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

Geography B

Paper 3: People and Environment Issues

– Making Geographical Decisions

Monday 11 June 2018 - Afternoon

Resource Booklet

Paper Reference

1GB0/03

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SECTION A

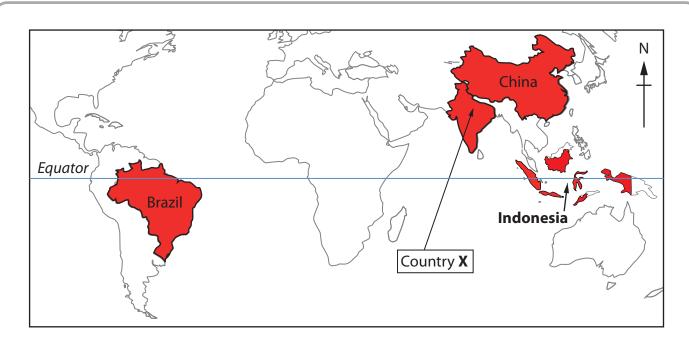
People and the biosphere

The issue: Conflicts over energy and the environment in Indonesia.

- Indonesia is the world's fourth most populated country and an emerging country, although levels of development vary greatly across its 1700 islands.
- Population growth, industrialisation and rising affluence (wealth) mean Indonesia's own energy needs are growing.
- This tropical country is the world's largest producer of palm oil, which is a biofuel. It is also a major exporter of coal and has offshore fossil fuel oil reserves.
- Mining coal and the planting of oil palms lead to the loss of tropical rainforest and reduces their rich and unique biodiversity.

Introduction

- Tropical rainforests grow in regions with high, all-year rainfall and high temperatures, including much of Indonesia. Oil palms need these conditions too.
- As a result, widespread deforestation has taken place in Indonesia to make room for oil palm trees. This is commonly done by burning down the rainforest.
- The Indonesian government encourages the palm oil industry and the mining companies to help economic development. The government has passed a number of environmental protection laws, however these are not always enforced.
- Indonesia has many remote islands making it hard to monitor palm oil companies.
- Some poor rural communities in Sumatra, Kalimantan and other forested Indonesian islands have always used wood from the rainforest as their main fuel source. Until they have an alternative energy source, deforestation will continue even if the palm oil companies can be controlled.



Year:	1950	1970	1990	2010	2030 (projected)
Population (millions)					
China	540	814	1165	1359	1453
Country X	376	555	868	1205	1476
Indonesia	70	120	180	240	293
Brazil	52	110	152	198	229

Figure 1

Population data and locations for Indonesia and other large emerging countries, 1950-2030

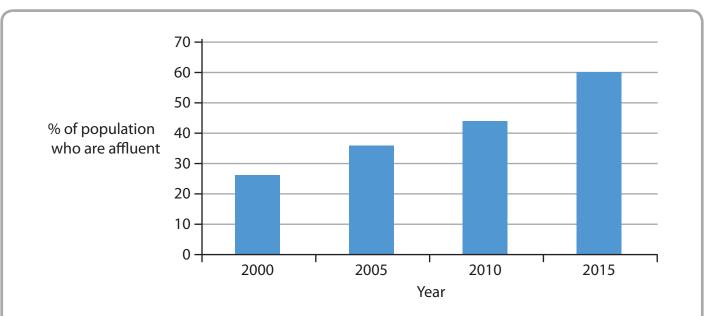


Figure 2

An estimate of rising affluence (personal income of at least US\$10 per day) in Indonesia, 2000-2015

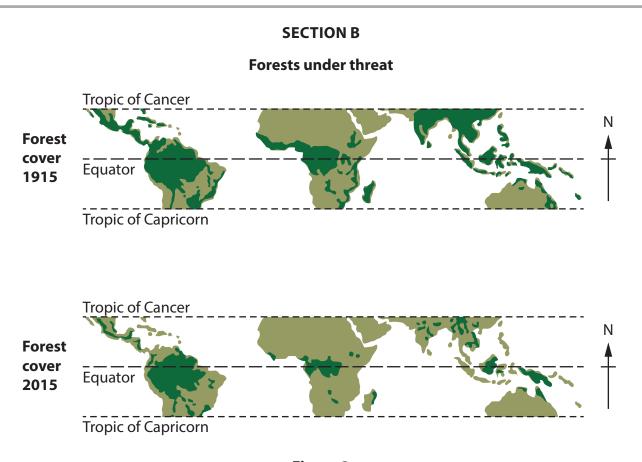


Figure 3

The distribution of forest between the Tropics in 1915 and 2015

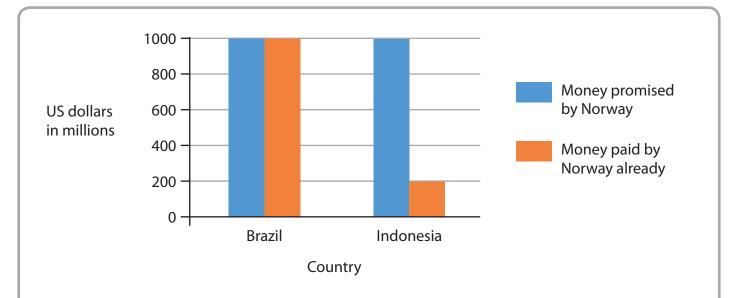
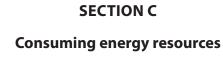
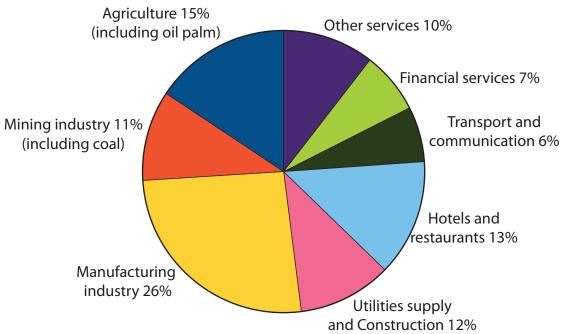


Figure 4

Money promised and paid for rainforest conservation
by Norway's Government to Indonesia and Brazil (million US\$)





Indonesia's total GDP: 868 billion US\$

Figure 5
The structure of Indonesia's GDP, 2014





Both local communities and companies burn rainforest to clear the land.



The land cleared by companies is now used to grow oil palm trees.



Figure 6

Rainforest in Indonesia is being cleared to make more room for oil palm plantations.

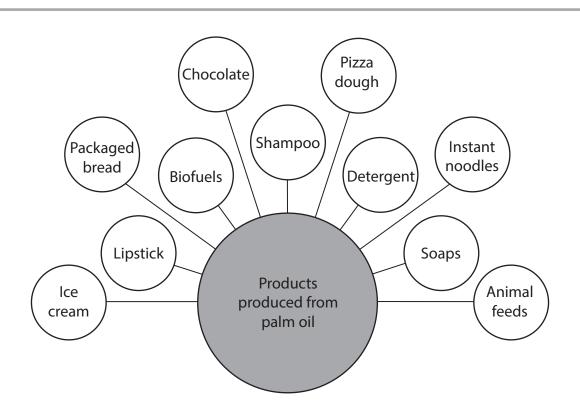


Figure 7a

Global demand is rising for products made using palm oil fruit



Figure 7b
Oil palm fruit

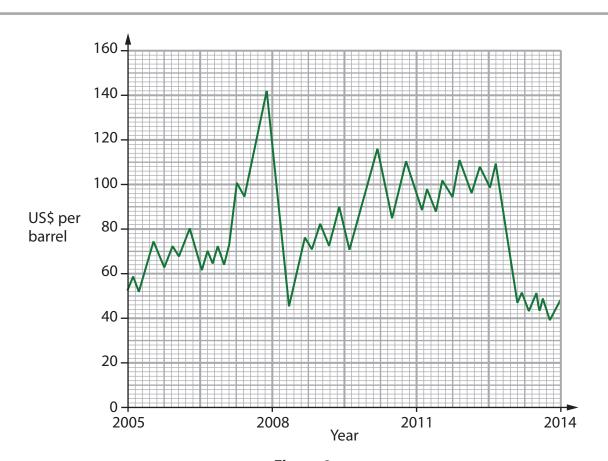


Figure 8a
Fossil fuel oil prices, 2005–2014

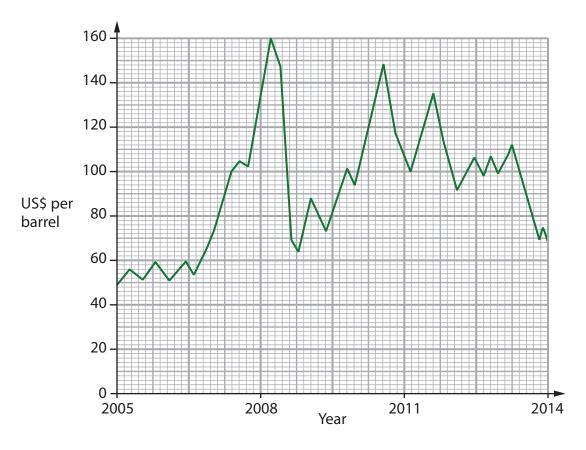
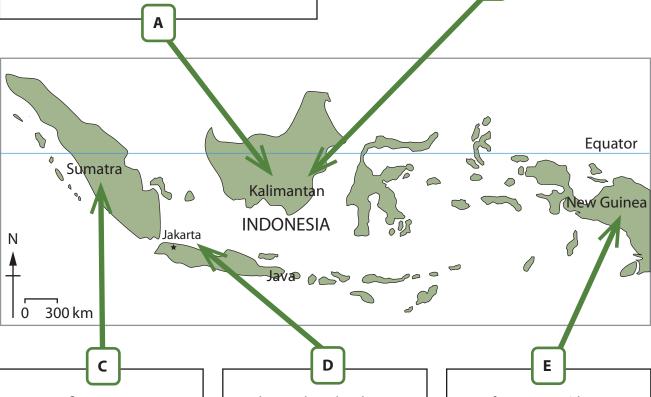


Figure 8b
Palm oil prices, 2005–2014

- 100 years ago, there were 230 000 orangutans.
- Due to habitat loss, the orangutan population in Kalimantan now numbers about 50 000 (Endangered) and only 7 500 Sumatran Orangutan remain (Critically Endangered).
- Half of Kalimantan's rivers suffer from toxic pollution from coal mines, which in turn affects many coastal environments.
- Mining has also led to landscape scarring in many areas.



- Forest fires in Sumatra and Kalimantan cause a toxic haze that spreads across Indonesia and other Southeast Asian countries.
- Smoke from forest fires causes large number of deaths including many children aged under 5.
- The Seribu Islands near Jakarta have suffered from repeated fossil fuel oil spills between 2004 and 2014.
- The source may have been leaking offshore oil rigs operated nearby by China National Offshore Oil Corp or BP Indonesia.
- Deforestation (due to human activities) and heavy rainfall leads to soil erosion throughout Indonesia.

Figure 9

Environmental impacts of energy resource development in Indonesia

The Indonesian government needs to enforce the laws to protect the trees. Brazil's government has done this.

Norway's government

The government keeps selling permits to expand palm oil production areas. Also, some oil palm companies abandon land too quickly when the soil fertility begins to fall. They clear more rainforest every time they want new soil for their oil palms.

A university expert

The killer smoke will carry on and damage to human health will continue. People everywhere eat snack foods and use soap. They don't ask enough questions about where the palm oil used in them comes from or how it is produced.

Pressure group

Our company has pledged to stop deforestation. We will grow more palm trees per unit area in our existing plantations. But when we say we want to save the rainforest, the Indonesian government just sells it to companies who don't care as much as we do.

A palm oil company manager

We want to develop eco-tourism here in Merabu, to attract adventurous tourists. The Norwegians paid us to save some local trees. But then a palm oil company came and cut them down. I think it's impossible to stop the worst companies.

The chief of Merabu, a village in Kalimantan

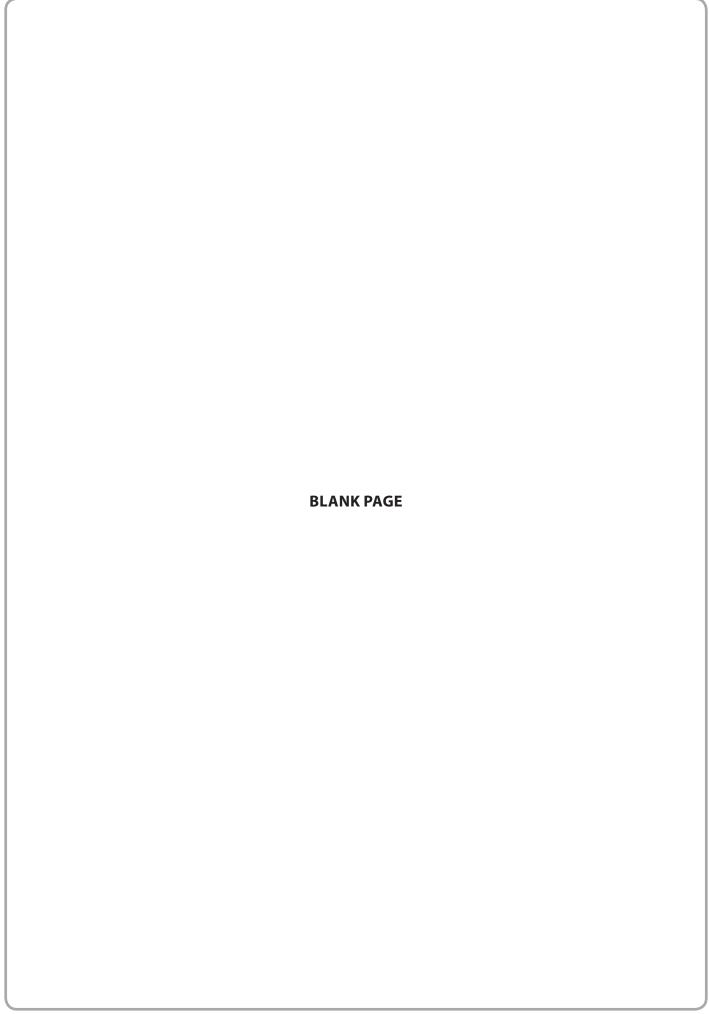
It is difficult to make some villages obey the rules. A lot of fires are started where local people want to make money from palm oil too. They claim that growing oil palms will speed up the development of their local community.

A government official

Figure 10

Different views about who is most to blame for deforestation in Indonesia







15

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