

Question 1

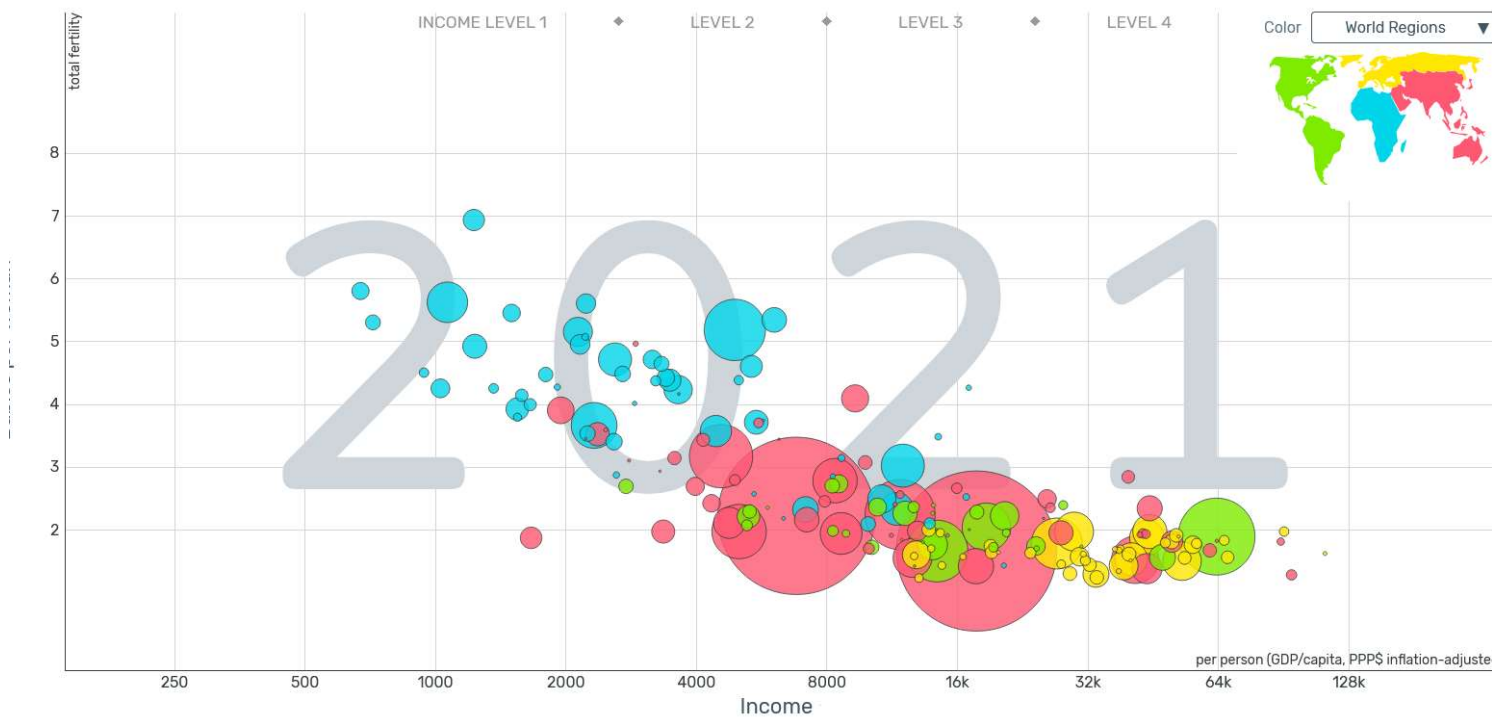
This document has been uploaded so that teachers or students can look over the questions that students have answered correctly or incorrectly. They contain none of the interactive elements of the online competition. Some of the wider graphics are missing their edges but the skill/knowledge required by the student to answer the question remains clear.

1. Which type of graph is this?

- infographic 1
- ternary graph 2
- scatter plot 3
- rose diagram 4

total fertility relative to income

© Gapminc



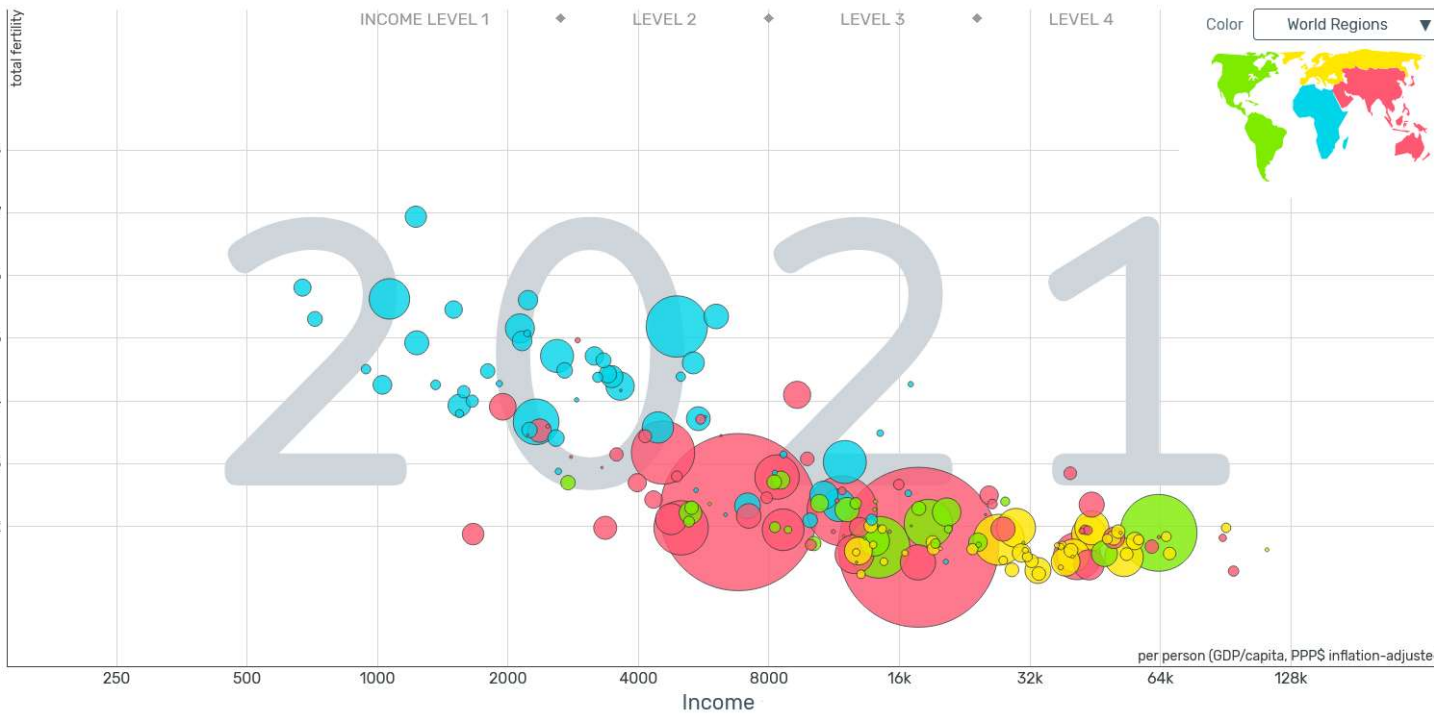
Question 2

2. What is the correct description of the correlation shown in the graph?

- positive 1
- perfect 2
- no correlation 3
- negative 4

total fertility relative to income

© Gapminc



Question 3

3. Using the graph, in which region does the highest proportion of countries have a fertility rate below replacement level?

Africa

1

The Americas

2

Asia/Pacific

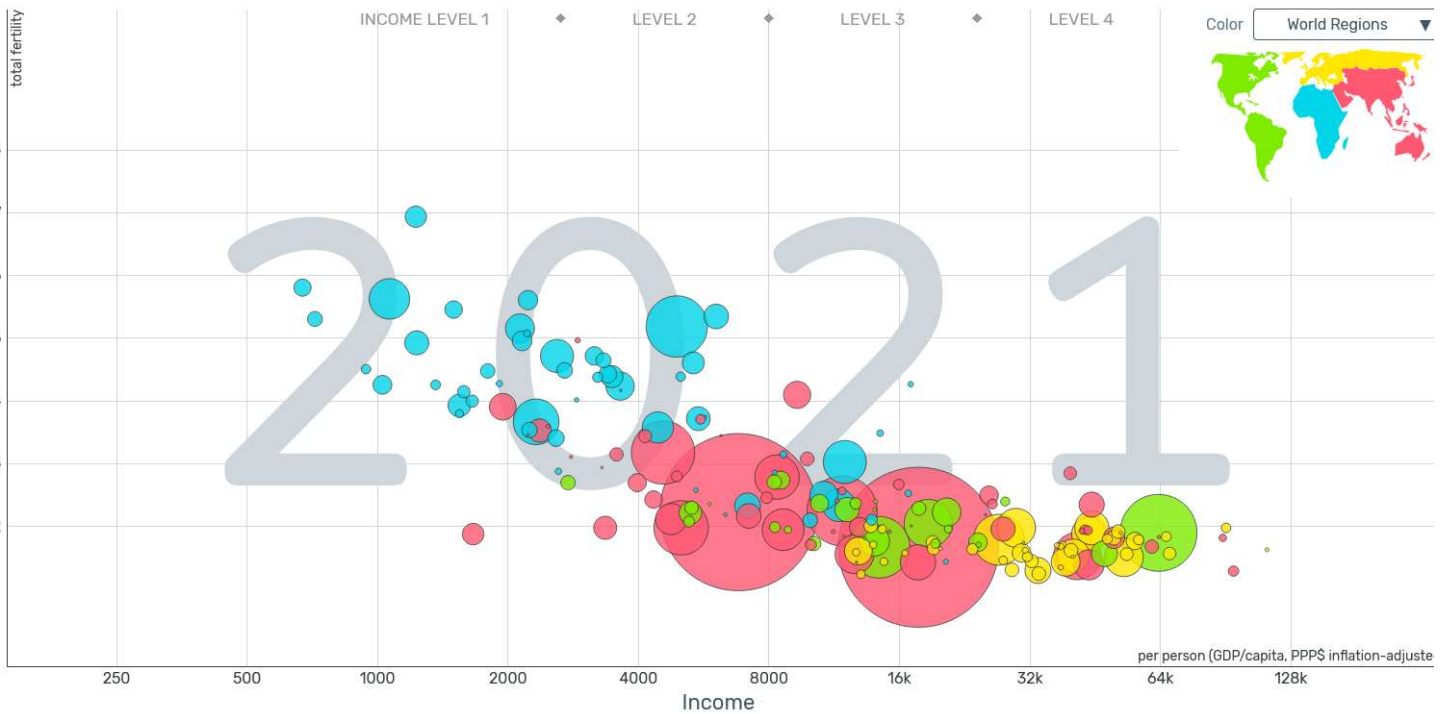
3

Europe

4

total fertility relative to income

© Gapminc



Question 4

4. Which of these influences on fertility in high-income countries is contrary to the relationship shown in the graph?

Women who can economically sustain themselves have less incentive to get married. 1

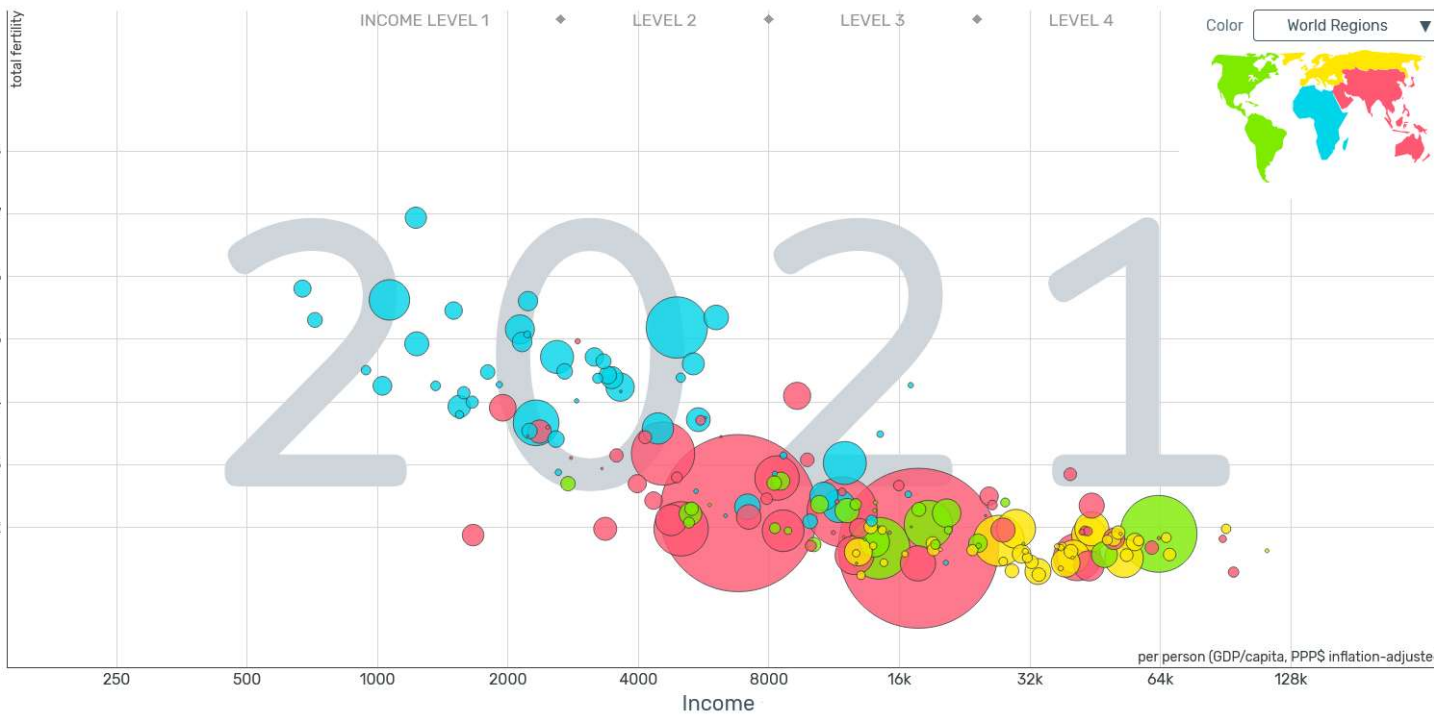
Employment instability contributes to fertility postponement in families. 2

Higher-income earners lose a larger amount of money if they focus on child rearing rather than their careers. 3

Higher-income parents value quality over quantity and choose to spend their resources on fewer children. 4

total fertility relative to income

© Gapminc



Question 5

5. In 2020 approximately 2 billion of the world's 7.8 billion people did not have access to safely managed drinking water.

What percentage of the world's population was that?

Round the answer to the nearest whole number and enter in the box.

You may use a calculator.

%

Question 6

6. Unsafe drinking water is a leading risk factor for deaths from:

- heart disease 1
- malnutrition 2
- infectious diseases 3
- diabetes 4

Question 7

Animation file loaded separately – see Sydney_Landsat.gif

7. Which phenomenon is illustrated in the satellite image animation of western Sydney?

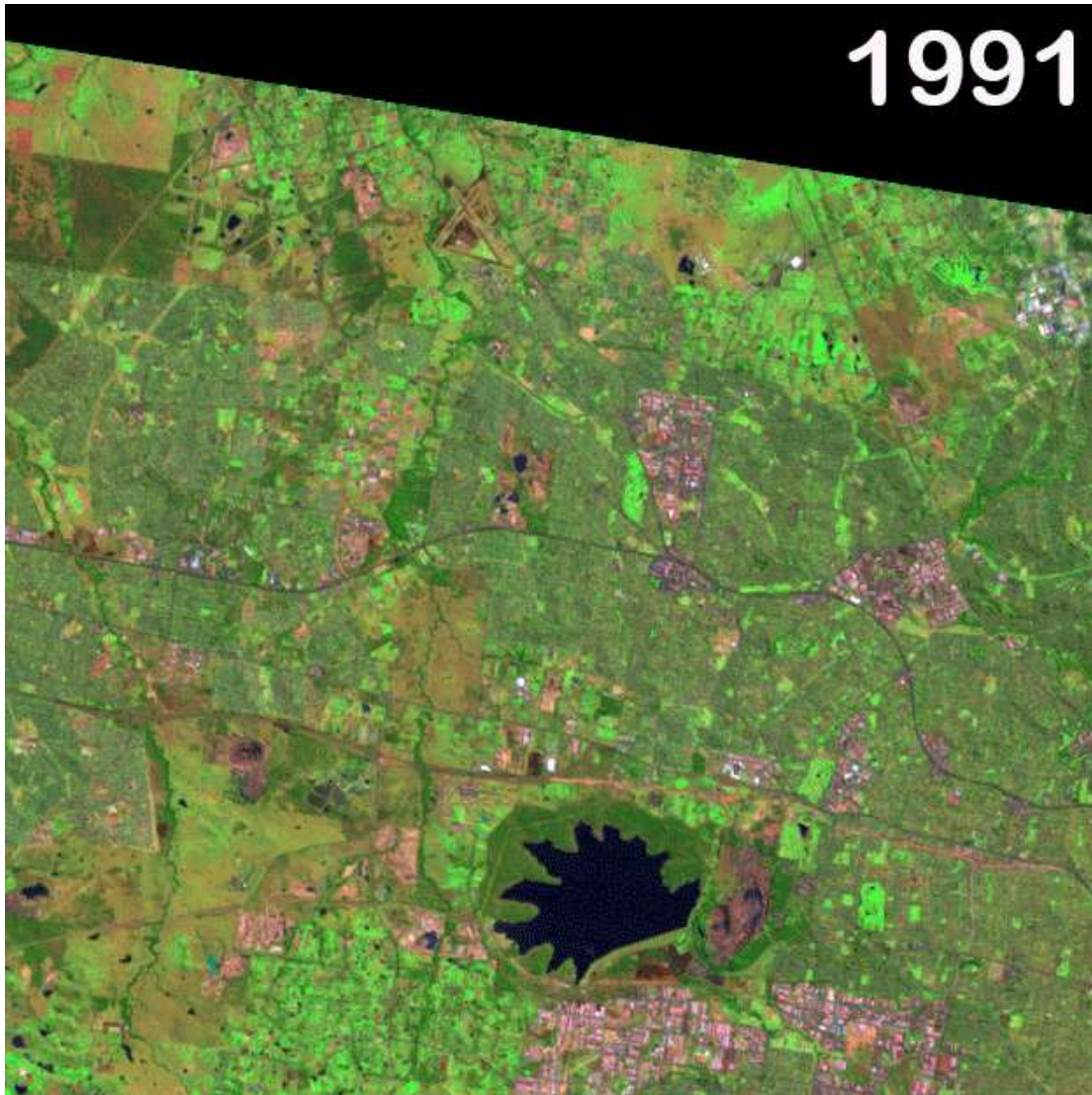
Choose the answer from the drop-down menu.

- edge expansion
- rural-urban migration
- tree change
- urban sprawl

The animation represents .

Western Sydney, 1991, 2002, 2019

Source images © U.S. Geological Survey



Question 8

8. Which is the most sustainable and efficient transport strategy to address impacts arising from the changes seen in the animation?

walking

1

public transport

2

ride-share service

3

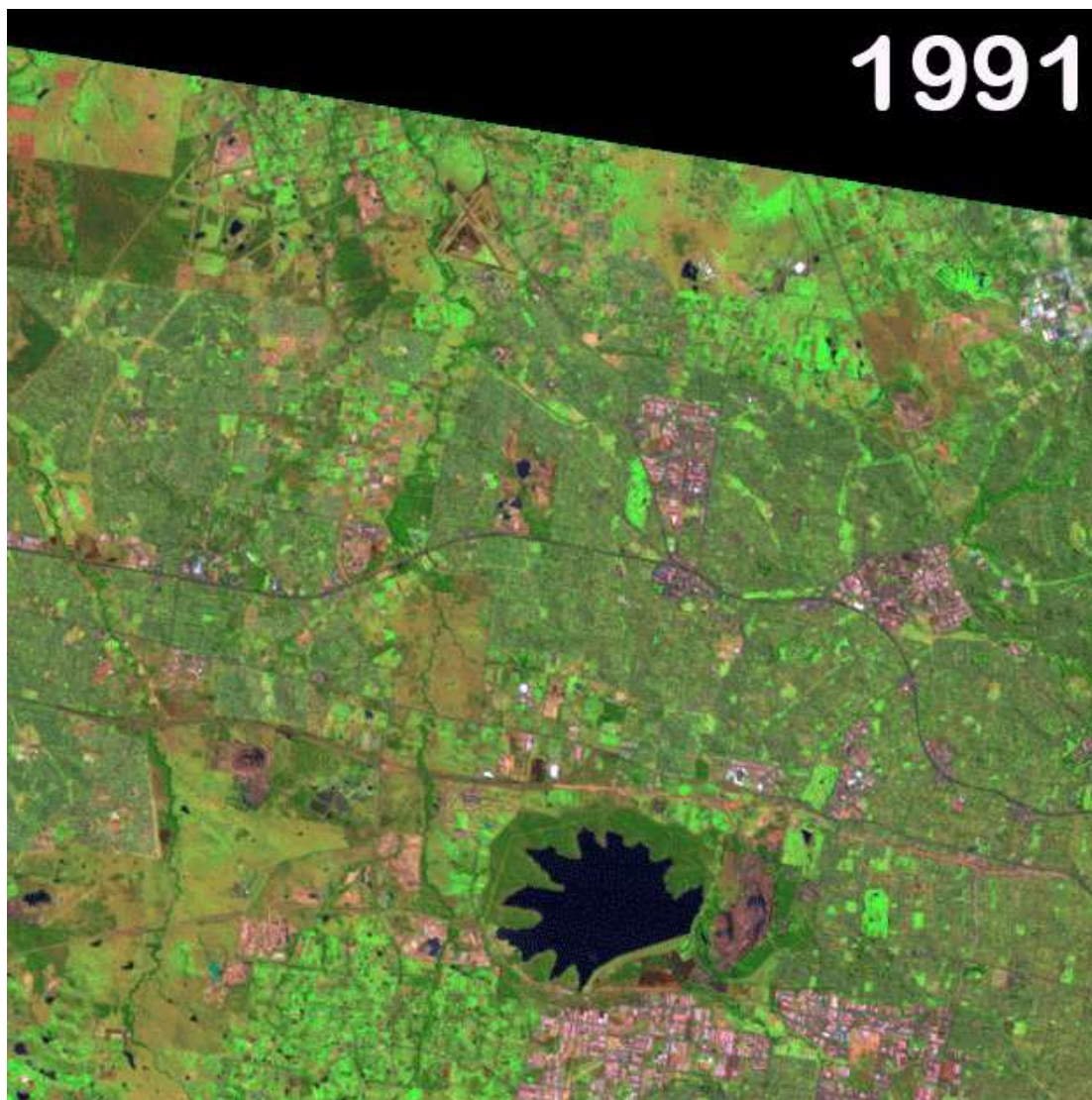
private cars

4

[Animation file loaded separately – see Sydney_Landsat.gif](#)

Western Sydney, 1991, 2002, 2019

Source images © U.S. Geological Survey



Question 9

9. What is the most likely reason for the migration flow in the 20-24 years age group, as seen in the graph?

The City of Sydney is a well-known tourist destination.

1

The City of Sydney has high quality health facilities.

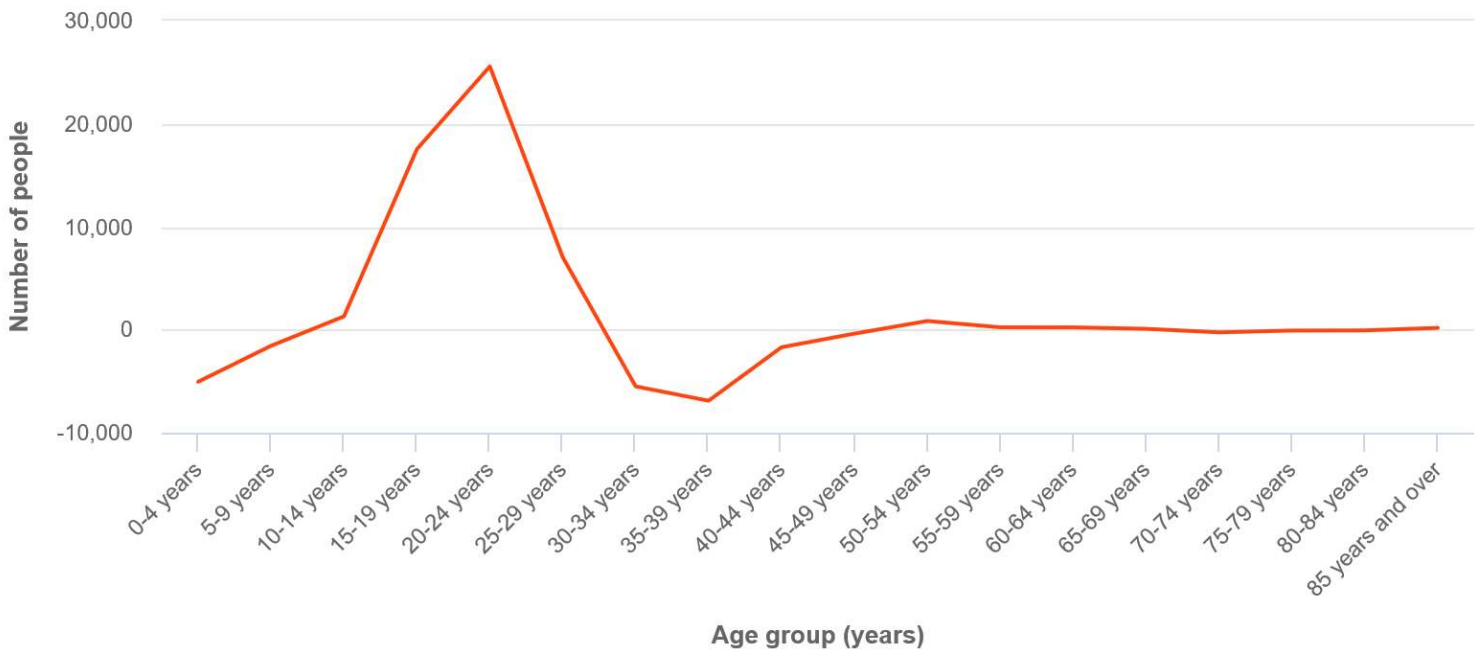
Students are moving to the City of Sydney to be close to its two universities.

3

People moving to the City of Sydney have many dependants aged 20-24.

Net migration by age group, City of Sydney, 2016-2021

© .id (informed decisions)



Question 10

10. What is the most likely reason for the migration flow of people in their 30s and 40s, as seen in the graph?

People that age are likely to be settled in their permanent careers. 1

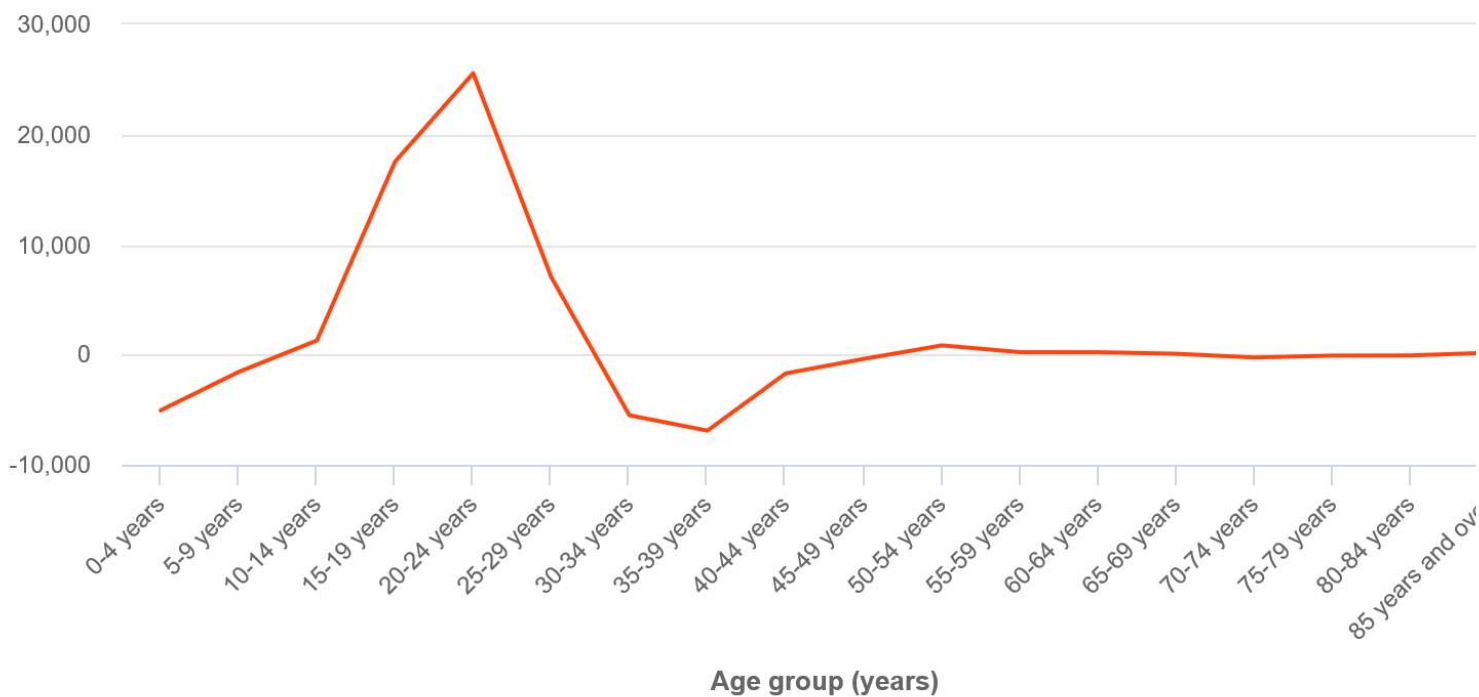
Many people leave the City of Sydney after completing University. 2

The City of Sydney is not a popular tourist destination for that age group. 3

Young families seek housing opportunities elsewhere. 4

migration by age group, City of Sydney, 2016-2021

© .id (informed decis



Question 11

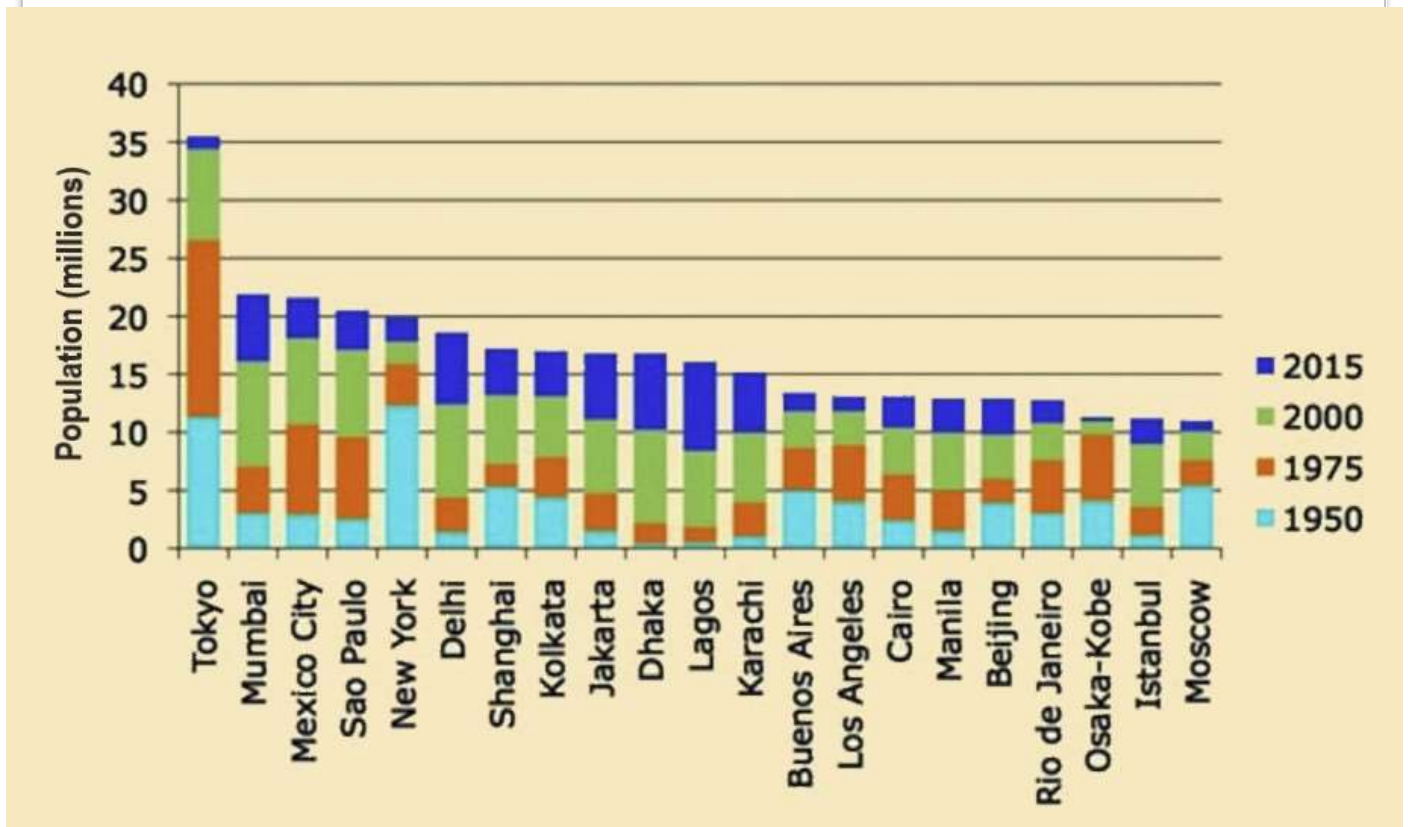
11. Using the graph, what was the most populous city in the world in 1950?

Enter the answer in the box.

New York

The world's megacities, 2015

Source: ISDS



Question 12

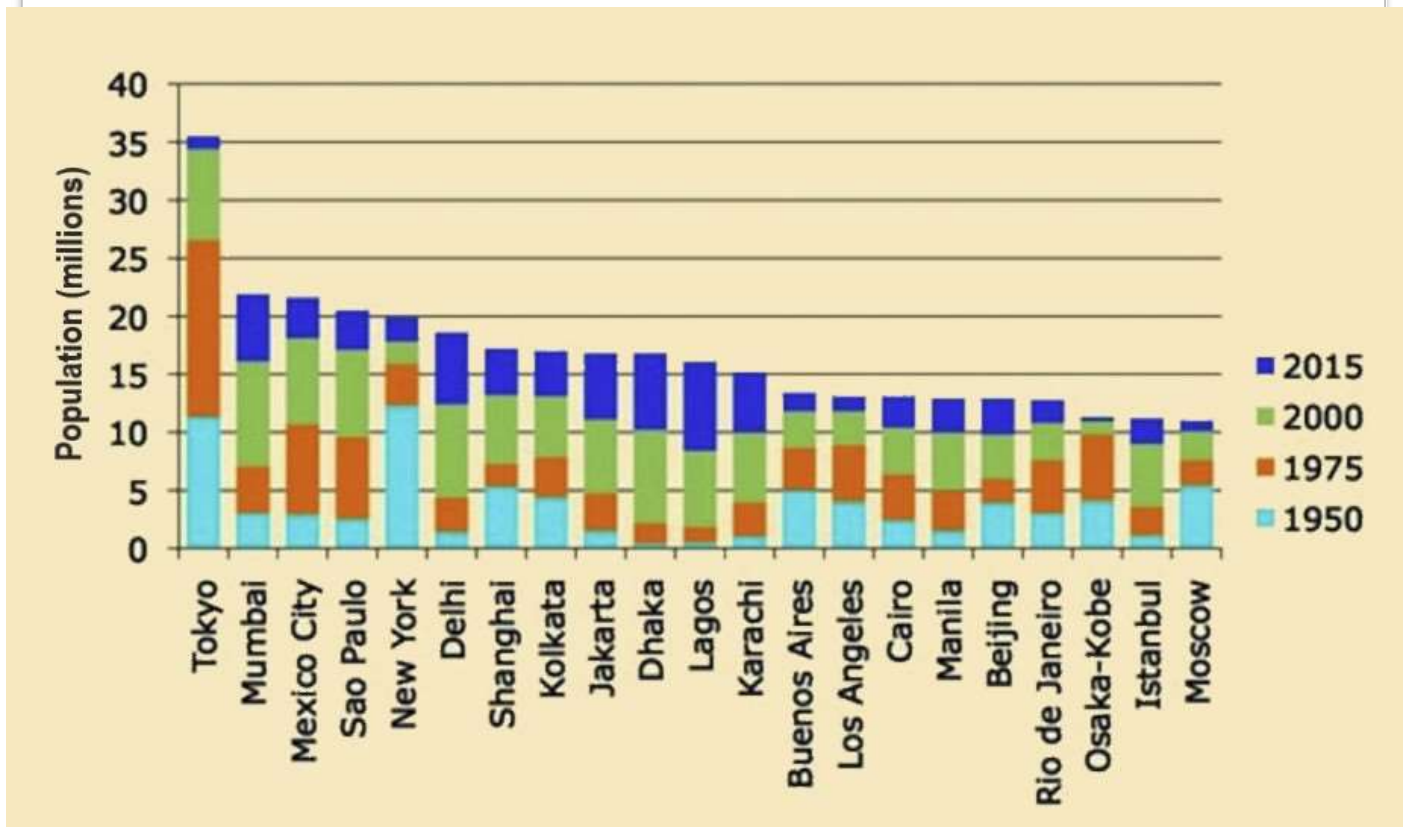
12. Using the graph, which megacity had the highest growth rate between 2000 and 2015?

Enter the answer in the box.

Lagos

The world's megacities, 2015

Source: ISDS



Question 13

13. What is the main driver of population growth in megacities in less developed countries?

- international immigration 1
- natural increase 2
- rural-urban migration 3

Question 14

14. Which captions best match the characteristics of Lagos illustrated in the photos?

Drag and drop the answers.

Inadequate infrastructure

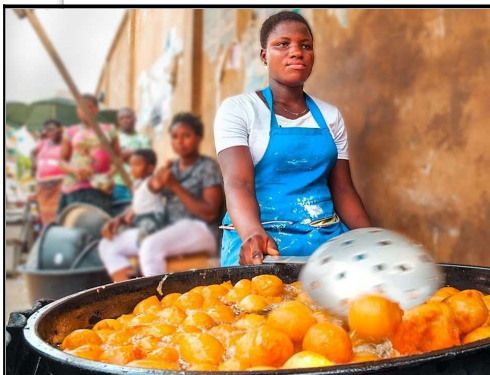
Governance issues

Economic strength

Informal economy

Informal settlements

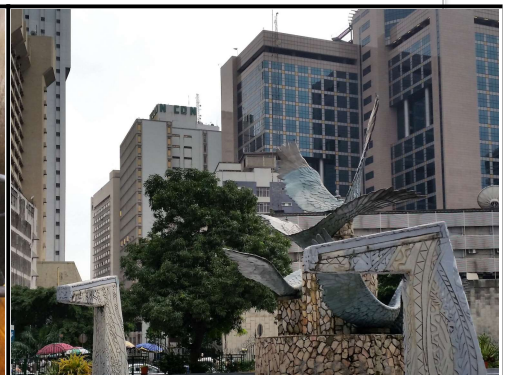
Cultural diversity



Informal economy



Inadequate infrastructure



Economic strength



Informal settlements



Cultural diversity



Governance issues

Photo sources clockwise from top left: © Sonny; © FOE Nigeria; © J Wheate; © P Ekpei; © Dubawa; © S Magdalinski

Question 15

15. Look at the lower panel of the diagram.

Are the illustrated management strategies hard or soft engineering?

Choose the answers from the drop-down menus.

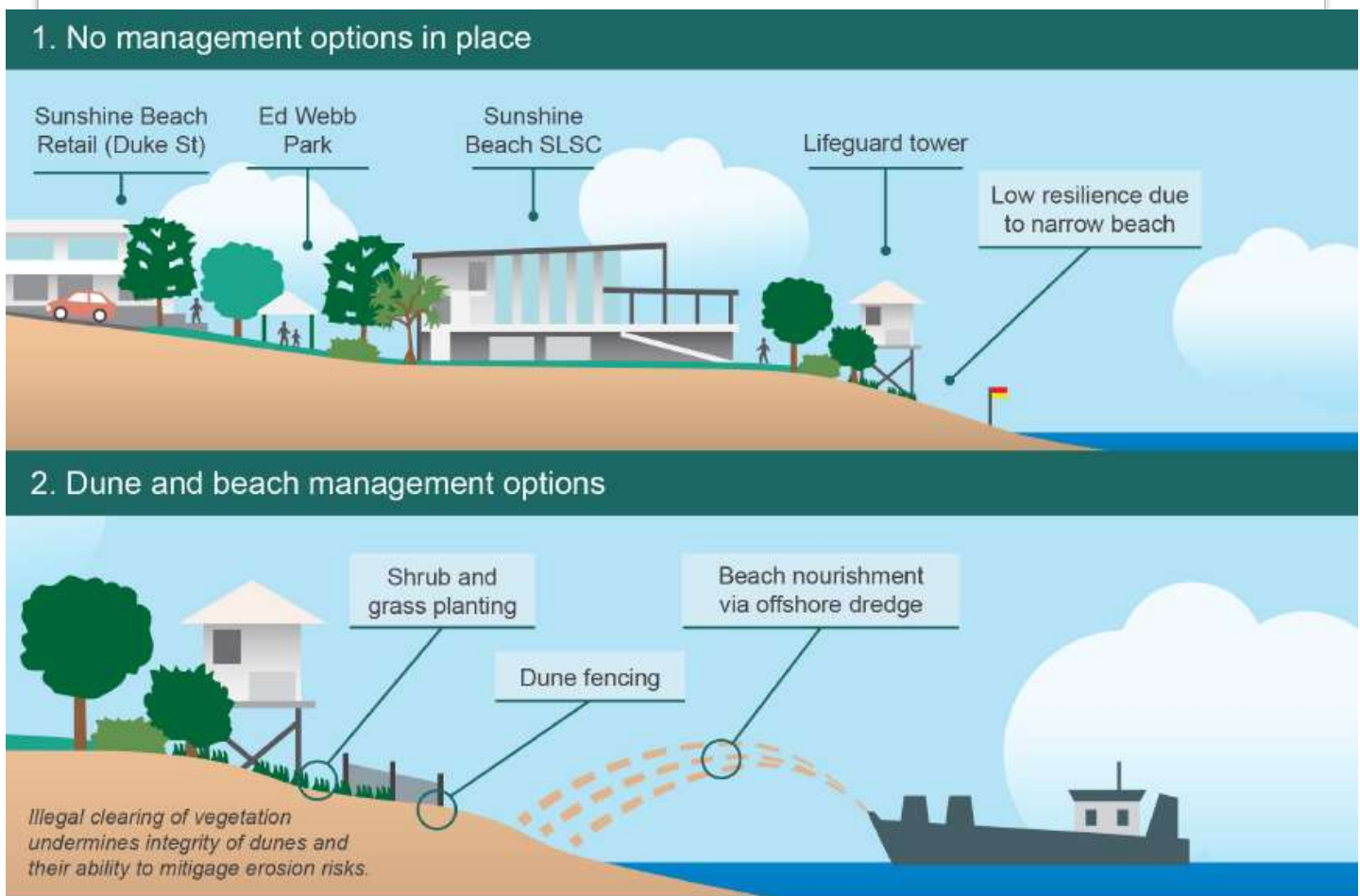
Shrub and grass planting is **soft** engineering.

Dune fencing is **hard** engineering.

Beach nourishment is **soft** engineering.

Dune and beach management measures, Sunshine Beach, Qld

© Noosa Council



Question 16

16. Implementing all the strategies shown in the lower panel of the diagram would result in:

erosion at the base of lifeguard tower ₁

improved access to the SLSC ₂

restoration of dune succession ₃

improved resilience to erosion ₄

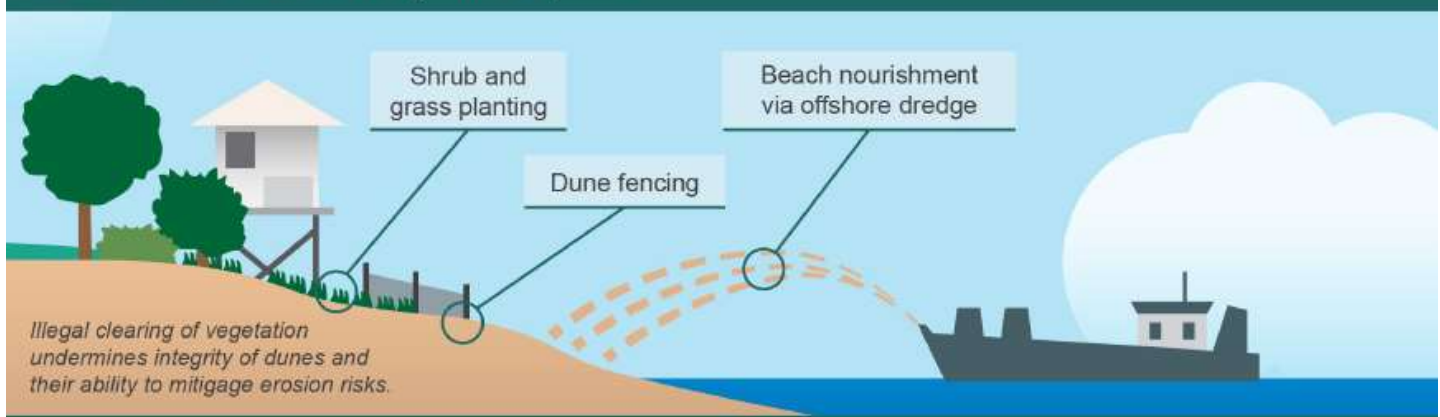
Dune and beach management measures, Sunshine Beach, Qld

© Noosa Council

1. No management options in place



2. Dune and beach management options



Question 17

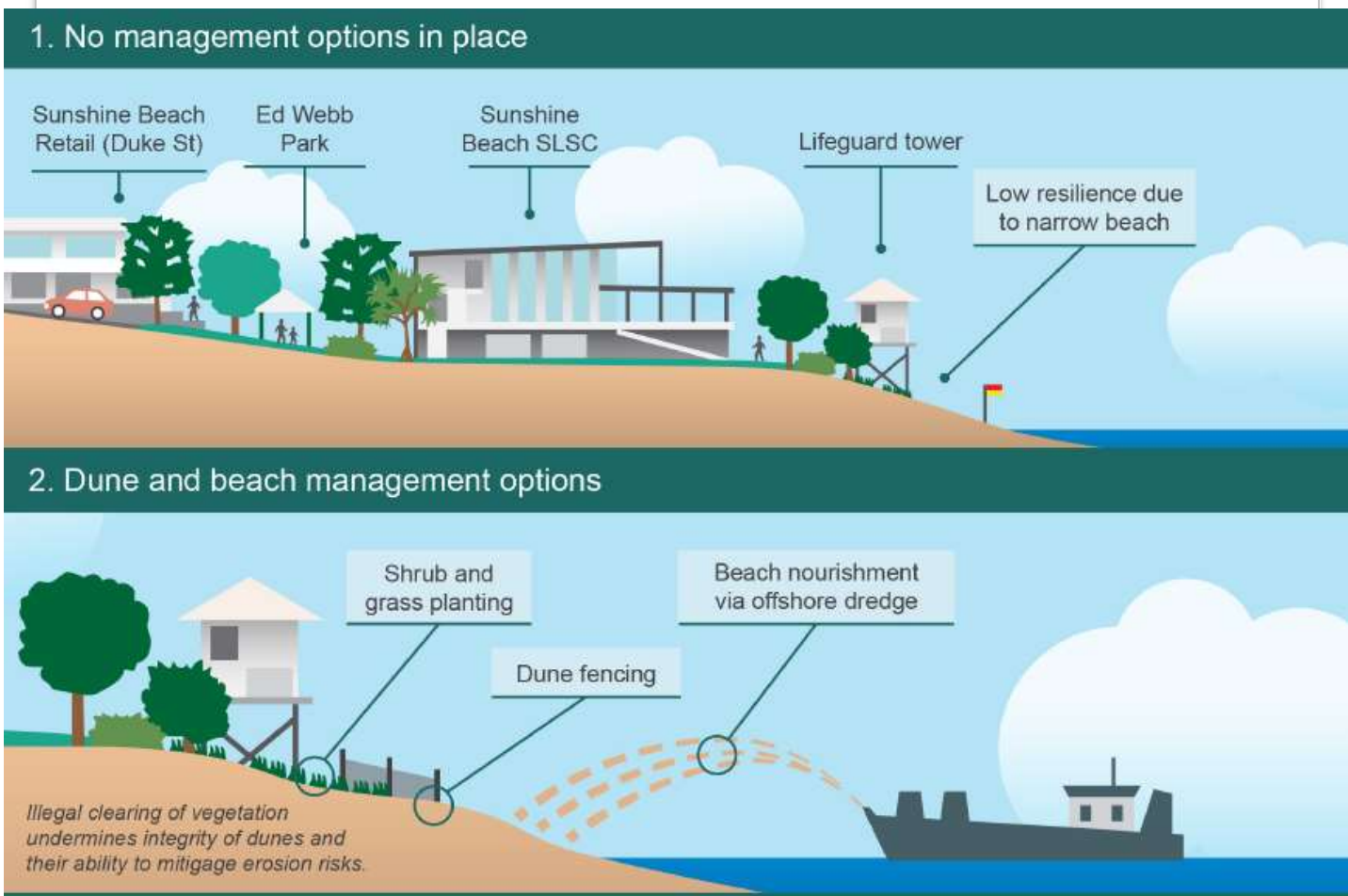
17. In the table, classify the impacts of Sunshine Beach’s management to indicate if they are mainly environmental, social or economic.

Choose the answers from the drop-down menus.

Classification	Impact of beach management
Economic	Tourism operators will benefit as more tourists are attracted.
Environmental	Vegetated dunes provide habitats for native species.
Social	Local residents can make more use of the beach for recreation.
Environmental	Offshore dredging will stir up sediment affecting marine life.
Economic	Damage to infrastructure from sea encroachment will be less likely.

Dune and beach management measures, Sunshine Beach, Qld

© Noosa Council



Question 18

18. Using the video, in which month in 2004 was the most land burnt in northern Australia?

September 1

October 2

November 3

December 4

[Video loaded separately - see North_Aust_HotSpots_edited.mp4](#)

A comparison of two extreme fire condition years in Northern Australia

© Charles Darwin University; North Australia and Rangelands Fire Information

Question 19

19. The incorporation of First Nations led burning into land management practices in northern Australia has mainly resulted in:

- rainforest replacing savannah 1
- a reduction in the extent and intensity of bushfires 2
- savannah replacing eucalyptus woodlands 3
- fewer fires but more canopy fires 4

Question 20

20. Which environmental world views match the definitions?

Drag and drop the answers.

biocentric

anthropocentric

egocentric

ecocentric

Term	Definition
anthropocentric	regarding human beings as the central and most important part of the world
biocentric	regarding all living components of the environment as equally important
ecocentric	placing value and importance on all elements of the ecosystem

Question 21

21. Which world view is evident in the image?

biocentric

1

egocentric

2

ecocentric

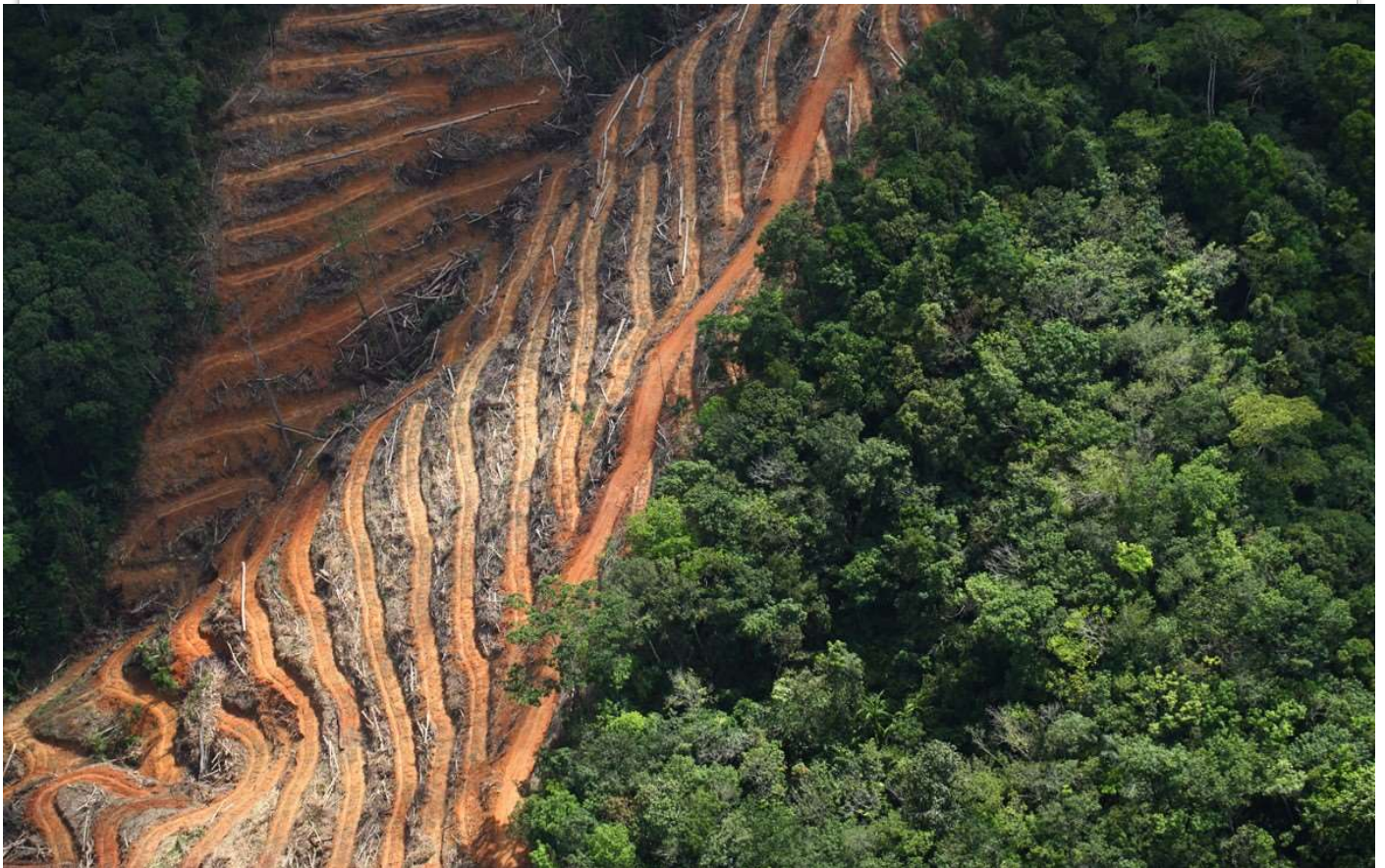
3

anthropocentric

4

Land clearing for oil palm plantation, Sabah, Malaysia

© Mongabay.com



Question 22

22. Which biome has been cleared in the area shown in the photo?

rainforest 1

shrubland 2

coniferous forest 3

deciduous forest 4

Land clearing for oil palm plantation, Sabah, Malaysia

© Mongabay.com



Question 23

23. Which of these environmental problems was most likely to have been caused by the clearing shown in the image?

salinisation

1

acid rain

2

desertification of surrounding land

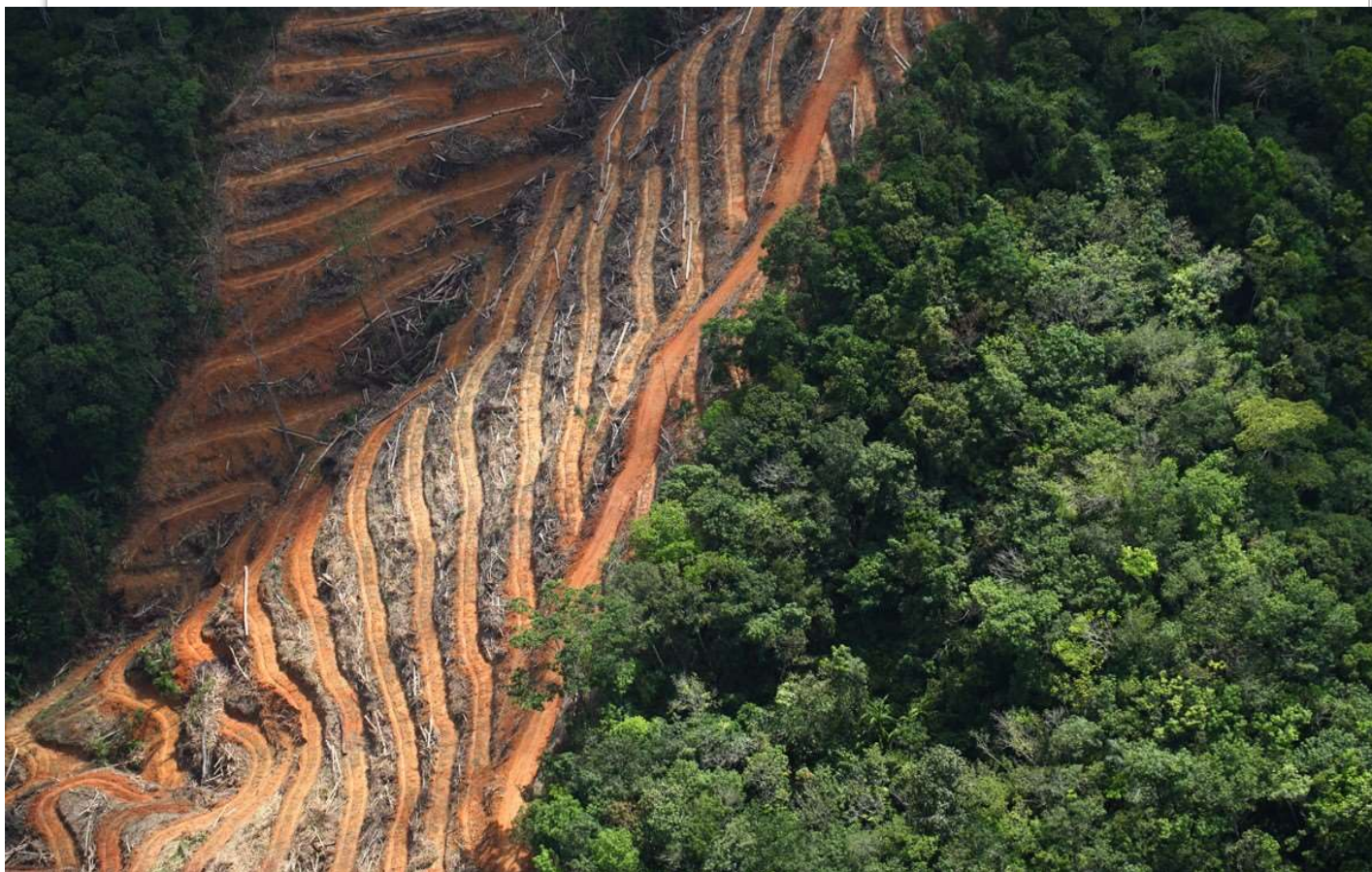
3

siltation of waterways

4

Land clearing for oil palm plantation, Sabah, Malaysia

© Mongabay.com



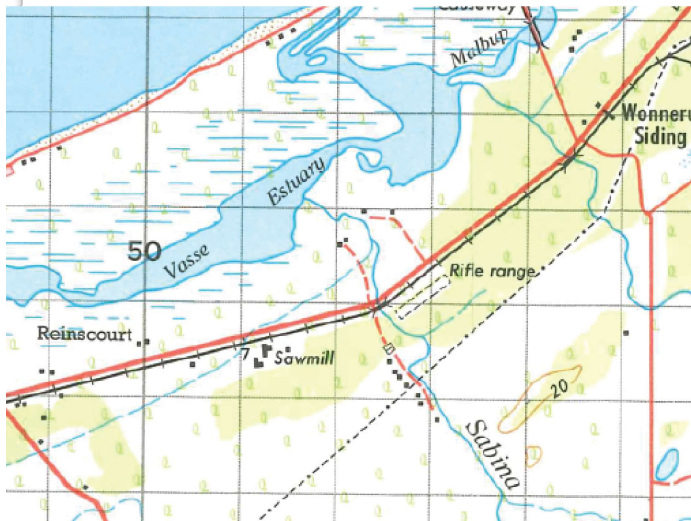
Question 24

24. Which land cover change has occurred in the northwest section of the images since 1969?

- land drainage and urban growth 1
- land reclamation and irrigation 2
- mining and land reclamation 3
- urban growth and rangeland modification 4

Near Busselton, 1969

© Commonwealth of Australia, Geoscience Australia



Near Busselton, 2017

© CNES



Question 25

25. Based on the two images, which of these is the WA Environmental Protection Authority likely to see as potentially the major concern arising from the mining in the southeast section?

noise and dust pollution affecting close neighbours

1

loss of land productivity due to soil disturbance

2

clearing of extensive areas of endangered tuart woodlands

3

contaminants entering the Ramsar-listed Vaase Estuary via the Sabina River

4

Near Busselton, 1969

© Commonwealth of Australia, Geoscience Australia



Near Busselton, 2017

© CNES



Question 26

26. Which of these are environmental benefits from the establishment of the Tuart Forest National Park in the northeast section of the image?

Select ALL correct options

protecting the biodiversity of the area from future land cover change

1

providing a visual barrier to the mine

2

restricting the flow of traffic into the regional township of Busselton

3

providing protection for the Vasse Estuary

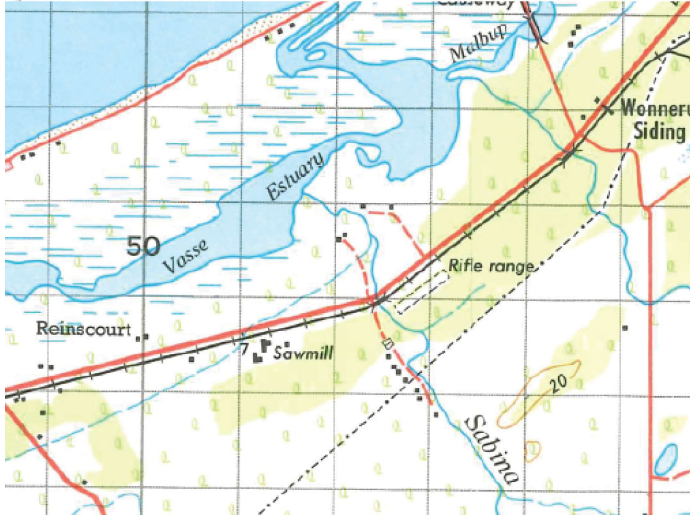
4

Near Busselton, 1969

Near Busselton, 2017

© Commonwealth of Australia, Geoscience Australia

© CNES



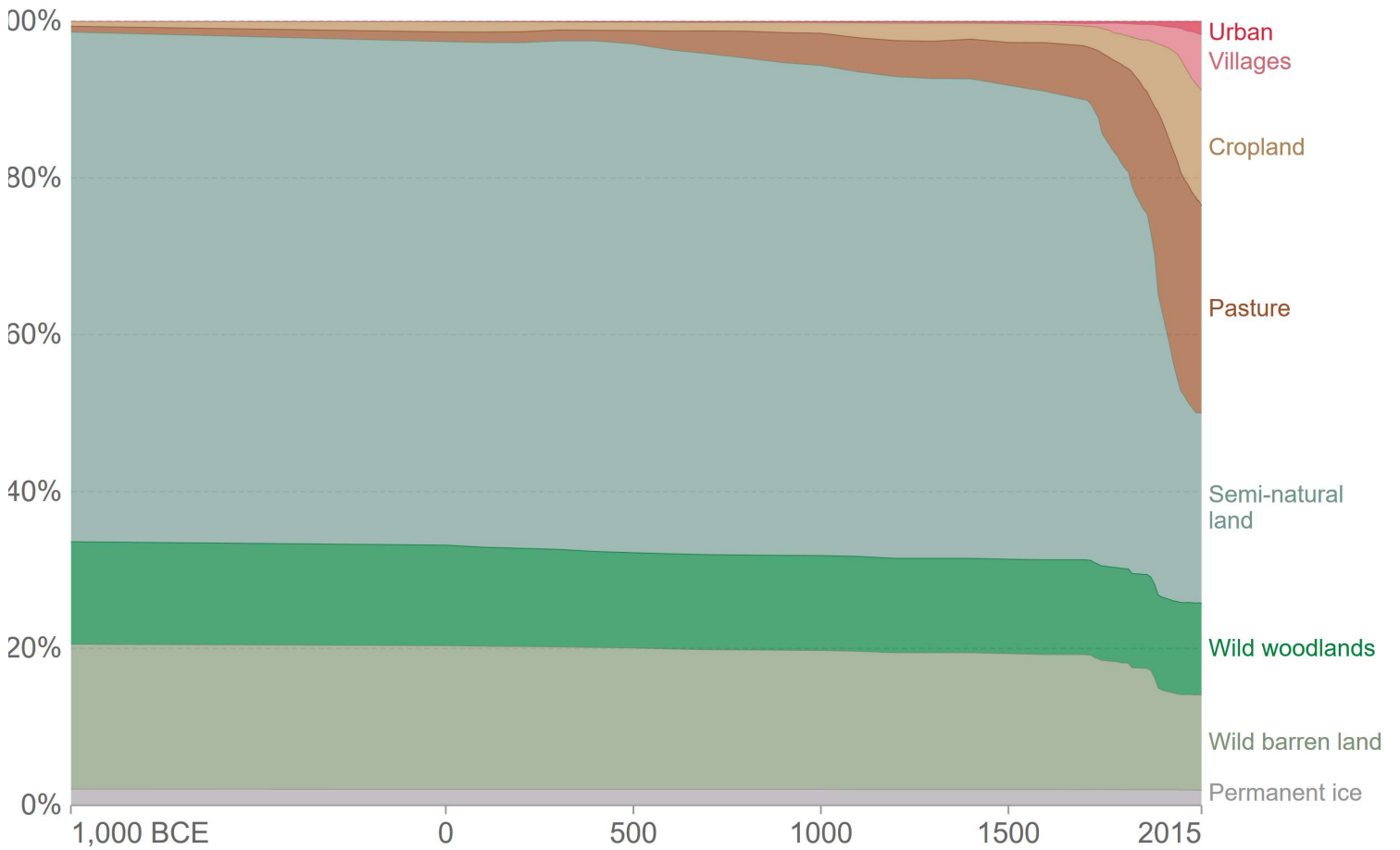
Question 27

27. Using the graph, approximately what percentage of land use was dedicated to agricultural practices in 2015?

- 15% 1
- 24% 2
- 42% 3
- 91% 4

Global land use since 1,000 BCE

© Our World in Data, CC BY



Question 28

28. What has been the main reason for the rapidly changing land use patterns over the last 250 years, as shown in the graph?

increasing affluence of the world's population 1

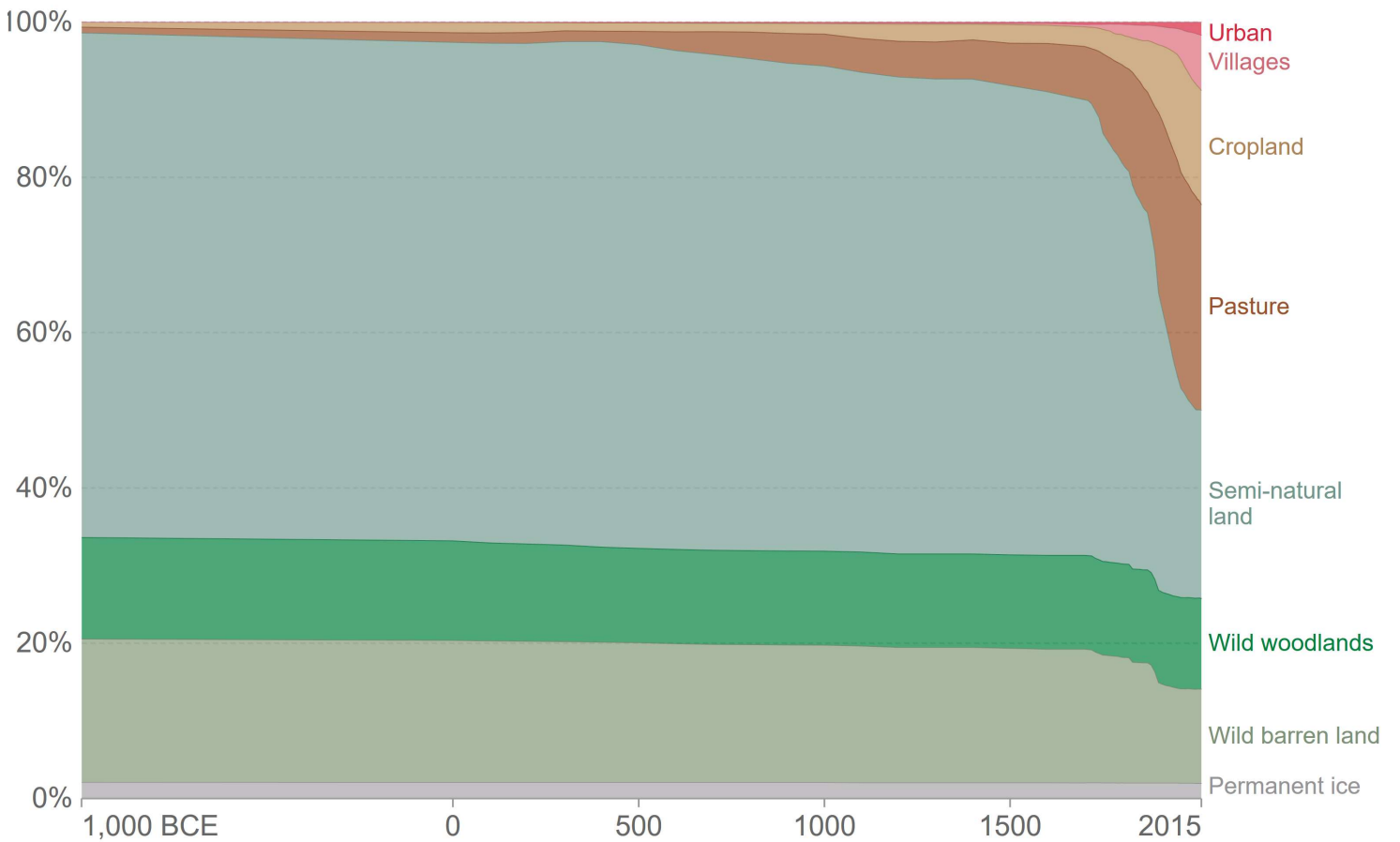
industrialisation of agriculture 2

large increase in urbanisation 3

large increase in the world's population 4

Global land use since 1,000 BCE

© Our World in Data, CC



Question 29

29. Anthropogenic biomes can best be described as biomes that:

- are where humans have lived for thousands of years 1
- have been greatly influenced by climate 2
- are the result of sustained direct human interactions with ecosystems 3
- are a type of ecosystem where organisms interact with each other 4

Question 30

30. Which of these best defines the concept of climate change?

- how day-to-day weather conditions change from long-term averages 1
- the change in average weather conditions over decades or longer 2
- the changing condition of the atmosphere due to carbon dioxide build-up 3
- the change to long-term weather conditions at different scales 4

Question 31

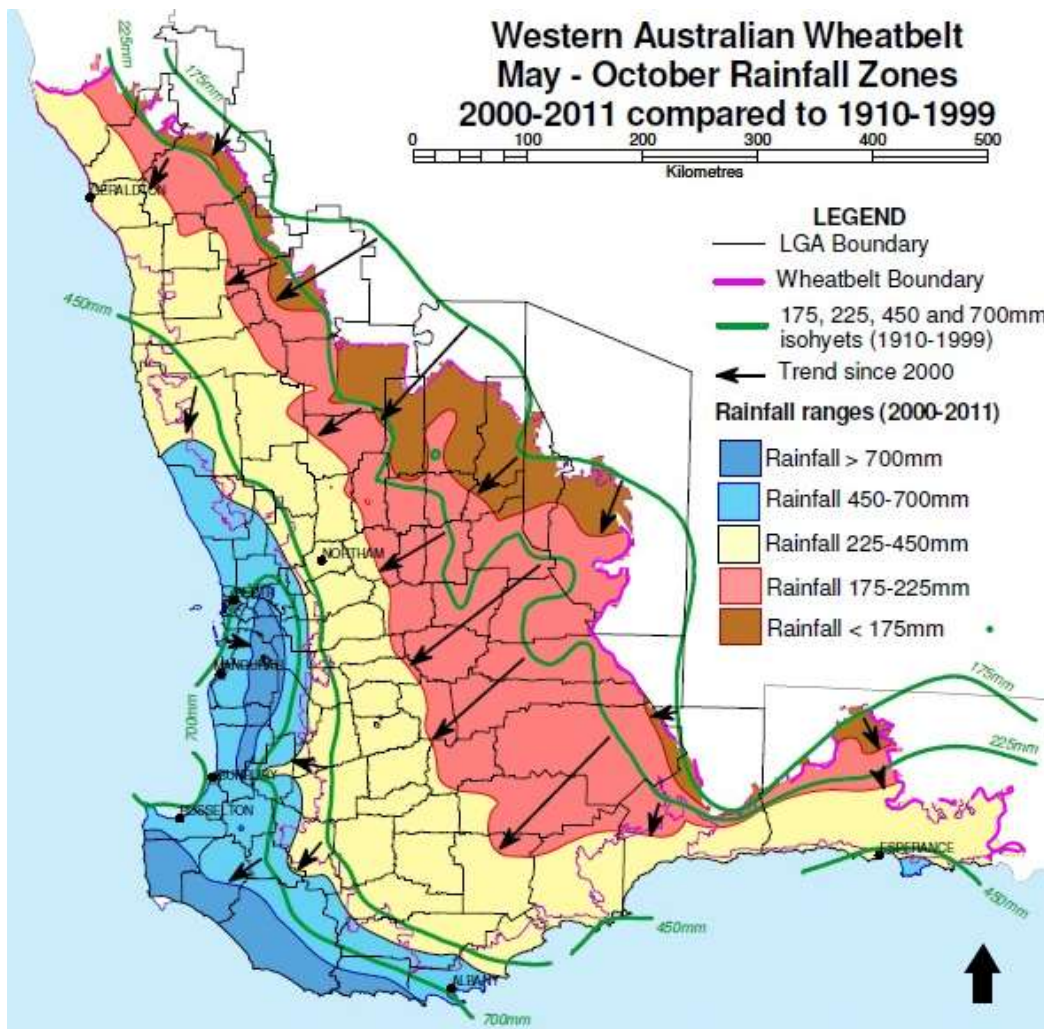
31. Using the map, what best describes the location of the Western Australian wheatbelt, 2000-2011?

Choose the answers from the drop-down menus.

The WA wheatbelt is located between the mm and mm isohyets. mm mm mm

Western Australian wheatbelt, May-October rainfall zones, 2000-2011 compared to 1910-1999

© Western Australia Agricultural Authority



Question 32

32. Using the map, which of these best describes the May to October rainfall trend from 1910-1999 to 2000-2011 in the WA wheatbelt?

Areas adjacent to the coast recorded increased rainfall and inland areas decreased rainfall.

1

The trend across most areas of the wheatbelt was for increased rainfall.

2

The trend across most areas of the wheatbelt was for decreased rainfall.

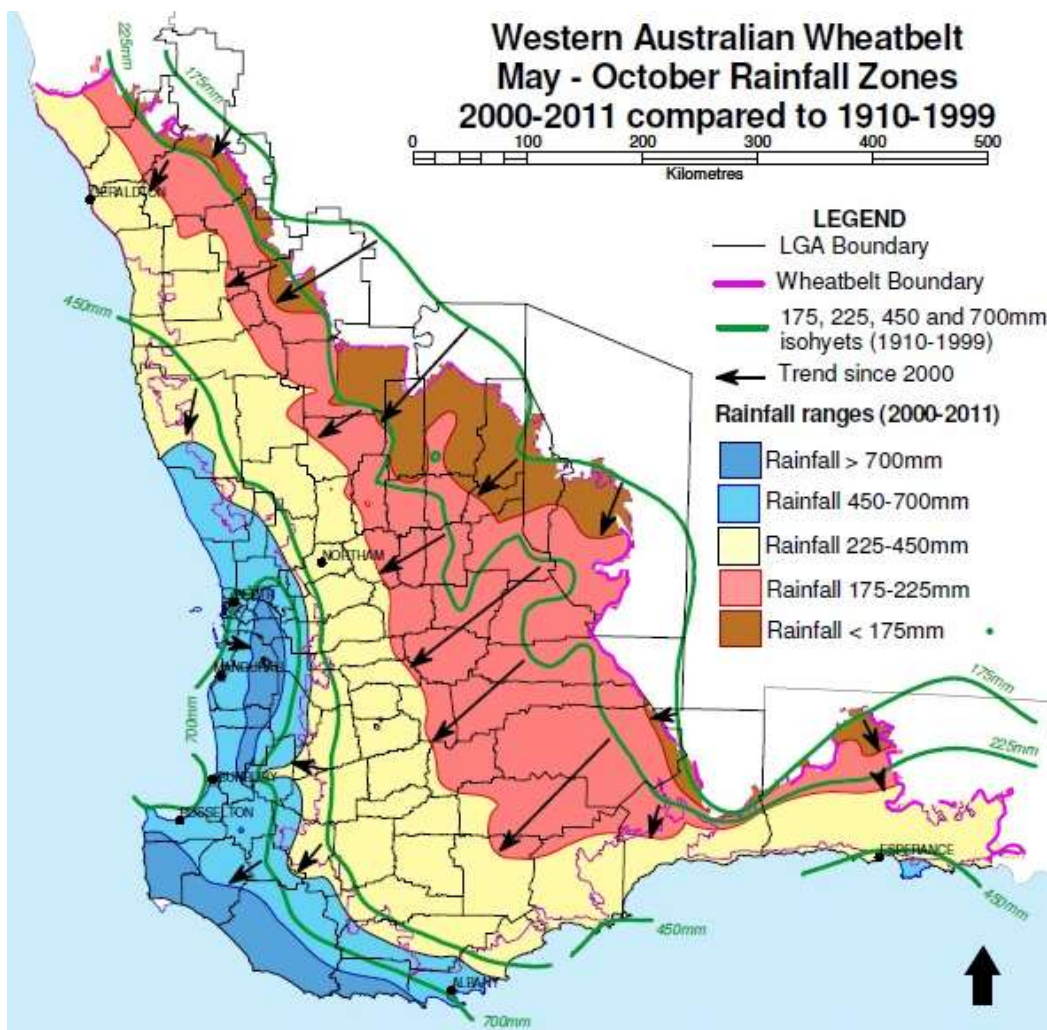
3

Areas adjacent to the coast recorded decreased rainfall and inland areas increased rainfall.

4

Western Australian wheatbelt, May-October rainfall zones, 2000-2011 compared to 1910-1999

© Western Australia Agricultural Authority



Question 33

33. Using the map, the section of the wheatbelt that recorded the largest difference in rainfall between the two time periods was the:

eastern region 1

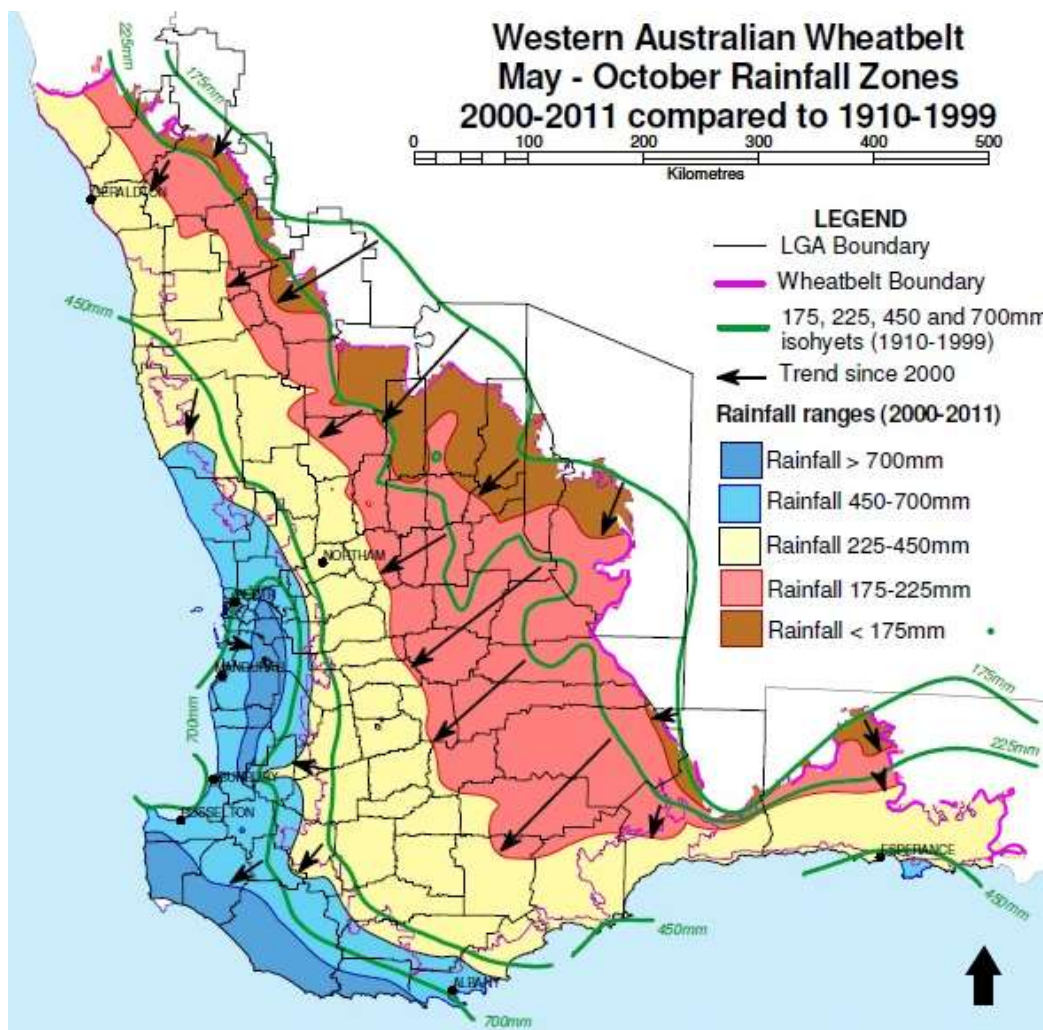
area around Perth 2

western region 3

coastal area 4

Western Australian wheatbelt, May-October rainfall zones, 2000-2011 compared to 1910-1999

© Western Australia Agricultural Authority



Question 34

34. As a result of the trend in rainfall in the southwest of WA, it can be inferred that:

- farms will be abandoned on a large scale and be succeeded by natural biomes 1
- the land use will change to exploit the increased water availability 2
- potential crop yields will decline across parts of the wheatbelt 3
- irrigation practices of cropland farming in the wheatbelt will adapt 4

Question 35

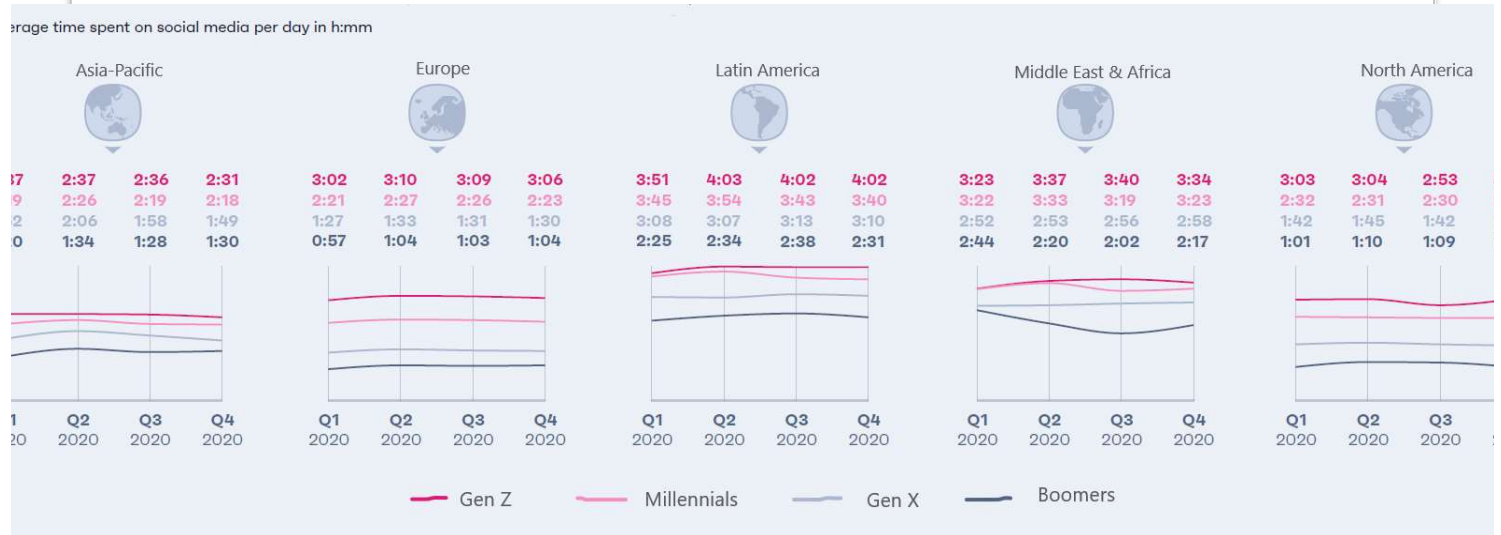
Because of a coding error in the answers, this question was not marked.

35. Choose whether the statements in the table are a correct or incorrect interpretation of the graphs below?

Choose the answers from the drop-down menus.

Statement	Correct/Incorrect
The highest number of social media users is in Latin America.	incorrect
The average person in Latin America spends more time on social media than do those in other regions.	incorrect
Latin American social media users spend the most time on these platforms.	correct
Latin America has the least difference between generations as to time spent on social media.	incorrect

Average time spent on social media by social media users, by region and by generation



Question 36

36. Which statement best explains the time spent on social media in the Middle East and Africa region, as shown in the graph?

The social media users surveyed in this region are mainly from high-income households. 1

People in this region now prefer to keep in contact via social media rather than via their cultural traditions of face-to-face contact. 2

People in this region have lower incomes and therefore have more spare time. 3

More people in this region have access to high-speed internet access which improves their experience on social media. 4

Time spent on social media by social media users, by region and by generation

© GW



Question 37

37. Networks formed over social media are less reliant than traditional networks on influences related to the concept of:

scale 1

interconnection 2

space 3

sustainability 4

Question 38 Because of a coding error in the answers, this question was not marked.

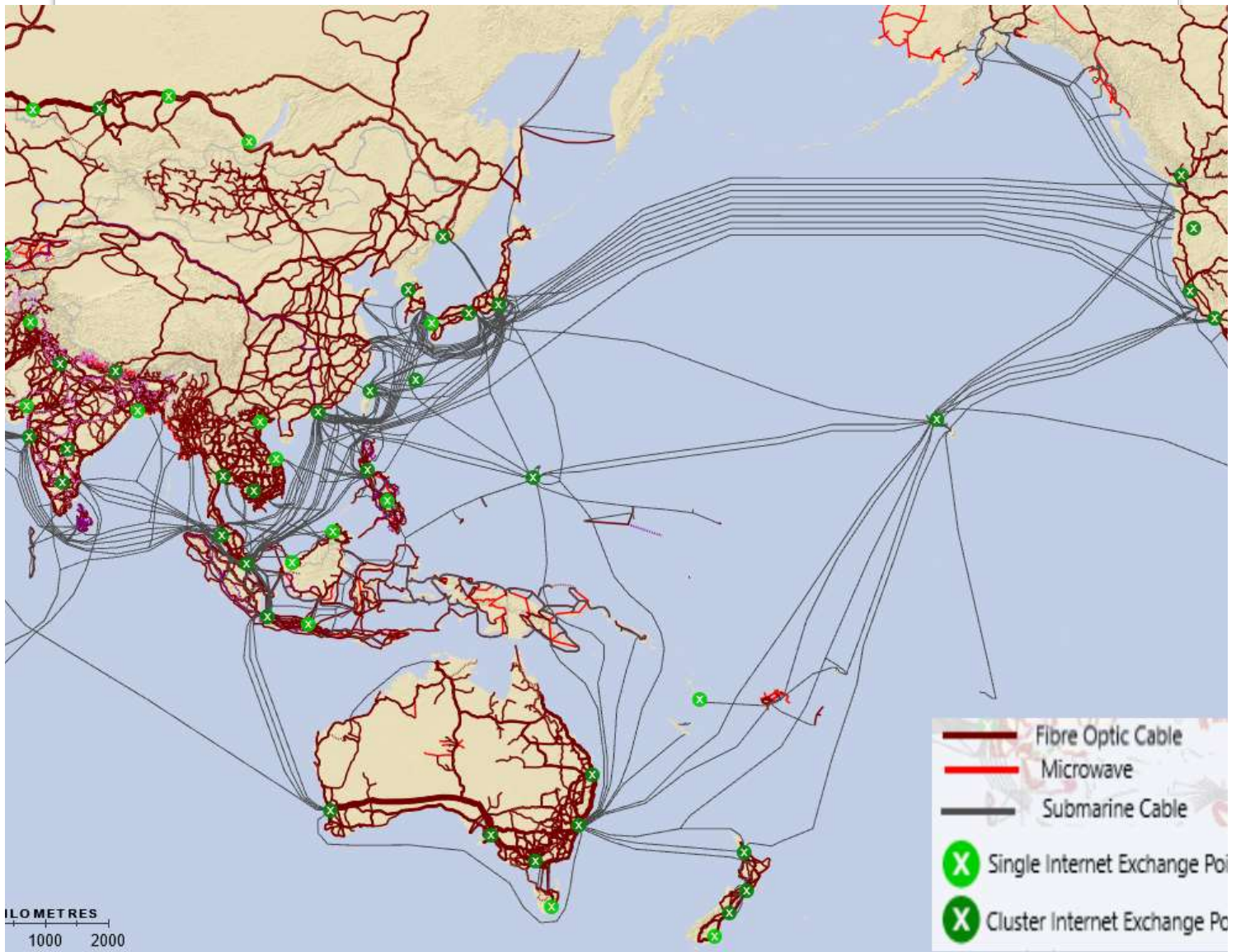
38. The pattern of fibre optic cables shown on the map largely reflects population distribution.

Classify the countries below as to whether or not they fit that pattern.

Country	Fits pattern?
Australia	yes ▾
Indonesia	yes ▾
Mongolia	no ▾
Vietnam	yes ▾

Pacific information superhighway map

© International Telecommunications



Question 39

39. Which combination of reasons best explains the location of the infrastructure at Hawaii, marked with a green arrow on the map?

large population and high-income households 1

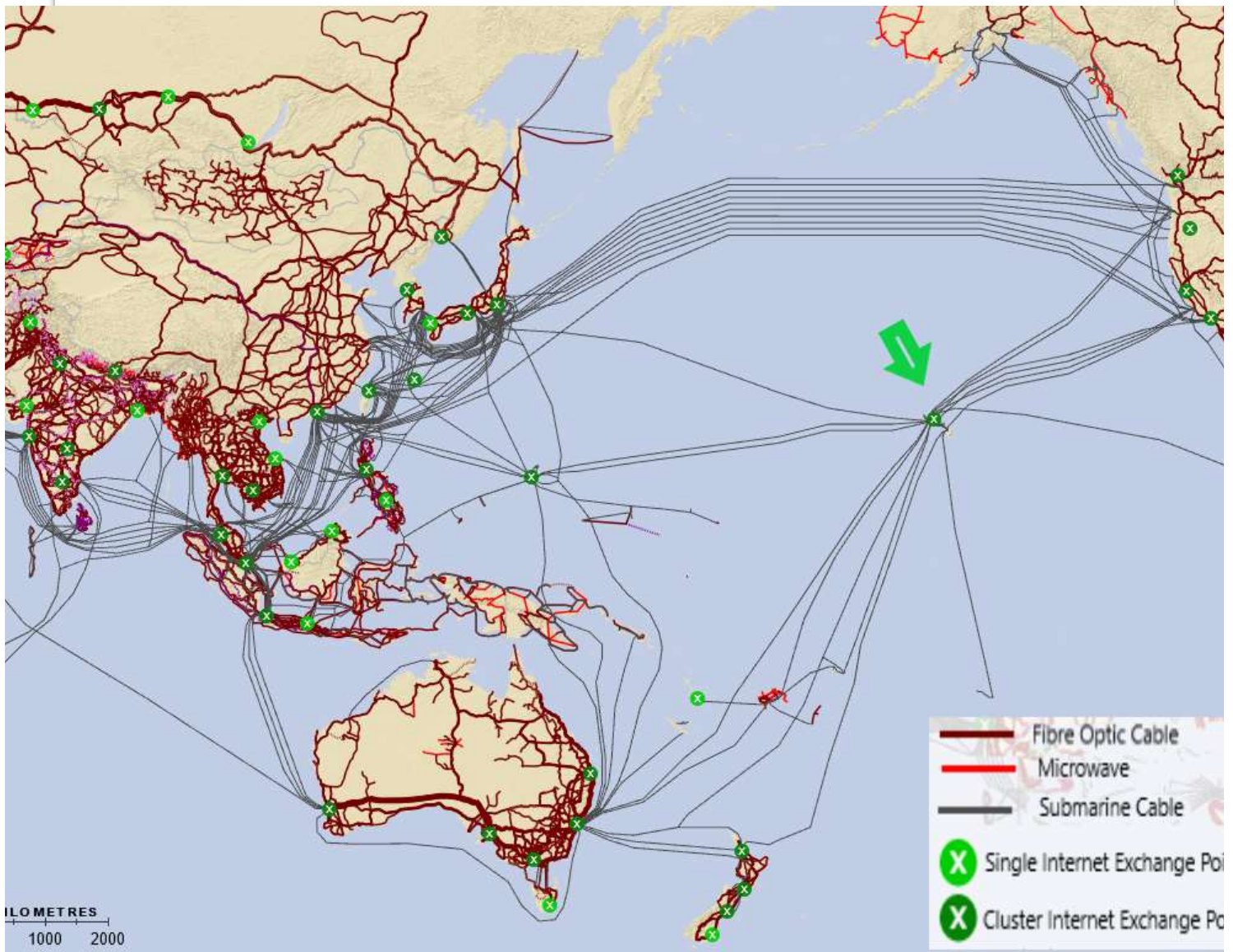
spatial association and economic development 2

proximity and sea level depth 3

political considerations and strategic position 4

Pacific information superhighway map

© International Telecommunications



Question 40

40. Tonga's only submarine cable connection was damaged earlier this year by:

- a volcanic eruption 1
- a deep-sea fishing trawler 2
- an anchor chain dragging 3
- sabotage by terrorists 4