



**GEOGRAPHY.
OLYMPIAD.CH**
GEOGRAPHIE-OLYMPIADE
OLYMPIADES DE GÉOGRAPHIE
OLIMPIADI DI GEOGRAFIA

6th Swiss Finals

27 March 2021

Multimedia Test

Questions Booklet

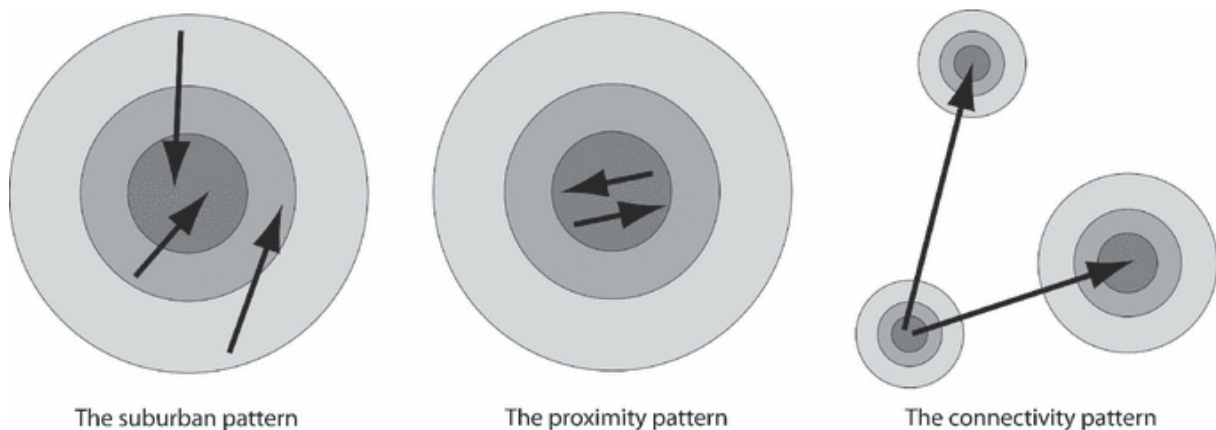
- Do NOT open the booklet before instructed to do so by a supervisor.
- Write your answers on the separate **Answer Sheet**.
- Only the answer sheet will be marked.
- Give only ONE answer to each question.

Student number:

Question 1

A study on new-built gentrifiers in Neuchatel and Zurich identified mobility as one of the main factors for new development in both cities. The schematic picture shows core cities (dark grey) and the different mobility patterns of the citizens that were detected. The connectivity pattern is quite specific for Switzerland. Which factors do you think lead to the formation of this pattern?

- a) Decentralized political organization
- b) A dense highway and railway network
- c) (Above) average financial means
- d) All of the above

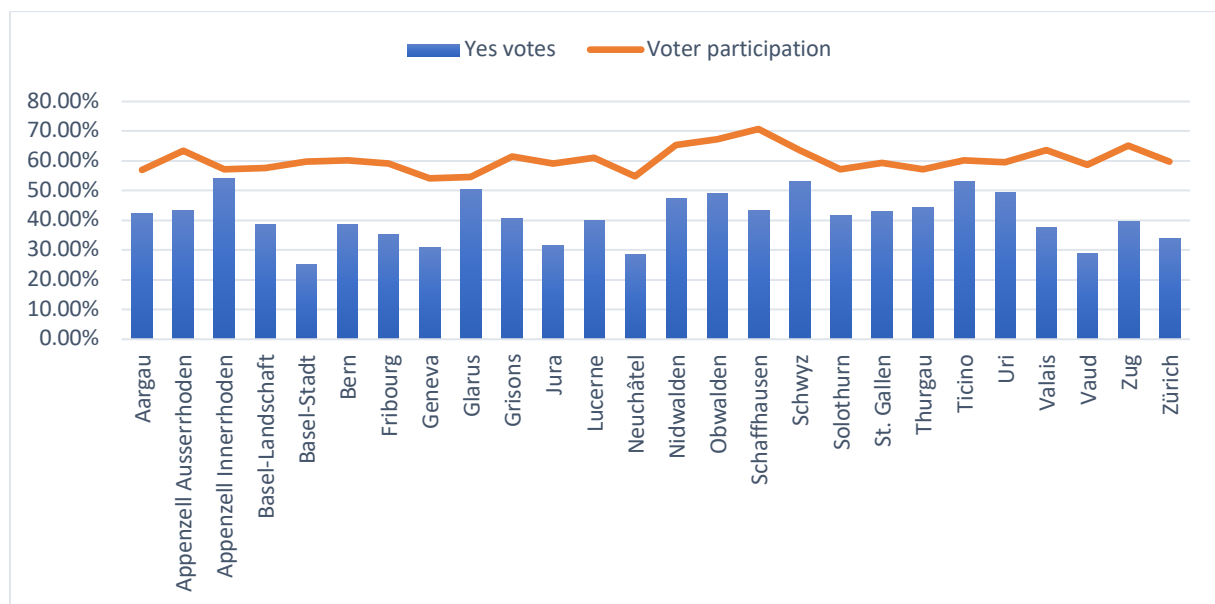


(Rérat & Lees, 2010)

Question 2

The chart shows the temporary results of the initiative “For a moderate immigration” from the Swiss national referendum of 27th September 2020. Which one of the following conclusions can be drawn?

- a) The initiative was accepted in all cantons.
- b) The percentage of supporters of the free movement of persons was higher in cantons of central Switzerland than in city cantons.
- c) The Romandie voted clearly in favor of preserving the free movement of persons.
- d) None of the above.



<https://tinyurl.com/y2jthpft>

Question 3

The picture shows an old water pipeline near Svalbard, Norway.
Which phenomenon is responsible for the deformation?

- a) The ground is flowing.
- b) An avalanche has hit the pipeline.
- c) Constant wind blows from one direction.
- d) The pipeline's stilts are old and have become instable.

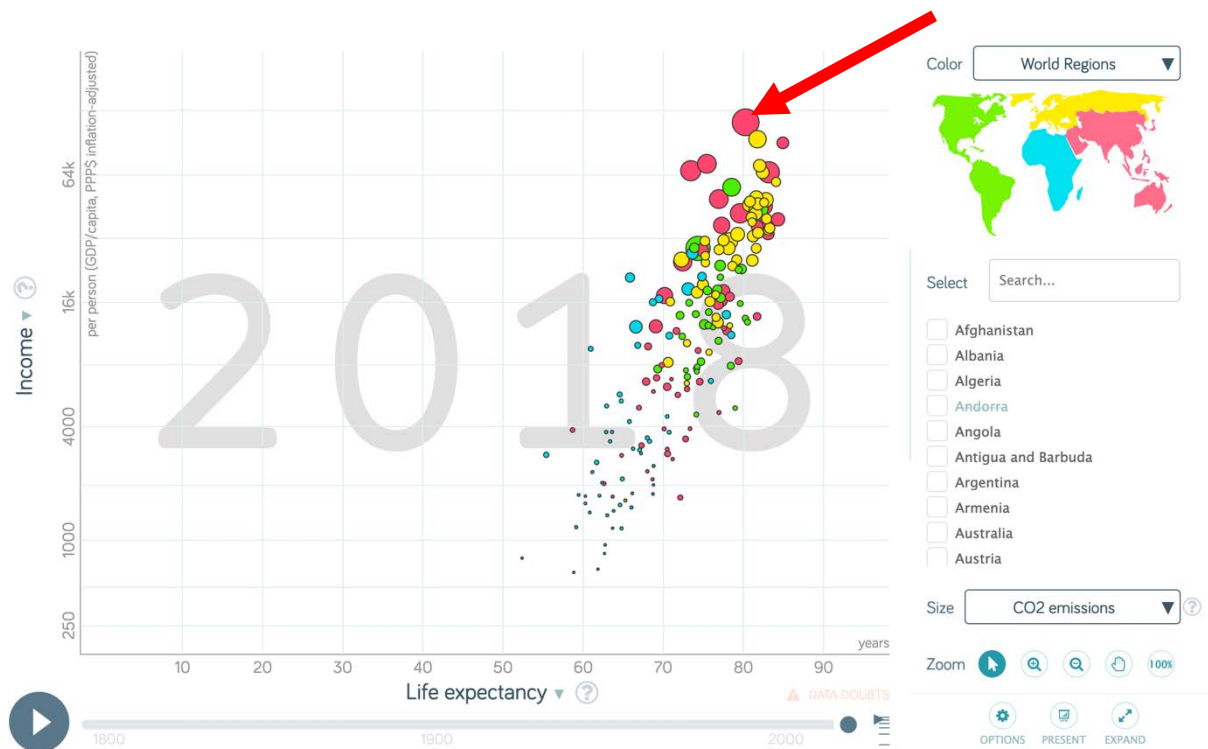


<https://tinyurl.com/uy9gaa2>

Question 4

Which country is depicted on the arrow's tip?

- a) China
- b) Qatar
- c) India
- d) Japan



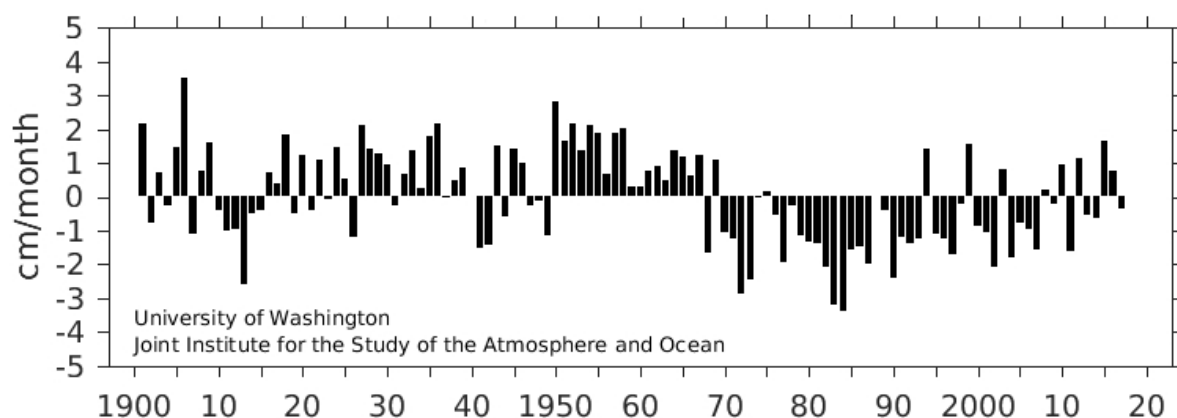
<https://tinyurl.com/yxpb9tfc>

Question 5

The below graph shows the annual precipitation index over 1901 to 2017 (where Sahel = 20 to 10 degrees N and 20 Degrees W to 10 degrees E; precipitation anomaly from a 1901 to 2017 baseline).

What statement is **WRONG**?

- a) Variation in precipitation over the whole period of time ranges from approx. +4 to -3 mm/month.
- b) The Sahel has one rain season.
- c) An extended drought hit the Sahel between 1965 and 1995.
- d) The warming climate supports the West African Monsoon (WAM) and thus the Sahel receives more rainfall lately.



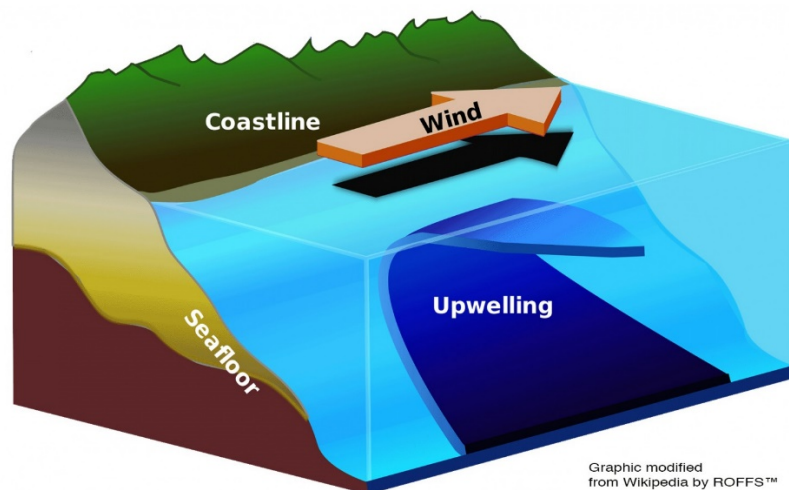
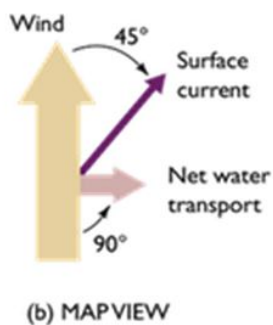
<https://tinyurl.com/uy9gaa2>

Question 6

The Ekman current is the surface current that develops from steady winds at the ocean's surface. The current gets deflected by the Coriolis effect in the northern hemisphere as shown below.

Where does the Ekman transport trigger coastal upwelling near the equator?

- a) West coast of Africa, west coast of Chile
- b) East coast of Africa, east coast of Chile
- c) West coast of India and Australia
- d) East coast of the US



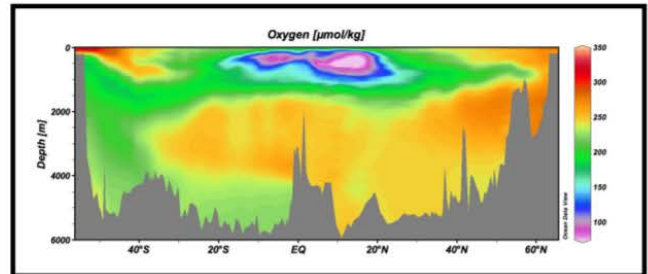
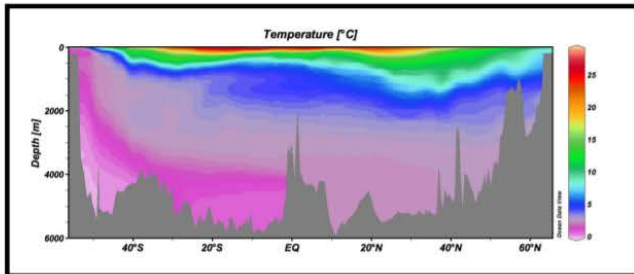
Ekman deflection on northern hemisphere

<https://tinyurl.com/y3vag58v>

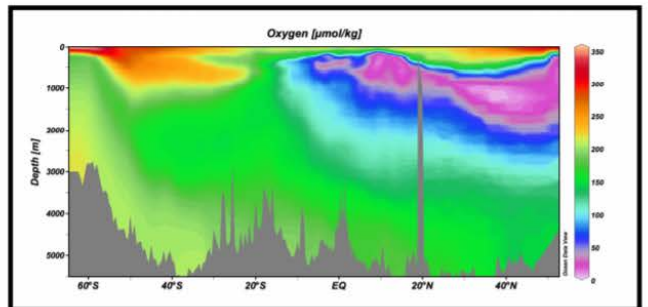
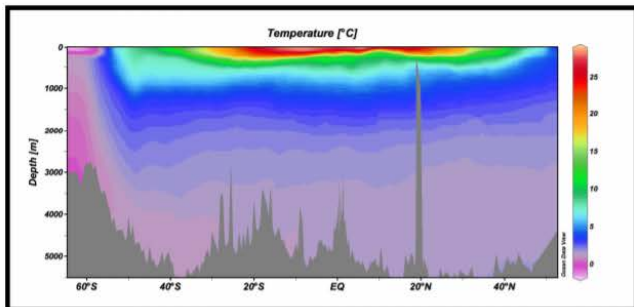
<https://tinyurl.com/y35g4d7o>

Question 7

Which statement is correct considering the below graphs?



Atlantic



Pacific

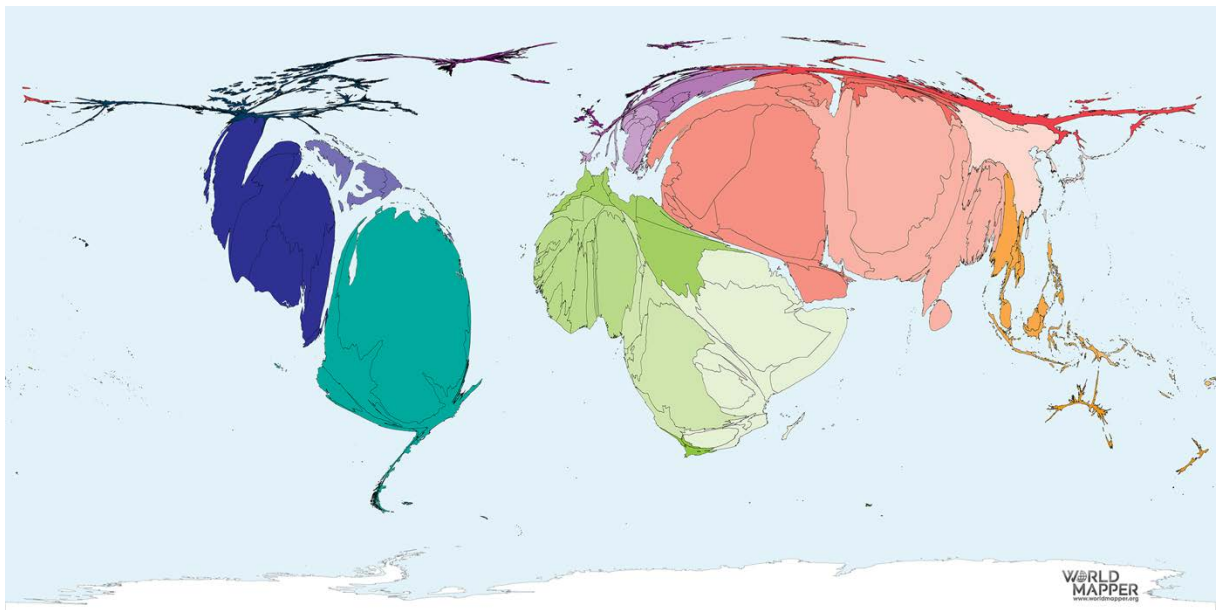
Source: 'Ocean Data view, World ocean atlas, 2001'

- a) The average temperature in the North Atlantic is lower than in the North Pacific.
- b) The oxygen concentration is higher the colder the water is.
- c) The average seafloor level is lower in the Pacific than in the Atlantic.
- d) At 50 degrees S the concentration of oxygen sinks almost gradually.

Question 8

What could be the data source of the below map?

- a) Military expenditure in 2018**
- b) Drug production in 2018**
- c) Asylum seekers in 2018**
- d) Newly discovered fossile fuels in 2018**



<https://tinyurl.com/y2dlug8e>

Question 9

The below picture shows a traditional dwelling in the Val Maggia (Canton Ticino). Which stone has been used?

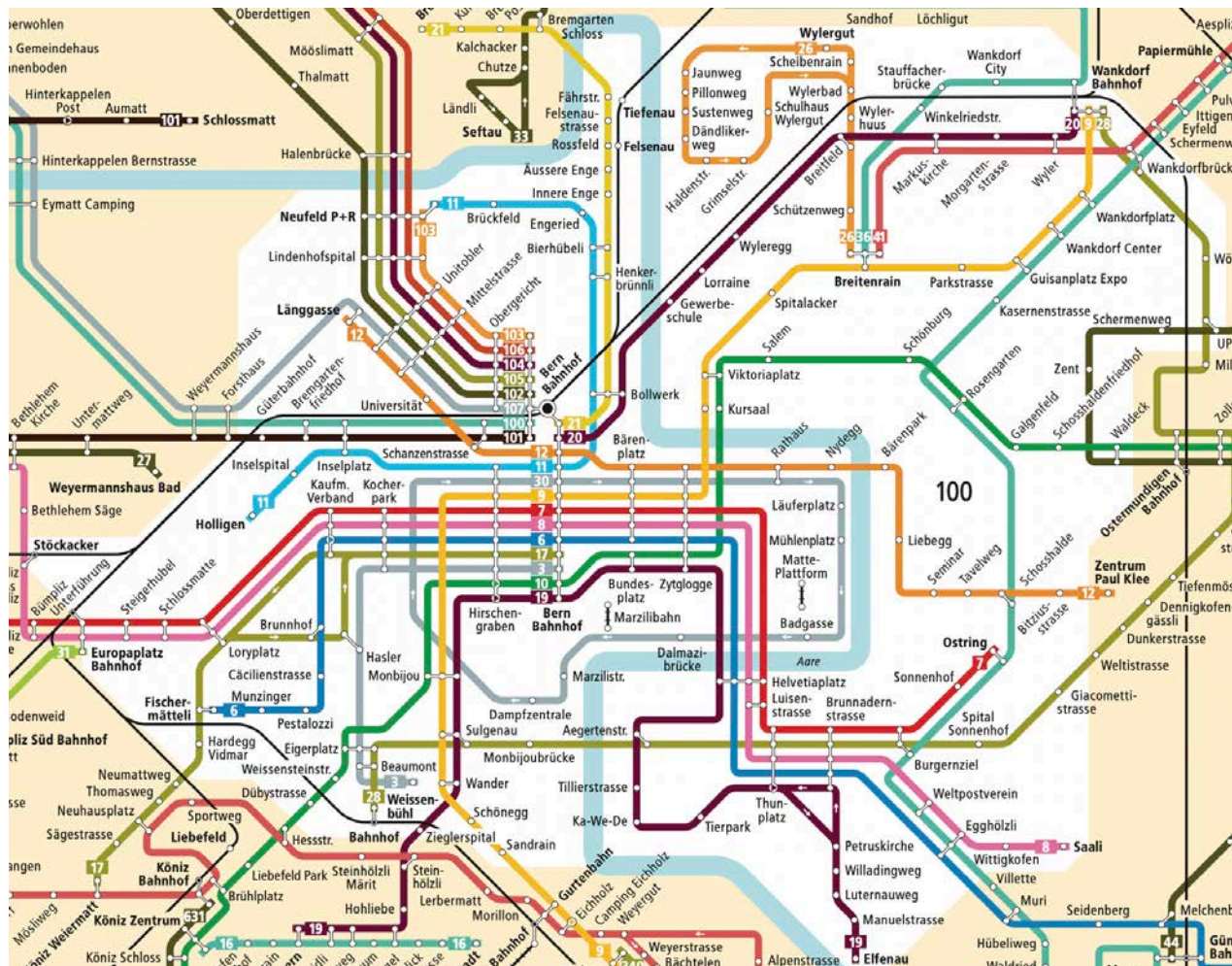
- a) Granite
- b) Limestone
- c) Marble
- d) Slate stone



Source: flickr.com

Question 10

This picture shows the network of trams and buses in the City of Bern.
Which of the following statements is false?



a) Lines 10 and 12 cross the river Aare.

b) Lines 17 and 19 skip several stops in both directions.

c) Line 30 is travelling in only one direction.

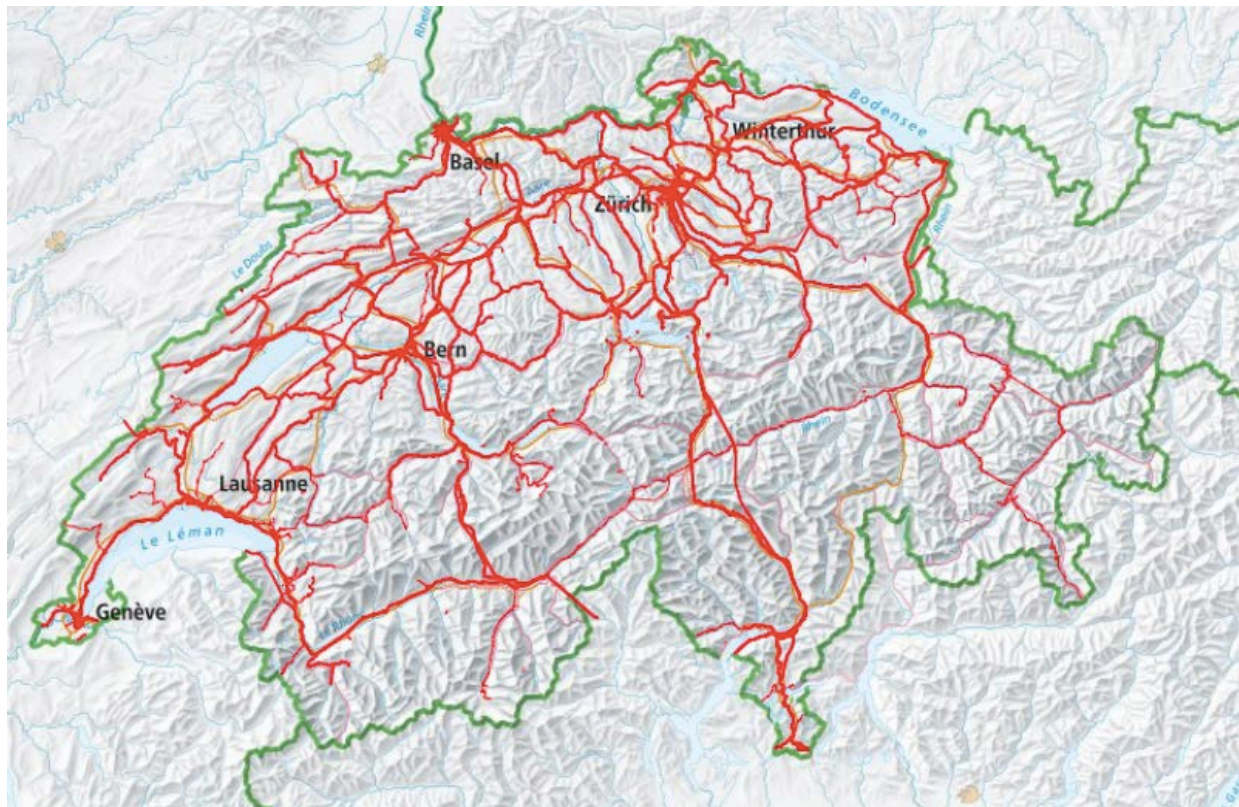
d) The map is north-oriented.

Source: BERNMOBIL, libero.

Question 11

What is depicted on the below map of Switzerland?

- a) Highway network.**
- b) Highspeed internet network.**
- c) Train network.**
- d) Bicycle network.**

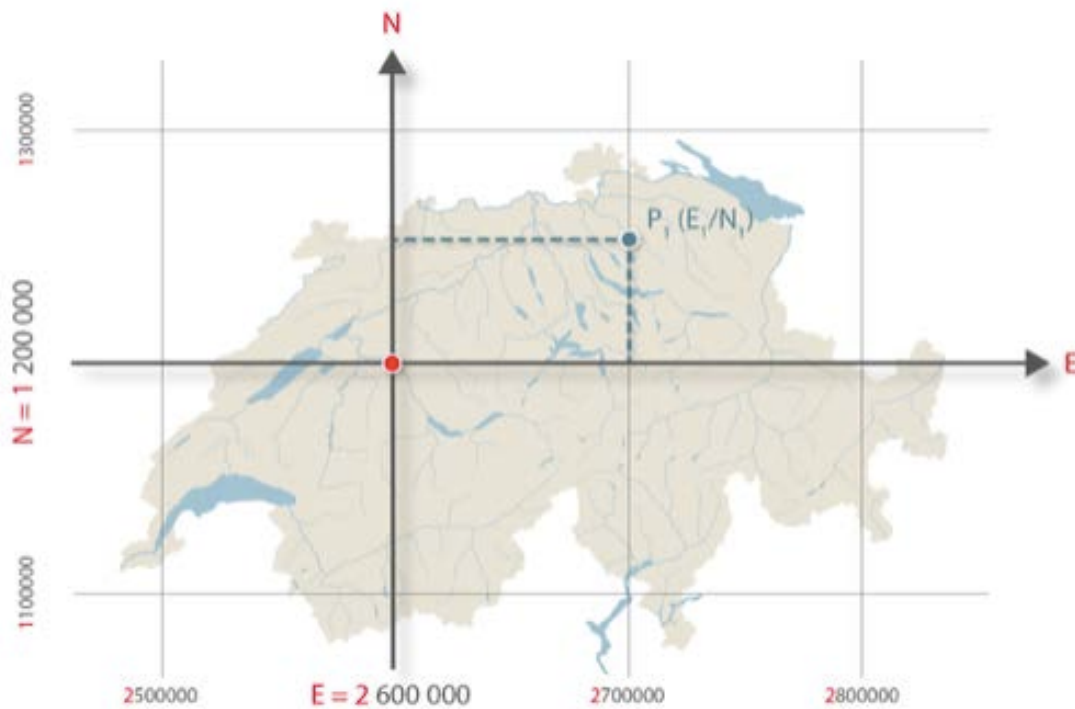


Source: swisstopo.

Question 12

The coordinates of the Swiss survey system LV95 uses 7 digits in east-west direction and 7 in north-south direction. The following image shows the function of the coordinate system.

Which coordinates refer to the upper castle in the city of Bellinzona?



Source: swisstopo.

- a) E 2 722 863 / N 1 257 129
- b) E 2 722 863 / N 1 116 438
- c) E 2 600 431 / N 1 116 438
- d) E 2 516 550 / N 1 165 155

Question 13

Which description and definition fits the below picture best?

- a) A transition zone with indefinite borders between rural and urban areas: *urban sprawl*
- b) An area changing from poor to wealthier where more and more people from higher social classes live: *gentrification*
- c) The process during which more and more people leave the countryside to live in cities: *urbanisation*
- d) Construction of new housing units within existing residential areas: *urban densification*



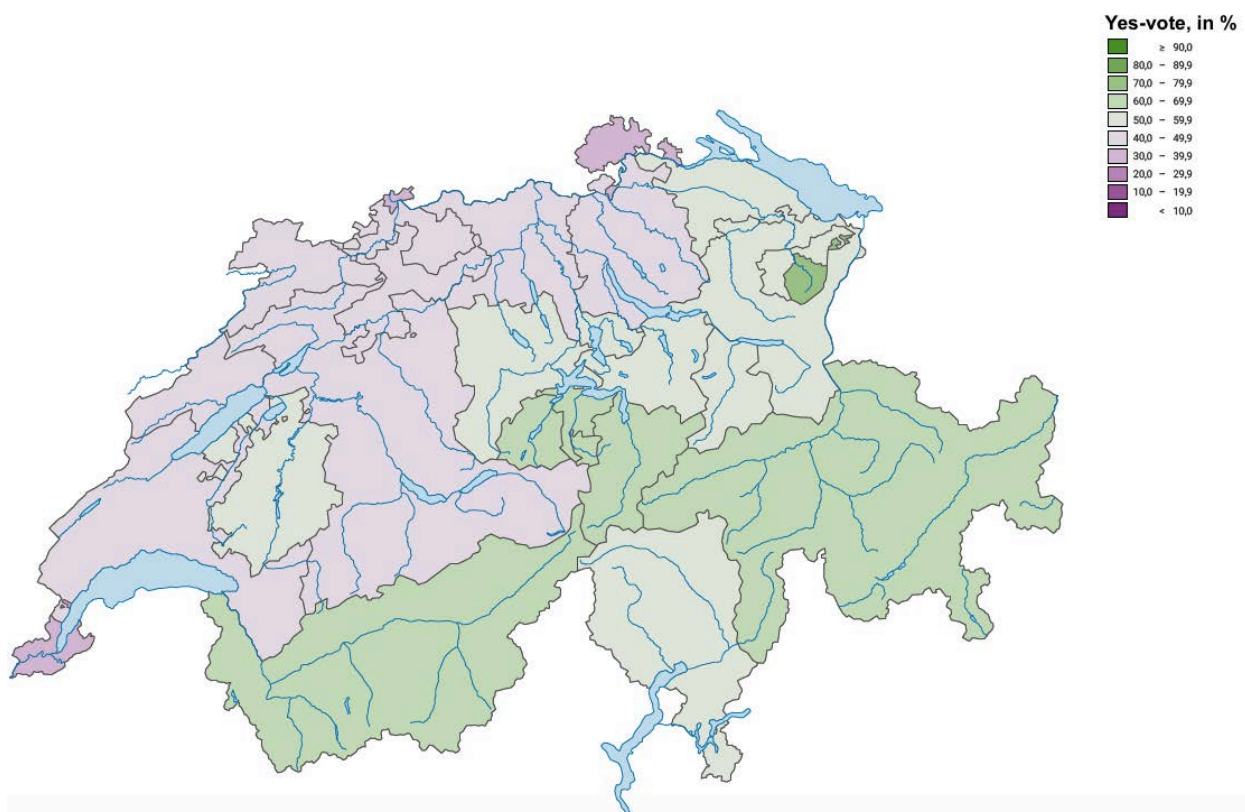
Source: Wikimedia.

Question 14

On 27 September 2020 the Swiss citizens have voted about whether or not to accept a new law on hunting. The law has been rejected with 51.9 %.

Which of the following statements is correct considering the below map?

- a) The law has been rejected by all urban cantons.
- b) The vote on this law shows a city-country ditch.
- c) The vote on this law shows a distinction between east and west.
- d) All cantons in the “Romandie” have rejected the law.



Source: Federal Statistical Office.

Question 15

The below graph shows the global land use in approximately 2015 for the ice-free land.

What share of the total of forests is “intact or primary”?

- a) 9%
- b) 17%
- c) 29%
- d) 40%

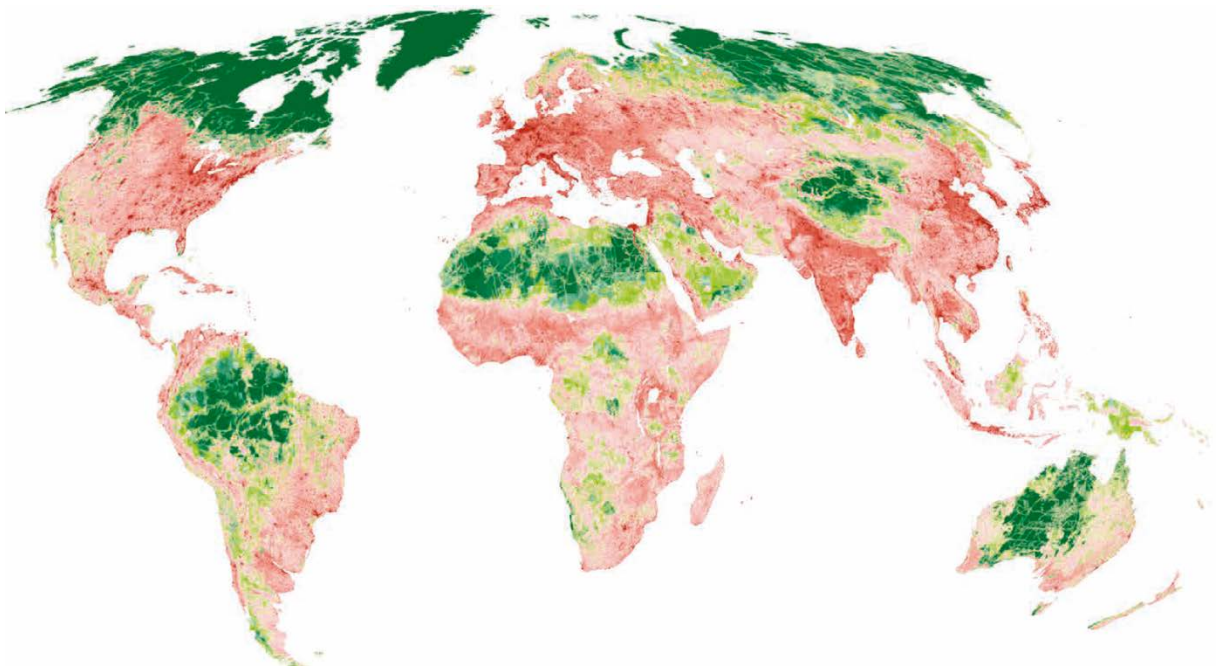


Living Planet Report 2020, S. 65

Question 16

What is depicted in the below map?

- a) The intensity of ecological changes until 2050**
- b) The degree of human modification**
- c) The changes of annual precipitation during last 30 years**
- d) The rate of biodiversity loss in terrestrial biomes**

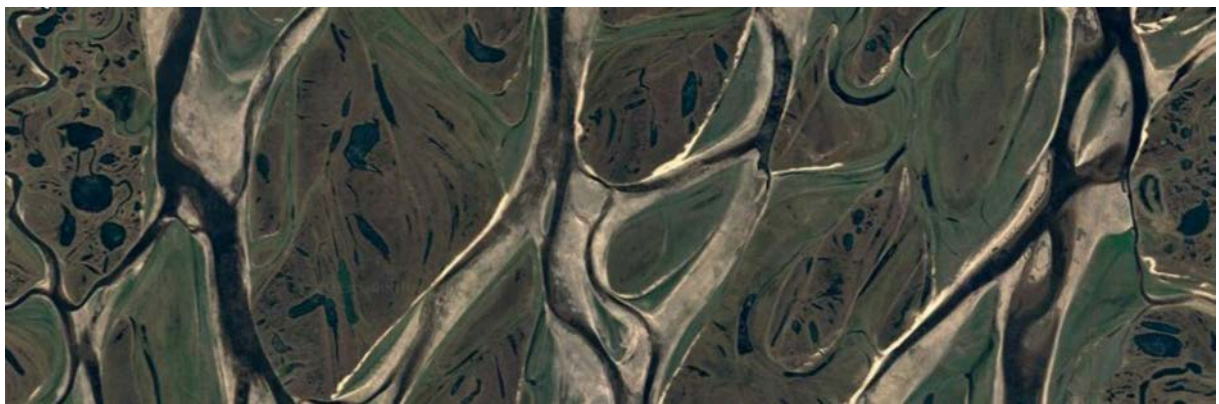


Living Planet Report 2020, S. 69

Question 17

What delta is depicted in the below satellite image? The picture is not north-oriented!

- a) Lena**
- b) Nile**
- c) Ganges**
- d) Danube**



Google Maps

Question 18

What country is depicted in the below graph?

- a) Switzerland**
- b) Cameroon**
- c) Cambodia**
- d) Canada**

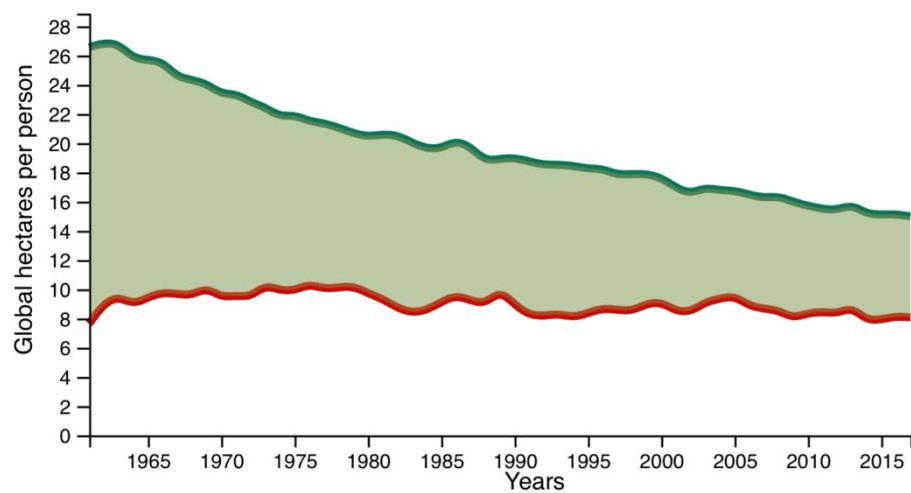
Ecological Footprint and

Biocapacity

From 1961 to 2017

Ecological
Footprint per
person

Biocapacity per
person



Data Sources: [National Footprint and Biocapacity Accounts 2021 edition \(Data Year 2017\)](https://data.footprintnetwork.org); GDP, World Development Indicators, The World Bank 2020; Population, U.N. Food and Agriculture Organization..

<https://data.footprintnetwork.org> (23.3.2021)