



AUSTRALIAN GEOGRAPHY COMPETITION


2023 Year 9

Instructions

Welcome to the 2023 Australian Geography Competition!

You have 30 minutes to complete 40 questions.

NOTE: Due to the size of some graphics, you may need to scroll down the page to see the complete graphic.



Some questions require the use of a ruler or calculator. To use, click on the icon at the top right of the screen. To turn off, click the icon again.

If you want to enlarge a graphic or text, click on the magnifying glass at the top left of the screen.

There is a timer count-down at the top left of the screen.

The flag button at the bottom right of the screen can be used as a reminder for a question you want to come back to. On the question overview page you can see which questions you flagged.

The tiles button in the top middle of the screen next to the question number takes you to the question overview.

The question overview shows a summary of questions not started, completed or flagged.


Progress summary

Show all 1 Answered 3 Not answered 36 Not read 1 Flagged



Questions
Click a number to go to that question

1 2 3 4 5 6 7 8 9

Supported by

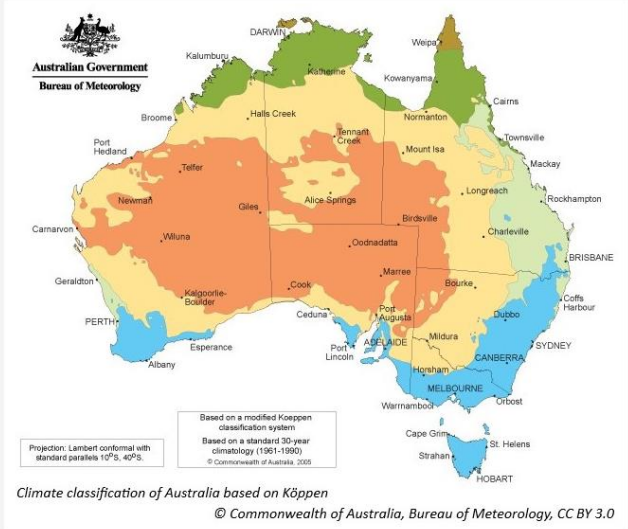


Good luck!

Flag  Next 

Drag and drop the labels to create a correct legend for the map.

- Desert Equatorial Grassland Subtropical Temperate Tropical

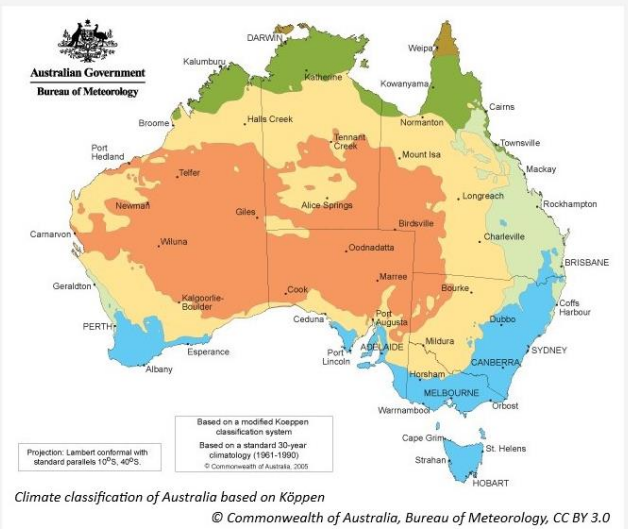


Major classification groups

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Drag and drop the food and fibre words to create the best match with the climate zones.

- Sugarcane Spinifex grass Beef Dairy



Climate Zone Food or Fibre Produced

Desert	<input type="checkbox"/>
Grassland	<input type="checkbox"/>
Temperate	<input type="checkbox"/>
Tropical	<input type="checkbox"/>



Question 3 of 40



Farm in Darién, Colombia

© N Palmer, GDFL

Which agricultural strategy is shown in the photo?

- crop rotation
- contour planting
- extensive agriculture
- intercropping

Back

Flag

Next



Question 4 of 40



Farm in Darién, Colombia

© N Palmer, GDFL

What are some benefits of the strategy shown in the photo above? Select all that apply.

- improves soil fertility
- reduces pest problems
- requires less planning
- easier to harvest

Back


Flag

Next

Question 5 of 40 

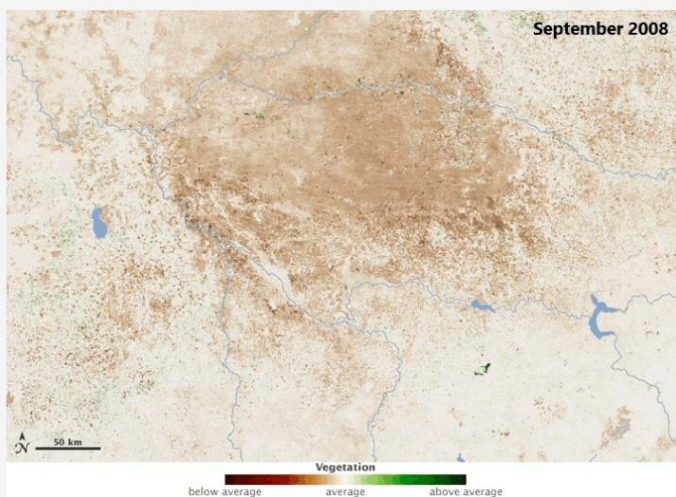
Aboriginal peoples in Australia commonly manipulated the land to enhance food availability through:

- controlled burning
- irrigation systems
- crop rotation
- contour ploughing

[Back](#)Flag [Next](#)Question 6 of 40 

Which factor best accounts for the 2006 difference in the vegetation pattern shown in the animation below?

- cropping
- deforestation
- drought
- seasonal change



Land bordering the Murray River, NSW/Vic

Images source: NASA Earth Observatory

[Back](#)Flag [Next](#)



Question 7 of 40



Which type of land degradation is highlighted in the photo below?

- gully erosion salinity deforestation desertification



Land degradation

© Government of Western Australia

◀ Back

Flag

Next ▶



Question 8 of 40



Which of these are negative effects of the type of land degradation in the photo? Select all that apply.

- hazardous for livestock and vehicles loss of topsoil
 causes nutrient deficiency in plants waterlogging affects the germination of seeds



Land degradation

© Government of Western Australia

◀ Back

Flag

Next ▶



Question 9 of 40



Which of these is the most effective strategy to prevent the land degradation in the photo?

- maintaining natural vegetation along drainage lines
- planting shelterbelts at right angles to the wind
- keeping heavy machinery off the land
- improving drainage to reduce soil waterlogging



Land degradation

© Government of Western Australia

Back

Flag

Next

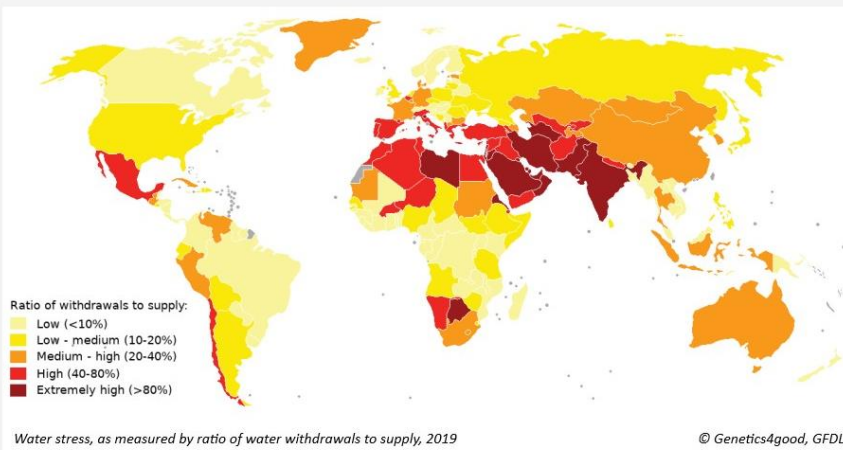


Question 10 of 40



Which type of map is the one below?

- choropleth
- cadastral
- physical
- topographic

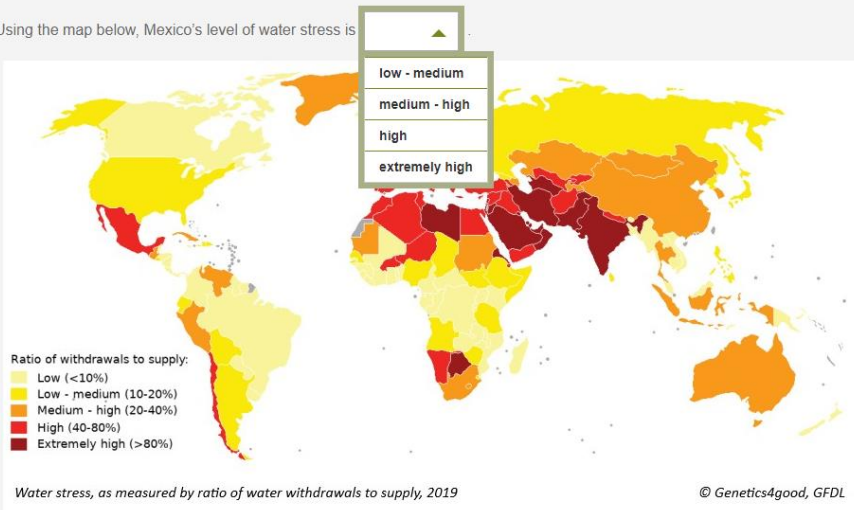


Back

Flag

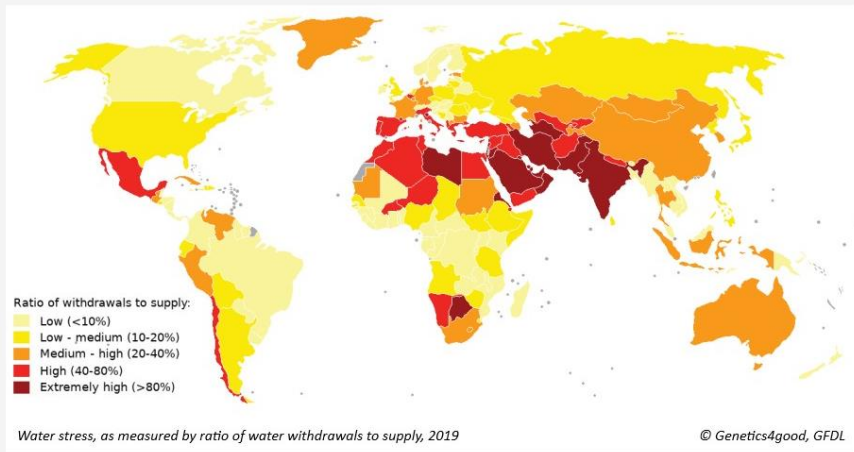
Next

Using the map below, Mexico's level of water stress is



Which of these is the most significant limitation of the data shown in the map below?

- does not include country name labels
- does not show variation within countries
- missing data for some countries
- does not show major dams





Question 13 of 40



Which of these initiatives are most likely to help reduce the risk of water scarcity for residents? Select all that apply.

- recycling water
- promoting water conservation measures
- privatising the water supply
- deregulating discharge from sewage treatment facilities

Back

Flag

Next

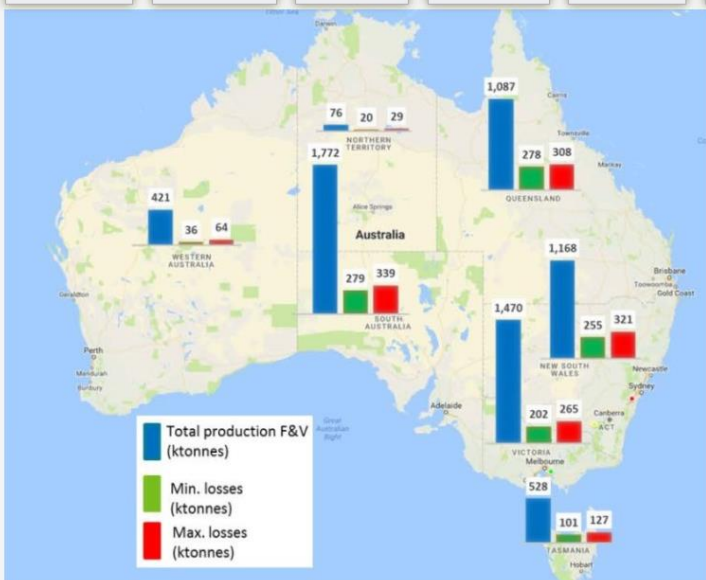


Question 14 of 40



Based on the map below, drag the state names so they are in order for production of fruit and vegetables, from the highest on the left to the lowest on the right.

- NSW
- QLD
- SA
- TAS
- VIC
- WA



Fruit and vegetables: production and estimated losses in primary production, packing and processing © CSIRO

Back

Flag

Next



Question 15 of 40



Which strategy would decrease fruit loss in primary production?

- better harvesting technology to extract more fruit
- increase the cost of fruit to consumers to limit waste
- production plants closer to grower sites to avoid spoilage
- training factory workers to reduce the volume of rejection

Back

Flag

Next

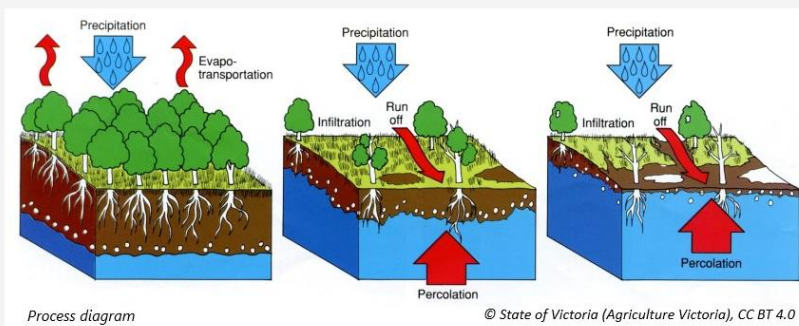


Question 16 of 40



Food production is impacted by which process represented in the diagram below?

- habitat loss
- soil acidification
- salinisation
- soil erosion



Back

Flag

Next

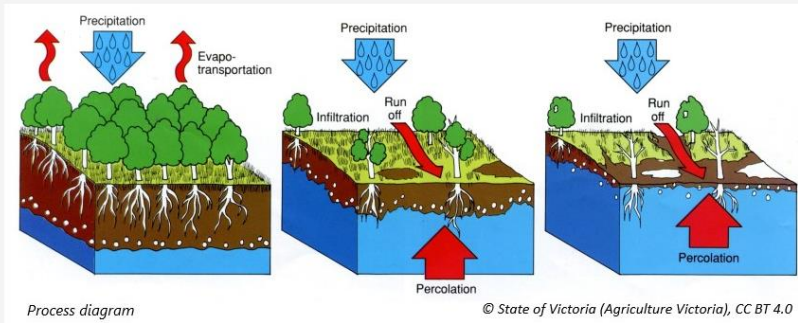


Question 17 of 40



Which of these is a suitable response to the problem shown in the diagram?

- planting rows of pine trees
- irrigating the land more intensively
- ploughing the land to break the surface
- planting salt tolerant plants, e.g. saltbush



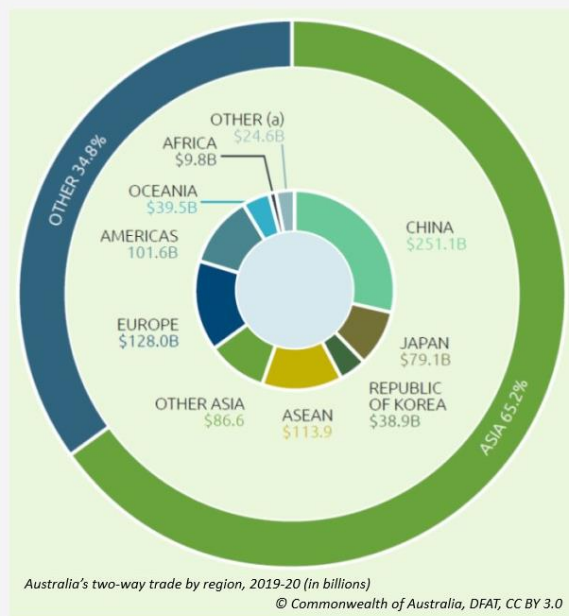
Back

Flag

Next



Question 18 of 40



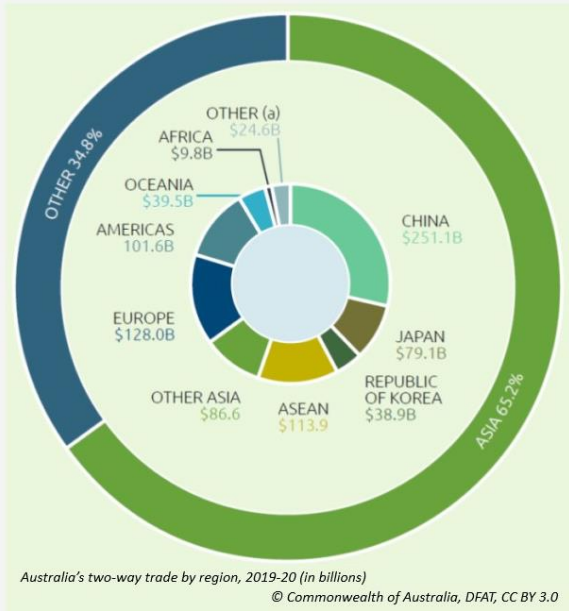
Which concept is represented by the graph?

- scale
- change
- interconnection
- sustainability

Back

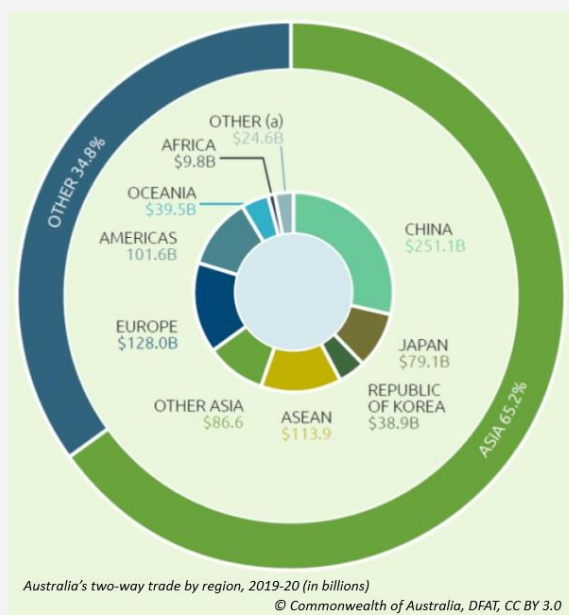
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Next



The graph is a variation of a:

- pie chart
- rose diagram
- bar chart
- scatter plot



You may use the on-screen calculator for this question. Click on the icon in the top right corner.

Australia's total two-way trade is valued at \$873.1 billion. Using data from the graph, calculate what percentage of Australia's two-way trade is with China.

Round your answer to a whole number and enter in the box.

Based on the table, the majority of Australia's exports in 2019/20 were the product of _____ industries.

Australia's top 10 exports, 2019-20

Rank	Commodity	\$ million	share of total exports
1	Iron ores & concentrates	102,864	22.2
2	Coal	54,620	11.5
3	Natural gas	47,525	10.0
4	Education-related travel services	39,661	8.3
5	Gold	24,394	5.1
6	Personal travel (excl education) services	16,368	3.4
7	Beef	11,258	2.4
8	Aluminium ores & concentrates (incl alumina)	8,875	1.9
9	Crude petroleum	8,568	1.8
10	Copper ores & concentrates	6,854	1.4

© Commonwealth of Australia, DFAT, CC BY 3.0

- primary
- secondary
- tertiary
- quaternary

Which of these is an environmental impact of the mine in the image?

- major contribution to Australia's Gross Domestic Product
- alteration of surface water flows
- contaminated run-off affecting marine biodiversity
- greenhouse gases released from the iron ore



Mount Whaleback iron ore mine

Source: NASA Earth Observatory



Question 23 of 40



What type of image is shown below?

aerial

satellite

terrestrial



Mount Whaleback iron ore mine

Source: NASA Earth Observatory

Back

Flag

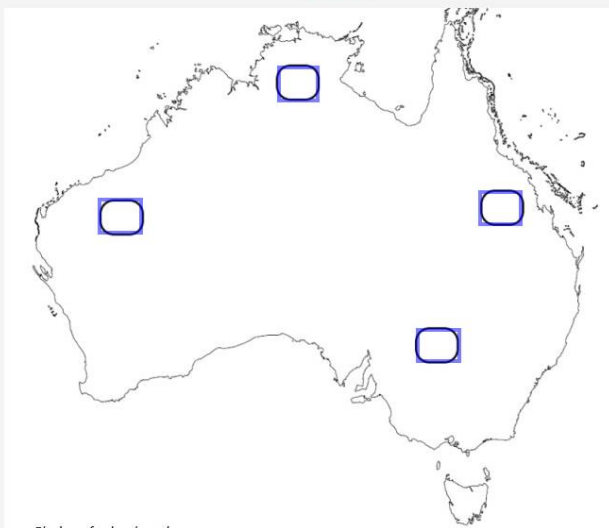
Next



Question 24 of 40



The thumbnail image is of the iron ore mine from the previous question. Drag the thumbnail to one of the areas marked on the map to show its location in Australia.



Choice of mine location

Base map: © Commonwealth of Australia, Geoscience Australia, CC BY 3.0

Back

Flag

Next

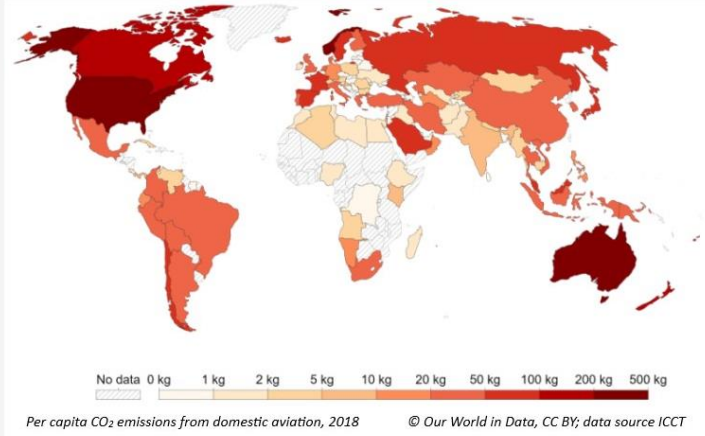


Question 25 of 40



Based on the map below, how much CO₂ did Australia emit per capita from domestic aviation in 2018?

- 48 kg
 92 kg
 183 kg
 267 kg



Back

Flag

Next

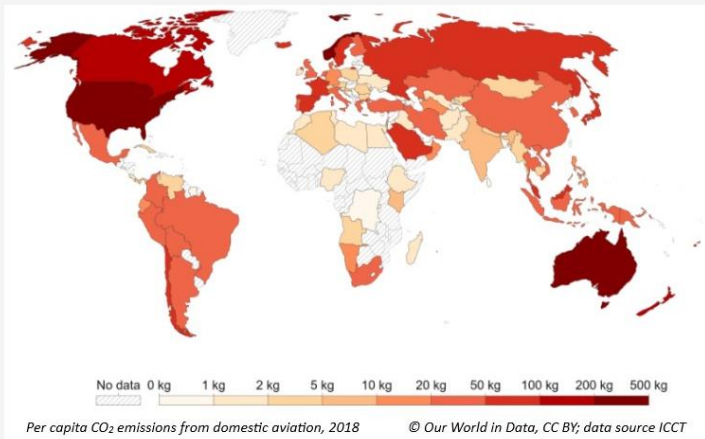


Question 26 of 40



What is the main reason for the difference in per capita CO₂ domestic aviation emissions in Australia compared with the United Kingdom, as shown in the map below?

- settlement distribution
 gross domestic product
 population size
 distance between the countries



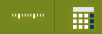
Back

Flag

Next



Question 27 of 40



This cartoon best illustrates the concept of:

- globalisation
- global distribution
- risk management
- social exclusion

Back

Flag

Next



Question 28 of 40



Which of these statements best explains why some Australian companies have moved their information services to Asian countries such as China?

- It is cheaper than having their information services in Australia.
- More of their customers live in China.
- Chinese workers are better at answering questions than Australian workers.
- Levels of technology are higher in China than in Australia.

Back

Flag

Next



Question 29 of 40



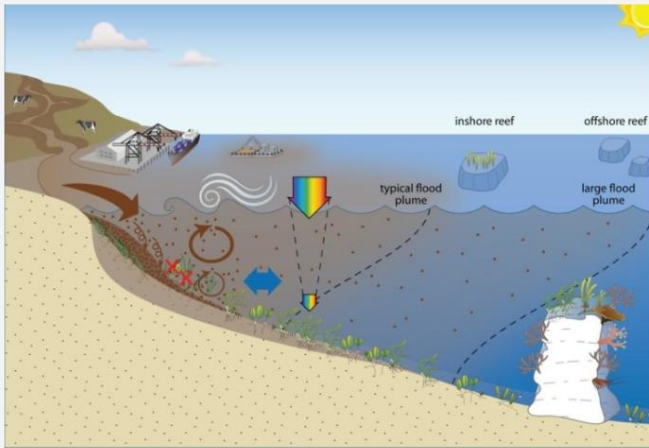
Choose the drop-down text that correctly completes the sentence.

The negative impacts of agriculture on the adjacent marine environment are more likely to occur in the ▲ season.

▲

wet

dry



Legend
 Sediment delivery, Sedimentation, Seagrass burial, Resuspension, Wind mixing, Offshore transfer, Light attenuation, Seagrass loss
 Processes affecting turbidity in the coastal zone of the Great Barrier Reef © State of Queensland, CC BY

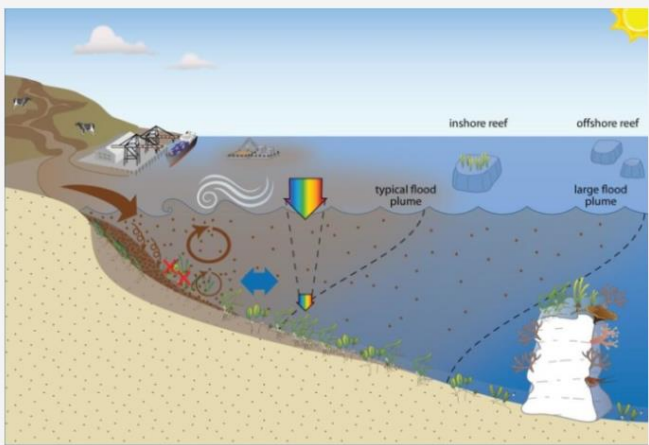
◀ Back

Flag

Next ▶



Question 30 of 40



Legend
 Sediment delivery, Sedimentation, Seagrass burial, Resuspension, Wind mixing, Offshore transfer, Light attenuation, Seagrass loss
 Processes affecting turbidity in the coastal zone of the Great Barrier Reef © State of Queensland, CC BY

Based on the diagram, number the sequence of events outlining the impacts of agricultural practises on the adjacent marine environment from 1 to 4.

Event	Order
Paddocks are compacted, creating a higher volume of run-off into rivers, and then sea.	<input type="text"/>
Algae covers the reef due to lack of marine herbivores.	<input type="text"/>
Large marine herbivores migrate away in search of more plentiful food sources.	<input type="text"/>
Run-off contains nutrients, which causes algal blooms in the sea, blocking sunlight from coral and seagrass.	<input type="text"/>

◀ Back

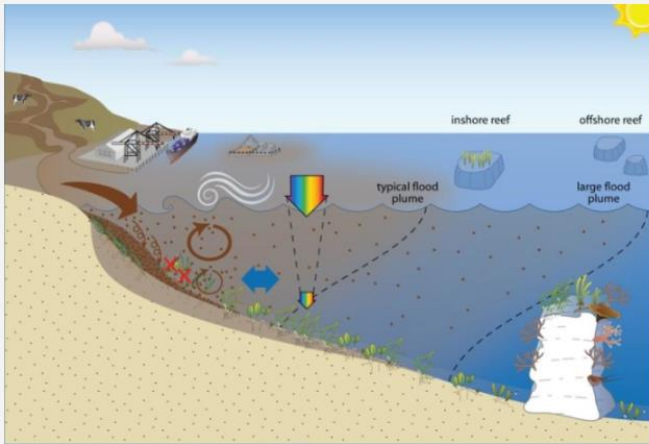
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Next ▶

Question 31 of 40

Which actions would it be reasonable for a farmer to implement to mitigate the impacts on the adjacent marine environment? Select all that apply.

- reduce erosion by revegetating hillsides
- grow organically to remove pesticides and artificial fertiliser from the soil
- relocate livestock further away from waterways
- create sandy embankments in the river to filter out excess sediment



Legend

- Sediment delivery
- Sedimentation
- Seagrass burial
- Resuspension
- Wind mixing
- Offshore transfer
- Light attenuation
- Seagrass loss

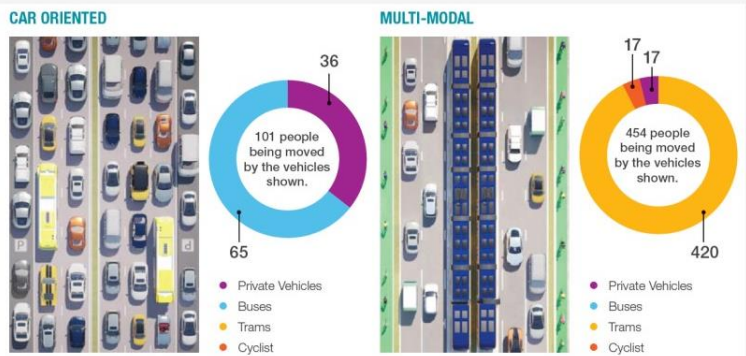
Processes affecting turbidity in the coastal zone of the Great Barrier Reef © State of Queensland, CC BY

Back Flag Next

Question 32 of 40

Based on the image below, in which ways can multi-modal transport improve liveability? Select all that apply.

- reduces traffic congestion
- reduces carbon emissions
- reduces destination choice
- improves social connections



Note assumptions:

- 30 Private vehicles with 1.2 people per car moving 36 people
- 2 Buses with 50% occupancy moving 65 people
- 14 Private vehicles with 1.2 people per car moving 17 people (with less traffic congestion)
- 2 Trams with 70% occupancy moving 420 people
- 17 Bicycles moving 17 people

Using the Gold Coast's road space more efficiently © City of Gold Coast

Back Flag Next

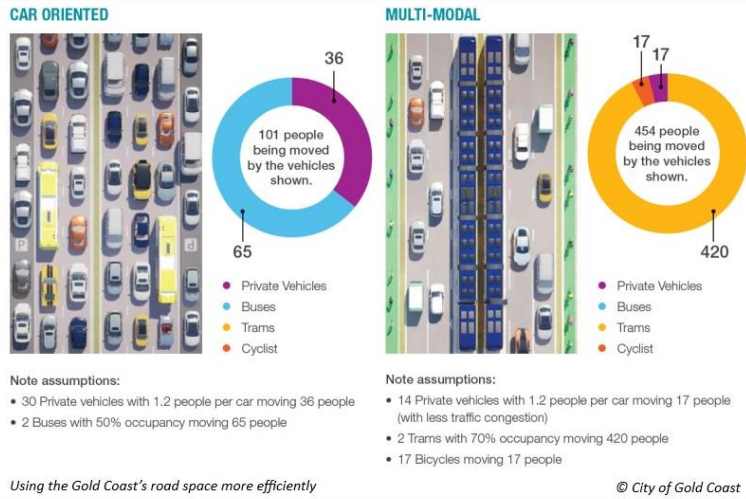


Question 33 of 40



What is the best explanation why buses are shown as having a lower occupancy rate than trams in the image below?

- Trams only travel on popular routes.
- More people can travel on trams.
- Trams emit fewer greenhouse gases.
- Buses are very noisy.



Back

Flag

Next

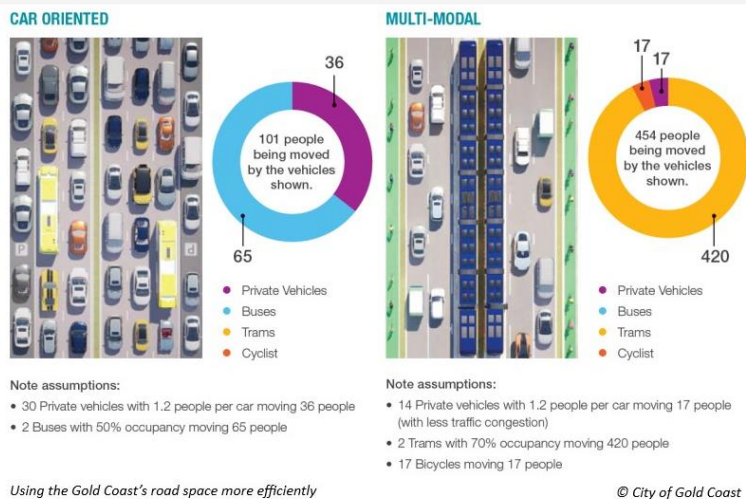


Question 34 of 40



Which of these would be a negative consequence of shifting to the multi-modal transport model shown in the image below?

- Lack of parking reduces trade in local businesses.
- Active transport methods are discouraged.
- Commuters spend less time travelling to work.
- Private car ownership becomes more expensive.



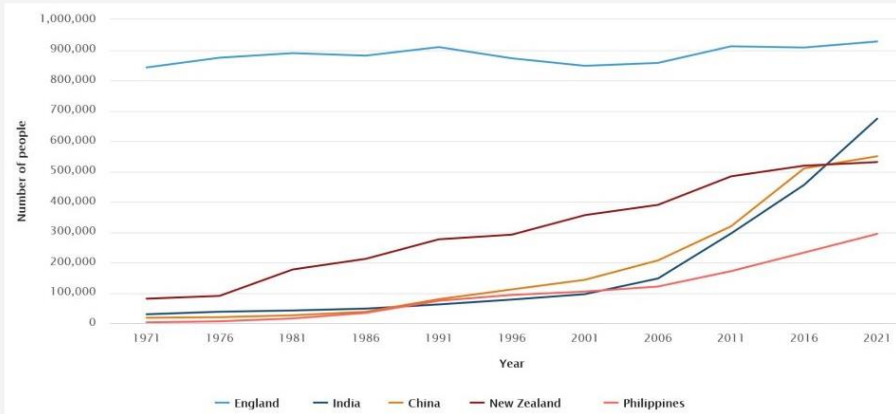
Back

Flag

Next

Based on the graph below, the highest number of migrants to Australia between 2006 and 2021 came from:

- England
 India
 China
 New Zealand



Number of people in Australia born in the top 5 overseas countries of birth 1971 to 2021

Source: ABS

Back

Flag

Next

Read the text below. Which kind of migration is it describing?

- permanent migration
 temporary labour migration
 student migration
 forced migration

Oliver Tari is from Vanuatu and is moving to Renmark in South Australia where he has a job picking and packing citrus fruits. When the fruit picking season ends, Oliver will return to Vanuatu.

Back

Flag

Next



Remember to scroll down if you can't see all of the map.

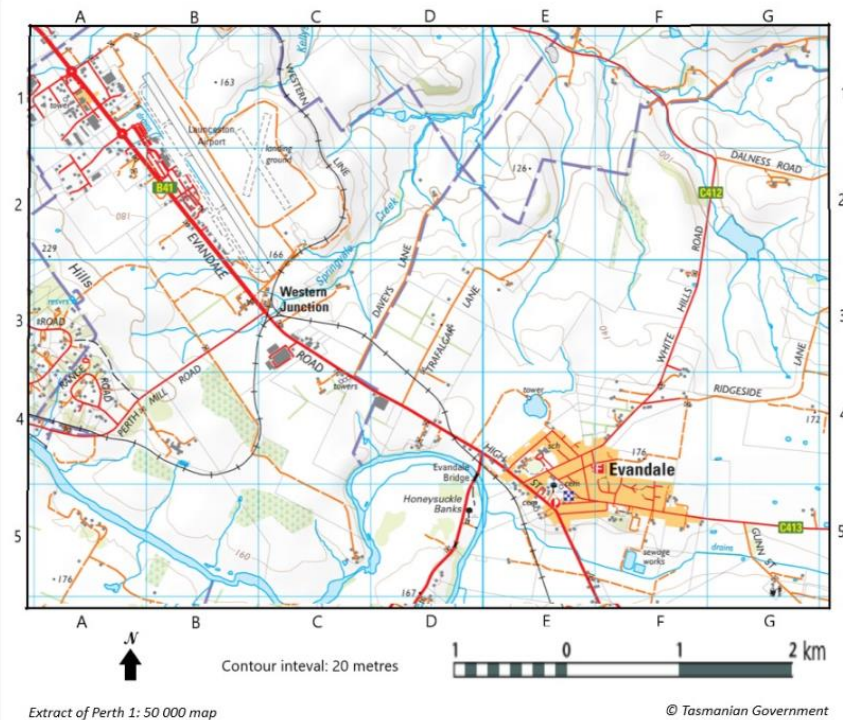
The map below is an extract. Which element is missing that a complete map should have?

legend

orientation

scale

title



Back

Flag

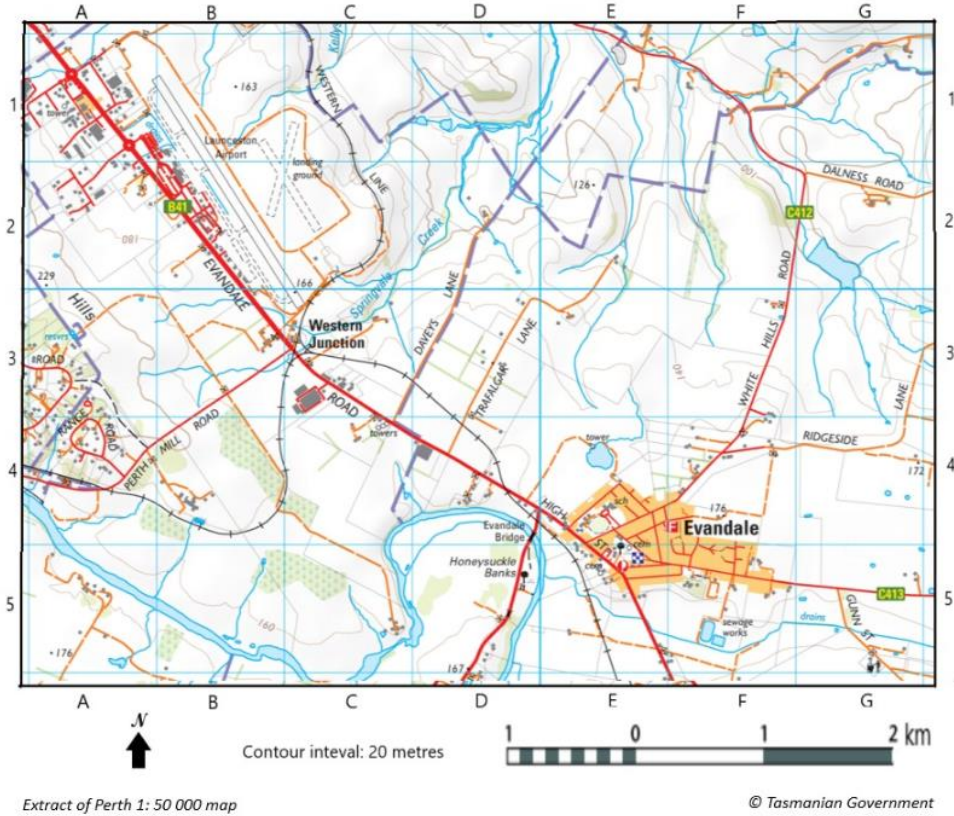
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Drag and drop the number that correctly completes the sentence. You may need to scroll down to see all the map.

- 150 170 190 200

The plantation shown in grid square C5 on the map is approximately metres above sea level.



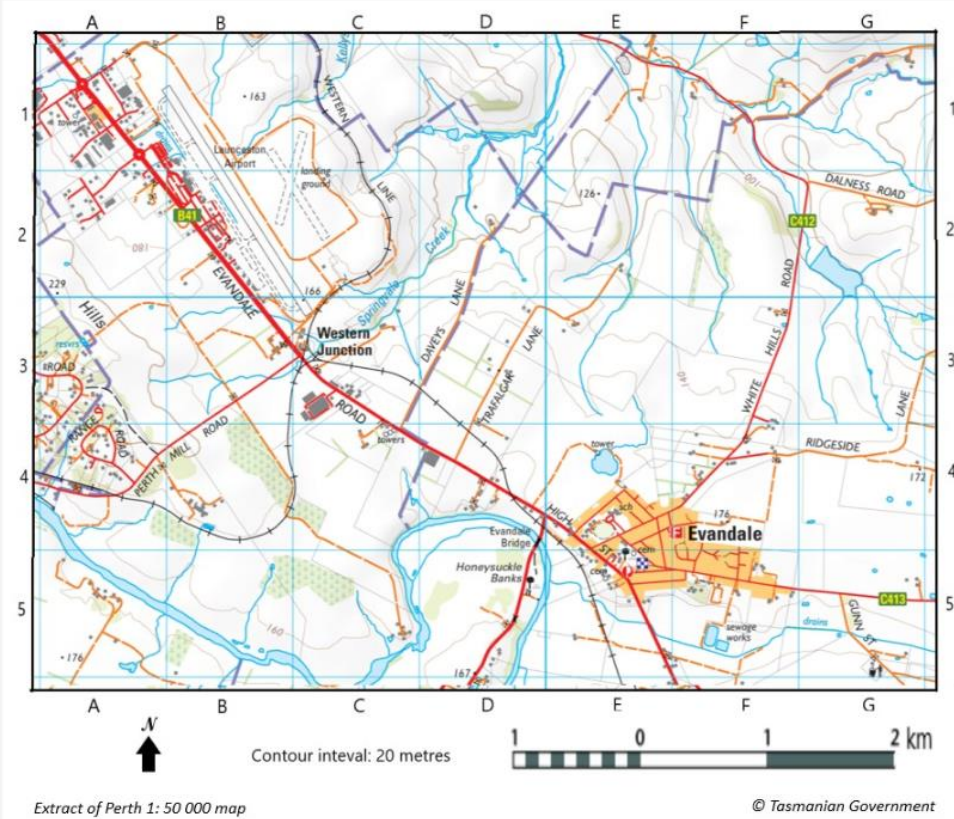
Back

Flag

Next

Which of these is located in grid square G2 on the map?

- farm dam
 hydroelectric station
 lagoon
 swamp



Back

Flag

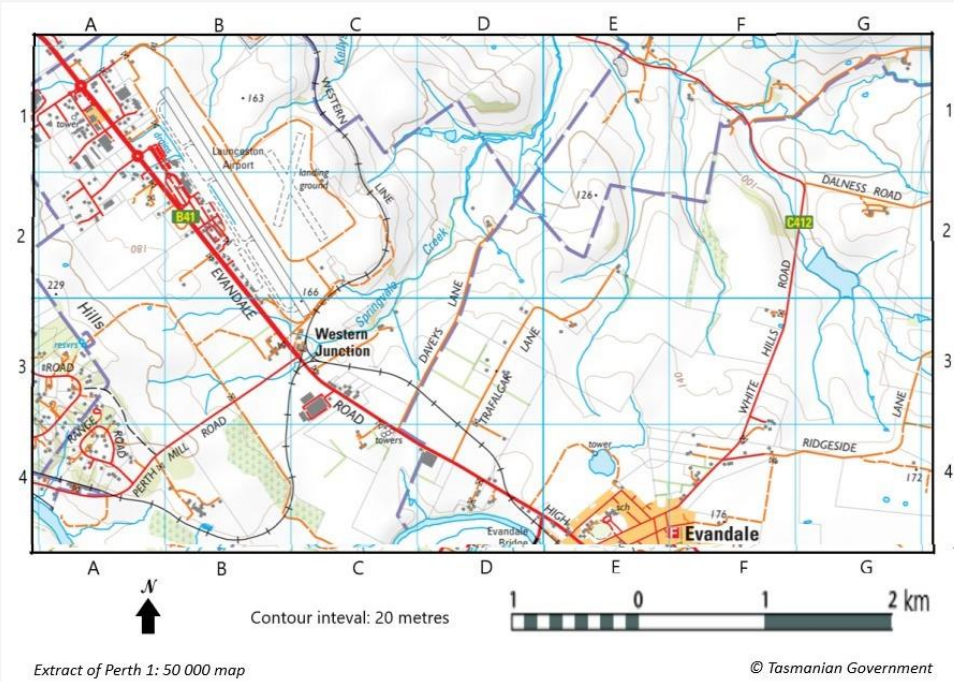
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Drag and drop the number that correctly completes the sentence. You may use the on-screen ruler - click on the symbol in the top right corner, drag and rotate it.

- 1.2 2.1 3.2 4.3

Using the map below, the length of Launceston Airport's main runway (see B1) is approximately km.



Back

Flag

Next