

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY

0460/01

Paper 1

October/November 2004

1 hour 45 minutes

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet. Write your Centre number, candidate number and name on all the work you hand in. Write in dark blue or black pen on both sides of the paper. You may use a soft pencil for any diagrams, graphs or rough working. Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The insert contains Photograph A for Question 3 and Fig. 6 for Question 4.

This document consists of **12** printed pages, **4** blank pages and an insert.



- 1 (a) What is meant by the term 'natural increase of population'?
Explain how it is calculated. [3]
- (b) Fig. 1 shows the growth of population in world regions from 1950 to 2050.

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Fig. 1

- (i) What does the diagram show about
- A** the rate of growth of the world's total population from 1950 to 2000, [2]
- B** the proportions of population in the world regions over the 100 year period? [4]
- (ii) Suggest reasons why the growth of population is
- A** large in some world regions, [5]
- B** much less in other world regions. [5]

- (c) Now study Fig. 2 which refers to Japan, a major developed country in Asia. It shows how the population aged over 60 is likely to develop by 2050 both in percentage terms and dependency ratio.

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Fig. 2

- (i) What is meant by the term 'dependency ratio'? [2]
- (ii) With reference to data from Fig. 2, explain why the expected developments shown will create problems for the country now and in the future. [4]

- 2 (a) Study Fig. 3 which shows a settlement hierarchy.

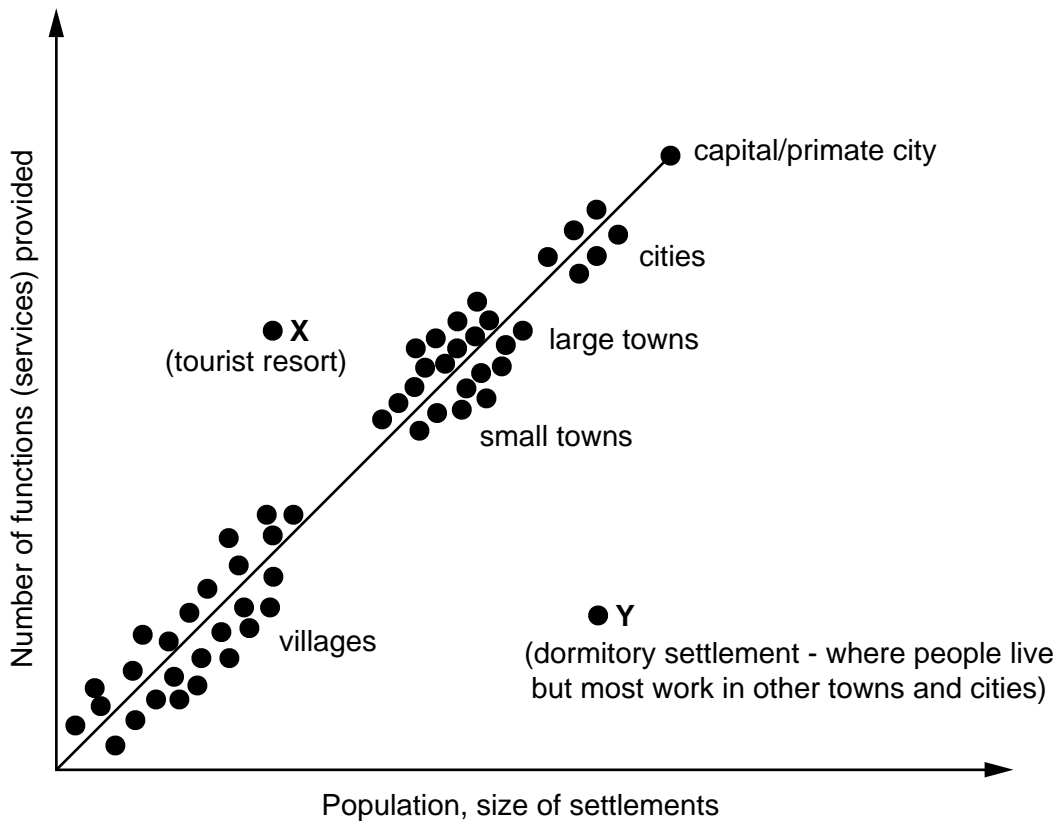


Fig. 3

- (i) Explain what 'settlement hierarchy' means. [1]
- (ii) What does Fig. 3 suggest about the relationship between the number of and the sizes of settlements? [1]
- (iii) Fig. 3 also shows that two types of settlement (X and Y) may not fit into the general relationship shown. Describe the position of each of these settlements on the graph and suggest a reason for each position. [2,2]
- (iv) State the type of functions (services) found in most villages and explain how they may differ from those in towns. [4]
- (v) Explain how the functions of a capital/primate city may differ from the functions (services) found in other settlements within a country. [3]

- (b) Now look at Fig. 4 which shows the percentages of land use in the CBD (Central Business District) of a large city.
Give reasons for the pattern shown. [5]

Percentage of land use in the CBD of a large city

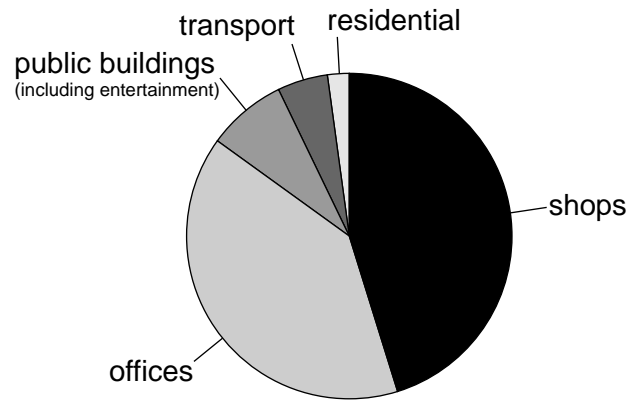


Fig. 4

- (c) Explain why many towns and cities throughout the world are restricting the use of private vehicles in central areas and are encouraging the use of public transport. [7]

- 3 (a) Photograph A (Insert) shows a wave breaking along a coastline.
- (i) On the photograph, locate by means of an arrow and label 'swash', 'backwash' and 'crest'. [3]
 - (ii) The wave shown is a destructive wave. What is meant by a destructive wave and how does it differ from a constructive wave? [4]
- (b) (i) State **two** factors which influence the energy of a wave. [2]
- (ii) What is the difference between hydraulic action and corrasion (abrasion) by waves? [4]
- (iii) By means of a labelled diagram or sketch map **only**, describe the process of longshore drift. [4]
- (c) Fig. 5 shows a stretch of coastline protected by the building of a sea wall and structures such as X - Y.

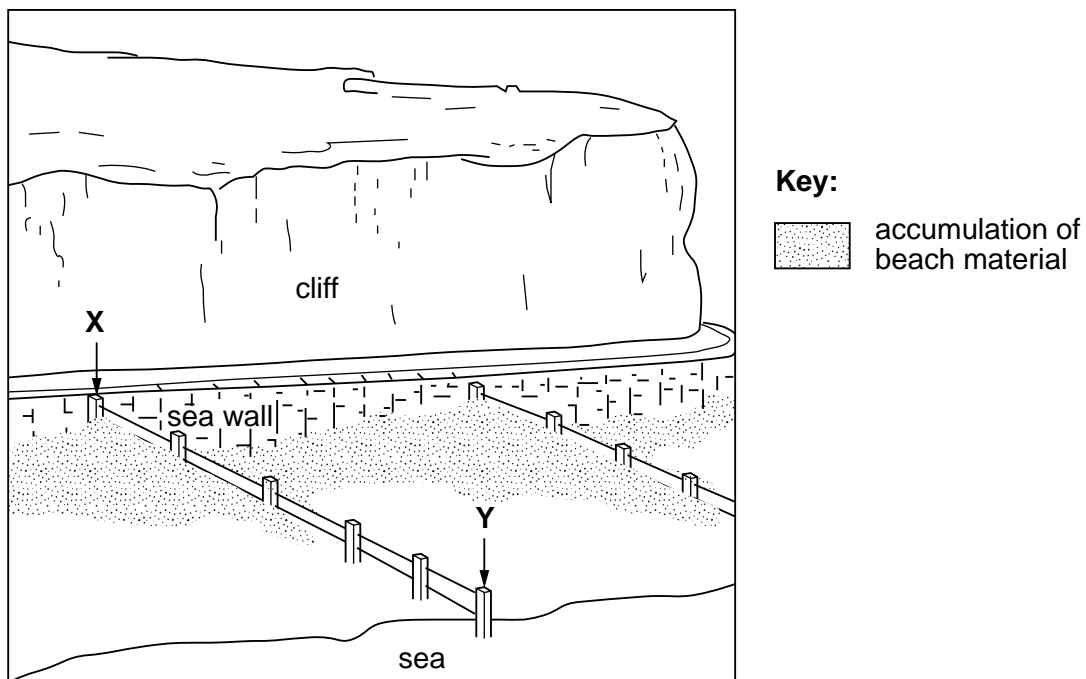


Fig.5

- (i) Suggest how the cliff was being eroded before the sea wall was built. [4]
- (ii) Describe the structure X - Y and explain how it may reduce the longshore drift of beach material. [4]

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- 4 (a) (i) Fig. 6 (Insert) is a diagram of tropical rain (evergreen) forest.
With the aid of labels added to Fig. 6, describe five of the main features of this type of natural vegetation. [5]
- (ii) Explain **three** ways in which features of tropical rain forest are adapted to the climate. [3]
- (b) Study Fig. 7 (opposite) showing the distribution of tropical rain forest in part of central Africa and answer the following.
- (i) Which country named on the map has the largest percentage of its area covered by tropical rain forest? [1]
- (ii) Which **one** of the five named countries has the lowest percentage of its area covered with tropical rain forest? [1]
- (iii) Which part of the Central African Republic is lacking in tropical rain forest? [1]
- (c) Now read the newspaper extract below, Fig. 8, which was published in 2002 and relates to the area of tropical rain forest shown in Fig. 7.

Big Five seek to save Congo forests

The world's five richest countries, international conservation groups and giant logging companies, will pump up to U.S. \$100m into trying to save the forests of the Congo basin. This is the largest stretch of unbroken forest in the world after the Amazon.

The Congo basin was until a decade ago virtually untouched forest. It has now been invaded by European-based logging companies.

The wood is exported mainly to Europe and almost all is known to have been felled illegally, with little or no monitoring of the

industry. The scale of destruction in the Congo basin is now thought to be so serious and rapid that up to 20% of the forest could be lost within 15 years. This could result in climate changes, more river flooding and the loss of plant species.

Fig. 8

- (i) Even though there was an agreement in 2002, it will be difficult to conserve the remaining tropical rain forest in the region shown in Fig. 7.
- A** Give your views on what should be done to conserve the forest. [4]
- B** Explain why conservation will be difficult. [4]
- (ii) How does the removal of tropical rain forest influence
- A** climate,
- B** rivers,
- C** plant species? [6]

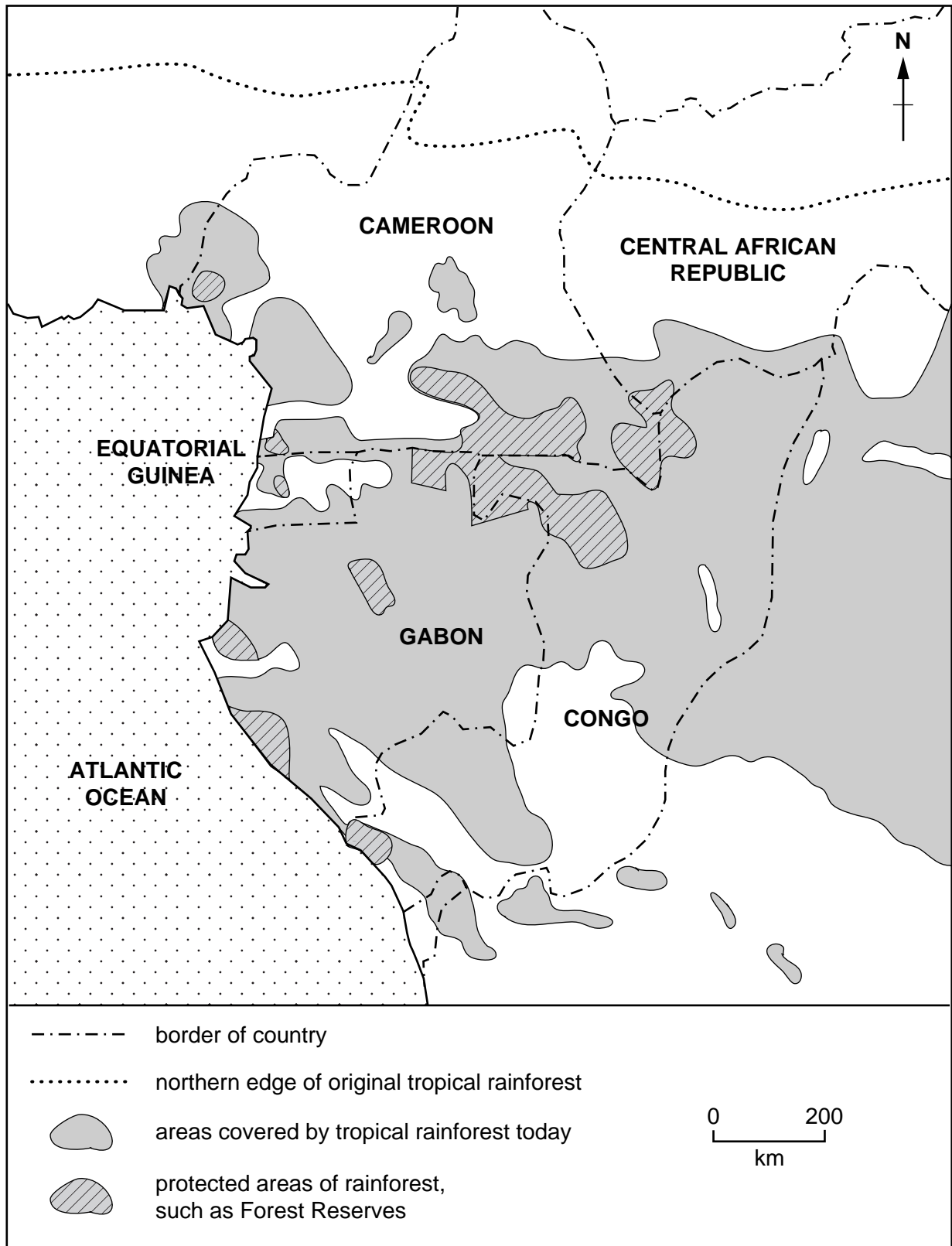


Fig. 7 for Question 4(b) opposite

- 5 (a) Fig. 9 shows two features of the climate of Montego Bay (a major tourist resort in Jamaica in the Caribbean region of central America) and London in the United Kingdom.

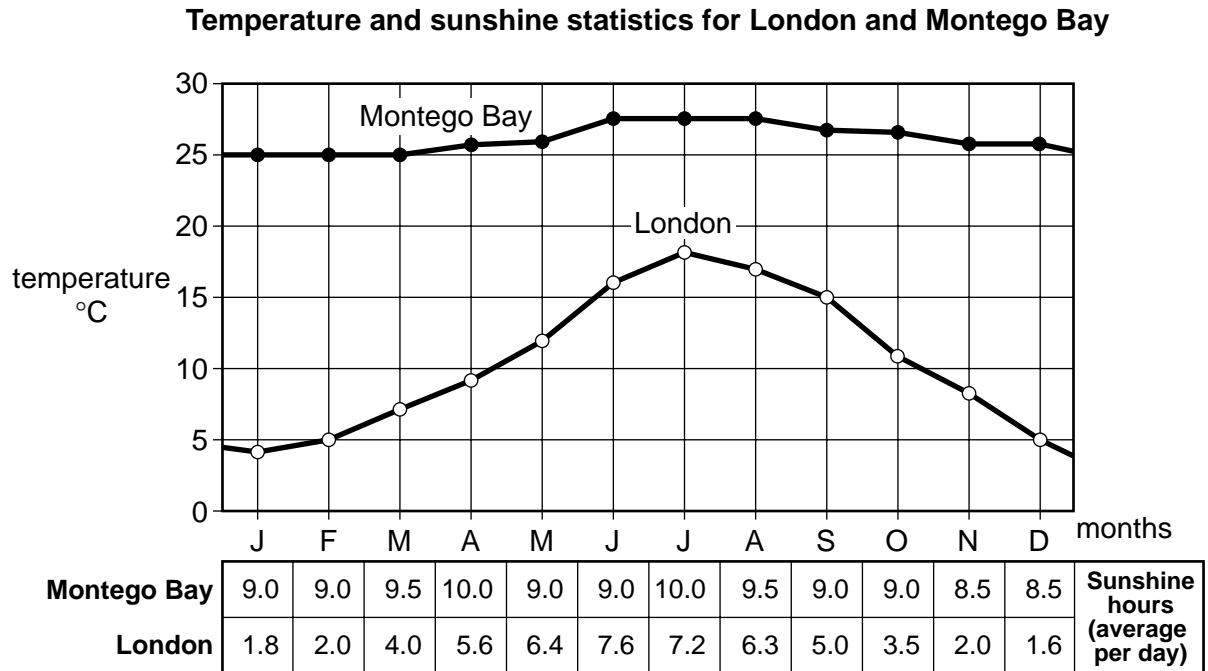


Fig. 9

- (i) Use the data in Fig. 9 **only** to suggest why many people from the United Kingdom may be attracted to visit Montego Bay. [3]
- (ii) Name **one** other climate feature that might interest a tourist planning a visit to Montego Bay from the United Kingdom. [1]
- (b) Give reasons for the increase in international tourism in recent years. [6]

- (c) Fig. 10 shows some of the effects of tourists developments on the environment and on people living in various parts of the world.

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Fig. 10

- (i) With reference to information in Fig. 10 and from studies you have made, explain how the growth of tourism has
- A** changed the natural environment, [4]
- B** caused problems for local people. [4]
- (ii) For a named tourist area, describe the benefits for local people from the growth of the tourist industry. [7]

- 6 (a) (i) Using the information in Fig. 11, explain how electricity may be generated and transported from a hydro-electric power station. [4]

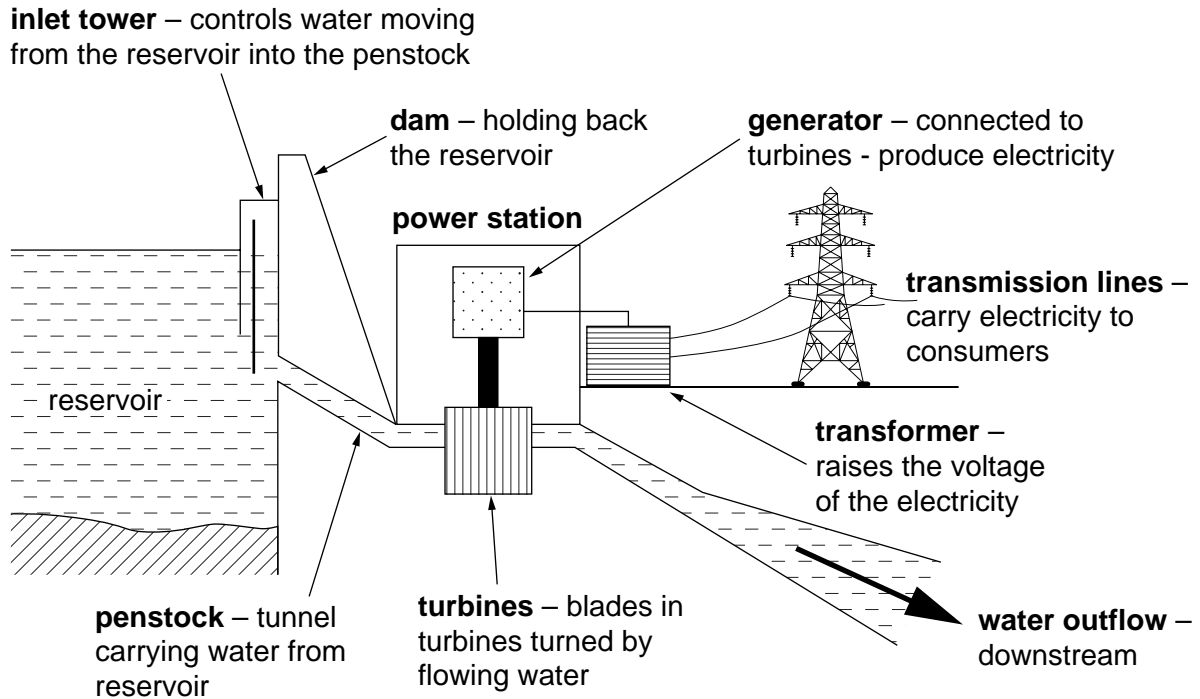


Fig. 11

- (ii) What physical features, including climate, favour the siting of a hydro-electric power station? [4]
- (iii) Why are objections sometimes made when it is proposed to develop a reservoir and hydro-electric power station in a rural location? [3]

- (b) Two billion people ($\frac{1}{3}$ of the world's population) cannot obtain electricity. Instead many gather wood and animal dung for burning as a fuel. Study the newspaper extract (Fig. 12 below) and suggest reasons why:
- (i) so much energy production depends on the burning of wood and animal dung in developing countries; [2]
- (ii) such large-scale burning of wood and animal dung may cause problems for people and the environment. [6]

<p>Two billion people, or a third of the world's population, cannot get electricity or any form of modern energy. In countries such as Sierra Leone, Uganda and Malawi, 95 per cent of the people lack such power resources. Instead they have to gather wood and dung, often walking for hours every day carrying</p>	<p>backbreaking loads, and robbing the land of tree cover and fertility in the process. Smoke trapped inside homes from burning wood and dung kills 2.2 million people a year - mainly women and children - and is responsible for 5 per cent of the total burden of disease worldwide, said the United Nations</p>	<p>Environment Programme (Unep). Burning the wood and dung gives off smoke that contains a cocktail of poisonous chemicals likely to cause respiratory and heart disease. This pollution is one of the leading causes of childhood and infant mortality.</p>
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Fig.12

- (c) Alternative energy sources, including hydro-electricity, only provide 10% of the world's energy. Suggest reasons for this. [6]

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Figure 10. © *The Guardian*. www.guardian.co.uk
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Figure 12. © *The Independent*

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