Question 5 = 7 marks)

6 The global climate was different in the past and continues to change due to natural causes.

(a) Study Figure 6a in the Resource Booklet.

(i) Calculate the range of temperatures shown in Figure 6a.

You must show your working in the space below.

(2)

..... °C

Historical records such as Figure 6a provide evidence of natural climate change.

(ii) State **two** other pieces of evidence of natural climate change.

(2)

1 .....

2 .....

(b) Explain **one** way in which the Milankovitch cycles can affect global temperature.

(3)

(c) Tropical cyclones develop under specific conditions and in certain locations.

(i) Study Figure 6b in the Resource Booklet.

Identify the feature labelled **X** on Figure 6b.

(1)

.....

(ii) Calculate the diameter of the tropical cyclone (shown by the line Y-Z) on Figure 6b.

You must show your workings in the space below.

(2)

..... km

(iii) Identify which country is regularly affected by tropical cyclones.

(1)

- ☒ **A** Indonesia
- ☒ **B** Finland
- ☒ **C** Peru
- ☒ **D** New Zealand

(d) Hurricane Matthew was the first Category 5 Atlantic hurricane since 2007.

Study Figures 6c and 6d in the Resource Booklet.

With reference to Figures 6c and 6d, suggest **two** reasons for the different impacts of Hurricane Matthew on Florida (USA) and Haiti.

(4)

1 .....

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2 .....

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(e) Assess the following statement.

'Drought is mainly due to natural causes.'

(8)

(Total for Question 6 = 23 marks)

TOTAL FOR SECTION B = 30 MARKS

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SECTION C

Ecosystems, Biodiversity and Management

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and specialist terminology will be assessed in Question 7(g).

7 Tropical grassland and tropical rainforest are both examples of large-scale global ecosystems.

(a) Study Figure 7a below.

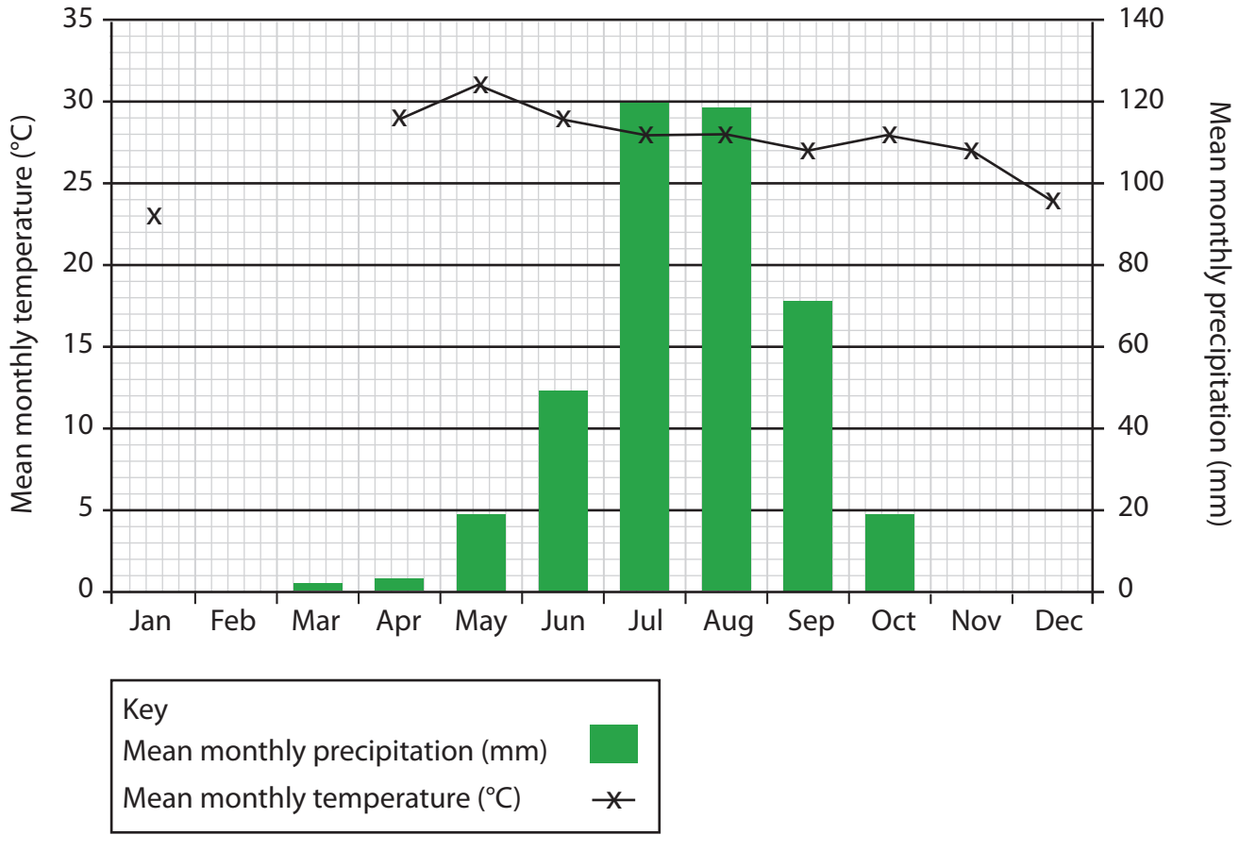

Figure 7a

Climate graph for Nyala, Sudan (Tropical Grassland)

(i) Plot the temperatures for February and March to complete the line graph shown in Figure 7a. Use the information in the data table below.

(3)

	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Monthly Temperature (°C)	23	25	29	29	31	29	28	28	27	28	27	24

(ii) Calculate the mean monthly temperature using the data table.

Answer to one decimal place.

You must show your working in the space below.

(2)

..... °C

(iii) Identify the median temperature shown on Figure 7a.

(1)

- ☒ **A** 26.5 °C
- ☒ **B** 27.0 °C
- ☒ **C** 27.5 °C
- ☒ **D** 28.0 °C

(b) Explain **two** ways climate can influence the distribution of large-scale ecosystems.

(4)

1 .....

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2 .....

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(c) With reference to Figure 7b in the Resource Booklet, explain **one** way human activity can damage marine ecosystems in the UK.

(2)

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(d) The tropical rainforest nutrient cycle is very rapid.

Explain **one** reason why the litter store is usually very small in tropical rainforests.

(3)

(e) Study Figure 7c in the Resource Booklet.

Suggest **one** economic cause for the changes to the tropical rainforest shown on Figure 7c.

(3)

(f) Explain **two** ways that tropical rainforests can be managed sustainably.

(4)

1

2

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(g) Evaluate the impact of physical and human factors on the biodiversity of deciduous woodland ecosystems.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 34 marks)

TOTAL FOR SECTION C = 34 MARKS
TOTAL FOR PAPER = 94 MARKS

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Tuesday 21 May 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **1GA0/01**

Geography A

Paper 1: The Physical Environment

Resource Booklet
Do not return this Resource Booklet with the question paper.

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Pearson

SECTION A

The Changing Landscapes of the UK

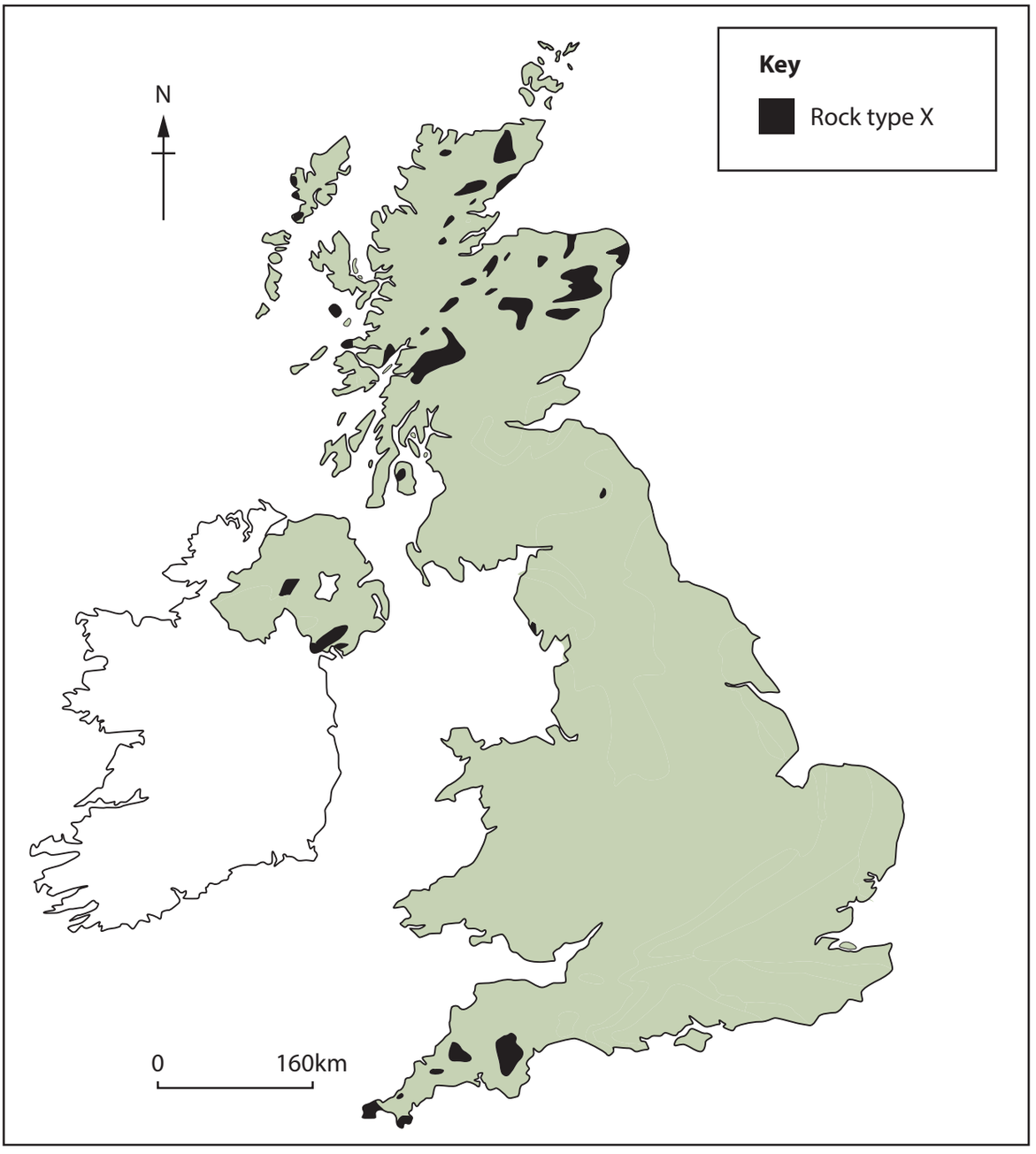

Figure 1

A map of the UK showing a selected rock type

Figure 2

Aerial photographs showing the coastline at Happisburgh, East Anglia in 1996 and 2012

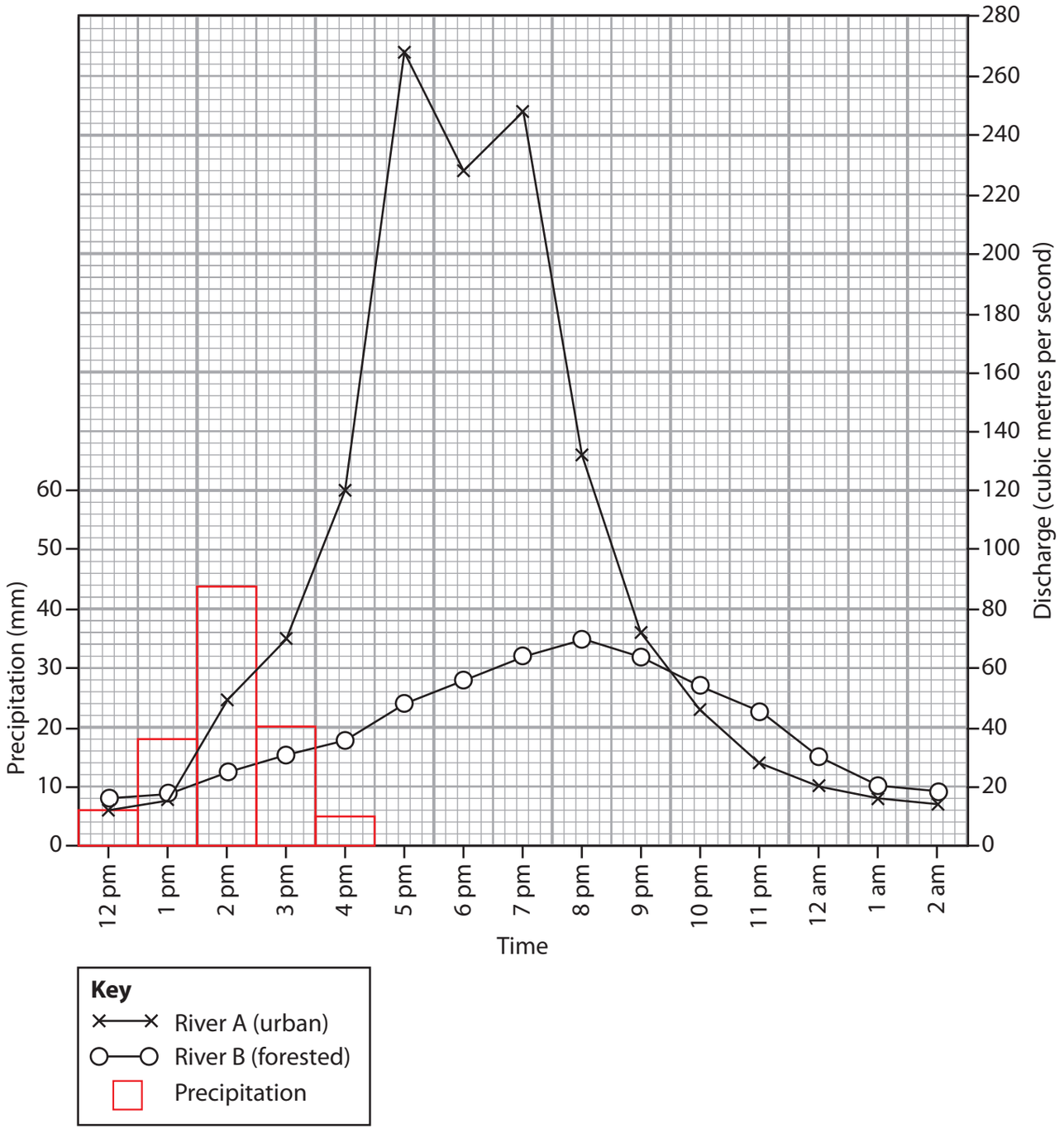

Figure 3

Storm hydrographs for an urban catchment (River A) and a forested catchment (River B) following a period of rainfall

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Figure 4a

A photograph looking North West to Llyn Cau (a glacial lake formed in the bottom of a corrie), Cadair Idris, Wales

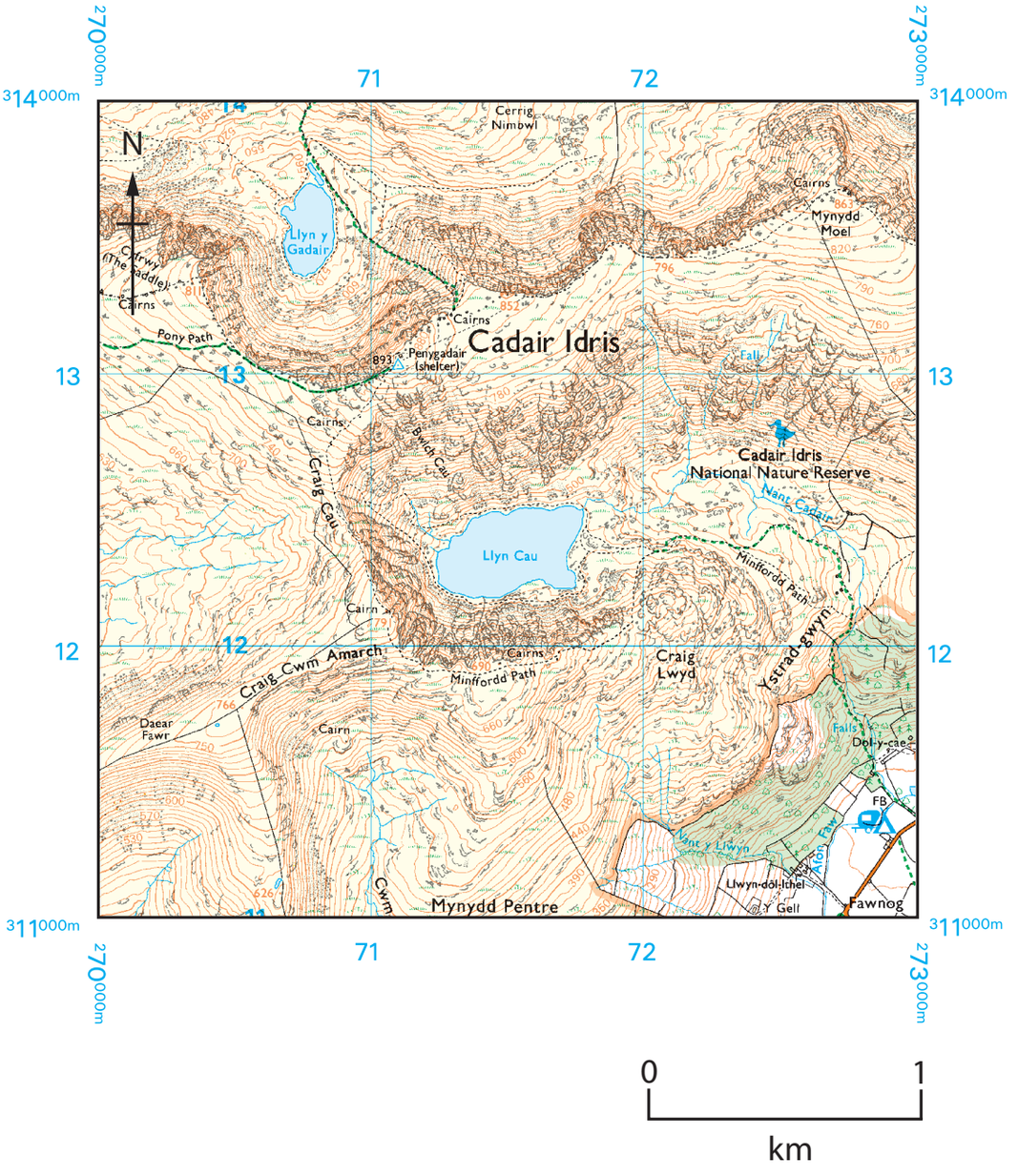

Figure 4b

An Ordnance Survey map of Cadair Idris, Wales

SECTION B

Weather Hazards and Climate Change

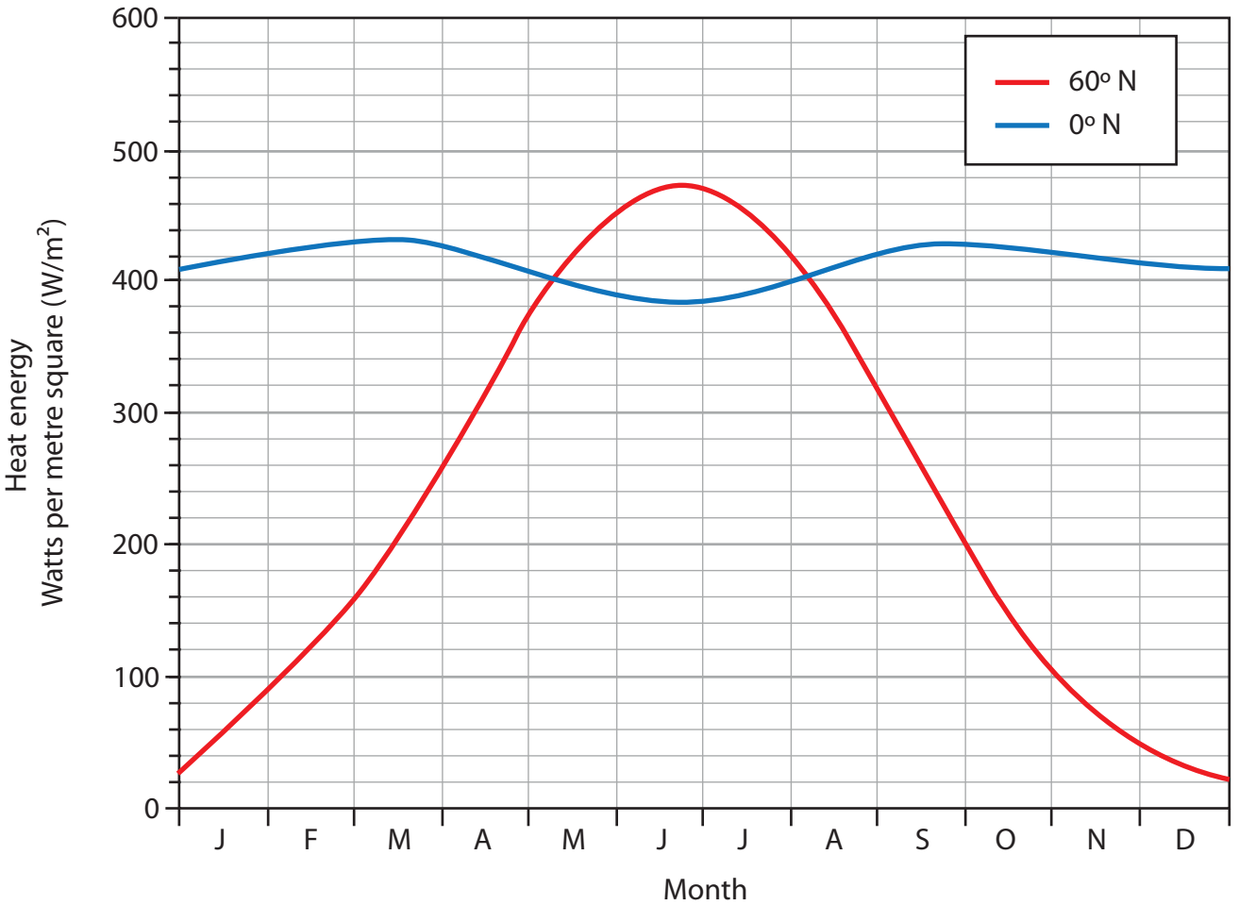

Figure 5b

Monthly values of heat energy received from the sun at different latitudes in Watts per metre square (w/m²)

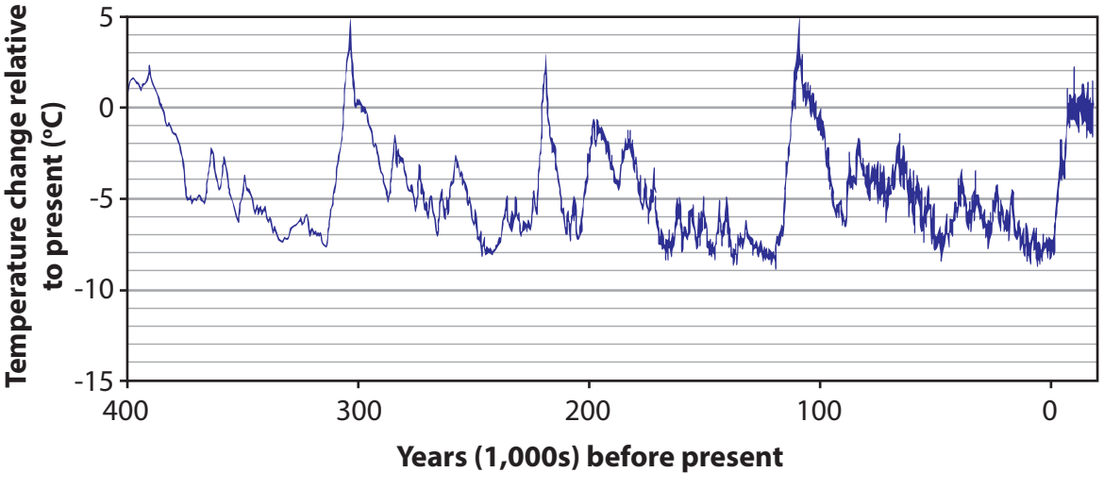

Figure 6a

A line-graph showing changes in the average global surface temperature

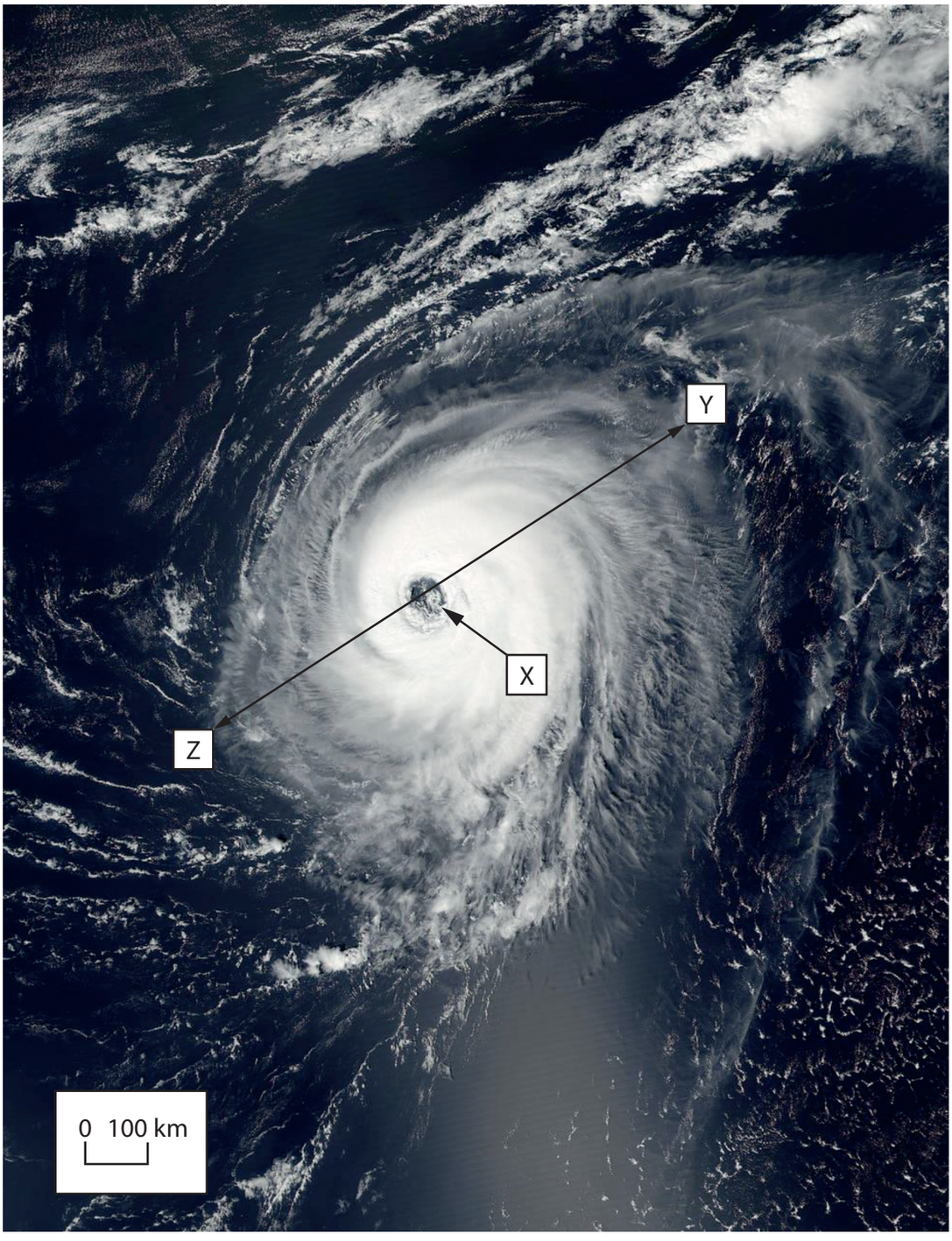

Figure 6b

A satellite image showing Typhoon Meranti, 14 September 2016

It led to 47 deaths in the USA.

The state of Florida planned to evacuate all residents within 100 miles of the coast.

The USA is a developed country with a GNI per capita of US$ 57,540 (2017).

Figure 6c

Evacuation in Florida, USA before the landfall of Hurricane Matthew, October 2016

It led to 546 deaths in Haiti.

In Haiti there were only 576 hurricane shelters available with capacity of 90,000 people for a population of 11 million.

Haiti is a developing country with a GNI per capita of US$ 1,760 (2017).

Figure 6d

Damage caused by Hurricane Matthew in Haiti, October 2016

SECTION C

Ecosystems, Biodiversity and Management

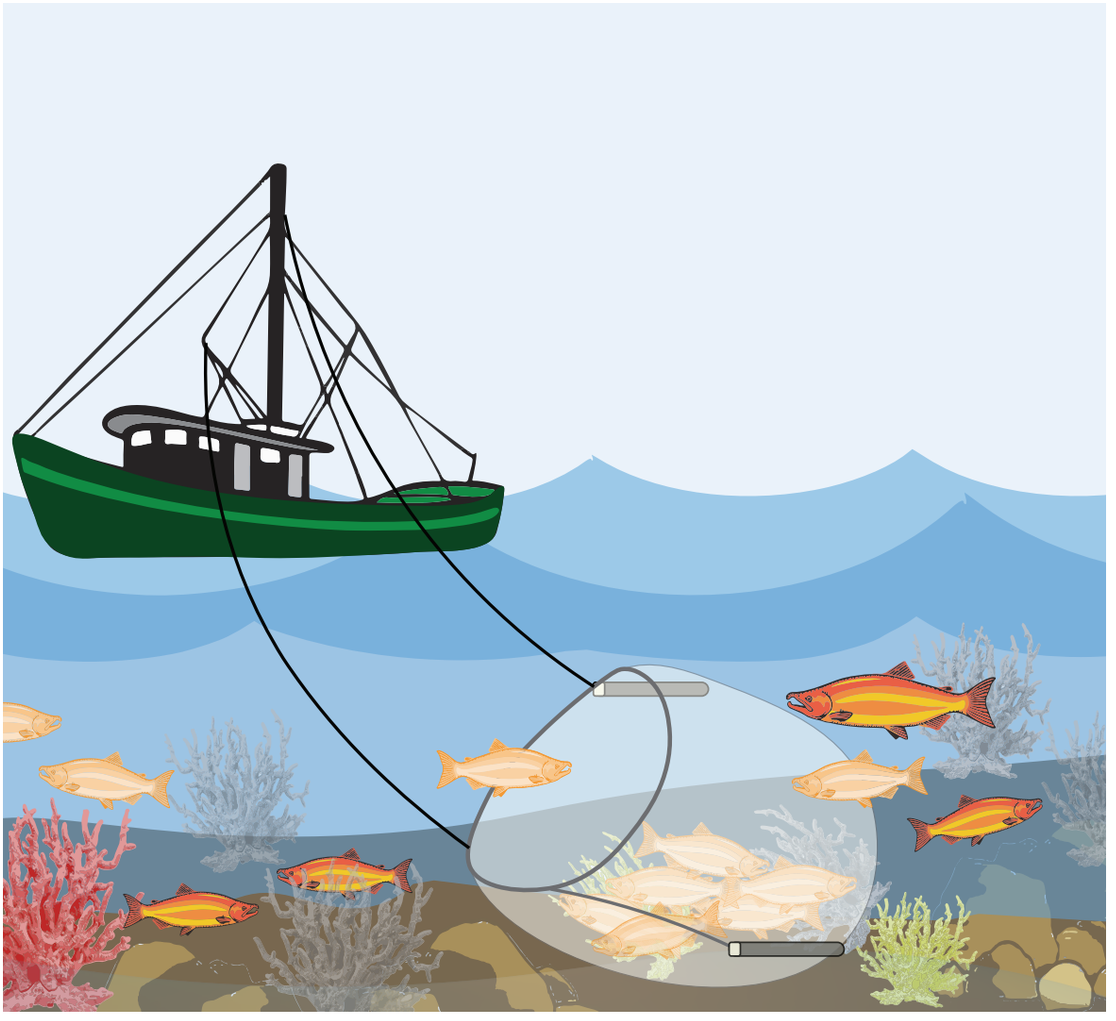

Figure 7b

An example of how human activity can affect marine ecosystems

Figure 7c

The effects of human activity in a tropical rainforest

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Figure 5b Sourced from: http://www.physicalgeography.net/fundamentals/6i.html

Figure 6a Sourced from: http://www.geocraft.com/WVFossils/last_400k_yrs.html

Figure 6b NOAA / NASA Goddard MODIS Rapid Response Team

Figure 6c © GREGG NEWTON/Stringer/Getty Images

Figure 6d © NurPhoto/Getty Images

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Ordnance Survey

Exmoor

P56153A

1:25 000 Scale
Explorer Series

Extract No 2318/OL9

Four colours should appear above; if not then please return to the invigilator.
Four colours should appear above; if not then please return to the invigilator.

ROADS AND PATHS **Not necessarily rights of way**

- M1 or A6(M) — Motorway; Service Area; 7 Junction Number
- A 35 — Dual carriageway
- A 30 — Main road
- B 3074 — Secondary road
- Narrow road with passing places
- Road under construction
- Road generally more than 4 m wide
- Road generally less than 4 m wide
- Other road, drive or track, fenced and unfenced
- Gradient: steeper than 20% (1 in 5); 14% (1 in 7) to 20% (1 in 5)
- Ferry; Ferry P – passenger only
- Path

RAILWAYS

- Multiple track / Single track — Standard gauge
- Narrow gauge or Light Rapid Transit System (LRTS) and station
- Road over; road under; level crossing
- Cutting; tunnel; embankment
- Station, open to passengers; siding

PUBLIC RIGHTS OF WAY **Not shown on maps of Scotland**

- Footpath
- Bridleway
- Byway open to all traffic
- Restricted byway-not for use by mechanically propelled vehicles

The representation on this map of any other road, track or path is no evidence of the existence of a right of way

OTHER PUBLIC ACCESS

- Other routes with public access

The exact nature of the rights on these routes and the existence of any restrictions may be checked with the local highway authority. Alignments are based on the best information available

- Recreational route
- National Trail / Long Distance Route
- Permissive footpath / Permissive bridleway — See note below

Footpaths and bridleways along which landowners have permitted public use but which are not rights of way. The agreement may be withdrawn.

- Traffic-free cycle route
- National cycle network route number – traffic free; on road

BOUNDARIES

- National
- County (England)
- Unitary Authority (UA), Metropolitan District (Met Dist), London Borough (LB) or District (Scotland & Wales are solely Unitary Authorities)
- Civil Parish (CP) (England) or Community (C) (Wales)
- National Park

HISTORICAL FEATURES

- Site of antiquity
- 1066 — Site of battle (with date)
- VILLA — Roman
- Castle — Non-Roman
- Visible earthwork

Information provided by English Heritage for England and the Royal Commissions on the Ancient and Historical Monuments for Scotland and Wales

GENERAL FEATURES

- Gravel pit; Sand pit
- Other pit or quarry; Landfill site or slag/spoil heap
- Slopes
- Place of worship
- Current or former place of worship – with tower – with spire, minaret or dome
- Building; important building
- Glasshouse
- Youth hostel
- Bunkhouse / camping barn / other hostel
- Bus or coach station
- Lighthouse; disused lighthouse; Beacon
- Triangulation pillar
- Mast
- Windmill; with or without sails
- Wind pump; wind turbine
- pylon / pole — Electricity transmission line
- BP — Boundary post
- BS — Boundary stone
- CG — Cattle grid
- CH — Clubhouse
- FB — Footbridge
- MP; MS — Milepost; milestone
- Mon — Monument
- PO — Post office
- Pol Sta — Police station
- Sch — School
- TH — Town hall
- NTL — Normal tidal limit
- W; Spr — Well; spring

HEIGHTS AND NATURAL FEATURES

- 52 · — Ground survey height
- 284 · — Air survey height

Surface heights are to the nearest metre above mean sea level. Where two heights are shown, the first height is to the base of the triangulation pillar and the second (in brackets) to the highest natural point of the hill

Vertical face/cliff

Boulders; Loose rock; Outcrop; Scree

- Water; mud
- Sand; sand and shingle

VEGETATION

Vegetation limits are defined by positioning of symbols

- Coniferous trees
- Non-coniferous trees
- Coppice
- Orchard
- Scrub
- Bracken, heath or rough grassland
- Marsh, reeds or saltings

ACCESS LAND

- DANGER AREA — Firing and test ranges in the area. Danger! Observe warning notices
- MANAGED ACCESS — Access permitted within managed controls, for example, local byelaws.

England and Wales

- Access land boundary and tint
- Access land in wooded area
- Access information point

Portrayal of access land on this map is intended as a guide to land which is normally available for access on foot, for example access land created under the Countryside and Rights of Way Act 2000, and land managed by the National Trust, Forestry Commission and Woodland Trust.

Access for other activities may also exist. Some restrictions will apply; some land will be excluded from open access rights.

The depiction of rights of access does not imply or express any warranty as to its accuracy or completeness. Observe local signs and follow the Countryside Code.

Scotland

- National Trust for Scotland, always open
- National Trust for Scotland, limited access – observe local signs
- Forestry Commission Land
- Woodland Trust Land

In Scotland, everyone has access rights in law over most land and inland water, provided access is exercised responsibly (Land Reform (Scotland) Act 2003). **This includes walking, cycling, horse- riding and water access, for recreational and educational purposes, and for crossing land or water.** Access rights do not apply to motorised activities, hunting, shooting or fishing, nor if your dog is not under proper control.

TOURIST AND LEISURE INFORMATION

- Building of historic interest
- Boat trips
- Boat hire
- Cadw (Welsh heritage)
- Camp site/Caravan site
- Castle / fort
- Cathedral / Abbey
- Craft Centre
- Country park
- Cycle hire
- Cycle trail
- English Heritage property
- Fishing
- Forestry Commission visitor centre
- Garden / arboretum
- Golf course or links
- Historic Scotland
- Information centre, seasonal
- Horse riding
- Museum
- Mountain bike trail
- Nature reserve
- National Trust property
- Other tourist feature
- P&R — Parking / Park and ride, all year / seasonal
- Picnic site
- Preserved railway
- PC — Public Convenience
- Public house/s
- Recreation / leisure / sports centre
- Slipway
- Telephone (public / roadside assistance/ emergency)
- Theme / pleasure park
- Viewpoint
- Visitor centre
- Walks / trails
- Water activites
- World Heritage site or area

Scale 1: 25 000

1 0 Kilometres 1

1 ¾ ½ ¼ 0 Miles 1

1 kilometre = 0·6214 mile

4 centimetres to 1 kilometre (one grid square)

1 Mile = 1·6093 kilometres