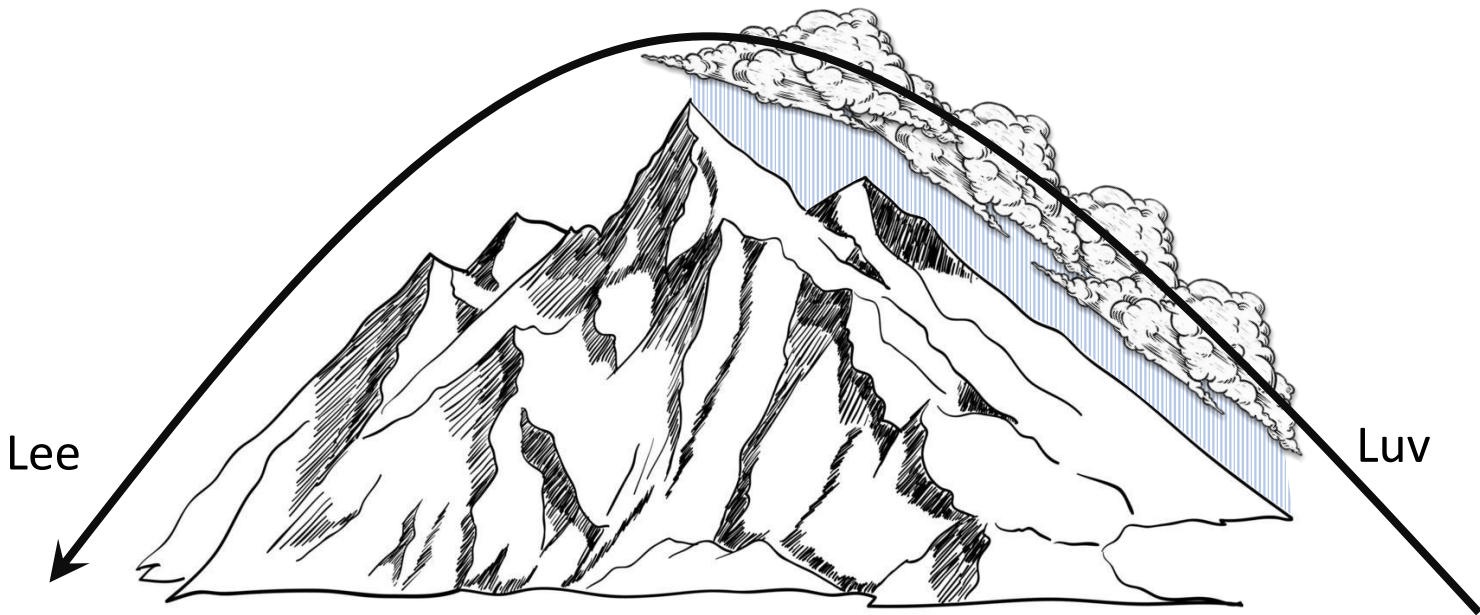


1) Which of the following statements about Foehn weather conditions is **wrong**?

- a) The air has a higher relative humidity on the luv side of the mountain.
- b) The ability of cold air to keep more water results in more rain at higher altitudes.
- c) The temperature on the plains on the luv side is lower than on the lee side.
- d) The air flows from a high-pressure system on the luv side in a low-pressure system on the lee side.

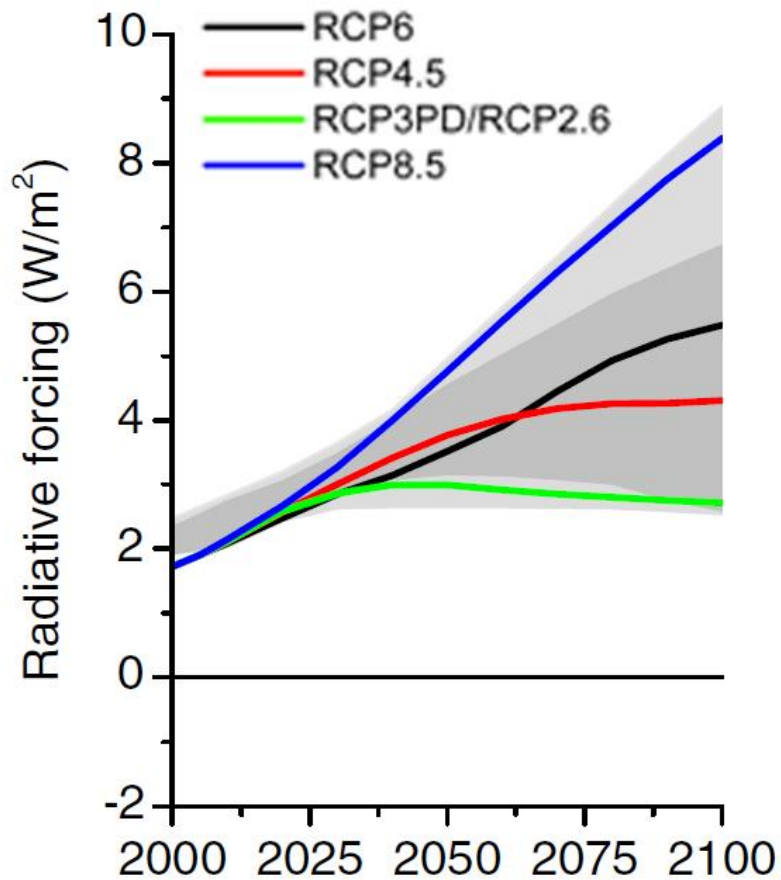


2) What is shown in the gif?



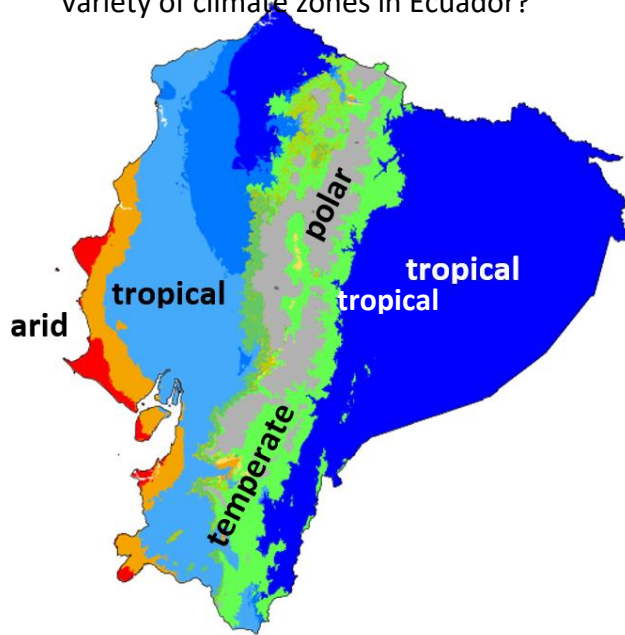
- a) Hypothetical future location of Uganda due to the collision of the African and Eurasian Plate
- b) Migration patterns between Uganda and Sweden
- c) (Area) distortion of a cylinder projected world map
- d) Exchange of climate zones in the future due to climate change

- 3) What are RCP scenarios? Use the following graph to answer that question. (The grey areas are uncertainties?)



- a) Global population growth scenarios
- b) Global greenhouse gas emission scenarios
- c) Global solar energy scenarios
- d) Global radioactivity scenarios

- 4) Which of the following geophysical characteristics does **not** contribute to the large variety of climate zones in Ecuador?



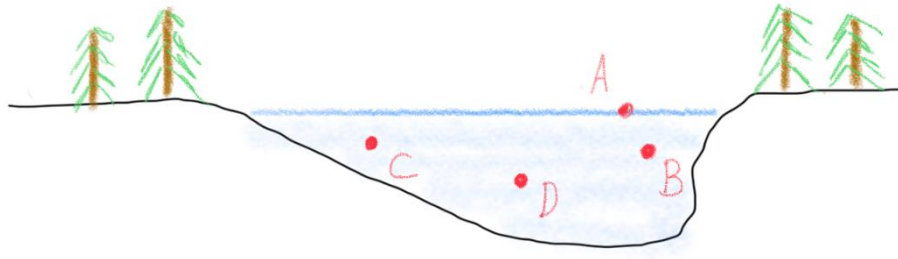
- a) volcanic activity
- b) cold coastal currents
- c) high central mountain ridge
- d) proximity to the ITC zone

5) What is the paradigm of the current international climate change regime?



- a) Every country decides by itself to what extent it mitigates its effects on climate change.
- b) The Contribution to climate change mitigation is proportional to a country's greenhouse gas emissions.
- c) Developed countries are obliged to take more actions than developing countries.
- d) Developing countries are not bound to regulation as long as they are below a certain GDP (Gross Domestic Product) per capita level.

6) Where would you expect the highest water velocity within this river?



- a) A
- b) B
- c) C
- d) D

7) To which strategy to achieve a sustainable development does the MSC (Marine Stewardship Council) relate here?

“Choosing products with the MSC blue fish label allows you to enjoy eating seafood with the knowledge you have made a positive choice to support well-managed, sustainable fisheries.”



“Choosing products with the MSC blue fish label allows you to enjoy eating seafood with the knowledge you have made a positive choice to support well-managed, sustainable fisheries.”

- a) Efficiency
- b) Accuracy
- c) Consistency
- d) Sufficiency



8) This ski resort covered a slope with a tarpaulin to ____**(1)**____ the melting of the glacier below. Due to the ____**(2)**____ albedo of the tarpaulin, short wave radiation from the ____**(3)**____ is reflected back to the atmosphere. Thus, the glacier below the tarpaulin maintains a lower temperature than its darker surroundings during the summer.

- a) (1) accelerate, (2) low, (3) sun,
- b) (1) reduce, (2) low, (3) atmosphere,
- c) (1) accelerate, (2) high, (3) atmosphere
- d) (1) reduce, (2) high, (3) sun

9) Which of the following pictures can directly be associated with a debris flow?

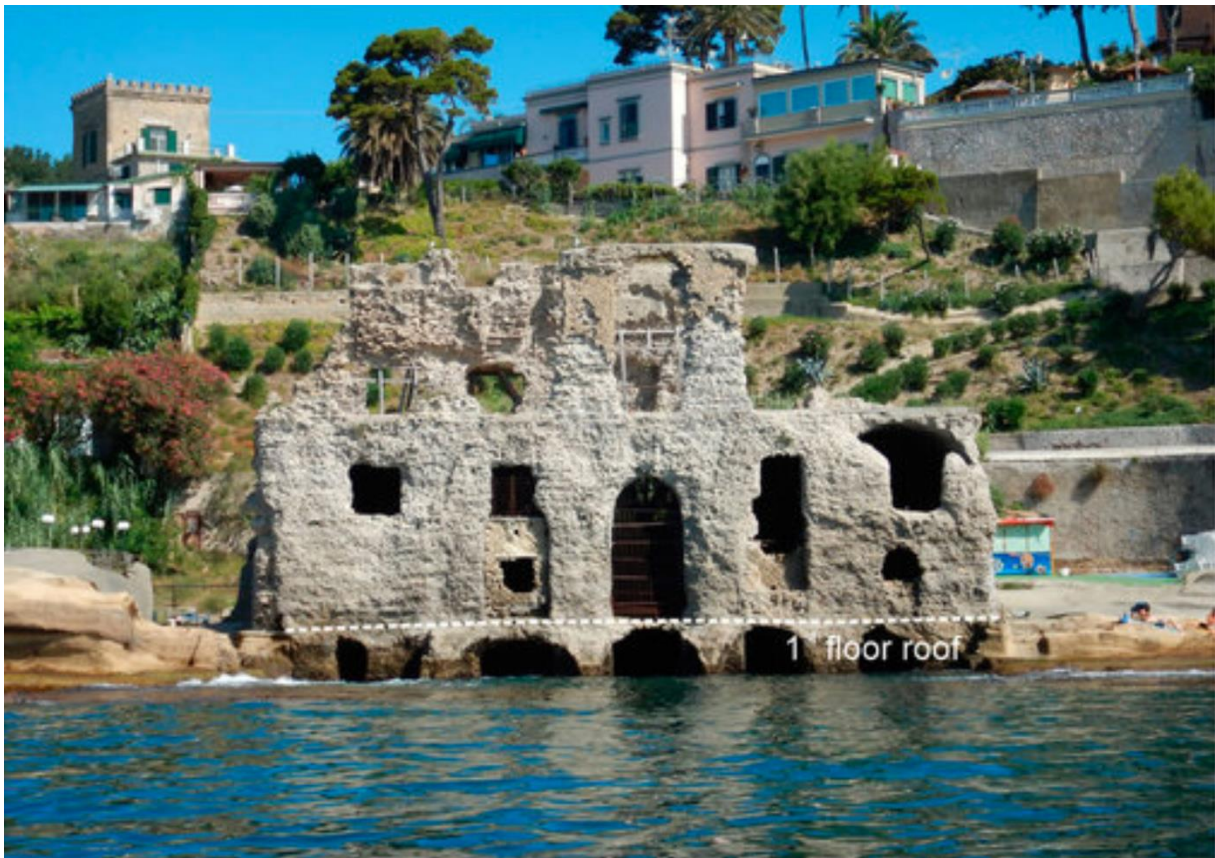


- a) A
- b) B
- c) C
- d) D



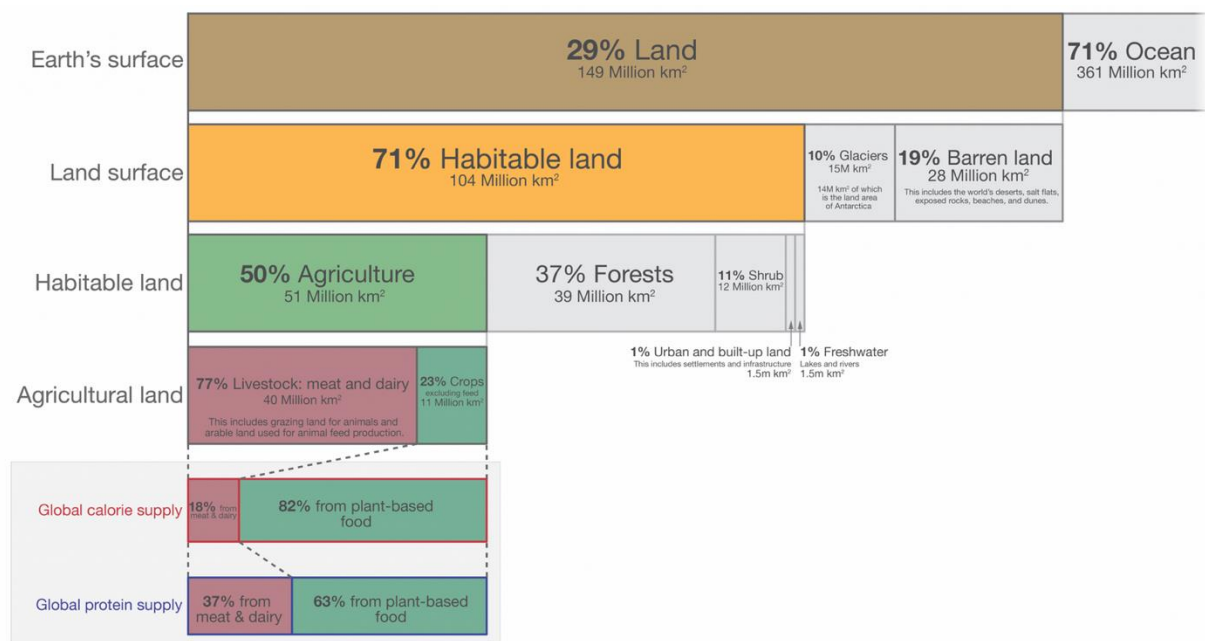
10) Forests close to the North American east coast actually show a surprisingly fast growing area of bleached, dead trees (ghost forests). What might be the cause?

- a) severe droughts in consecutive years
- b) increasingly salty ground water
- c) increased number and intensity of hurricanes
- d) massive outbreaks of mountain pine beetles



11) This Roman villa «Palazzo degli Spiriti» near Naples shows a nearly completely submerged first floor. What is the reason?

- a) instable ground under the villa
- b) rising of the sea level
- c) tectonic lowering of the surrounding area
- d) coastal erosion due to tides



Data source: UN Food and Agriculture Organization (FAO)

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the authors Hannah Ritchie and Max Roser in 2019.

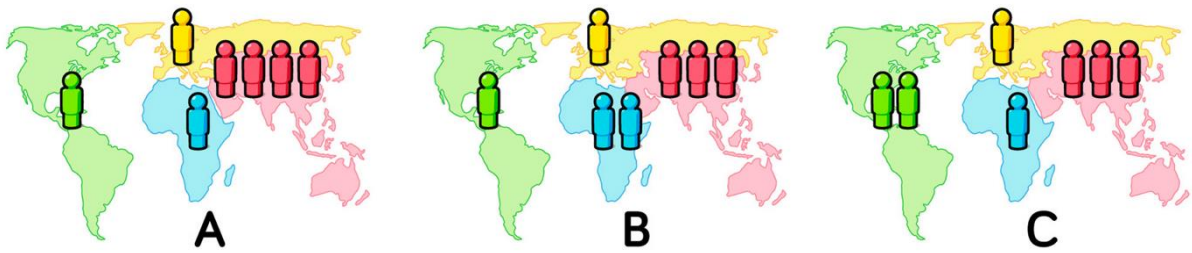
12) How much of the Earth's surface is used for agriculture following the above graph?

- a) 50%
- b) ~33%
- c) ~21%
- d) ~10%

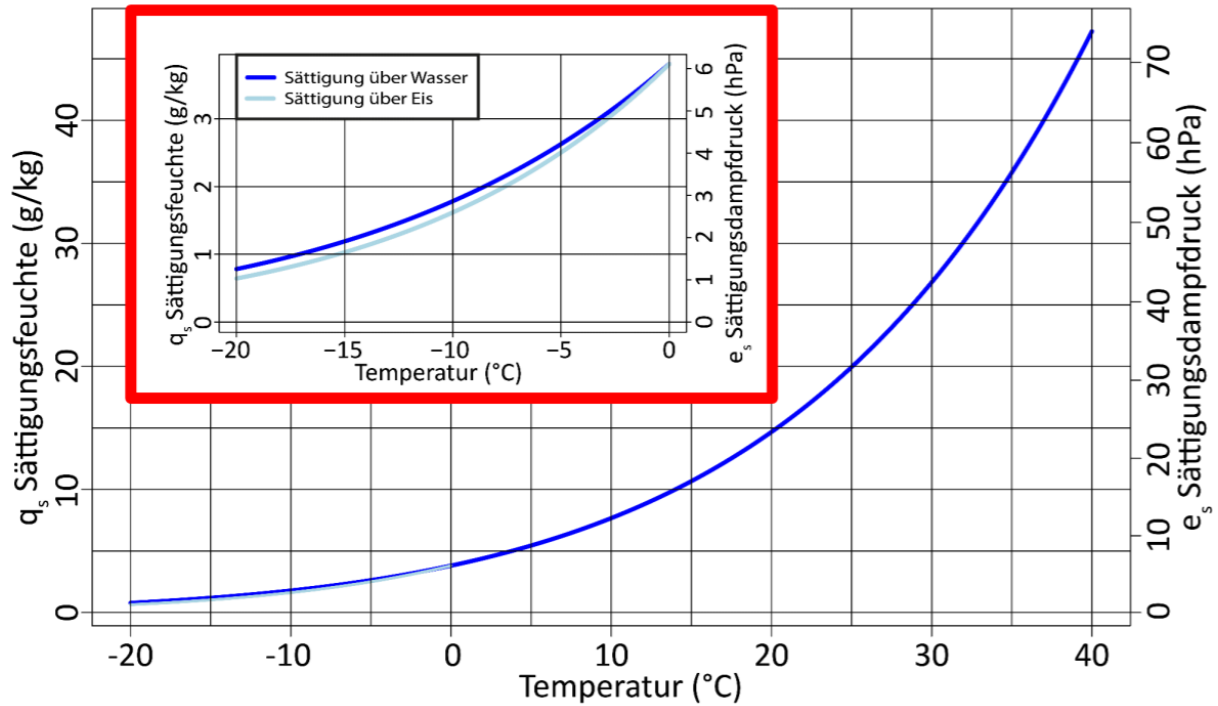
13) Which country shows the highest number of languages (840)?

- a) Papua New Guinea
- b) India
- c) China
- d) Brazil

14) If the numbers of the continent's populations are rounded there are roughly 7 billion people in the world today. Which map shows best where they live? (Each figure represents 1 billion people)

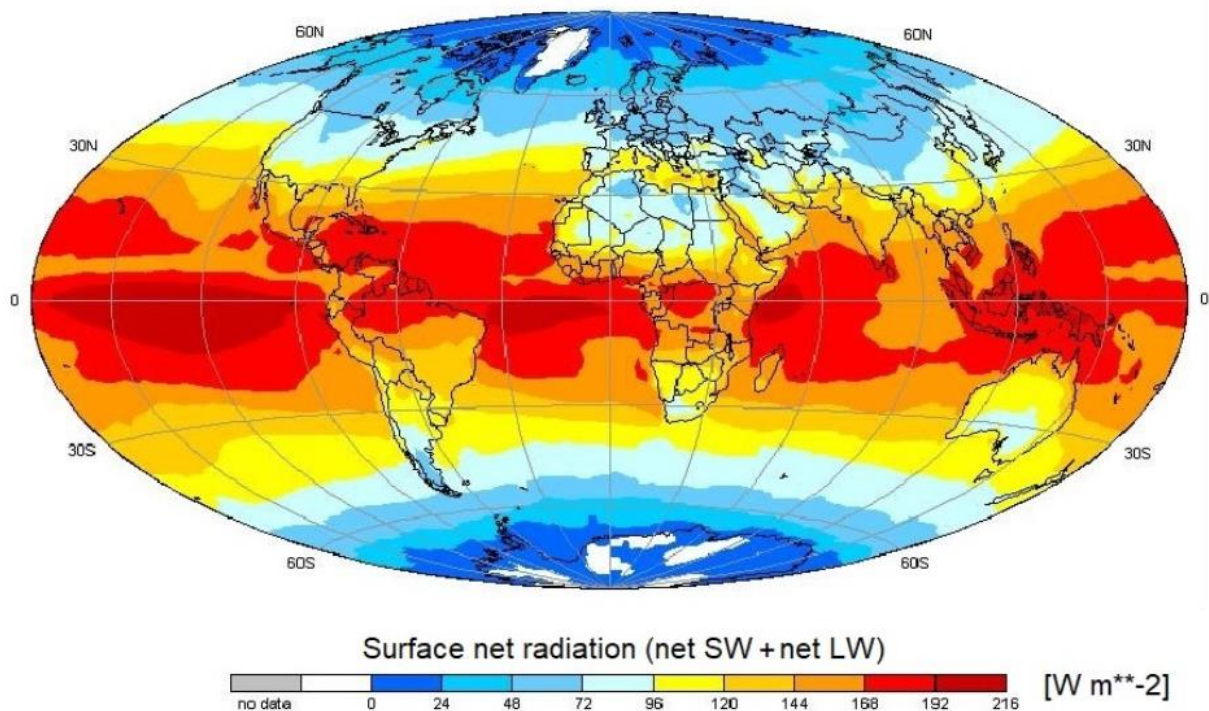


- a) A
- b) B
- c) C
- d) none of the above



15) How many metres does air with a temperature of 20 °C and a relative humidity of 50% have to rise to be saturated, if the dry adiabatic lapse rate is -1 °C per 100 m?

- a) 1000 m
- b) 100 m
- c) 1200 m
- d) 500 m



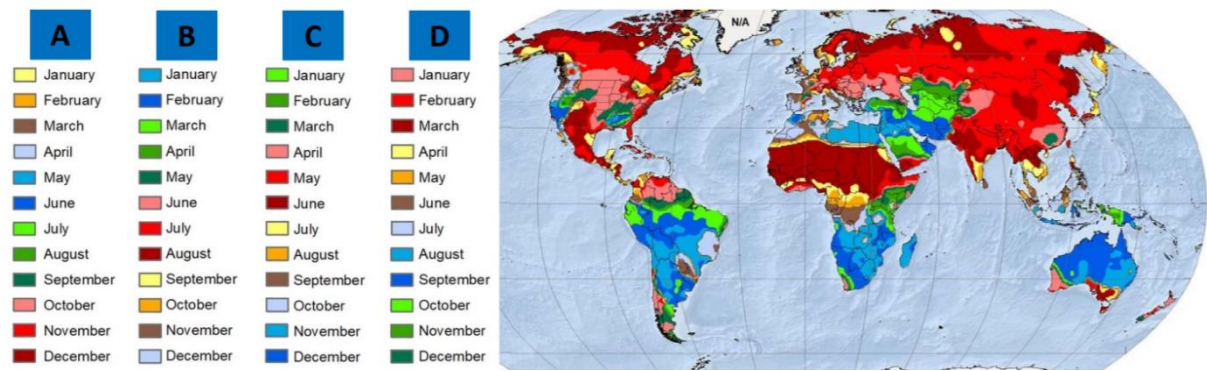
16) The figure shows the surface net radiation (sum of short- and longwave radiation). Which of these statements is wrong?

- a) The surface net radiation in the high latitudes is low because of high albedo and large zenith angles of the Sun.
- b) The surface net radiation in the desert areas is low because of little absorbed solar radiation caused by a high albedo.
- c) The surface net radiation in the desert areas is low because of large longwave radiation through dry soils.
- d) The surface net radiation in the high latitudes is low because of low aerosol concentrations in the air.



17) These are banknotes from four different countries. Which of the depicted mountains has been shaped by karst processes?

- a) A
- b) B
- c) C
- d) D



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

- a) Key A
- b) Key B
- c) Key C
- d) Key D



19) On which island of the Aeolian Islands has this image been taken?

- a) Alicudi
- b) Salina
- c) Stromboli
- d) Vulcano

20) Table 1 shows the daily amounts of each food group recommended by the national health guidelines of the respective country, while Table 2 shows associated greenhouse gas (GHG) emission (total and per food group) of these diet patterns.

Which of these statements is not correct?

- a) GHG emission (kg of CO₂-eq) associated with protein foods are higher than with fruits or vegetables
- b) GHG emission (kg of CO₂-eq) associated with dairy foods are higher than with grains
- c) Uruguay's GHG emissions (kg of CO₂-eq) associated with proteins is mainly based on plant proteins
- d) a plant-based diet has lower GHG emissions (kg of CO₂-eq)

Table 1 Daily recommended amounts of each food group for a 2000-kcal diet by country, scaled to common units

	Protein foods (g)	Dairy ^b (ml)	Grains (g)	Fruit (g)	Vegetables (g)	Oils/fats (g)
Germany ^c	99	524	362	250	512	35
India ^c	75 ^e	300	330	100	500	25
Oman	168	118	662 ^g	686	420	56
The Netherlands ^d	150	415	428 ^g	200	250	40
Thailand	135	237	600 ^h	784	200	N/A
United States ^d	156	710	170	392	350	27
US Vegetarian ^d	97	710	184	392	350	27
Uruguay ^c	91 ^f	455	227 ⁱ	455 ^j		25

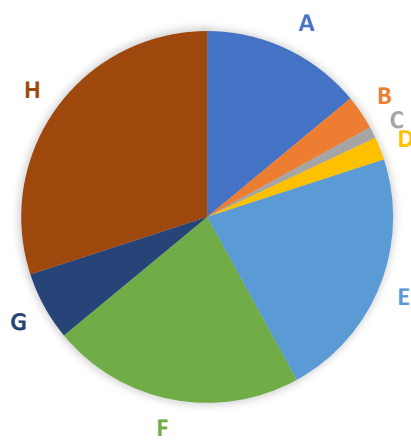
Table 2 Greenhouse gas emissions (kg of CO₂-eq) of daily food group recommendations for a 2000-kcal diet pattern by country

	Protein Foods	Dairy	Grains	Fruit	Vegetables	Oils/fats	Total
Germany	0.98	0.81	0.05	0.12	0.20	0.09	2.25 ^b
India	0.03	0.41	0.11	0.05	0.17	0.08	0.86 ^b
Oman	1.24	0.17	0.20	0.39	0.27	0.26	2.53
The Netherlands	1.12	0.89	0.08	0.08	0.12	0.15	2.86 ^c
Thailand	0.63	0.33	0.31	0.47	0.09	N/A	1.83
United States	1.84	1.10	0.02	0.16	0.16	0.03	3.83 ^c
US Vegetarian	0.06	1.10	0.02	0.16	0.16	0.03	1.80 ^c
Uruguay	1.50	0.65	0.03	0.18 ^d		0.04	2.42 ^b

21) Which share of greenhouse gas emissions associated with food production within the EU belongs to the “transport sector”?

- a) A
- b) B
- c) C
- d) H

**EU AVERAGE OF GREENHOUSE GAS EMISSIONS
ASSOCIATED WITH FOOD FOR DIFFERENT STEPS
ALONG THE SUPPLY CHAIN**



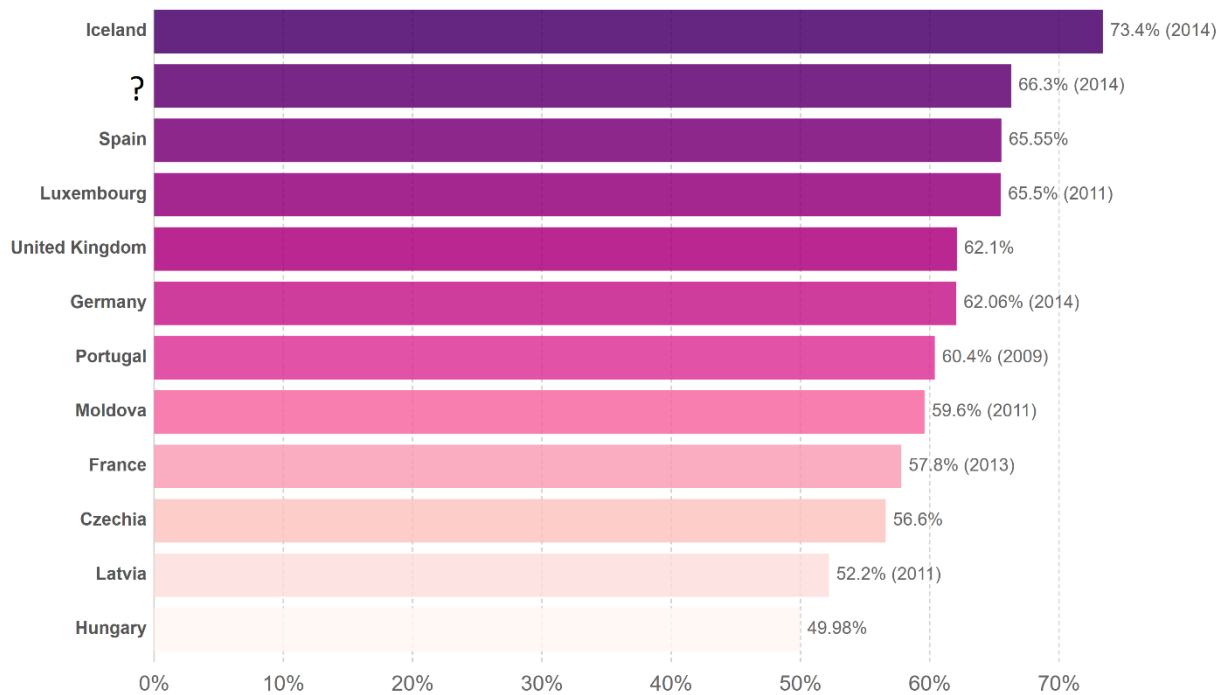
22) Which European country resembles the “?” in the chart below?

- a) Switzerland
- b) Sweden
- c) Slovakia
- d) Poland

Share of women among low pay earners, 2015

Percentage of low pay workers, among all low pay workers, who are female. Workers are considered 'low pay' if their hourly earnings at all jobs are less than two-thirds of median hourly earnings.

Our World
in Data

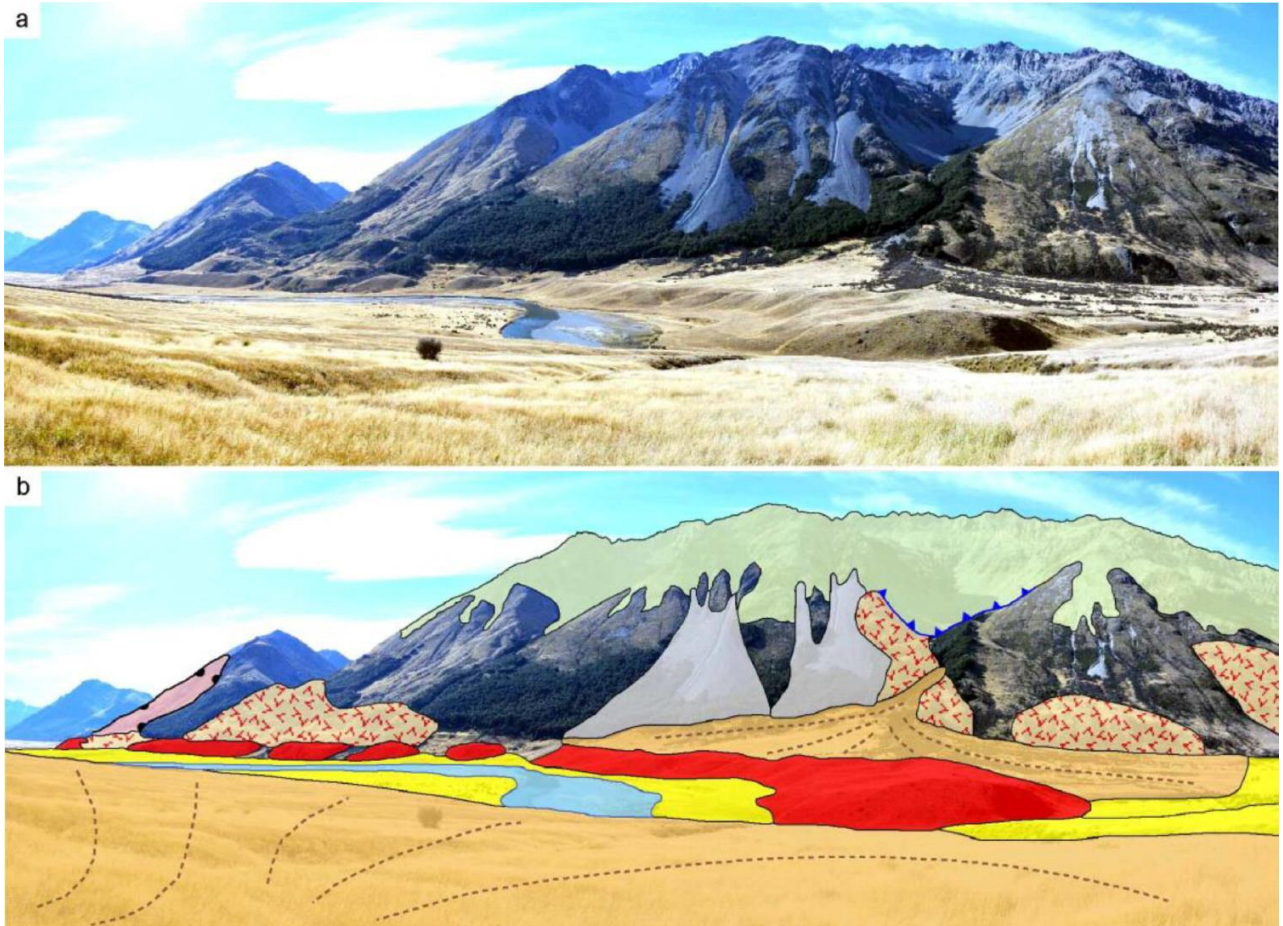


Source: ILOSTAT

CC BY

23) The photograph (a) shows a part of the Southern Alps (New Zealand) and an associated glacial geomorphological map (b). What is the name of the landform shaded in red?

- a) Active river plain
- b) Alluvial fan
- c) Moraine
- d) Landslide



24) Which term most closely describes the image for the country of origin?

- a) Braingain
- b) Braindrain
- c) Internally Displaced Persons
- d) immigrant volunteers



25) What does the picture show?

- a) mountain fall
- b) rockslide
- c) boulder glacier
- d) a result of mechanical weathering



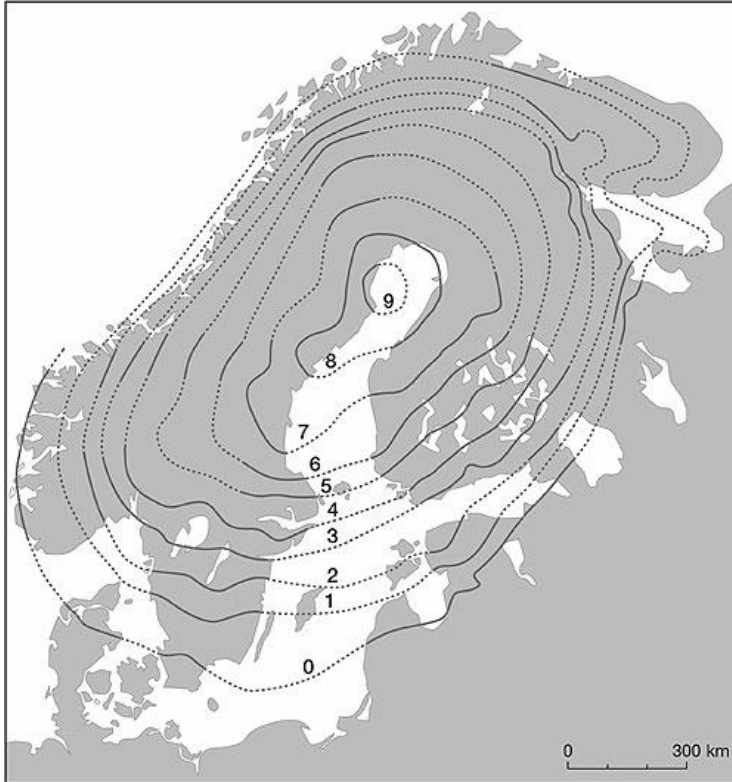
26) Which statement about Creux-du-Van in Neuchâtel Jura is correct?

- a) The layers are rich in fossils.
- b) The picture shows loose rocks.
- c) The upper layers were deposited later than the lower ones.
- d) The lower layers were deposited later than the upper ones.



27) The development shown is a consequence ...

- a) of plate tectonics.
- b) of earthquakes.
- c) of isostasy.
- d) convection currents.



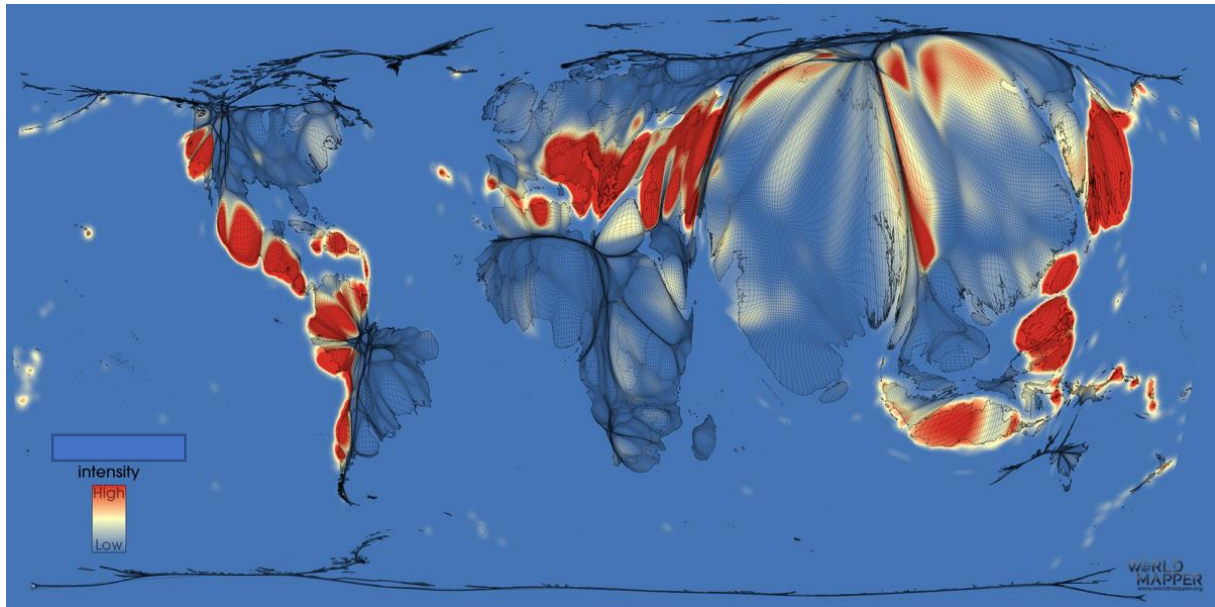
28) Compare the Google Earth map with the photo. In which compass direction is the photographer looking?

- a) southwest
- b) southeast
- c) northwest
- d) northeast



29) What does this map show?

- a) Flood risk
- b) Unemployment rate
- c) Migration figures
- d) Earthquake risk





30) Which of the following population pyramids best fits the human settlement shown in the picture?

- a) A
- b) B
- c) C
- d) D