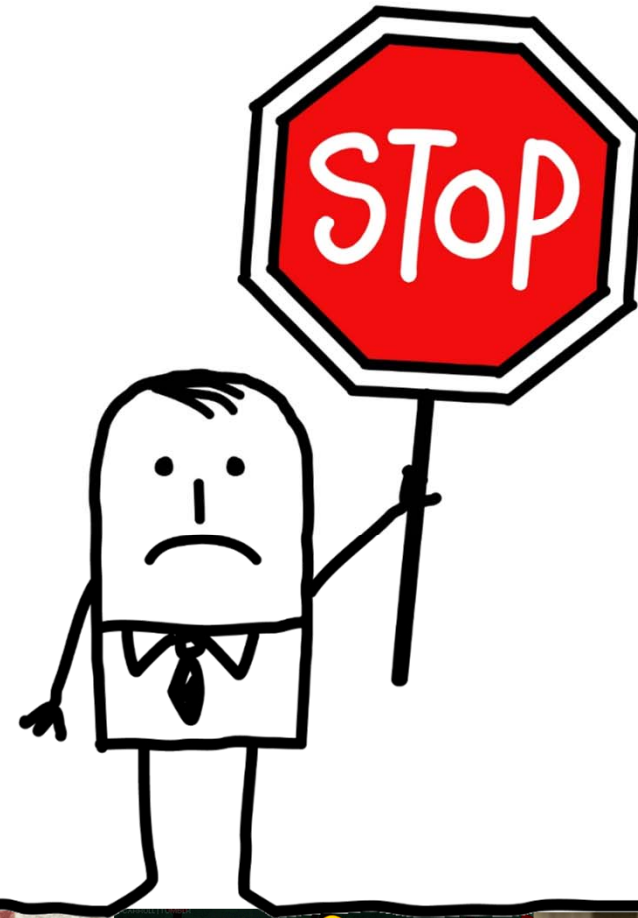




DO NOT TOUCH THE  
COMPUTER UNTIL  
TOLD TO DO SO





Sources: see file iGeo 2018 MMT\_answers

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# Multimedia Test

## iGeo MMT-working group 2018





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Contributions of: Australia, Czech Republic, Estonia, New Zealand, Russia, Singapore, Switzerland and The Netherlands.

## Instructions

- This test has **40 questions**. Look at every page and read the questions carefully.
- You have **60 minutes (native English) / 70 minutes (non-native English) to complete the test**. If you finish early wait silently until time is over. There will be a short evaluation afterwards.
- Each question is multiple-choice. Choose A, B, C, or D. **Only one answer is correct**.
- Some questions contain a short video clip or audio fragment. These are indicated by this icon: . **Click inside the video** frame to start it. 
- If there is **sound** involved in the question, it is indicated by this icon: . Please check if your headset is working properly with this test file: 
- Mark your choice on the **answer sheet** by making a circle around the letter that you want to select. If you make a mistake cross the selected letter and circle a new choice. If you believe there will be any confusion, also write the letter of your answer next to the question number.
- For navigation it is best to use the arrows on the keyboard to move the te next (↓ →) of previous (↑ ←) page. **DO NOT CLICK ON THE ESCAPE BUTTON, AS THAT ENDS THE PRESENTATION.**

Q 01

In what country were these photographs taken?



.05 Angola

.64 Namibia

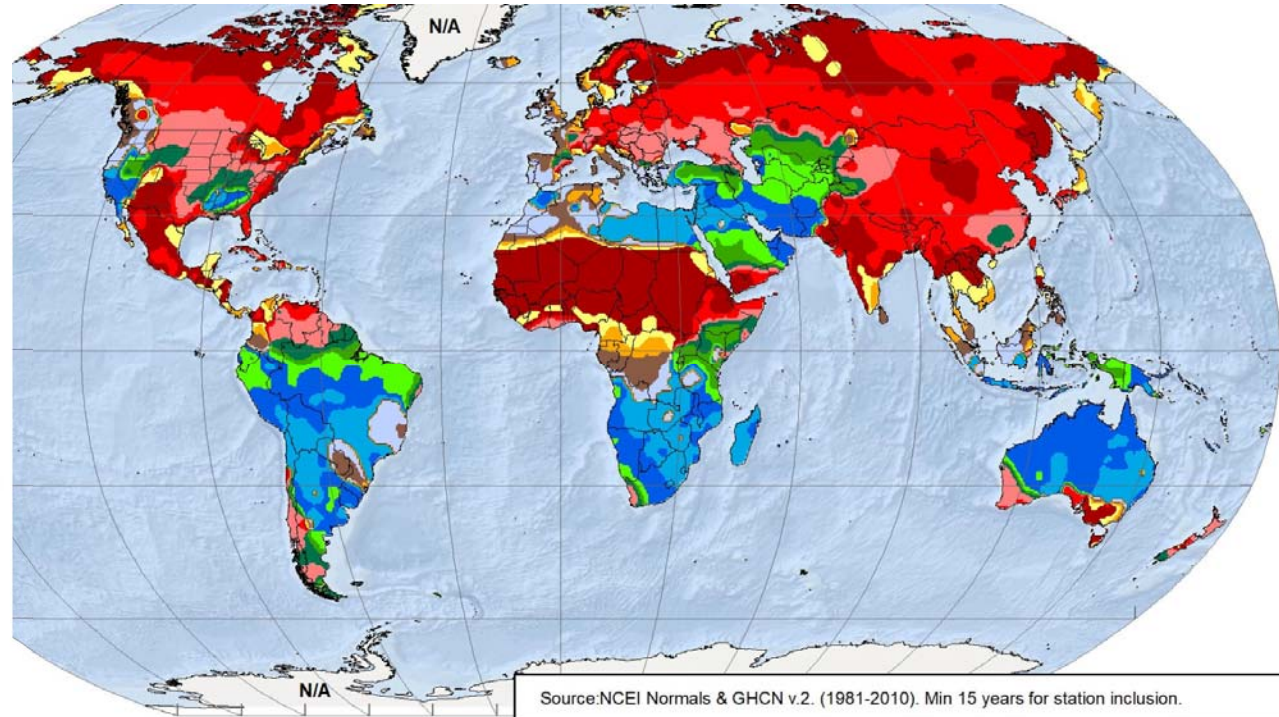
.02 Madagascar

.28 South-Africa

**Q 02**

**Which key corresponds to this map showing the wettest months of the year?**

A	B	C	D
January	January	January	January
February	February	February	February
March	March	March	March
April	April	April	April
May	May	May	May
June	June	June	June
July	July	July	July
August	August	August	August
September	September	September	September
October	October	October	October
November	November	November	November
December	December	December	December



**.07 key A**

**.70 key B**

**.20 key C**

**.02 key D**

Source: NCEI Normals & GHCN v.2. (1981-2010). Min 15 years for station inclusion.

Source: <http://www.banknoteworld.it/HONDURAS.htm> + <https://www.worldbanknotescoins.com/2015/05/canada-20-dollar-note-1979-queen-elizabeth-ii.html> + <https://www.britannica.com/topic/rial> + <http://www.thanhniennews.com/travel/places-of-note-five-historic-sites-that-grace-vietnams-banknotes-38729.html>

Q 03

Banknote Mountains. Which mountain has been shaped by karst processes?



.09 A

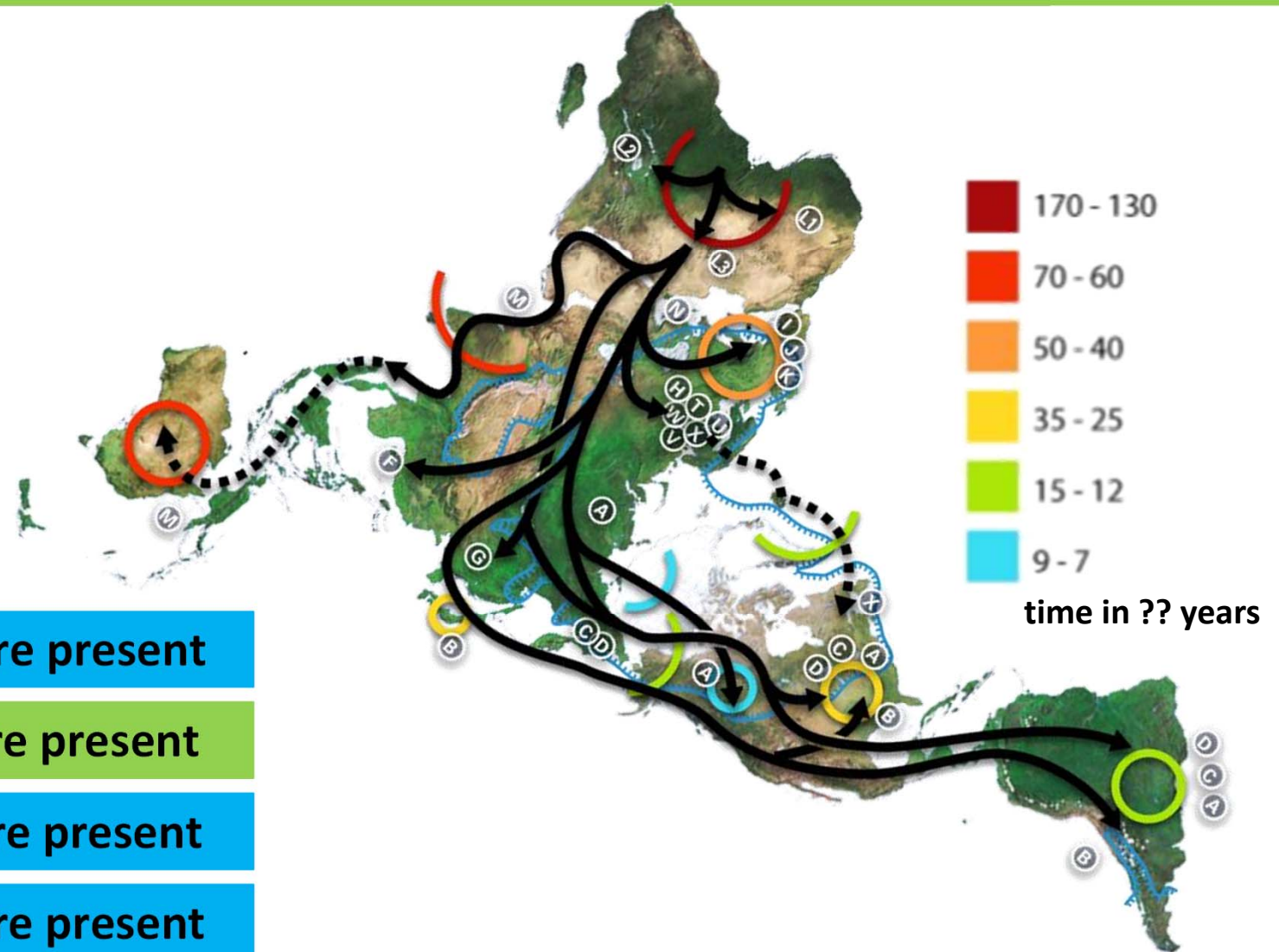
.18 B

.05 C

.67 D

**Q 04**

**What is the unit of time in the legend of this map showing human migration?**



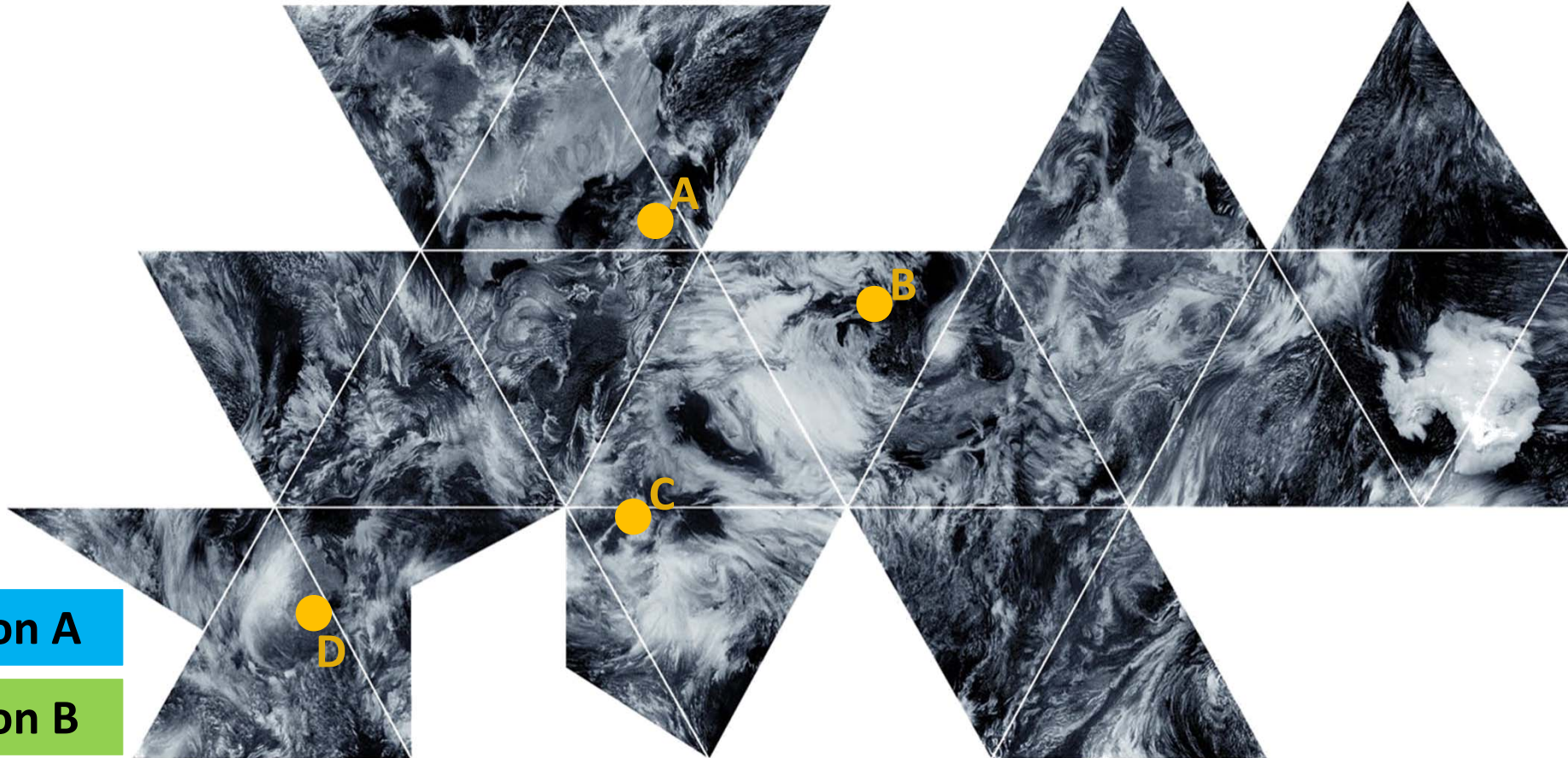
**.14** 100 years before present

**.52** 1.000 years before present

**.27** 10.000 years before present

**.07** 100.000 years before present

**Q 05** A world of clouds. **Where is city of Québec (Canada) located?**



**.11** location A

**.41** location B

**.23** location C

**.24** location D

**CLOUDS** ON FULLER PROJECTION  
AIR-OCEAN WORLD DYMAXION MAP  
*pencil drawing after satellite images.*



Source: <http://arquitecturaintegrativa.blogspot.com/2016/12/la-arquitectura-en-el-contexto-de-un.html>

**Q 06**

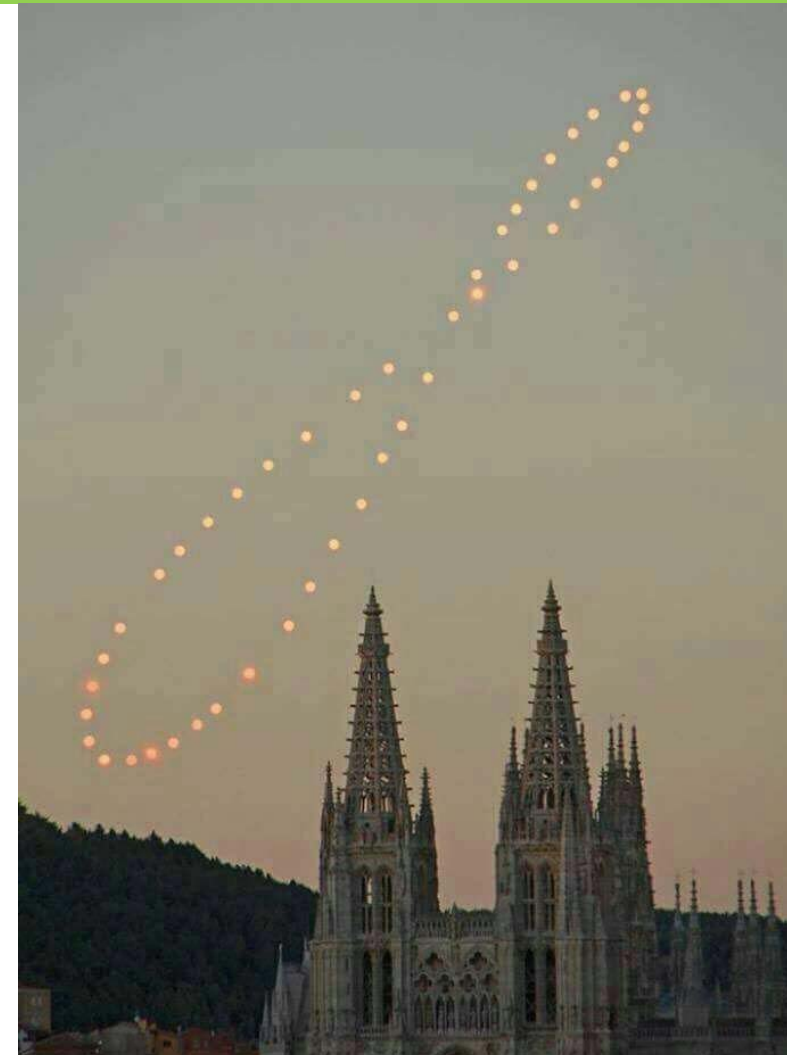
48 superimposed photos of the sun, taken during a year, one per week, in the same place and time. **Where has this picture been taken?**

**.02 Abidjan, Ivory Coast**

**.08 Casablanca, Maroc**

**.67 Burgos, Spain**

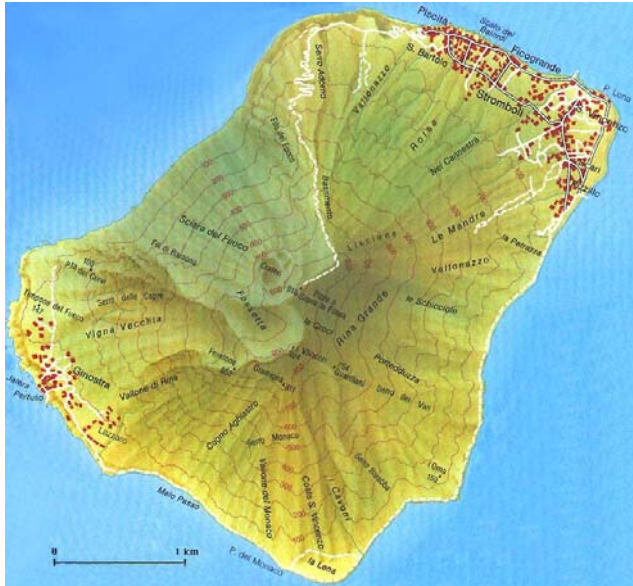
**.22 Ny-Ålesund, Spitsbergen, Norway**



Source: [http://www.dyxum.com/dforum/stromboli-aeolian-islands-italy-more-photos\\_topic114709.html](http://www.dyxum.com/dforum/stromboli-aeolian-islands-italy-more-photos_topic114709.html) + <http://www.mappery.com/Stromboli-Map> + <https://www.internationaltraveller.com/57-climb-to-the-top-of-stromboli-italy/> + photo Tim Schuring

**Q 07**

This ship is visiting the volcanic Island of Stromboli on a weekly base from Naples, Italy. What is most likely being transported by this ship?



**.45 fresh water**

**.18 liquid natural gas (LNG)**

**.16 petrol**

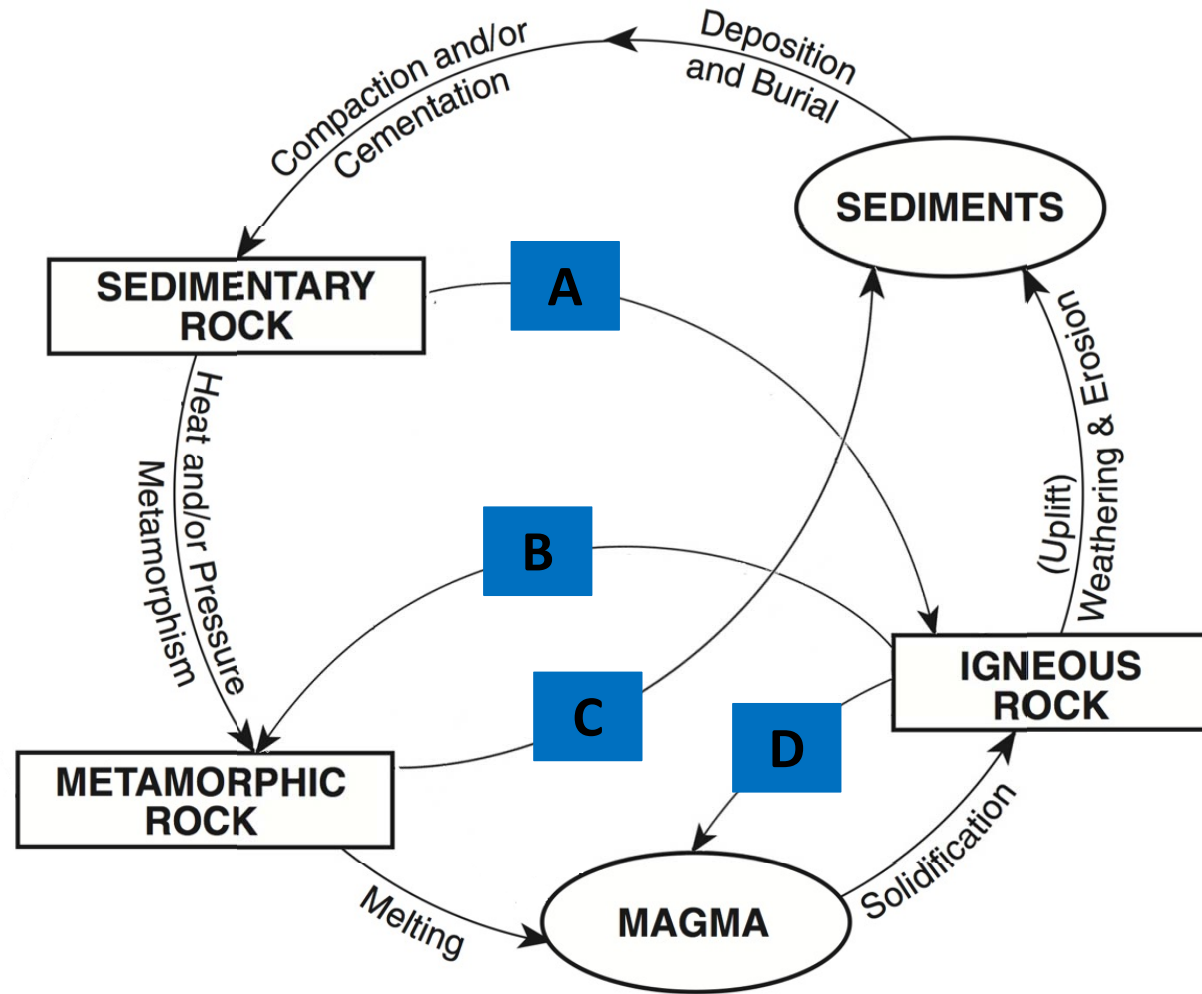
**.21 waste**



**Q 08**

**Which of these four shortcuts in the rock cycle is geologically least likely?**

### Rock Cycle in Earth's Crust



**.72** shortcut A

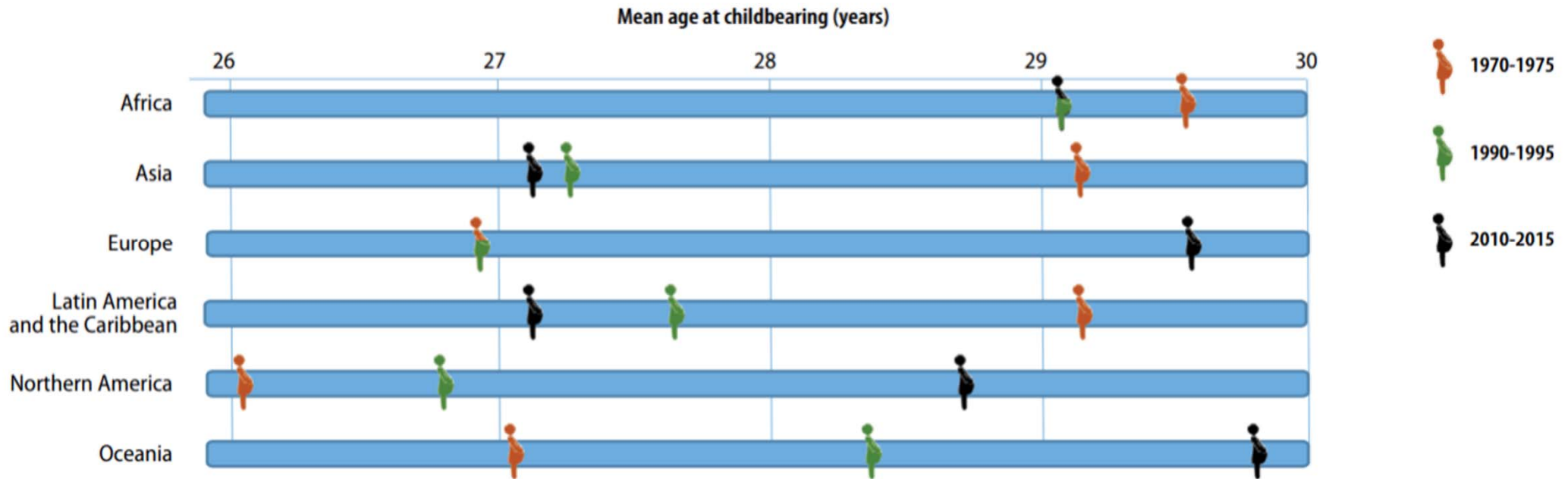
**.08** shortcut B

**.13** shortcut C

**.07** shortcut D

Q 09

## Which statement is correct for Latin America and the Caribbean?



**.87** decreasing age at childbearing, by decline of childbearing of women at older ages.

**.10** decreasing age at childbearing, by postponement of childbearing.

**.01** increasing age at childbearing, by decline of childbearing of women at older ages.

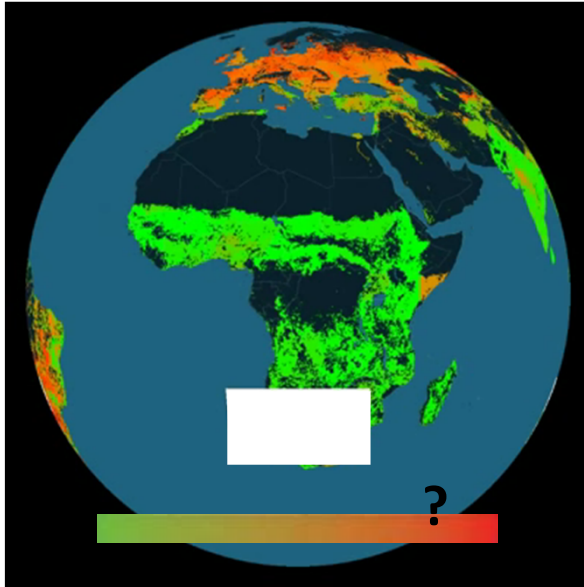
**.02** increasing age at childbearing, by postponement of childbearing.

**Q 10**

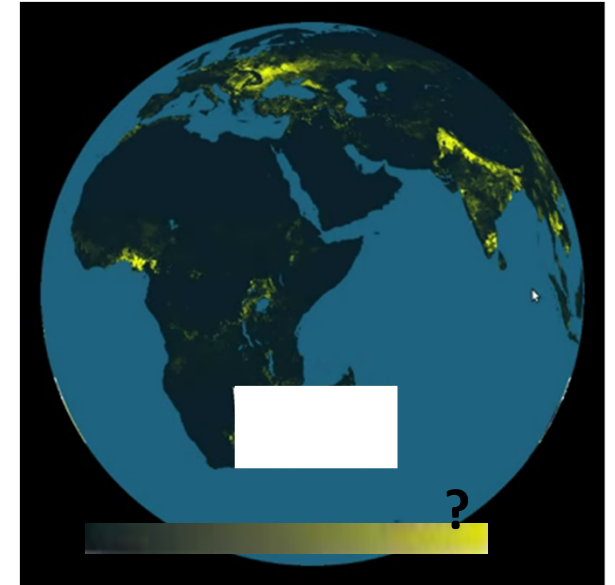
**What is depicted by these food production maps on moving globes?**



feed vs food



food production gap



**.41**  crops grown for livestock (feed)

 maximum production

**.28**  crops grown for livestock (feed)

 could produce more

**.19**  crops grown for humans (food)

 maximum production

**.10**  crops grown for humans (food)

 could produce more

Source: unknown

**Q 11**

**What natural element has destroyed the city on the video?**



**.65** hurricane

**.14** tsunami

**.05** earthquake

**.15** floods

Source: <http://factspy.net/7-longest-traffic-jams-in-history/> + <http://www.dailymail.co.uk/news/article-2333113/New-Yorkers-behold-breathtaking-sunset-sun-falls-perfectly-Big-Apples-iconic-buildings-Manhattanhenge.html> + <https://www.ijr.org.za/2017/03/07/south-africas-22-years-of-democracy-myth-busted/> + unknown

**Q 12a** Which image relates best to the graph on the next slide?

**A** average hours of traffic jam per city dweller in 2017



**B** average hours of sun (cloudless weather) per year (2017)



**C** average hours of using public transport per city dweller in 2017



**D** average hours a city dweller have to work to pay an iPhone X in 2017



**.24** image A

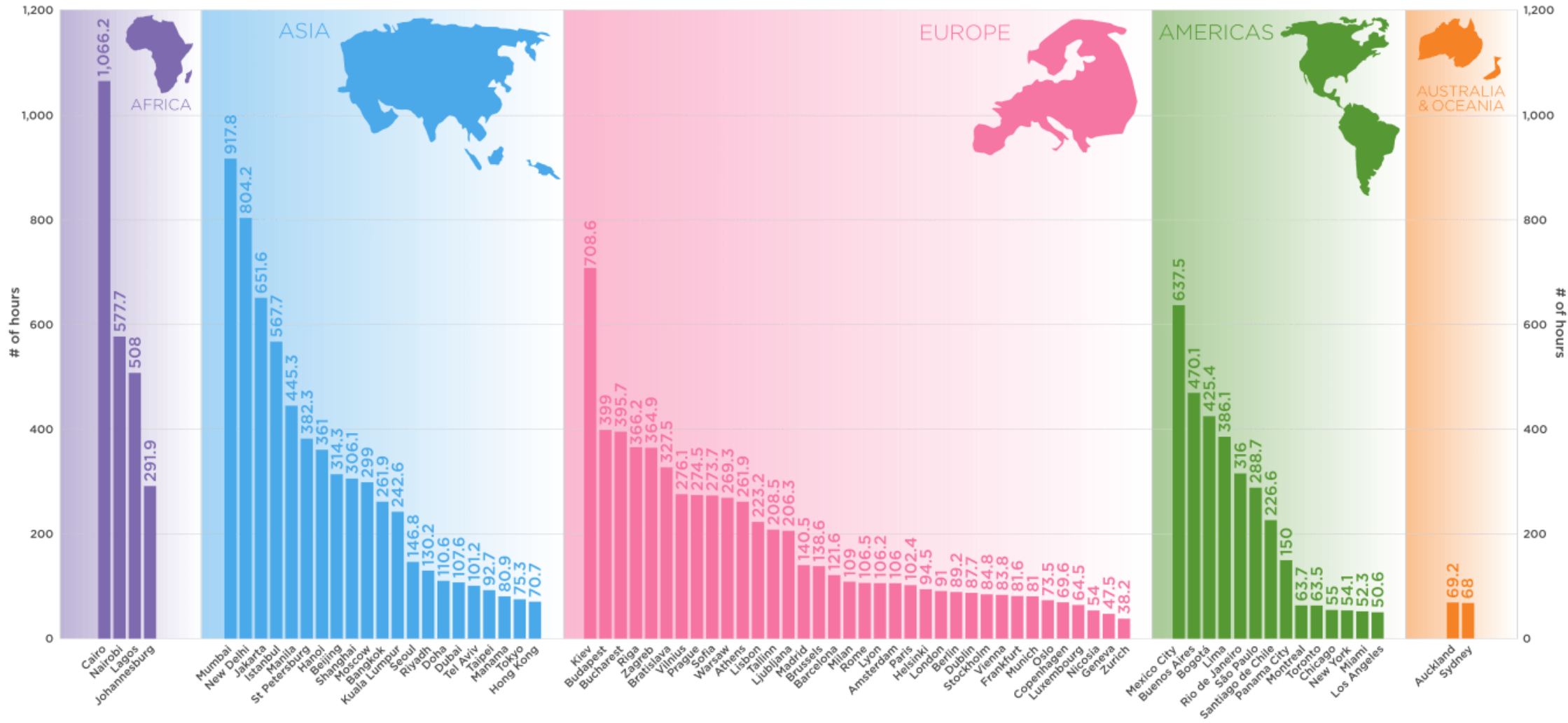
**.03** image B

**.10** image C

**.62** image D

Source: <https://howmuch.net/articles/hours-work-buy-iphone>

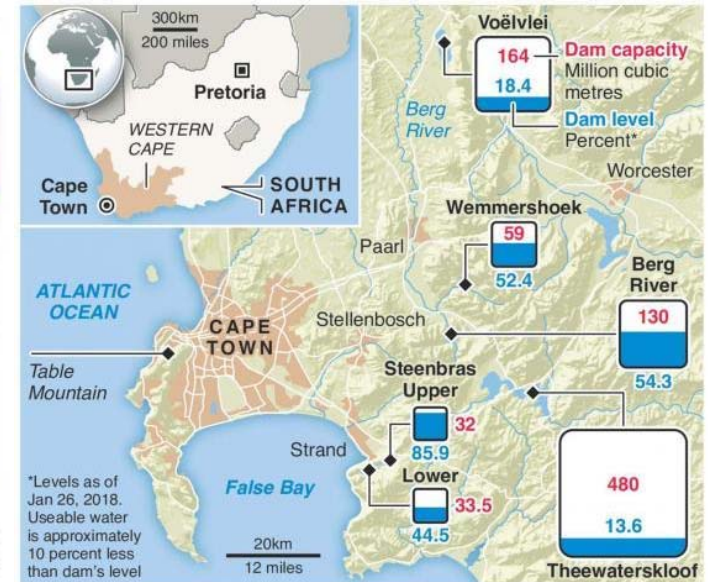
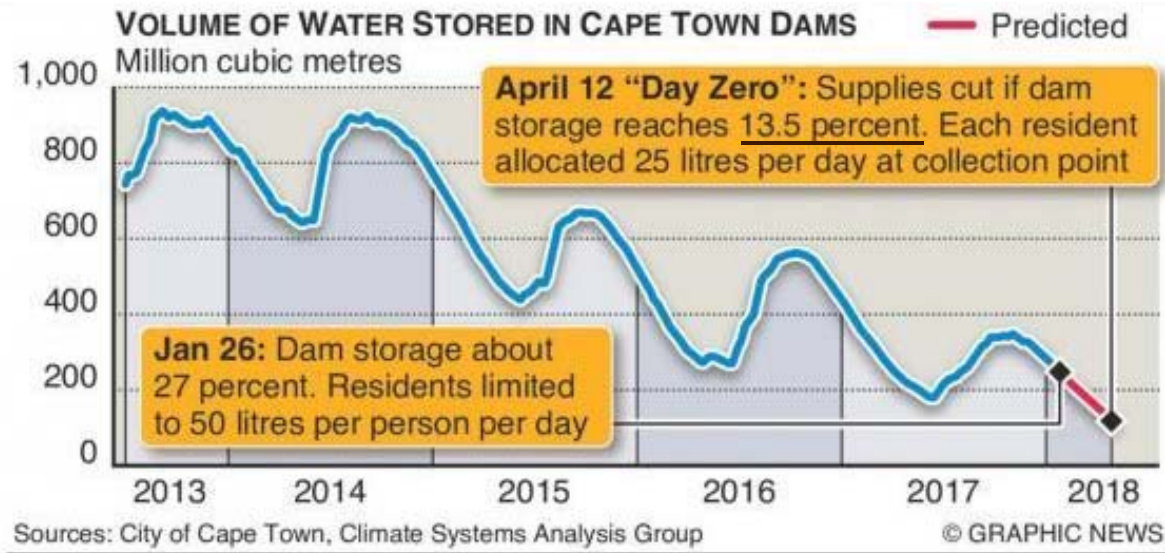
# Q 12b Which image of the previous slide best relates to this graph?





**Q 13**

**Which reservoir is closest to the “Day Zero” cutoff on April 12 and why would this be the most concerning to the City of Cape Town?**



**.06** Berg river, as it is the closest source of water for the city.

**.04** Lower Steenbras, as it has the lowest capacity.

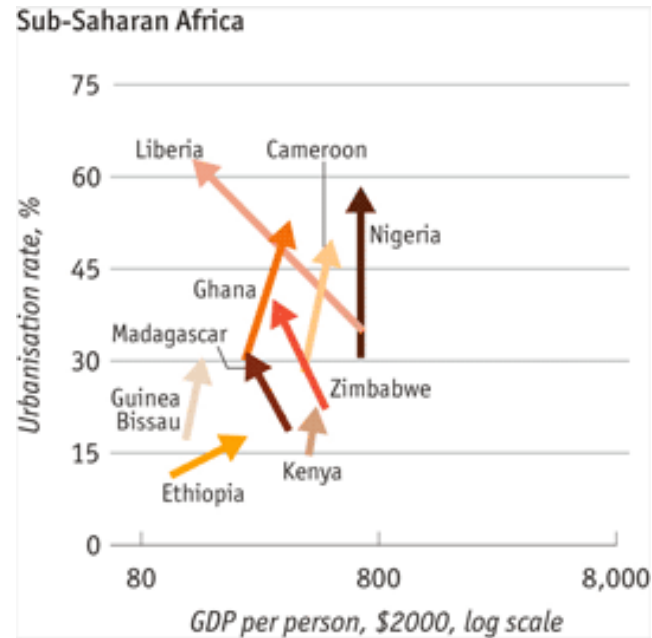
**.85** Theewaterskloof, as it stores the majority of the city’s water supply.

**.04** Voëlvlei, as it is the furthest from the city and therefore the last water available

## Q 14 What is explaining the pattern for Madagascar and Zimbabwe?

### Urbanisation and income

Change between 1985 and 2010



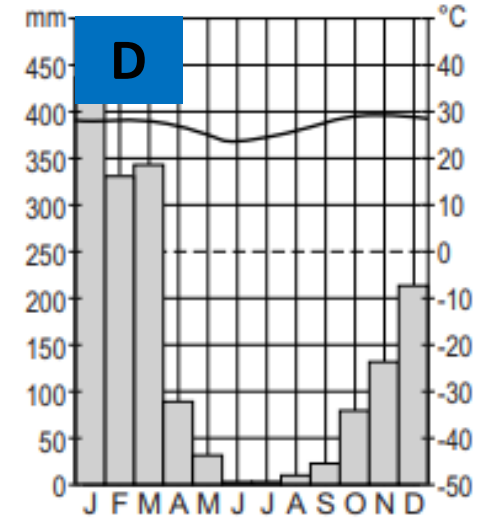
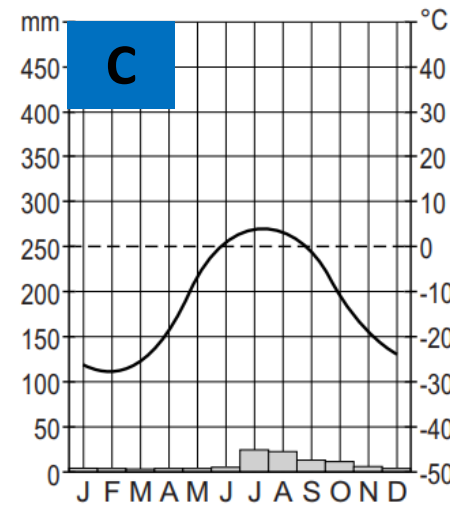
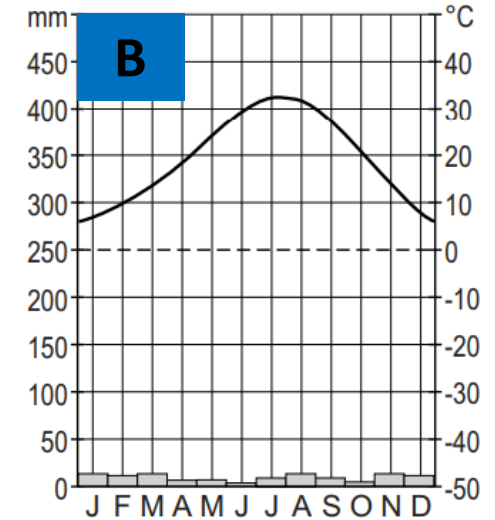
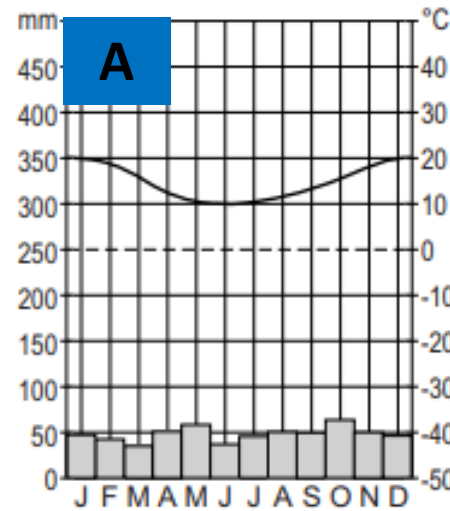
**.73** increase of relatively unproductive slums

**.14** urban agglomeration effect (i.e. cluster and network effect)

**.11** severe civil wars during the period in question

**.02** growth policies paying attention to female or youth employment

# Q 15 Which climate diagram corresponds best to this landform?



**.08** climate diagram A

**.01** climate diagram B

**.58** climate diagram C

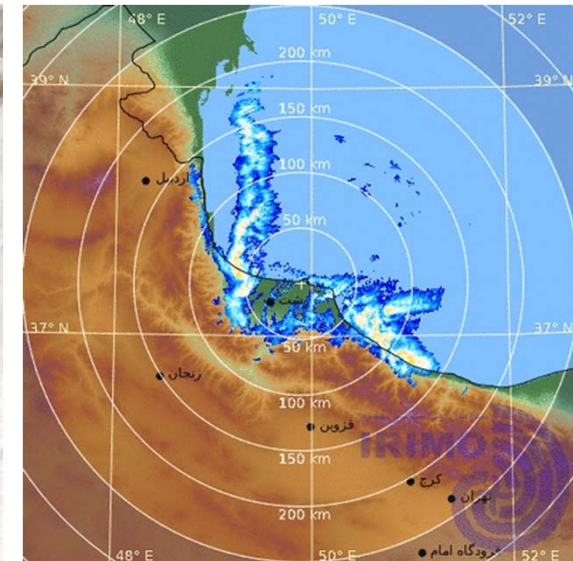
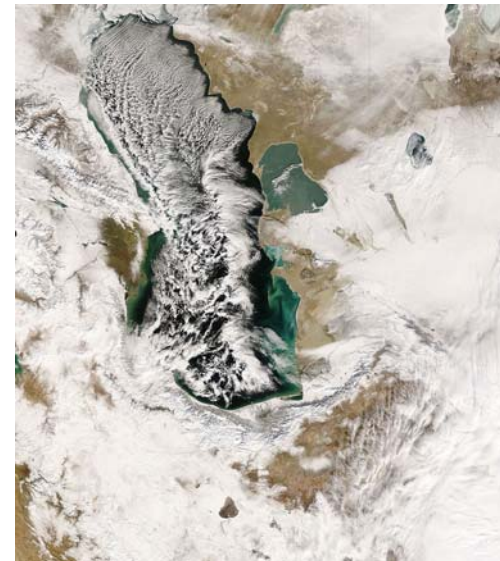
**.32** climate diagram D

Source: <https://earthobservatory.nasa.gov/images/83110/snow-blankets-iran> +

[http://www.wikiwand.com/bg/%D0%9A%D0%B0%D1%81%D0%BF%D0%B8%D0%B9%D1%81%D0%BA%D0%BE\\_%D0%BC%D0%BE%D1%80%D0%B5](http://www.wikiwand.com/bg/%D0%9A%D0%B0%D1%81%D0%BF%D0%B8%D0%B9%D1%81%D0%BA%D0%BE_%D0%BC%D0%BE%D1%80%D0%B5)

**Q 16**

**Which combination of phenomena caused snowfall and snow blizzards in the northern coast of Iran?**



**.52** a strong Siberian high pressure area and relative warm water of the Caspian sea

**.23** a strong Siberian high pressure area and relative cold water of the Caspian sea

**.15** a weak Siberian high pressure area and relative warm water of the Caspian sea

**.10** a weak Siberian high pressure area and relative cold water of the Caspian sea

## Q 17 What is shown on this dynamic map?

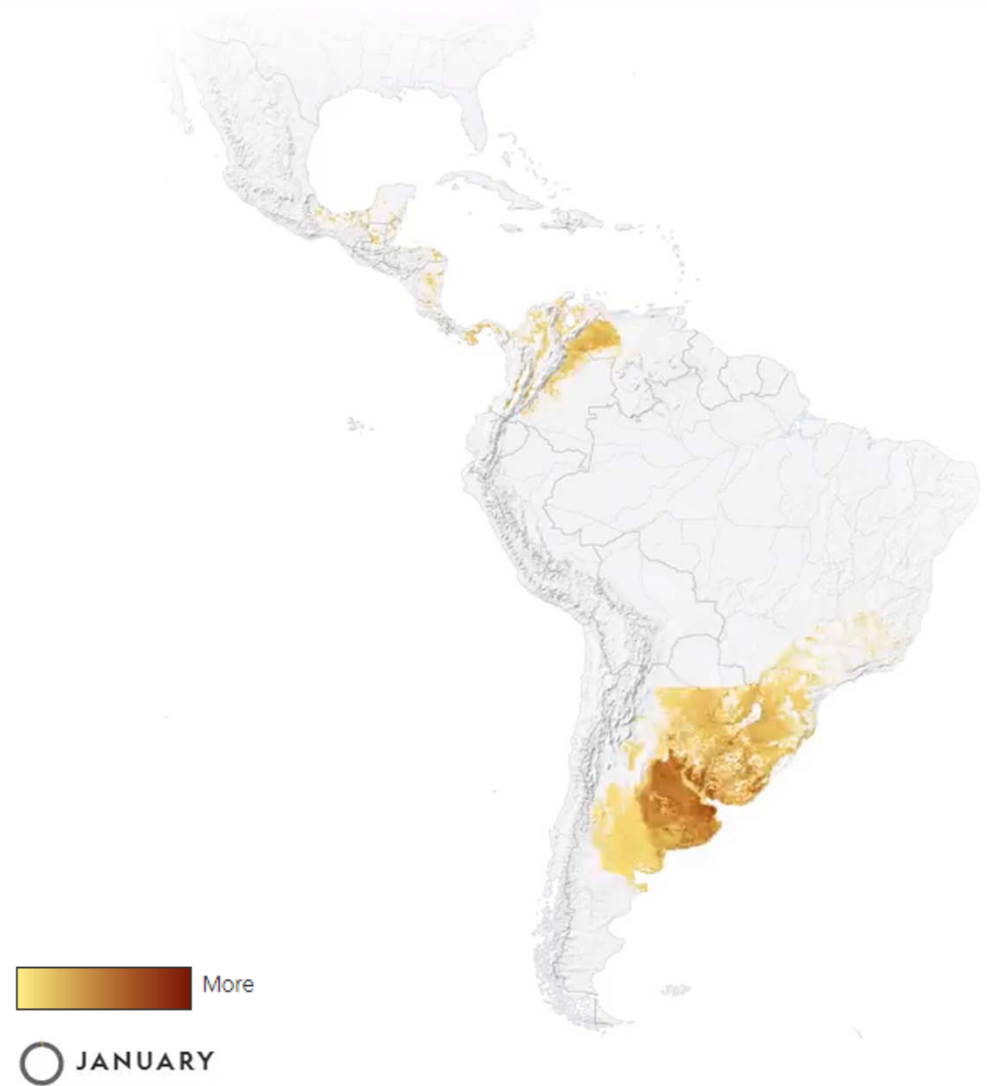


**.12** strong winds (storms)

**.41** bird migration

**.26** production of wheat

**.21** flash floods



Source: unknown

**Q 18** What is the geological structure shown on this aerial photo?



**.47** meteorite crater

**.23** volcanic caldera

**.15** eroded anticline

**.10** eroded syncline

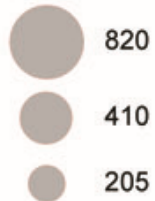
Q 19

As a result of globalization, the number of spoken languages in each country:

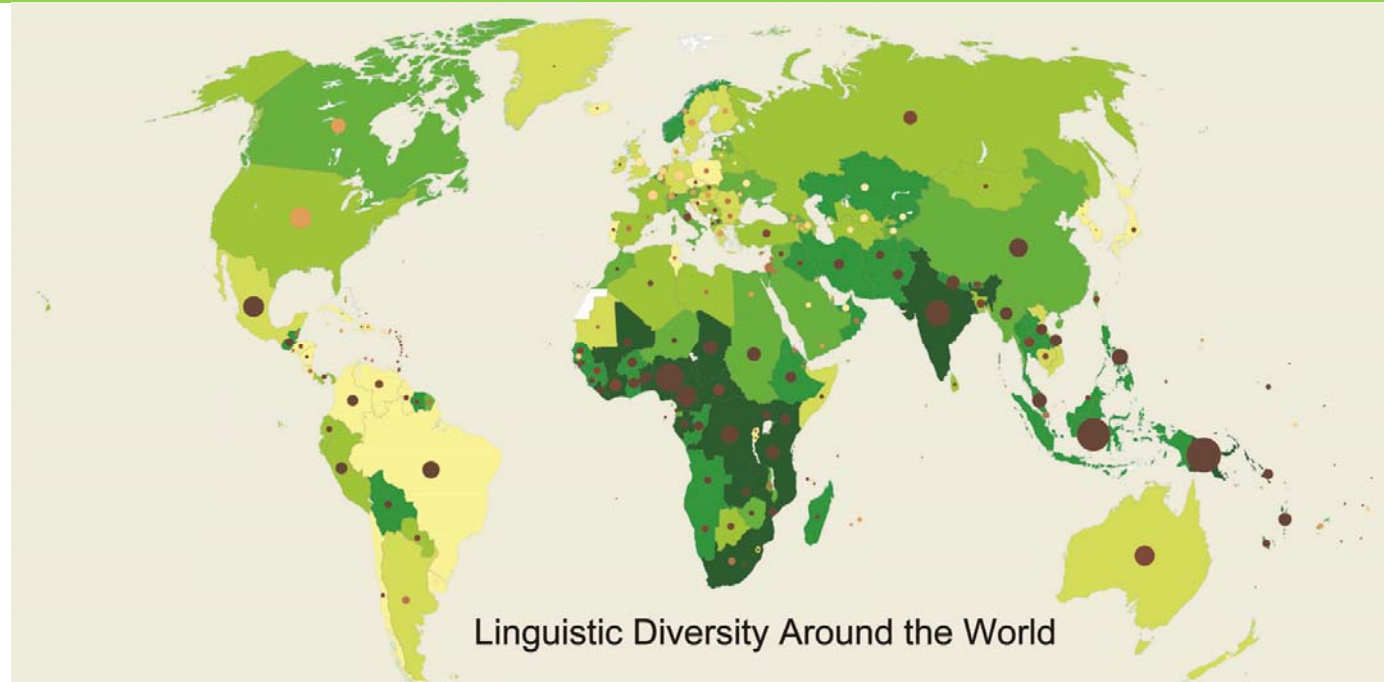
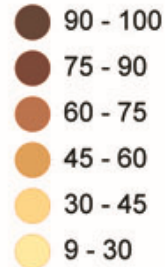
Index of Linguistic Diversity



Number of Spoken Languages in Each Country



Native Languages As Percent of All Spoken Languages



*MEDCs = more economically developed countries*  
*LEDCs = less economically developed countries*

**.24** will decrease for MEDCs and decrease for LEDCs for next decades.

**.08** will decrease for MEDCs and increase for LEDCs for next decades.

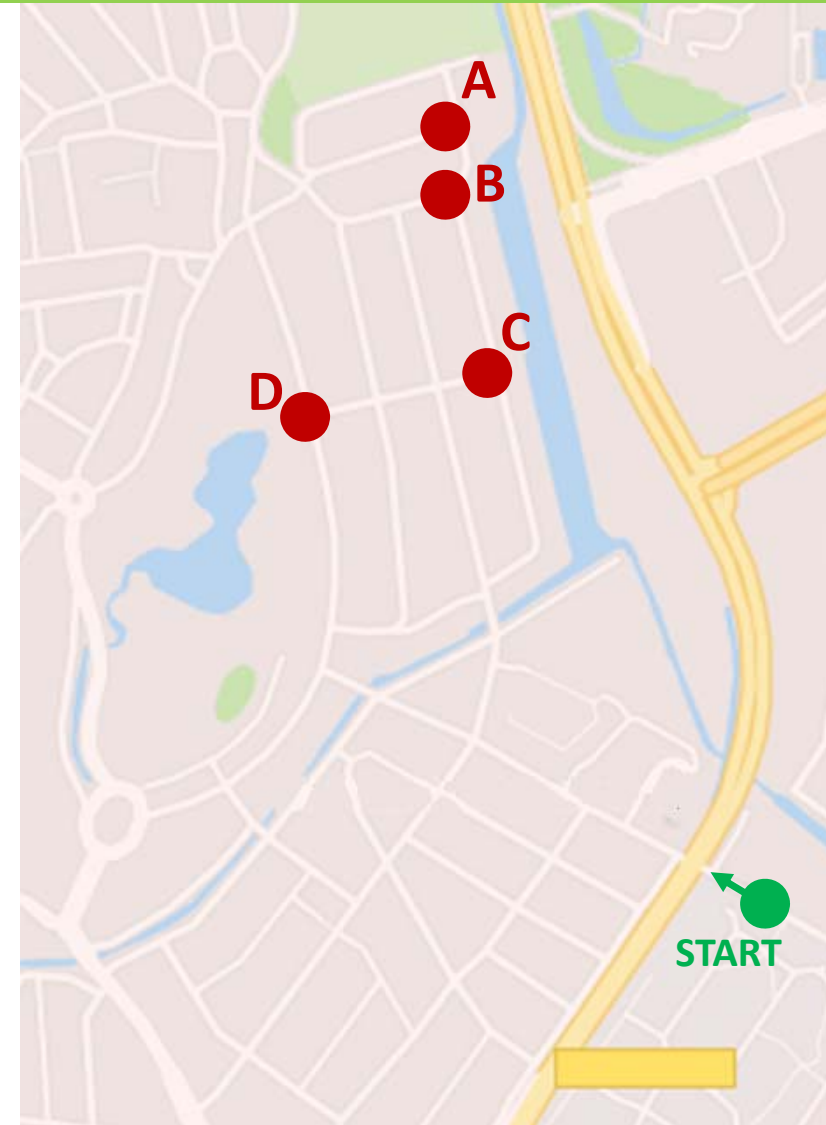
**.56** will increase for MEDCs and decrease for LEDCs for next decades.

**.10** will increase for MEDCs and increase for LEDCs for next decades.

Source: video: Tim Schuring; map: Google Maps (reworked)

**Q 20**

**What was the endpoint of this geographer's cycling tour?**



**.13** point A

**.78** point B

**.04** point C

**.04** point D

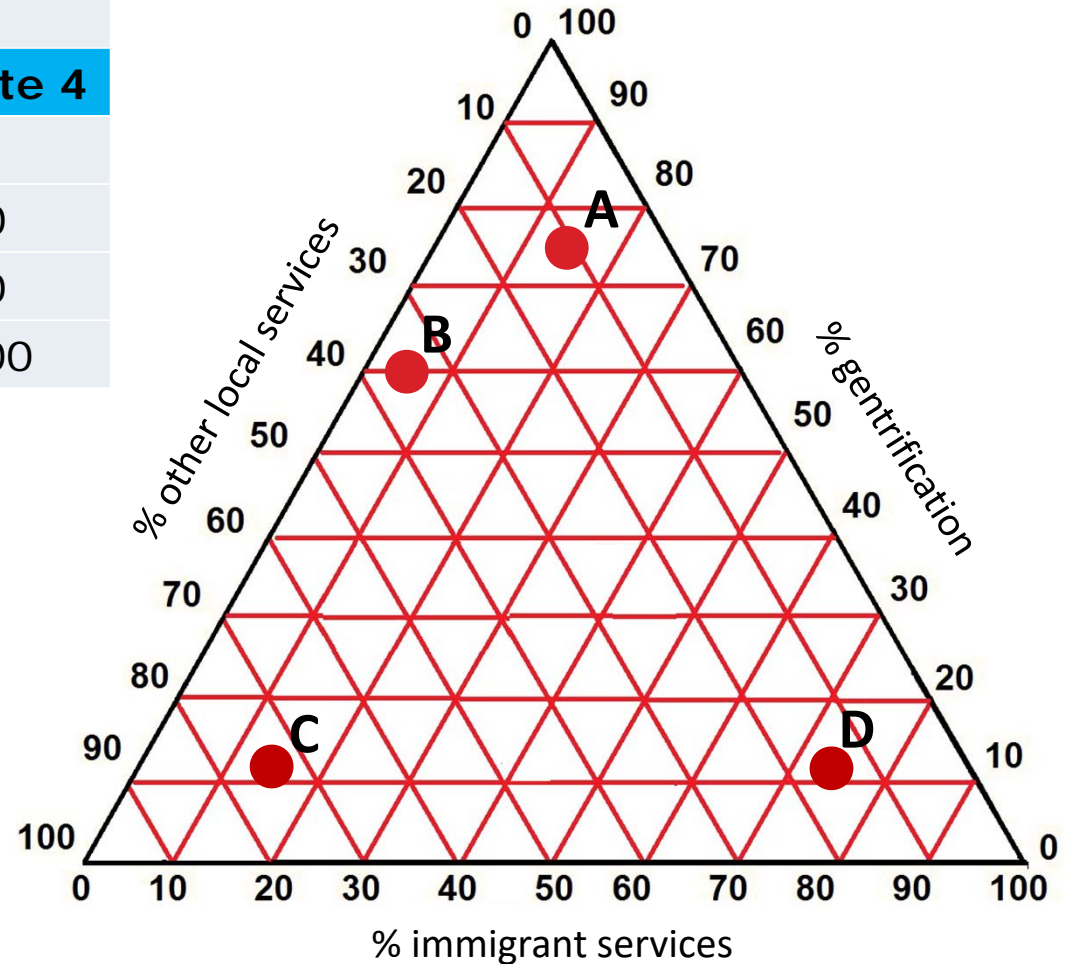


**Q 21**

Service structures for 4 sites in El Raval, an inner-city area of Barcelona (Spain).  
**What is the correct place of Site 2 in the triangular graph?**

**El Raval Service Structure**

Service	Site 1	Site 2	Site 3	Site 4
% gentrification	60	11.4	3	0
% immigrant services	5	15.2	20	50
% other local services	35	73.4	76	50
<b>Total</b>	100	100	100	100



**.03 A**

**.01 B**

**.92 C**

**.04 D**

Source: unknown

**Q 22** The sound of geography. **What phenomenon is captured by the sound?**



**.07** rock fall

**.35** sea surf waves

**.20** storm winds

**.37** volcanic eruption

Source: <https://www.sbs.com.au/nitv/nitv-news/article/2018/03/12/sos-carved-indonesian-palm-oil-plantation-highlight-impact-people-and-wildlife> + <https://www.edie.net/news/7/Unilever-cancels-palm-oil-sourcing-contracts-over-deforestation-concerns/> + [http://www.saynotopalmoil.com/Whats\\_the\\_issue.php](http://www.saynotopalmoil.com/Whats_the_issue.php)

**Q 23**

**All images show the effect on rainforest of:**



**.15 cacao plants**

**.76 oil palms**

**.00 orange trees**

**.09 rubber trees**



## Q 24 What are the coordinates of this airport?



.72 67°N 50°W

.17 85°N 12°E

.04 46°N 71°W

.06 75°N 71°E

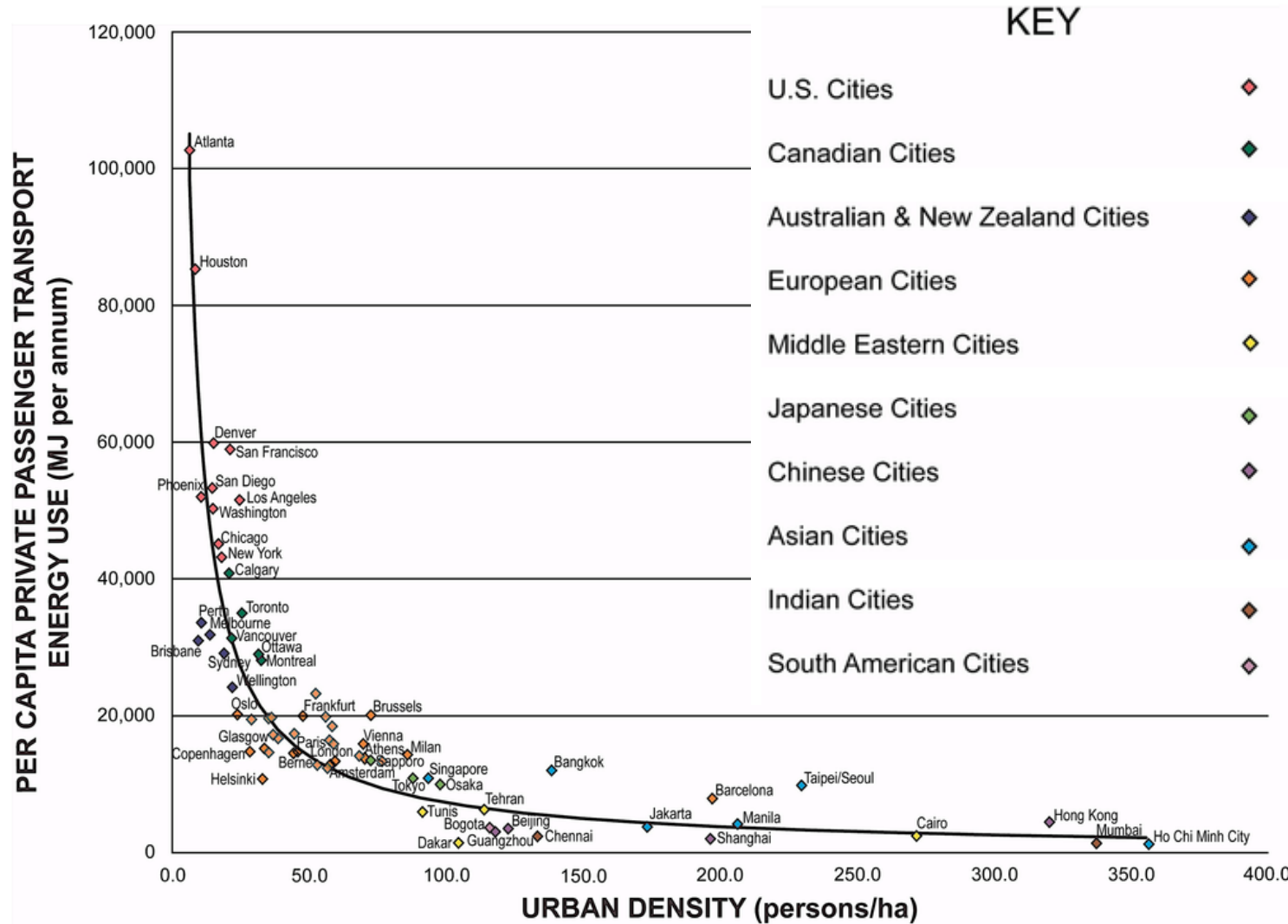
**Q 25** This graph is an example of:

**.13** positive correlation

**.05** relative location

**.42** spatial association

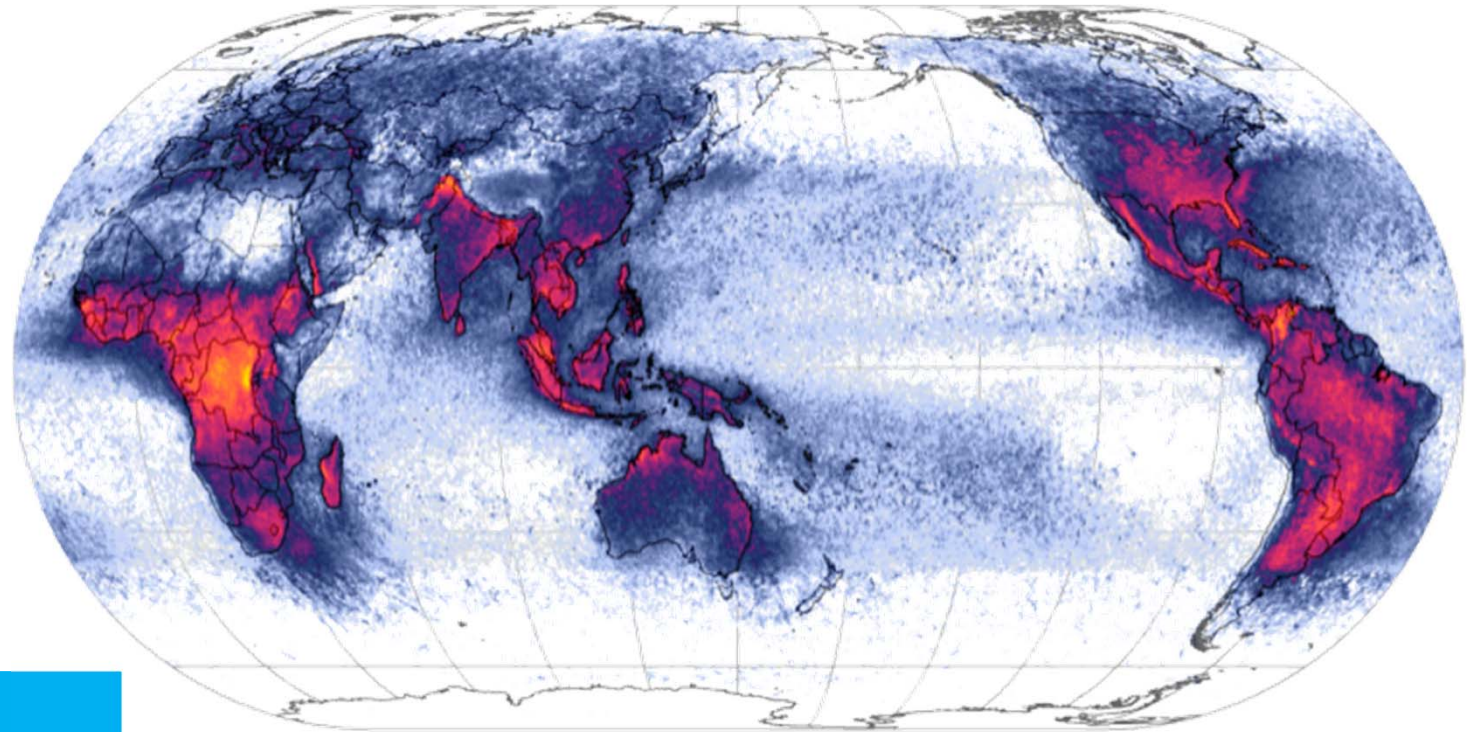
**.39** a trend



Source: <https://visual.ly/community/infographic/science/average-lightning-strikes-square-kilometer-year>

**Q 26**

**What pattern is shown on this map?**



*low/small values*  *high/big values*

**.17** annual rainfall

**.13** forest fires

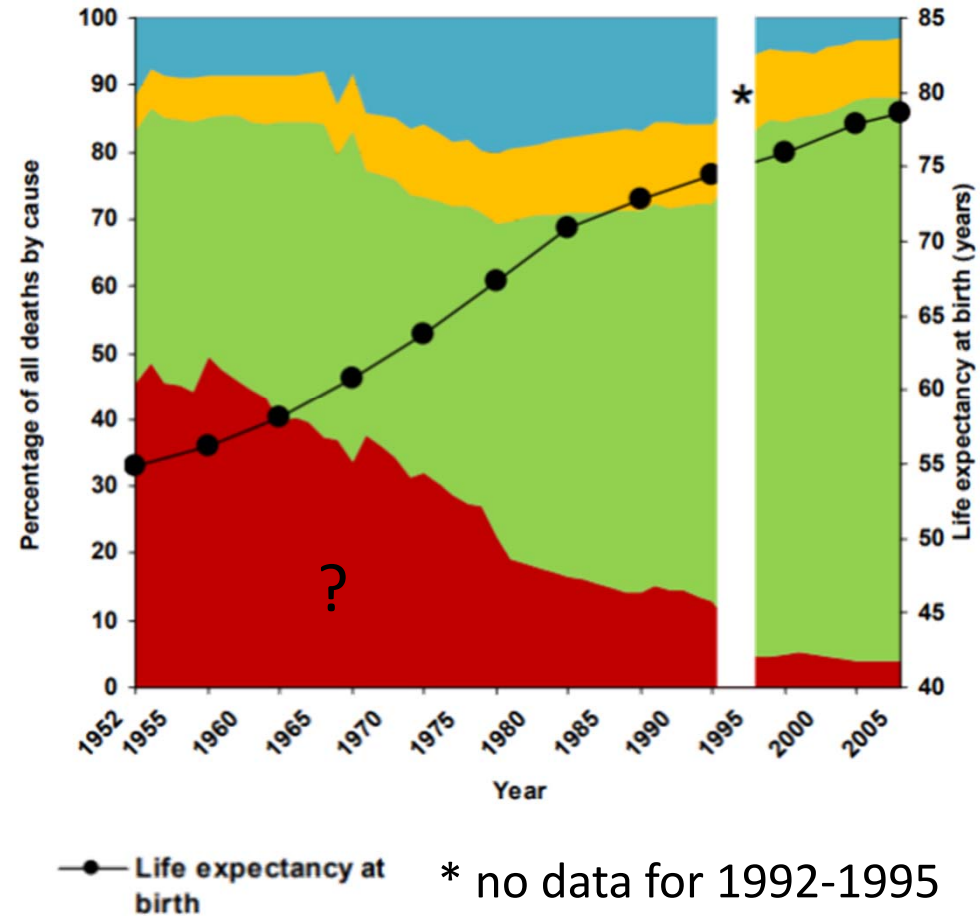
**.06** methane (CH<sub>4</sub>) emission

**.63** lightning strikes

**Q 27**

**Which cause of death is indicated by the colour red?**

**Percentage distribution of deaths by group of causes and life expectancy at birth, Chile, 1952-1992 and 1995-2005.**



**.69** communicable diseases

**.14** injuries and natural disasters

**.07** non-communicable diseases

**.09** old age

**Q 28**

**Evaporation ponds of a potassium mine. What is causing the intense blue color?**



**.18** added dye to speed up evaporation

**.18** bacteria growing in strong acidic waters

**.00** pesticides to stop pests

**.62** specific reflection of potassium-salts crystals



Q 29

What is shown by this dynamic map?



**.28** brain drain and seasonal migration

**.04** foreign direct investments

**.64** major conflicts and refugees

**.03** pattern of influenza outbreaks

Source: <https://www.propertyturkey.com/blog-turkey/why-healthcare-tourism-in-turkey-is-booming> + <https://www.wmf.org/project/venice> + <http://www.konbini.com/us/entertainment/garbage-paradise-surfing-the-maldives-infamous-trash-island/> + photo Killing Fields Cambodia by Tim Schuring

Q 30

Which image relates best to the concept of 'black tourism'?



.08 image A

.07 image B

.22 image C

.62 image D

Source: photo by Jüri-Ott Salm; Sweden, Stora Mosse

**Q 31**

**What is this rather common activity in temperate zone wetlands (especially in swamps in protected areas) on the photo?**



**.55 digging ditches in the swamp for soil improvement**

**.15 building the board walk for recreational purposes**

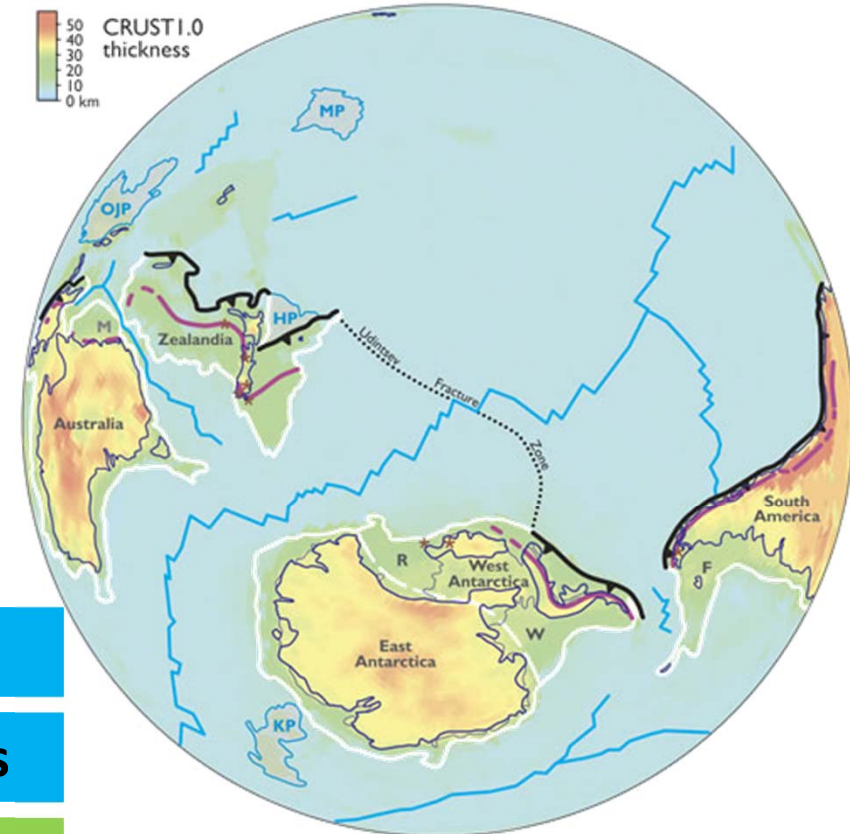
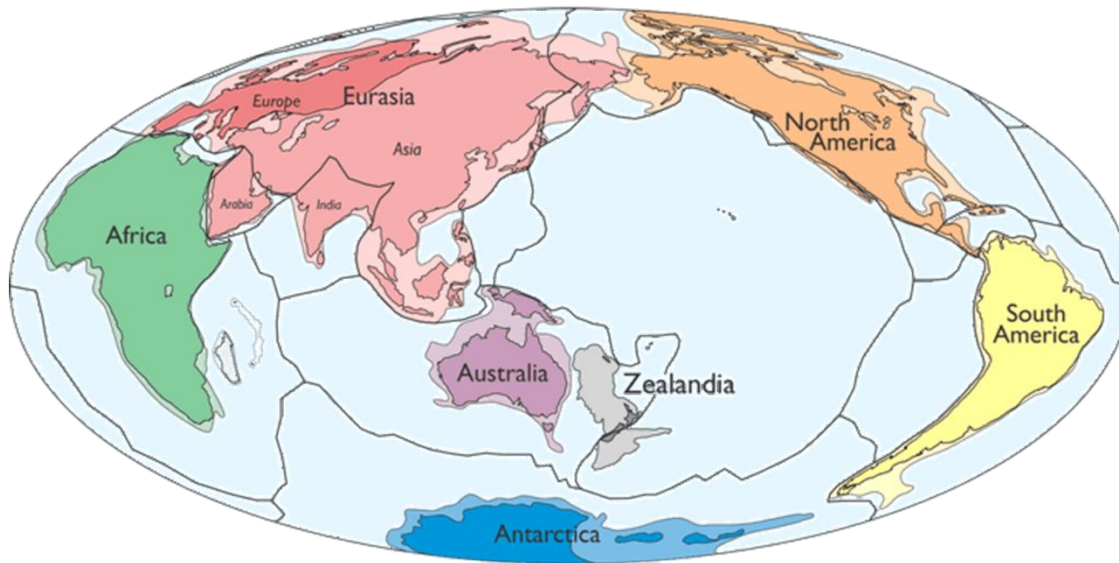
**.23 building a dam during swamp restoration process**

**.06 building artificial habitat for beavers**

Source: <https://www.forbes.com/sites/bridainejarnell/2017/02/17/the-lost-continent-of-zealandia/#6497682d54e7> + <https://bigthink.com/design-for-good/earths-hidden-continent-zealandia-finally-recognized>

**Q 32**

**Geologists in 2017 defined a new continent: Zealandia. What argument could be used to consider Zealandia as a new continent?**



**.25 a basalt-rich crust, thicker than its surroundings**

**.14 a basalt-rich crust, thinner than its surroundings**

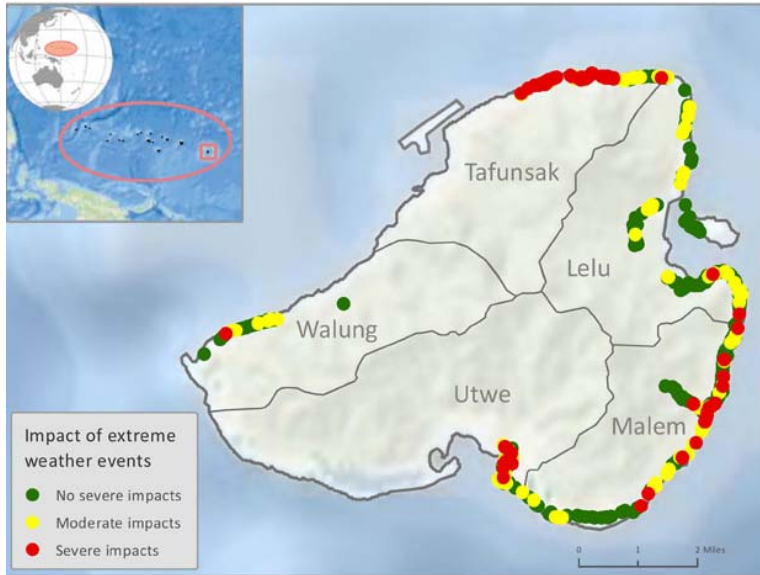
**.56 a granite-rich crust, thicker than its surroundings**

**.04 a granite-rich crust, thinner than its surroundings**



**Q 33**

**Which feature makes parts of the Kosrae Island (Micronesia) capable to withstand an extreme weather event ('no severe impacts' on the map)?**



**.71 photo A**

**.14 photo B**

**.02 photo C**

**.12 photo D**

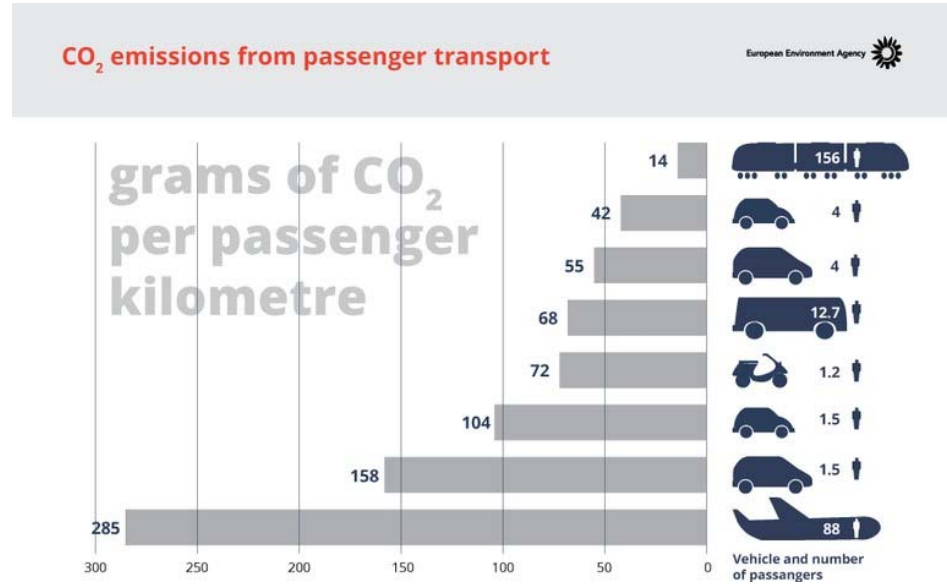
Source: <https://www.flightradar24.com/blog/the-busy-summer-skies-continuing-to-break-flight-tracking-records/> + <https://www.eea.europa.eu/media/infographics/co2-emissions-from-passenger-transport/view>

Q 34

## What additional information is needed to calculate the amount of CO<sub>2</sub> emissions produced by all flights on July 13th 2018?



July 13th 2018 record: 205.468 flights in 24 hours



.39 average length of the flights

.04 total amount of passengers

.50 average length of the flights and total amount of passengers

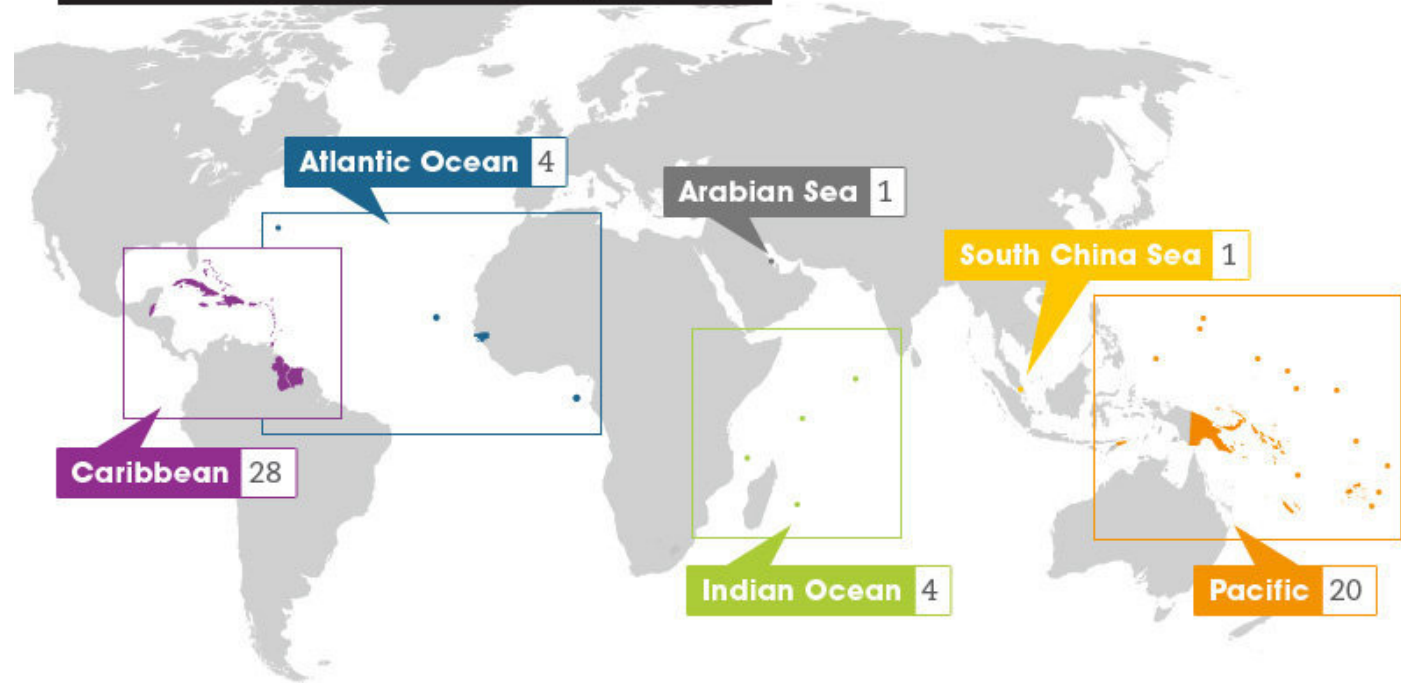
.06 don't need any additional information to this data

**Q 35**

**Which economic sector do many small island states rely on to bring in foreign exchange income?**

**Small Island Developing States**

58 SIDS in total



**.17 financial services**

**.08 fishery**

**.04 mining**

**.69 tourism**

Source: <https://www.ibtimes.co.uk/cop21-how-climate-change-destroying-sami-way-life-scandinavia-1526549> + <https://infograph.venngage.com/p/112362/mayans-aztecs-and-incas> + [https://en.wikipedia.org/wiki/Marsh\\_Arabs](https://en.wikipedia.org/wiki/Marsh_Arabs) + <http://www.climateprep.org/stories/2016/3/14/identity-and-vulnerability-the-case-of-sama-bajaus>

**Q 36**

**What is the correct order of names of these indigenous peoples from left to right?**



**.10 Inuit | Aymara | Yazidis | Chamorros**

**.12 Inuit | Tuareg | Ma'dan | Charmorros**

**.59 Sami | Aymara | Ma'dan | Sama-Bajau**

**.17 Sami | Tuareg | Yazidis | Sama-Bajau**



**Q 37**

**How might the conflict depicted in the cartoon be related to your everyday life?**



**.16** mined bauxite used in the airplane which brought you to the iGeo in Quebec

**.04** mined coal for the generation of domestic energy

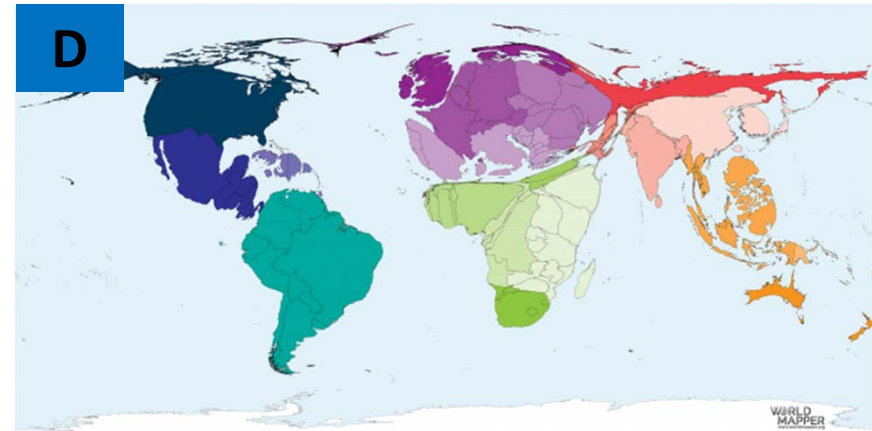
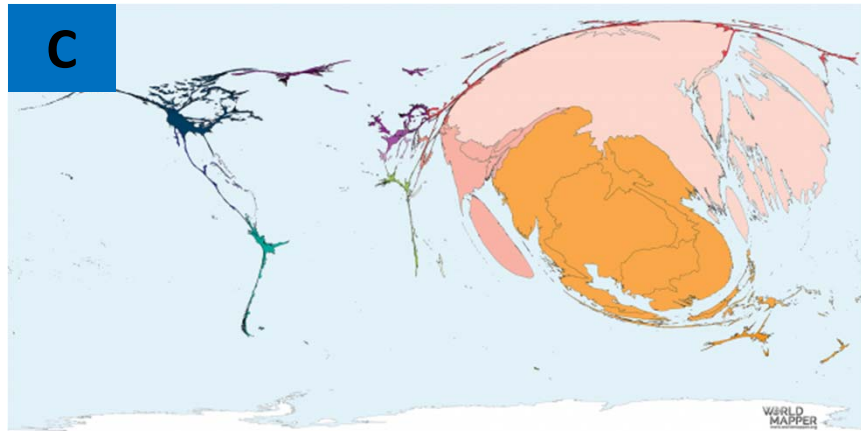
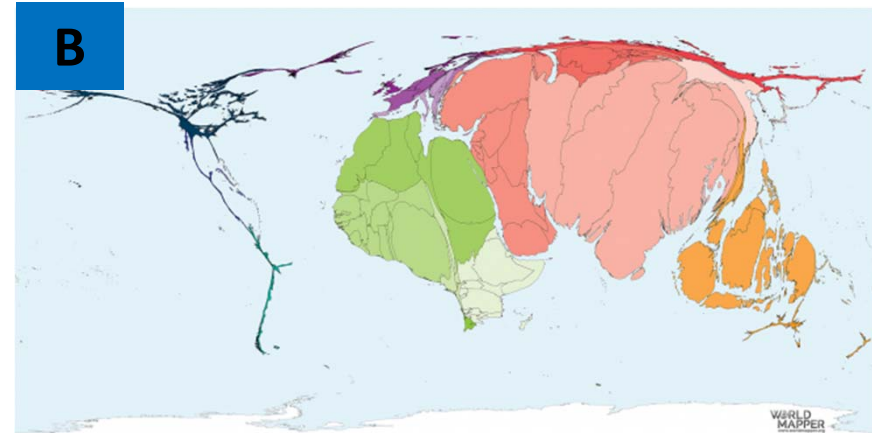
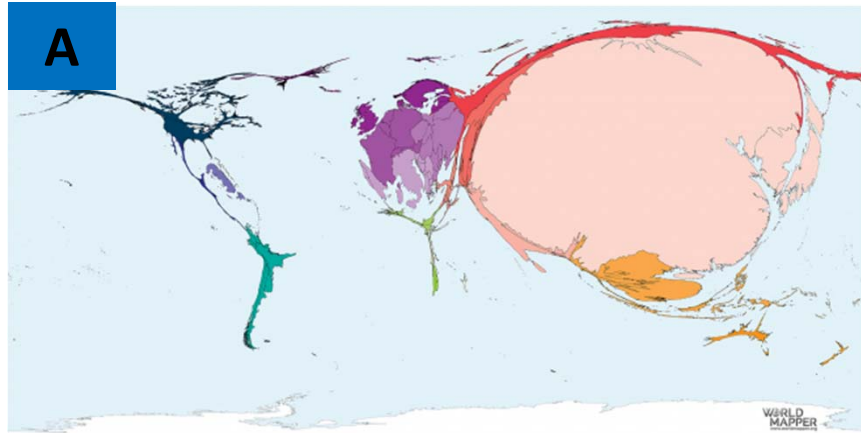
**.03** mined minerals (e.g. phosphorus) are used as fertilizers in agriculture

**.76** mined rare earth minerals used in the production of electronic equipment

Source: <https://worldmapper.org/>

**Q 38**

These maps of religious population are, in alphabetical order, : atheist, buddhist, christian and muslim. **Which map shows the atheist (non-religious) population?**



**.82** map A

**.01** map B

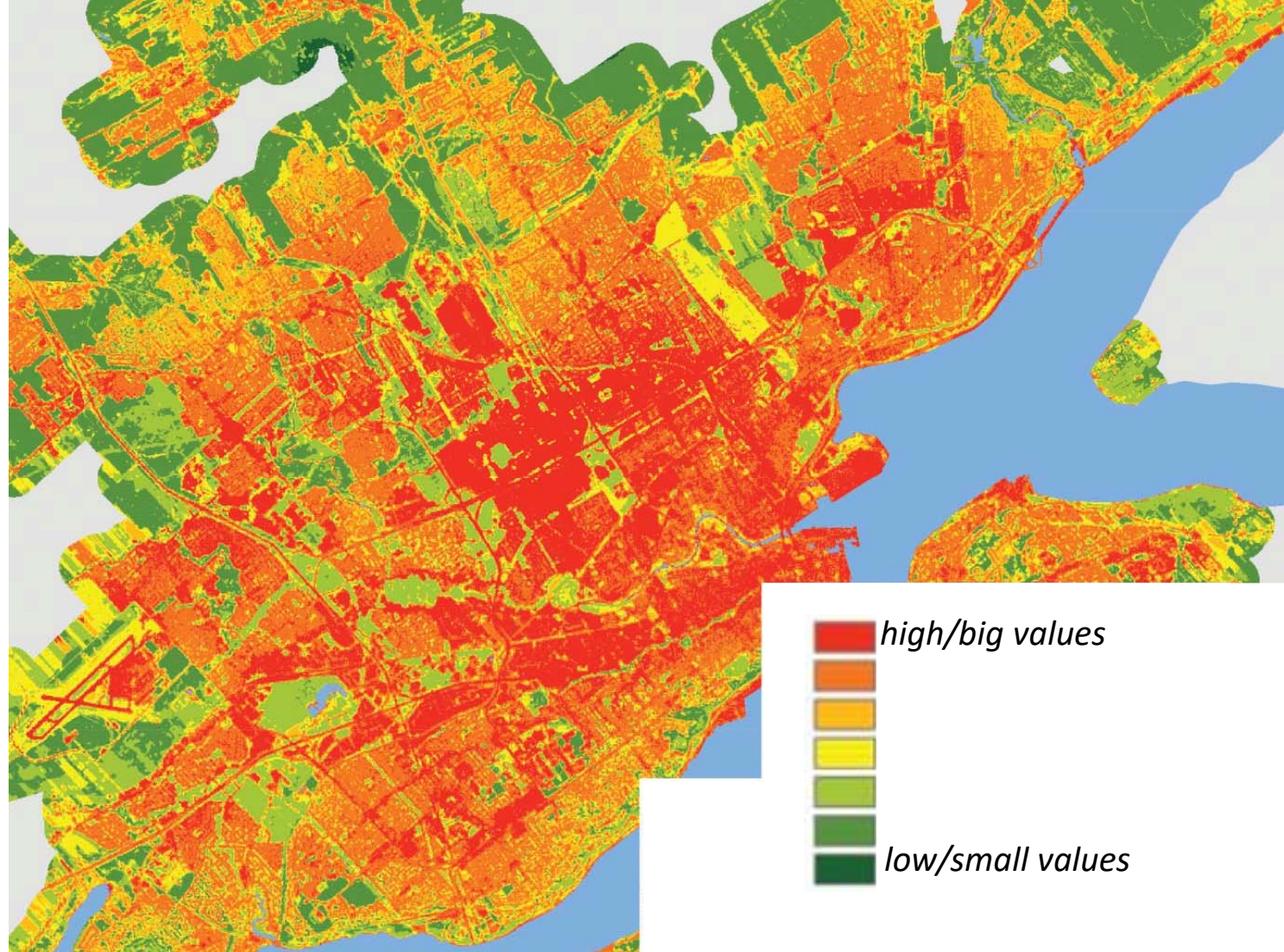
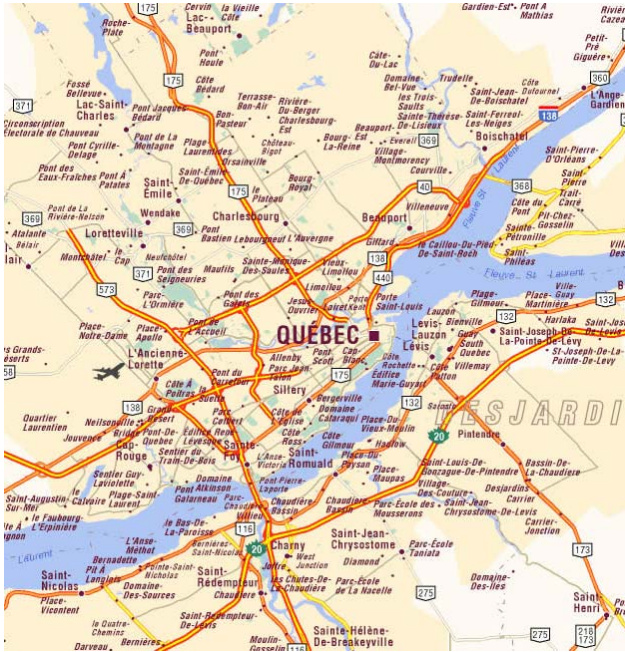
**.04** map C

**.13** map D

Source: <https://resources.esri.ca/map-gallery/mapping-urban-heat-and-cold-islands-in-the-qu%C3%A9bec-region>

Q 39

# What is shown on this map of the city of Quebec?



**.09** age of houses

**.16** house prices

**.44** noise pollution

**.30** temperature

high/big values

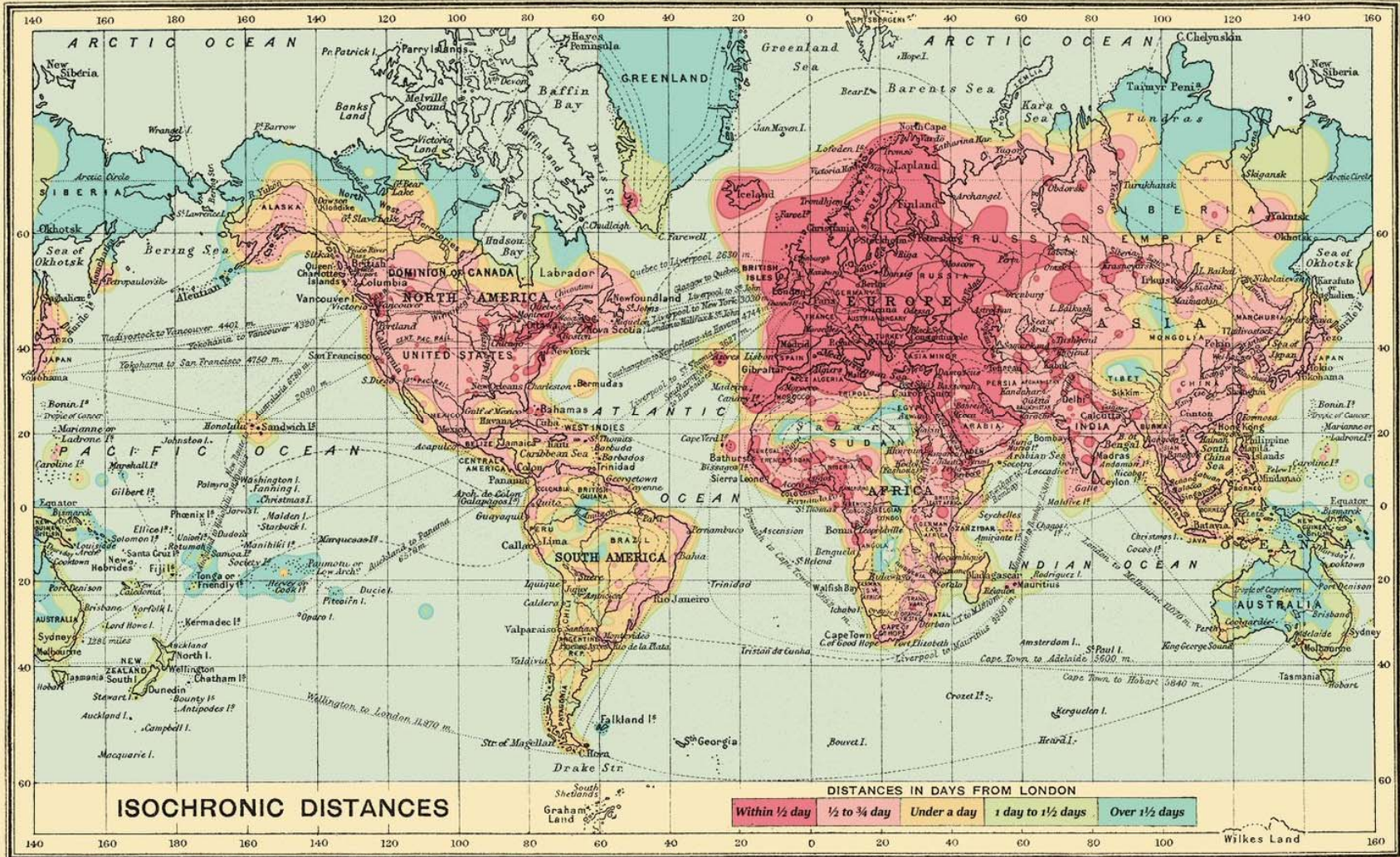
low/small values

Source: <http://i.imgur.com/IBHntcj.jpg>

Q 40

This isochronic map shows travel time from London for:

12<sup>B</sup>



.02 1716

.05 1816

.33 1916

.59 2016

## The last slide



*The End*

- You have reached **the last slide** of the Multimedia Test.

- Click on the arrow (↑ ←) to go back to the previous page(s) if you want to check your answers.

- **For fast navigation:**

Click [here](#) to go back to question 1

Click [here](#) to go back to question 10

Click [here](#) to go back to question 20

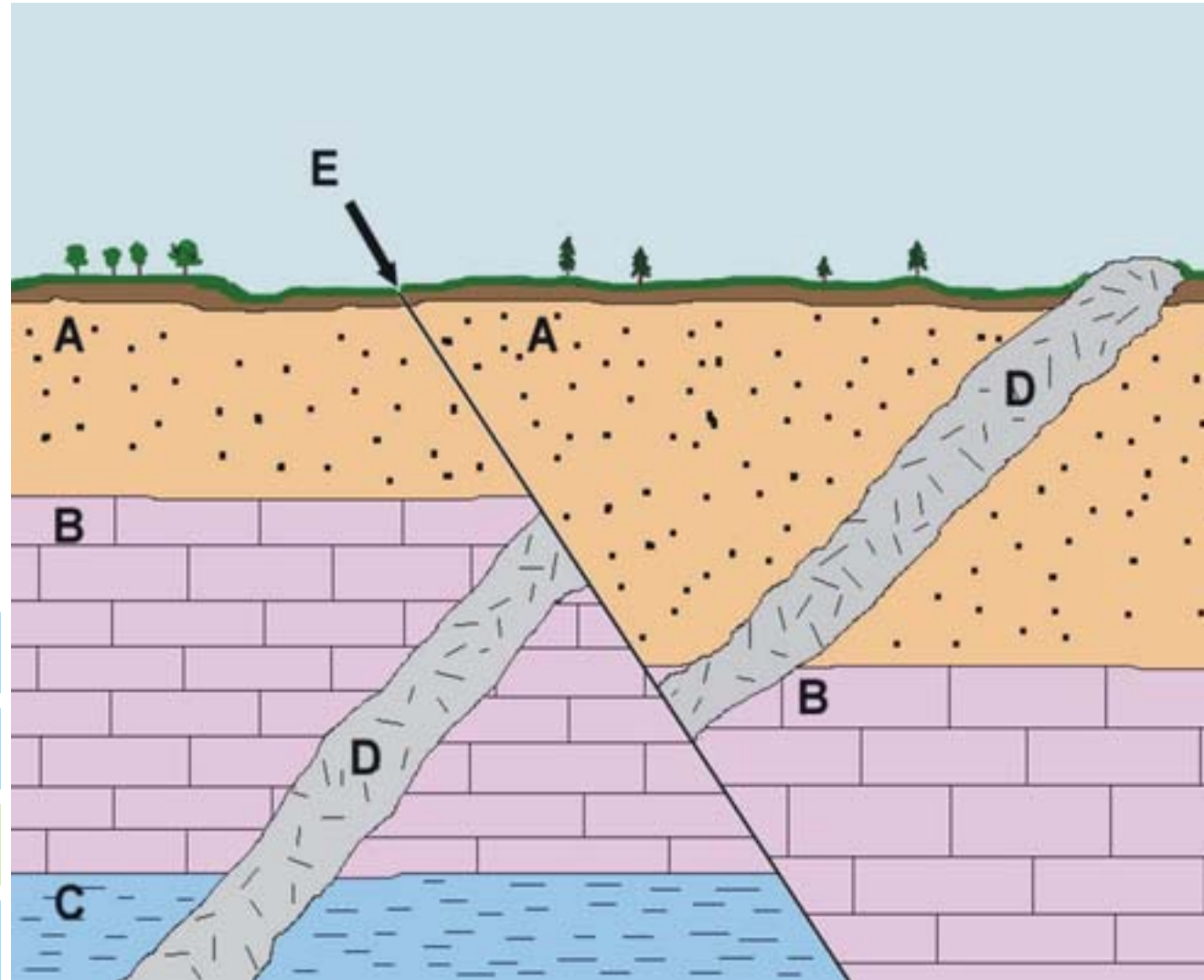
Click [here](#) to go back to question 30

- Please remain seated after your answer form has been picked up. There will be a small **questionnaire on paper to evaluate** the 2018 MMT. Your answers will help to improve future MMTs and won't influence your score in any way.

**Wait silently until the time is over.  
DO NOT CLICK ON THE ESCAPE BUTTON,  
AS THAT ENDS THE PRESENTATION.**

**RES 1** What is the chronological order of these geological layers (A-D) and fault (E)?

**RESERVE QUESTION 1  
YOU WILL BE TOLD IF  
ANOTHER QUESTIONS IS  
SUBSTITUTED BY THIS  
QUESTION DURING THE TEST**



- d - c - b - a - e

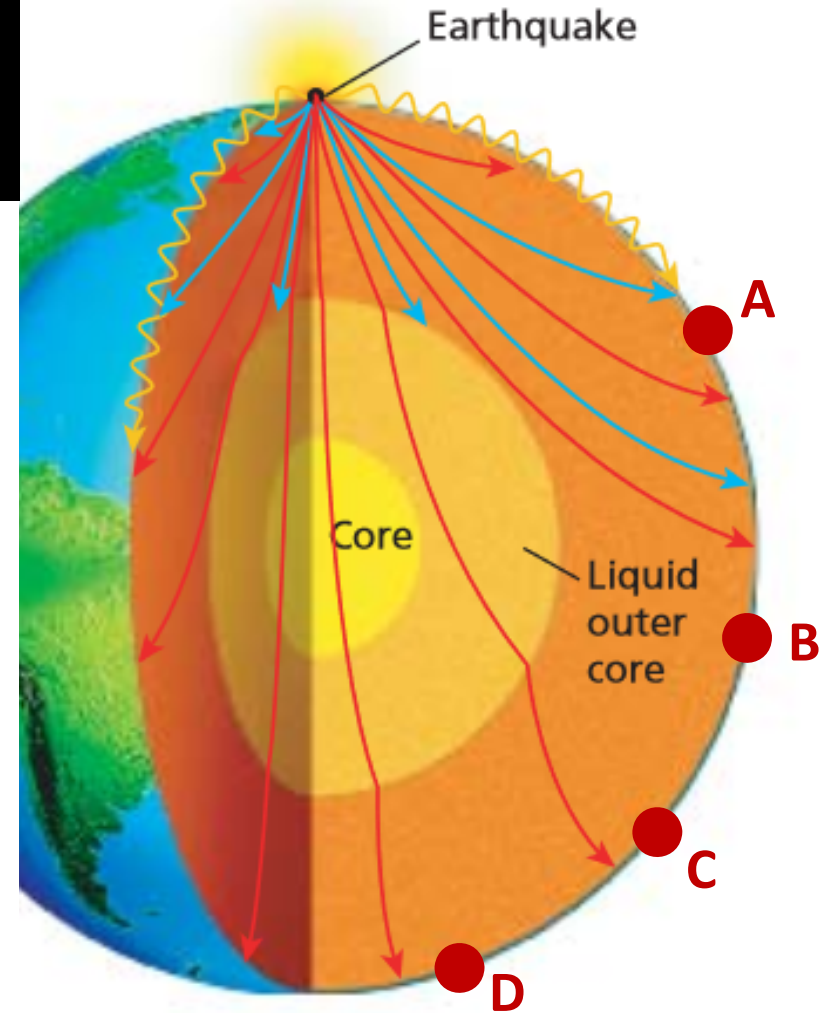
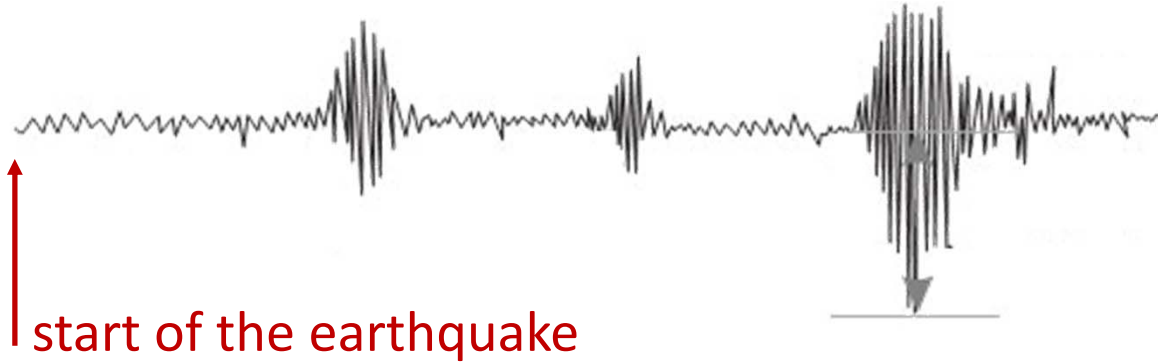
- d - c - b - e - a

- c - b - a - d - e

- c - d - b - e - a

## RES 2 To which place does this schematic seismogram belong?

**RESERVE QUESTION 2**  
**YOU WILL BE TOLD IF ANOTHER QUESTIONS IS**  
**SUBSTITUTED BY THIS QUESTION DURING THE TEST**



- point A

- point B

- point C

- point D