Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

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

Time 1 hour 30 minutes

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues
Making Geographical Decisions

You must have:
Resource Booklet (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.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- 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 and grammar are clearly indicated.

Advice

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

Turn over

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P 7 0 8 5 6 A 0 1 2 0

Pearson

SECTION A

People and the Biosphere

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

1 Use Section A (pages 3 and 4) of the Resource Booklet before answering this question.

(a) Study Figure 1.

Identify the year when Ghana's population reached 20 million.

(1)

.....

(b) More resources are needed when a country's population increases in size.

Using your own knowledge, state **one other** reason why the demand for resources may grow over time.

(1)

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.....

(c) Ghana's population is predicted to double in size between 2020 and 2050.

Explain **one** way in which the graph in Figure 1 supports this prediction.

Use data from Figure 1 in your answer.

(2)

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(d) Study Figure 2 in the Resource Booklet.

Using Figure 2, identify **two** ways in which mining leads to vegetation loss.

(2)

1 .....

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2 .....

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(e) Using your own knowledge, explain **one** way in which soil can be damaged by the loss of vegetation.

(2)

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(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

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SECTION B

Forests Under Threat

Answer ALL questions. 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 ☒.

2 Use Section B (pages 5 and 6) in the Resource Booklet to answer this question.

(a) Study Figure 3.

(i) Identify when the greatest increase in precipitation occurs.

(1)

☐ **A** between April and May

☐ **B** between May and June

☐ **C** between August and September

☐ **D** between September and October

(ii) Identify the **modal** amount of monthly precipitation.

(1)

..... mm

(b) Using your own knowledge, identify **two** ways in which plants in tropical rainforests are adapted to the climate.

(2)

☐ **A** drip-tip leaves

☐ **B** cone-shaped trees

☐ **C** low biodiversity

☐ **D** needle-shaped leaves

☐ **E** buttress roots

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(c) Study Figure 4 in the Resource Booklet.

Explain **two** ways in which the changes shown in Figure 4 may lead to the loss of tropical rainforest animals.

(4)

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(Total for Question 2 = 8 marks)

TOTAL FOR SECTION B = 8 MARKS

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SECTION C

Consuming Energy Resources

Answer ALL questions. 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 ☒.

3 Use Section C (pages 7 to 12) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Identify Ghana's most valuable export in 2019.

(1)

.....

(ii) Identify how you would work out the percentage increase in GDP per capita from 2010 to 2019.

(1)

☐ **A** $\frac{3100+5194}{3100}\times 100$

☐ **B** $\frac{3100+5194}{5194}\times 100$

☐ **C** $\frac{5194-3100}{3100}\times 100$

☐ **D** $\frac{5194-3100}{5194}\times 100$

(b) Study Figure 6 in the Resource Booklet.

Identify which country started oil production first.

(1)

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(c) Study Figures 5 and 6 in the Resource Booklet.

Using evidence from Figures 5 and 6, explain **two** ways in which Ghana's economy might be affected by the development of new oil resources.

(4)

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(d) Study Figure 7 in the Resource Booklet.

Identify the distance between Axim and the centre of the Jubilee Field.

(1)

☒ **A** 70 km

☒ **B** 100 km

☒ **C** 170 km

☒ **D** 1000 km

(e) Using your own knowledge, explain **one physical** and **one economic** reason why oil resources can only be developed in certain places.

(4)

Physical reason

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Economic reason

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(f) Study Figure 8 in the Resource Booklet.

Assess the similarities and differences between the two views.

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(g) Study Figure 9 in the Resource Booklet.

Using evidence from Figure 9 and your own knowledge, explain **two** reasons for the rise in global CO_2 emissions from fossil fuel use since the year 2000.

(4)

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(h) Study Figure 10 in the Resource Booklet.

Using evidence from Figure 10, assess the environmental challenges which climate change may bring to Ghana.

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(Total for Question 3 = 32 marks)

TOTAL FOR SECTION C = 32 MARKS

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SECTION D

Making a Geographical Decision

Answer Question 4. Write your answer in the space provided.

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

4 Study the three options below for Ghana's government to develop its economy so that it is no longer reliant on overseas aid.

Option 1: Stop looking for new oil and focus on educating Ghana's growing population

Option 2: Keep supporting the gold, cocoa and oil industries in order to increase Ghana's national income

Option 3: Focus on developing Ghana's oil industry but discourage any new gold mining or cocoa production

Select the option that you think is best for the future development of Ghana.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option .....

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS
TOTAL FOR PAPER = 64 MARKS

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

Time 1 hour 30 minutes

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues
Making Geographical Decisions

Resource Booklet

Do not return this Booklet with the question paper.

Turn over

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SECTION A

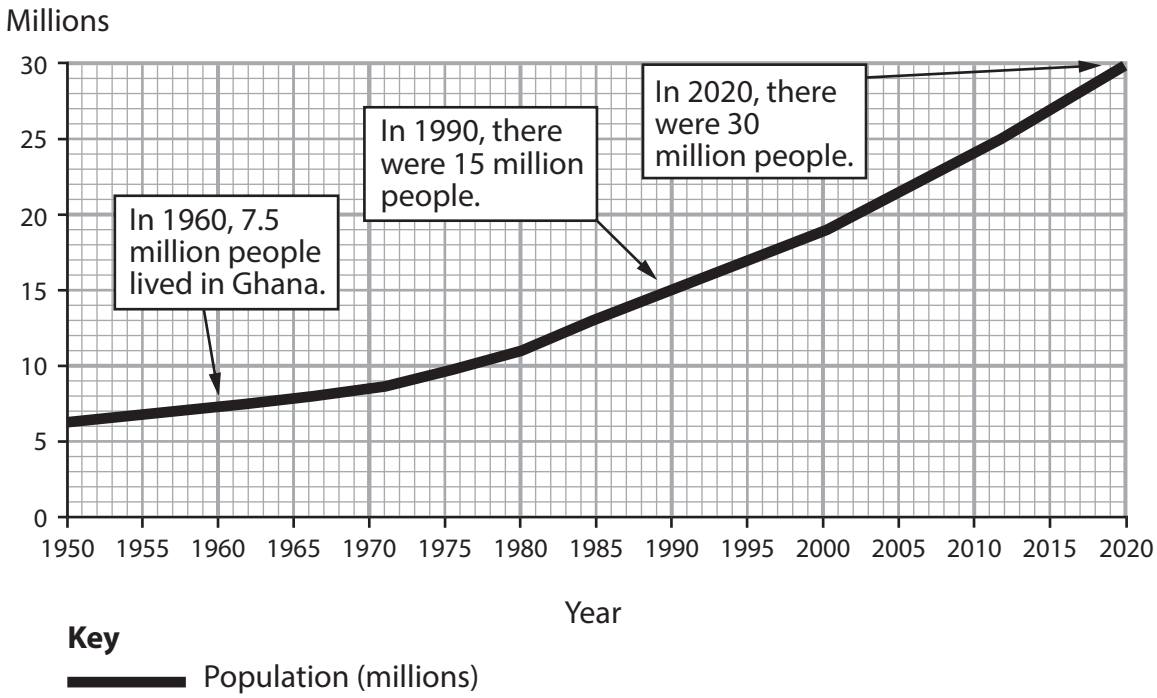
People and the Biosphere

The issue: **development choices for Ghana.**

- Ghana is a tropical West African country.
- Its main exports are oil, gold and cocoa (used to make chocolate).
- However, the country remains dependent on foreign aid.
- Ghana's government recently introduced a policy called 'Ghana beyond aid'. It wants Ghana's economy to grow more quickly – but how?

Introduction

- Ghana is a relatively poor country where around a quarter of children still don't complete secondary school.
- Ghana's tropical climate is suitable for cocoa production and this has led to the removal of much of Ghana's tropical rainforest. Nearly half of Ghana's people work in agriculture.
- Around 1 million people work in small gold mines. This industry is another major cause of deforestation. Ghana lost a larger percentage of its remaining rainforest than any other country in 2018.
- Ghana gained independence from the UK in 1957. Like then, much of today's profit from mining and agriculture still leaves Ghana. One view is that local people are exploited by transnational corporations (TNCs).
- Ghana's government has made developing new offshore oil resources its priority. The government says this will make people wealthier and less dependent on foreign aid.
- Two major development challenges lie ahead though. Firstly, population is predicted to nearly double between 2020 and 2050. Secondly, Ghana's physical environment is greatly threatened by climate change.



In 2020, the fertility rate for Ghana was approximately 4 children per woman. The fertility rate is the average number of children a woman gives birth to in her lifetime.

Figure 1

Population growth in Ghana, 1950–2020

Figure 2

Gold mining in Ghana

SECTION B

Forests Under Threat

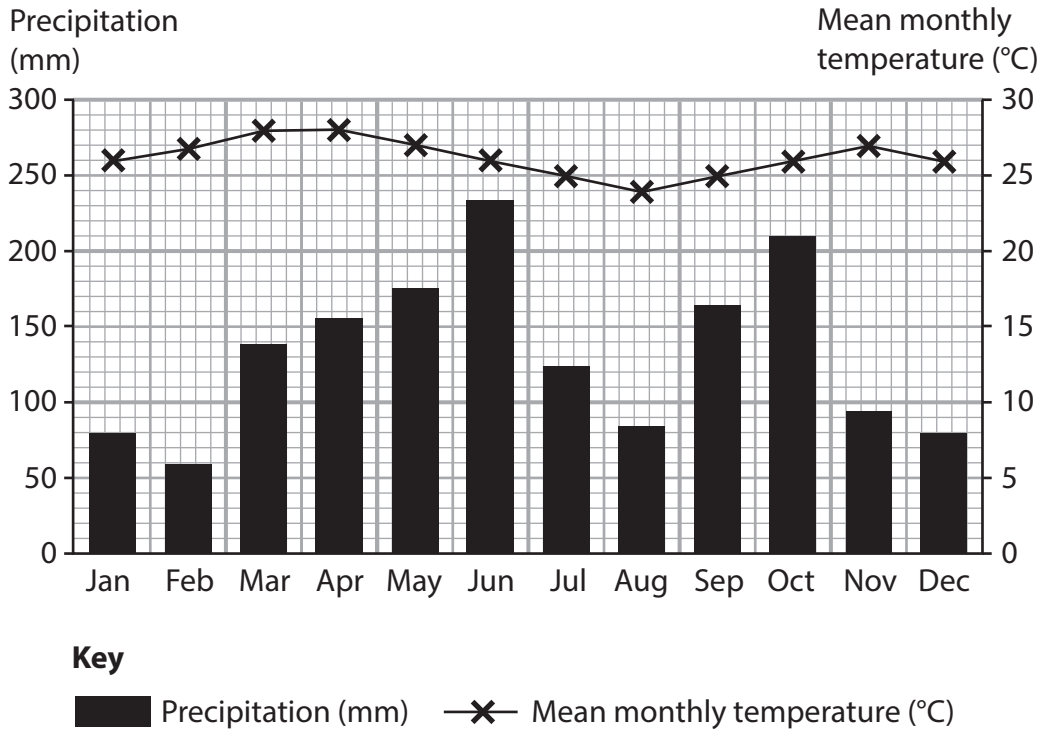
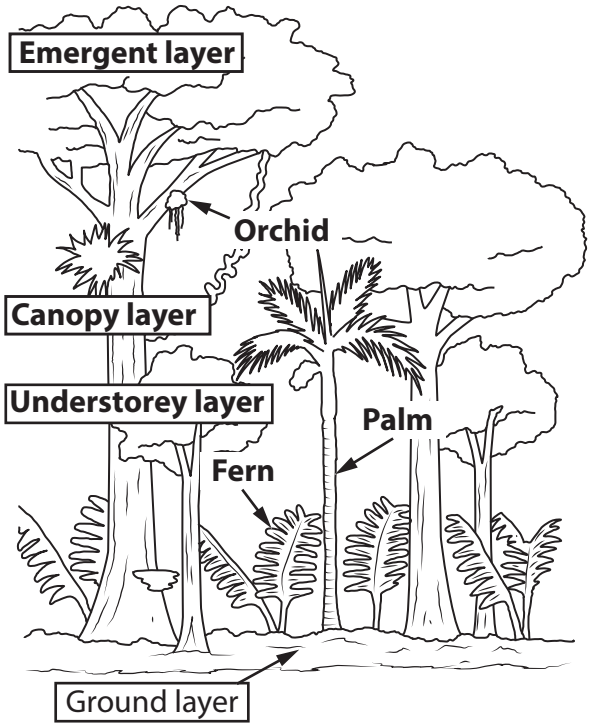


Figure 3

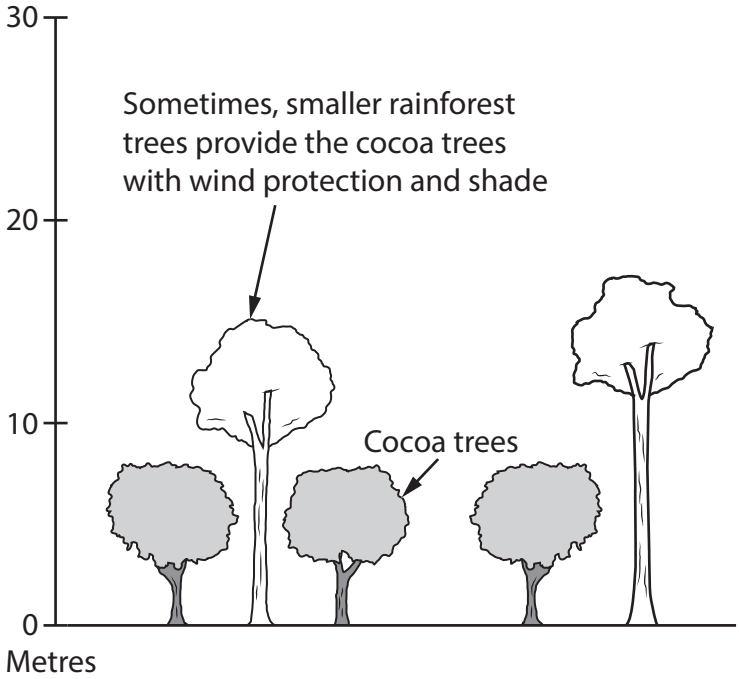
Climate graph for Ghana's tropical rainforest region

BEFORE



The structure of the tropical rainforest

AFTER



The structure of the cocoa plantation

Figure 4

Changes in vegetation resulting from cocoa production

SECTION C

Consuming Energy Resources

Ghana – a development profile		
Development indicators	**2010**	**2019**
Gross Domestic Product (GDP) per capita in US$	3,100	5,194
Human Development Index (HDI) ranking	152	140
% of 18 year olds attending university	7	17
Amount of international aid received in US$	1,697 million	1,256 million

The relative value of Ghana's different exports, 2019

- Each rectangle's size is proportional to the value of that economic sector.
- In 2020, the total economic value of Ghana's exports was US$ 21 billion.

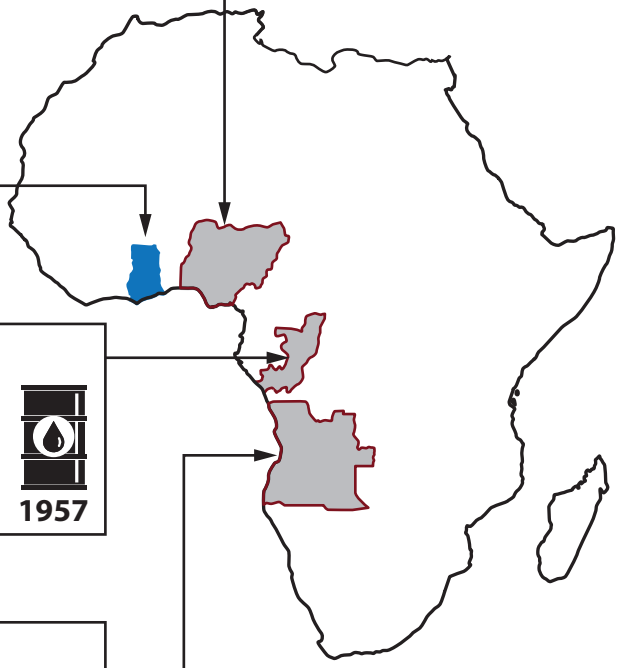
Figure 5

A development and economic profile of Ghana

Nigeria

GDP contribution of oil:	**10%**
Annual oil production:	**670 million barrels**
Per capita GDP:	**US$ 6,100**
Living in extreme poverty:	**39% of population**

1958



Republic of the Congo (Congo-Brazzaville)

GDP contribution of oil:	**50%**
Annual oil production:	**125 million barrels**
Per capita GDP:	**US$ 6,300**
Living in extreme poverty:	**37% of population**

1957

Angola

GDP contribution of oil:	**25%**
Annual oil production:	**600 million barrels**
Per capita GDP:	**US$ 6,800**
Living in extreme poverty:	**52% of population**

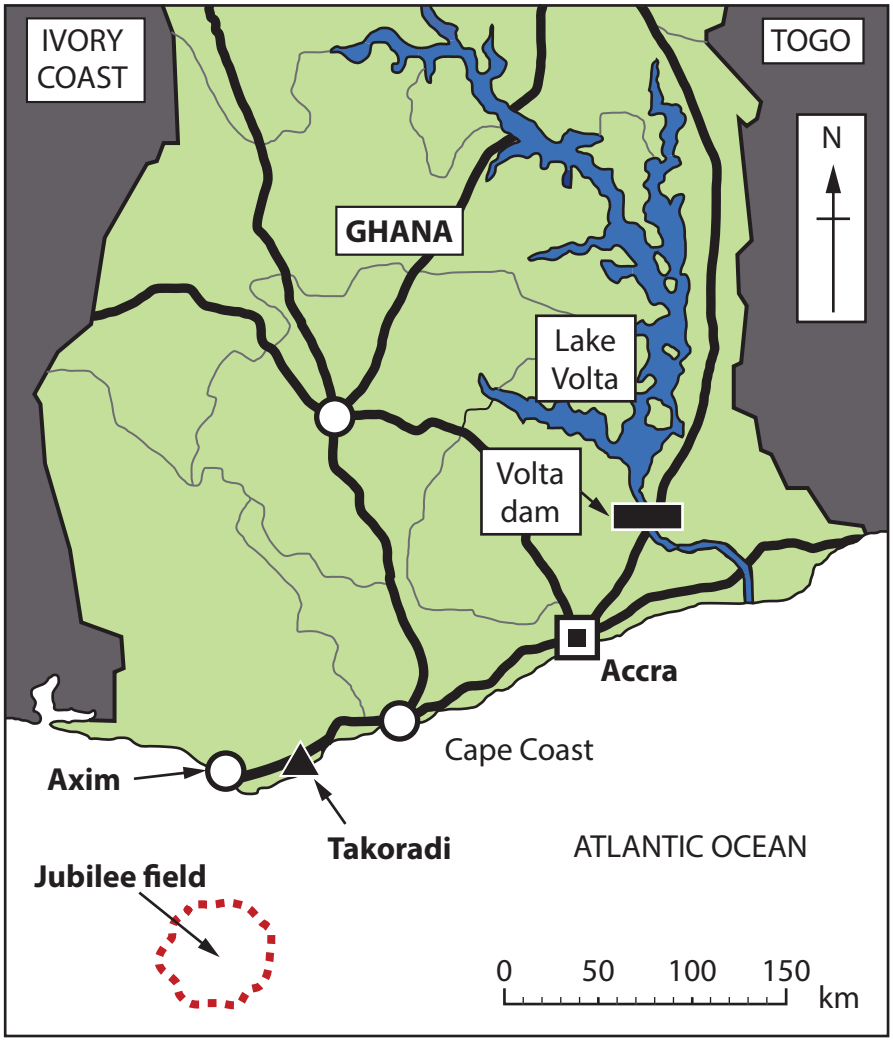
1956

Year oil production began

1957

Figure 6

Africa's top three oil producers, 2020



Key

- Capital city
- City
- Roads
- Oil storage area
- Dam and hydroelectric power (HEP) station
- Oil field

In 2010, Ghana's government allowed a British TNC called Tullow to begin exploiting the newly-discovered Jubilee oil field.

Figure 7

Ghana's Jubilee oil field

View 1: A Ghanaian government minister

"Ghana is lucky. We only found oil recently, so we can learn from the mistakes of other countries where oil wealth has been a source of corruption and war. When I was young, we depended on cocoa exports. Today, everyone is talking about oil and freeing ourselves from foreign aid.

We still rely on foreign TNCs to provide the skilled workers and technology needed to develop our offshore oil. But this will change as our universities begin to offer management and engineering courses.

One day soon, Ghana will be a top African oil exporter with production of about 100 million barrels per year. We are excited about new offshore survey data produced by Kosmos (a US TNC). It shows we will become a very rich and successful country."

View 2: A Ghanaian university professor

"The vast majority of the profits from our natural resources do not remain here. Only 2% of gold profits make their way back. Oil is not much better. TNCs, aided by a few rich and powerful Ghanaians, keep most of the profits. Everyone else is left dependent on aid.

TNCs take 100 billion US$ each year from developing countries. Of the top 10 foreign TNCs operating in Africa, nine are based in developed countries. This is just a new version of colonialism.

In other words, wealth from our gold, cocoa and oil is used to promote economic growth elsewhere – while we stay too poor to pay for the infrastructure, education and skills needed to process and distribute our resources ourselves."

Figure 8

Two views on the exploitation of oil and other natural resources in Ghana

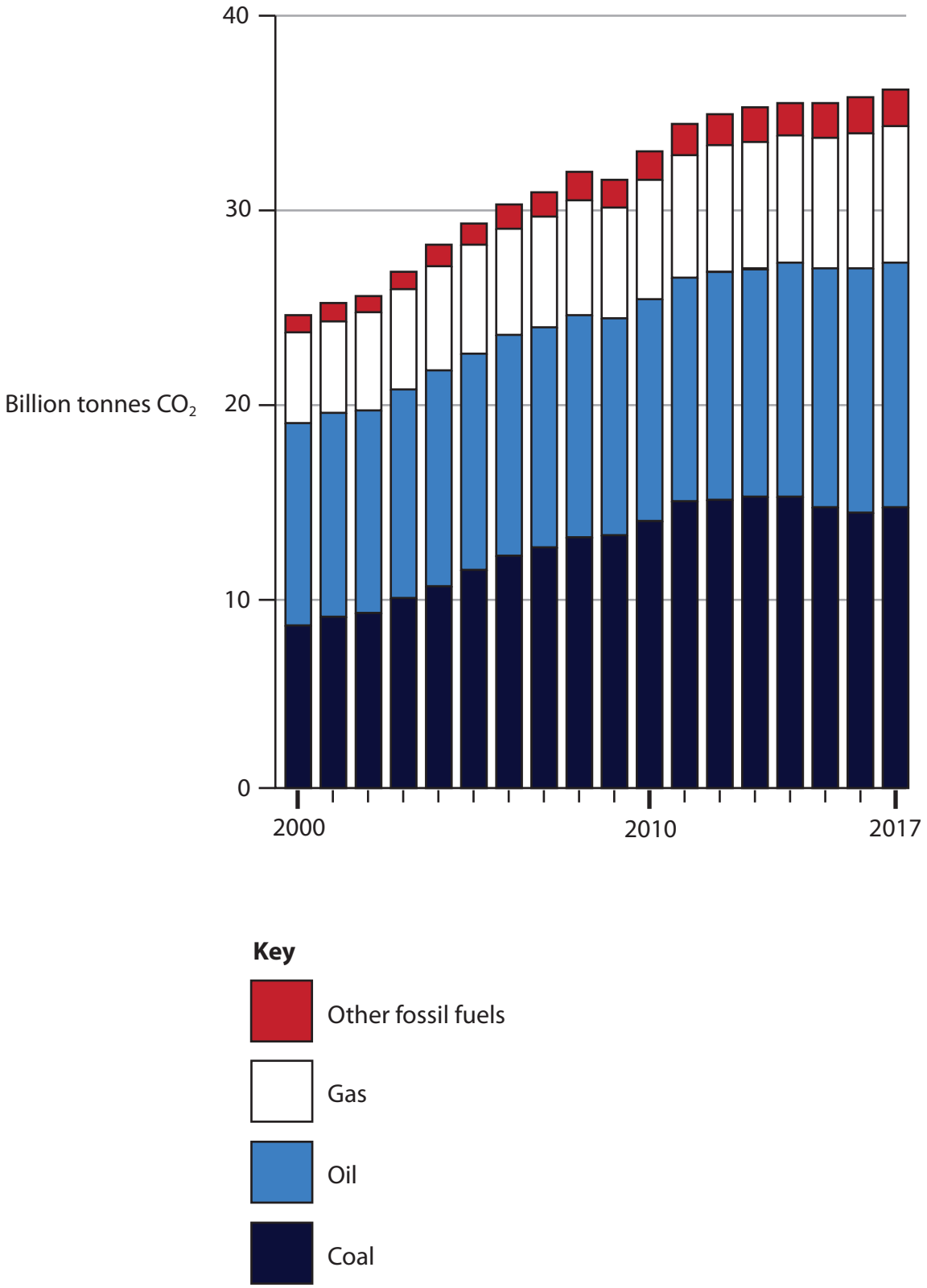


Figure 9

Global CO_2 emissions from fossil fuel use, 2000–2017

Climate change projections for Ghana

1.4–5.8°C increase in temperature by 2080

4 per cent (%) decrease in rainfall by 2040

75–190 mm rise in sea levels by 2100

Key future environmental issues for Ghana

Threatened ecosystems
- Forests replaced by grasslands with fewer animal habitats.
- Climate may become too dry for some existing crops.

Freshwater shortages
- Reduced water availability.
- Reduced water for HEP (hydroelectric power).

Flooded coastline
- Many of Ghana's urban areas will be flooded, where 2 million people live.
- Loss of farmlands near Lake Volta.

Warmer coastal waters
- Loss of species who prefer a colder habitat, so food webs may collapse.
- Loss of earnings for 2 million people who earn a living from fishing.

The longer 'business as usual' fossil fuel use continues, the worse these impacts will be.

Figure 10

Results of research by Ghana's climate change scientists

Acknowledgements
Pearson Education Ltd gratefully acknowledges all following sources used in preparation of this paper:
Figure 1 sourced from https://worldpopulationreview.com/countries/ghana-population
Figure 2 ©Greenshoots Communications/Alamy Stock Photo
Figure 5 sourced from https://oec.world/en/profile/country/gha/#Exports%20%20%20, https://wenr.wes.org/2019/04/education-in-ghana
Fig 6 sourced from https://www2.deloitte.com/us/en/insights/industry/oil-and-gas/africa-oil-gas-industry-energy-reserves.html
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Fig 8 view 1 adapted from https://www.ft.com/content/c10e6314-c1ad-11e8-84cd-9e601db069b8
Fig 8 view 2 adapted from https://www.salon.com/2019/05/25/98-3-percent-of-ghanas-gold-remains-in-the-hands-of-multinational-corporations_partner/
Fig 10 adapted from https://www.climatelinks.org/sites/default/files/asset/document/2017_USAID_Climate%20Change%20Risk%20Profile%20-%20Ghana.pdf