

Pearson Edexcel Level 3 GCE

Tuesday 12 May 2026

Afternoon (Time: 1 hour 45 minutes)

**Paper
reference**

8GEO/01

Geography

Advanced Subsidiary

PAPER 1: Dynamic Landscapes

Resource Booklet

Do not return this Booklet with the question paper.

Turn over ►

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SECTION A

The following resources relate to Question 1.

Direction from Mount Kanlaon	Number of observations of gas and ash emissions in 2024
North	6
East	5
South	17
West	8
Total	36

Figure 1b

Information about gas and ash emissions from Mount Kanlaon, Philippines

	1999 Jiji earthquake	2024 Hualien earthquake
Population	11,000	110,000
Population density (per km ²)	186	3,400
Taiwan's GDP per capita	US\$13,000	US\$33,000
Magnitude (MMS)	7.7	7.2
Earthquake depth	33km	40km
Number of deaths	2,415	13
Number of buildings destroyed	51,700	28

Governance actions taken after the Jiji earthquake:

- **Laws** ensure buildings are hazard resistant
- **Technology** used
 - Sensors to monitor
 - Computers to predict
 - Mobile phones to alert
 - Social media and surveillance cameras to organise emergency responses
- **Preparation** of people with annual earthquake drills

Figure 1c

Data for two earthquakes in Taiwan, and actions taken by local and national governments

SECTION B

The following resources relate to Question 2.



Figure 2a

A relict glacial landscape on the Isle of Skye

Average temperature (°C)

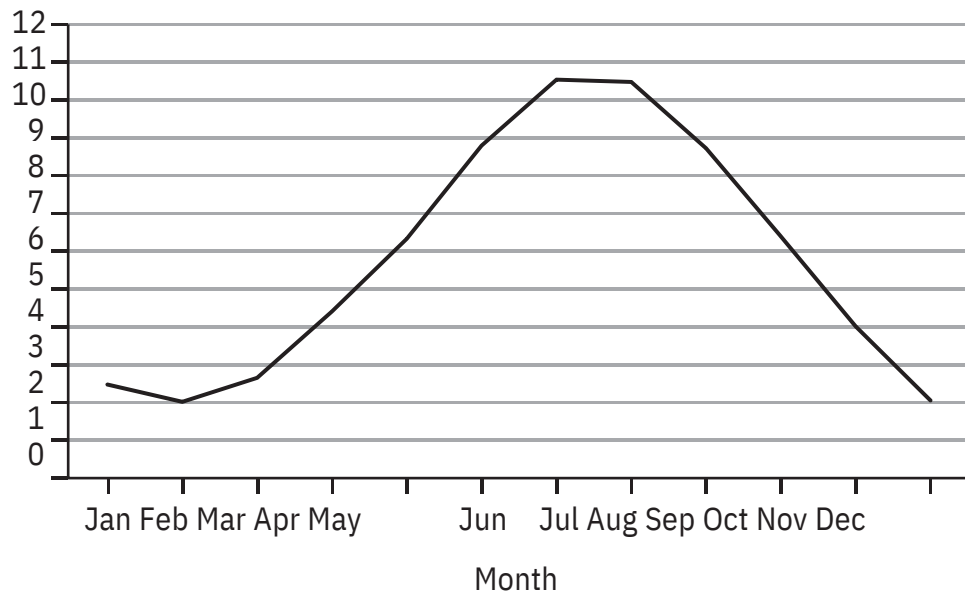


Figure 2b

Average monthly temperature on the Isle of Skye

The following resources relate to Question 4.

- Kenya's Rift Valley, in East Africa, is part of a larger geological formation on a complex divergent plate boundary, causing earthquakes and volcanic activity.
- The highest of the volcanoes (Mount Kenya) has glaciers, however this important water source is under threat as glaciers retreat because of climate change.
- Kenya is an emerging country that makes use of its natural resources. Developing these may threaten the environmental value of its landscape. The many sources of geothermal heat are used to secure Kenya's economic growth.
- Some sites in the Rift Valley are sacred to the indigenous groups who live there. Their way of life is under threat from both development and climate change.

Figure 4a

Information about the environmental value of Kenya's Rift Valley

**Views about
water resources**

"The snow of Mount Kenya is a crown; the mountain is the earthly throne of the god Ngai."

Kikuyu, Embu and Meru people who are at threat from water supply issues

**Views about
energy resources**

"The Menengai crater is haunted; the rising hot steam that you can see are the spirits of ancient warriors trying to make their way up to heaven."

Maasai people who have lost land to geothermal power development

**Views about
biodiversity**

"The construction of Gibe III dam will condemn the lake to a not-so-slow death."

Friends of Lake Turkana representing different indigenous groups surrounding the lake

Figure 4b

Views on the threats to the environmental value of Kenya's Rift Valley

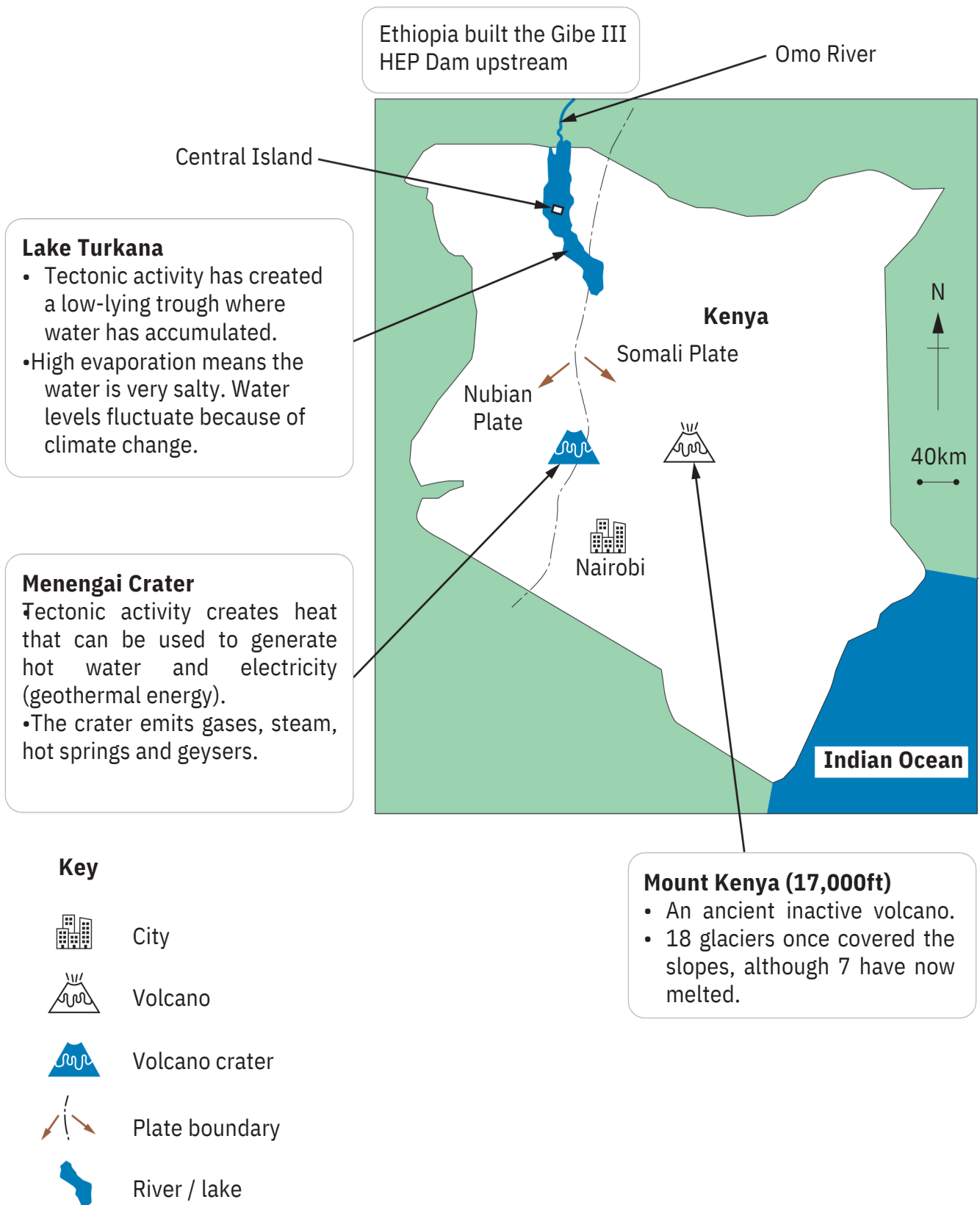


Figure 4c

Physical processes and human activity in Kenya's Rift Valley

Mount Kenya



- The rate of glacial recession has accelerated; 2 million people rely on its water supply.
- Indigenous groups depend on the rich fertile soil for agriculture.

Menengai Crater



- Kenya's Rift Valley is being exploited by the Geothermal Development Corporation (GDC).
- While creating some jobs, geothermal sites in Kenya have displaced the communities that live there.

Central Island, on Lake Turkana



- The Central Island is an active volcano, occasionally emitting volcanic ash and steam.
- It is a unique site for scientific research and a breeding ground for crocodiles and flamingos.

Figure 4d
Three scenes from Kenya's Rift Valley

SECTION C

The following resources relate to Question 5.



Figure 5a

Isle of Skye coastline

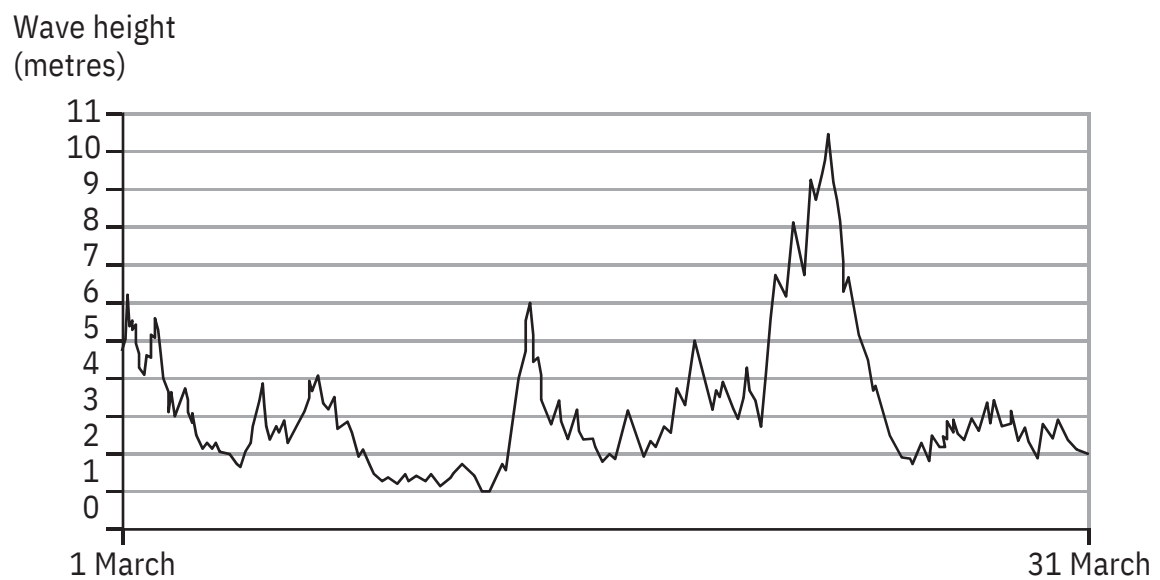


Figure 5b

Wave height at the Isle of Skye, March 2024

The following resources relate to Question 7.

- The Hawaiian islands are a state of the USA, in the Pacific Ocean. They form as the Pacific Plate moves slowly over a hot spot (a mantle plume). The oldest volcanoes are extinct, but the newest erupt regularly.
- The long fetch across the Pacific Ocean makes the coastlines vulnerable to erosion. Flooding risk from tsunamis and storm surges is increasing due to sea level rise.
- 20–25% of Hawaii’s economy relies on tourists attracted by the stunning coastlines and volcanoes. The islands have a high cultural value but are environmentally sensitive.
- Managing the physical risks of the islands is a controversial topic. Islanders have a strong spiritual connection to their land. Some management decisions have increased threats to the environment.

Figure 7a

Information about the environmental sensitivity of the Hawaiian islands

**Views about
coastal erosion**

“The Hawaiian spirit is to work together. We need to look for better coastal management methods.”

Islanders working to prevent coastal erosion on Oahu Island

**Views about
coastal flooding**

“The original Hawaiians avoided settling in areas that might flood. We need to take action to protect against the effects of climate change.”

Islanders working to prevent coastal flooding on Maui Island

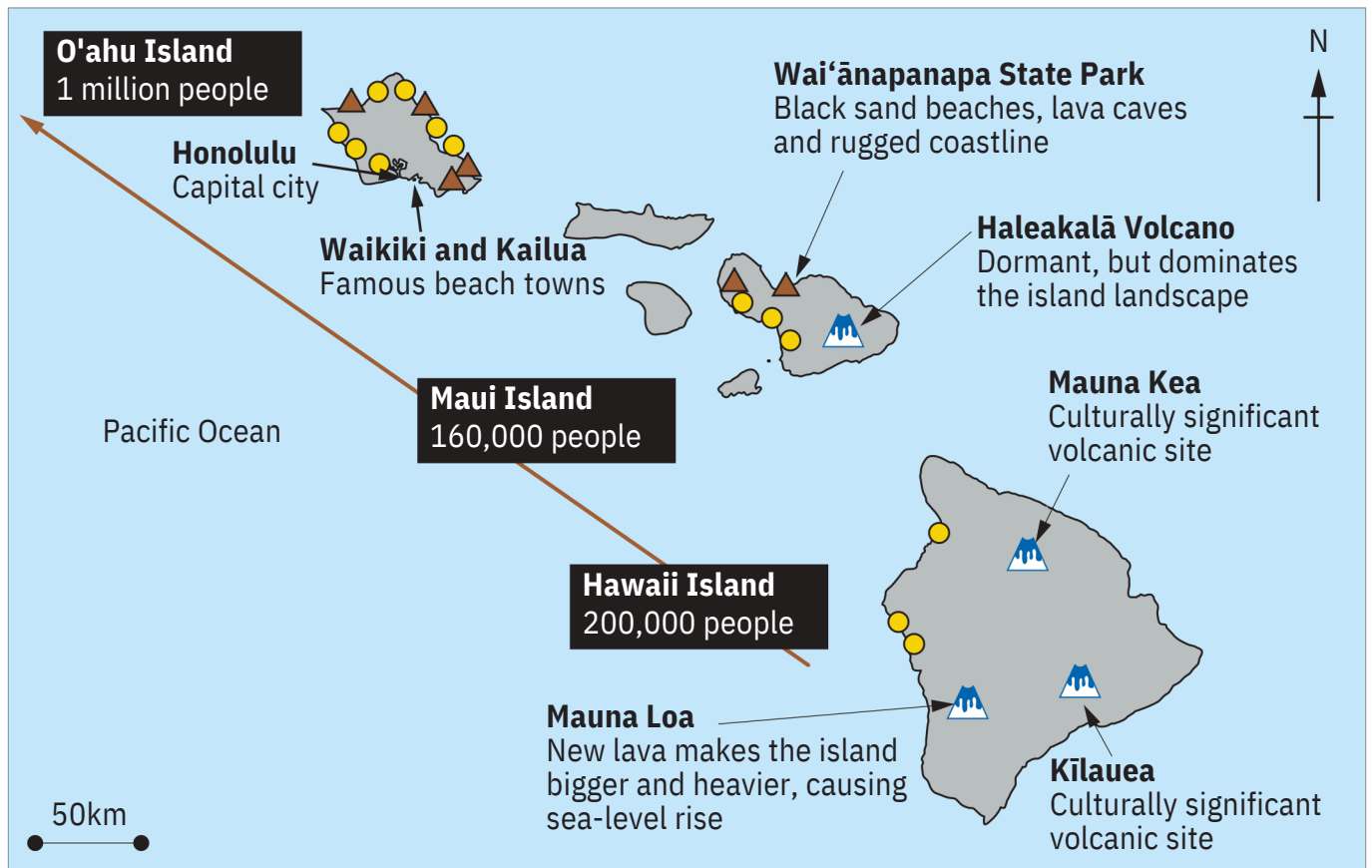
**Views about
volcanic activity**

“Volcanoes are the home of gods; the molten lava creates new land in Hawaii. We must always show our respect; but it can be hard to leave our land during an eruption.”

Islanders living with the threat of volcanic activity on Hawaii Island

Figure 7b

Views on the threats to the environmental sensitivity of the Hawaiian islands



Key

-  Seawalls
-  Sandbags
-  Plate movement
-  Significant volcano

Figure 7c

Physical processes and human activity in the Hawaiian Islands

The threat of coastal erosion



- Engineers have experimented with seawalls, sandbags and other stone structures to protect against coastal erosion.
- Beaches are being replenished and volunteers are planting vegetation to strengthen sand dunes.

The threat of coastal flooding



- In 2024 the government increased the distance new buildings have to be built from the sea.
- Some key pieces of infrastructure including highways are being moved inland (managed retreat).

The threat of volcanic eruptions



- Scientists and the US military continually monitor all volcanoes on the island.
- National Parks are closed when eruptions are more severe.

Figure 7d

Three scenes from the Hawaiian islands

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