



13rd Hungarian Geographical Contest 2021/22

2nd Round

Written Test

Source Booklet

12 February 2022

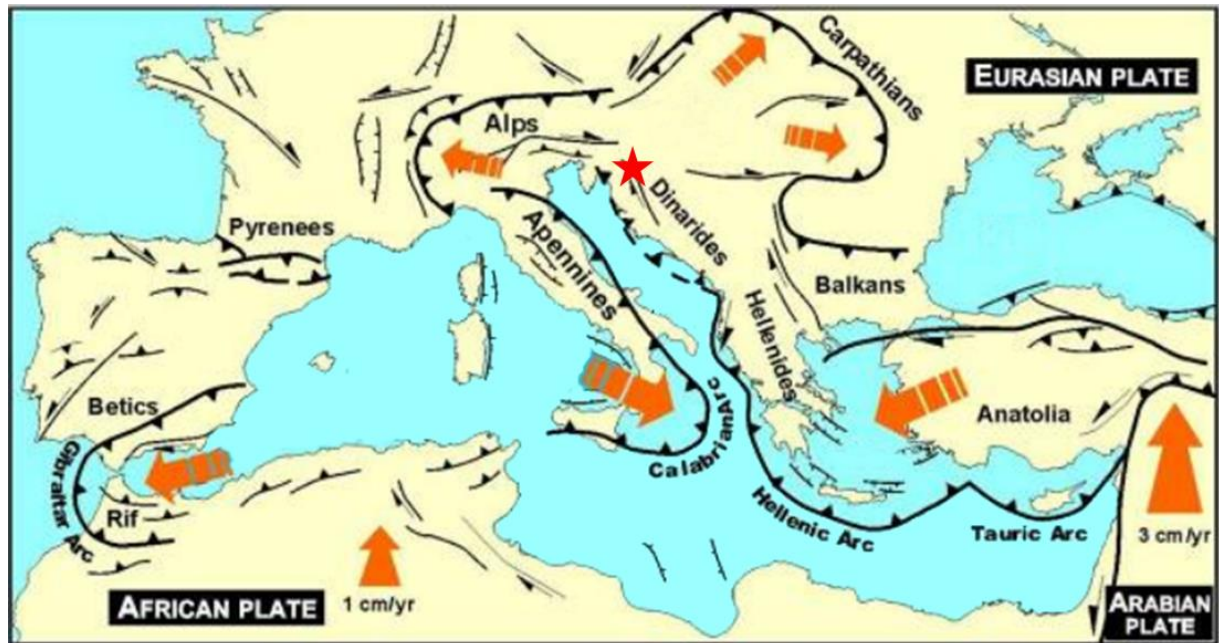
Do NOT open the booklet until told to do so by a supervisor!

Your answer will NOT be marked if you write it in this booklet!

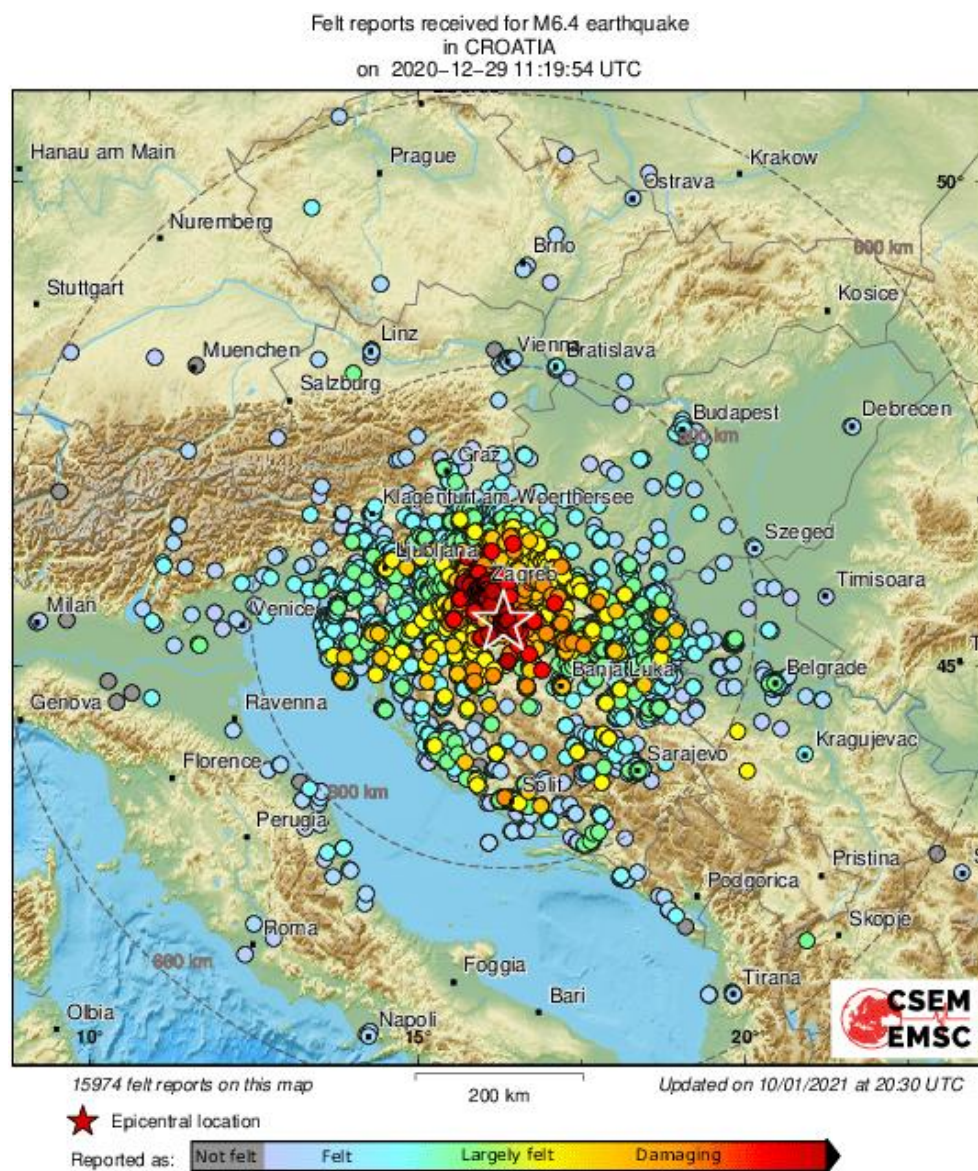


Section A - Shocking experience in the neighbourhood

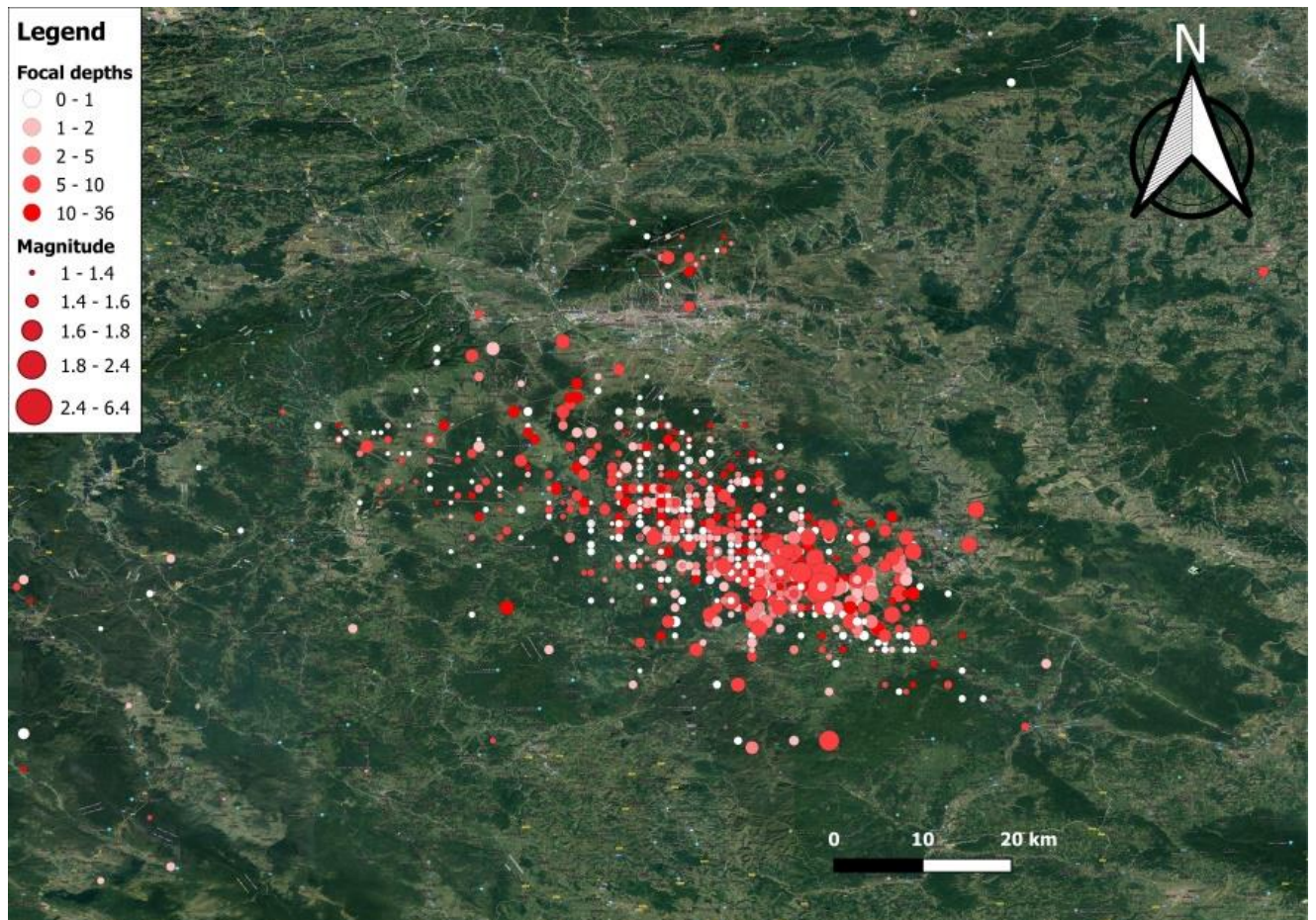
A.1. – Tectonic map of the Mediterranean region



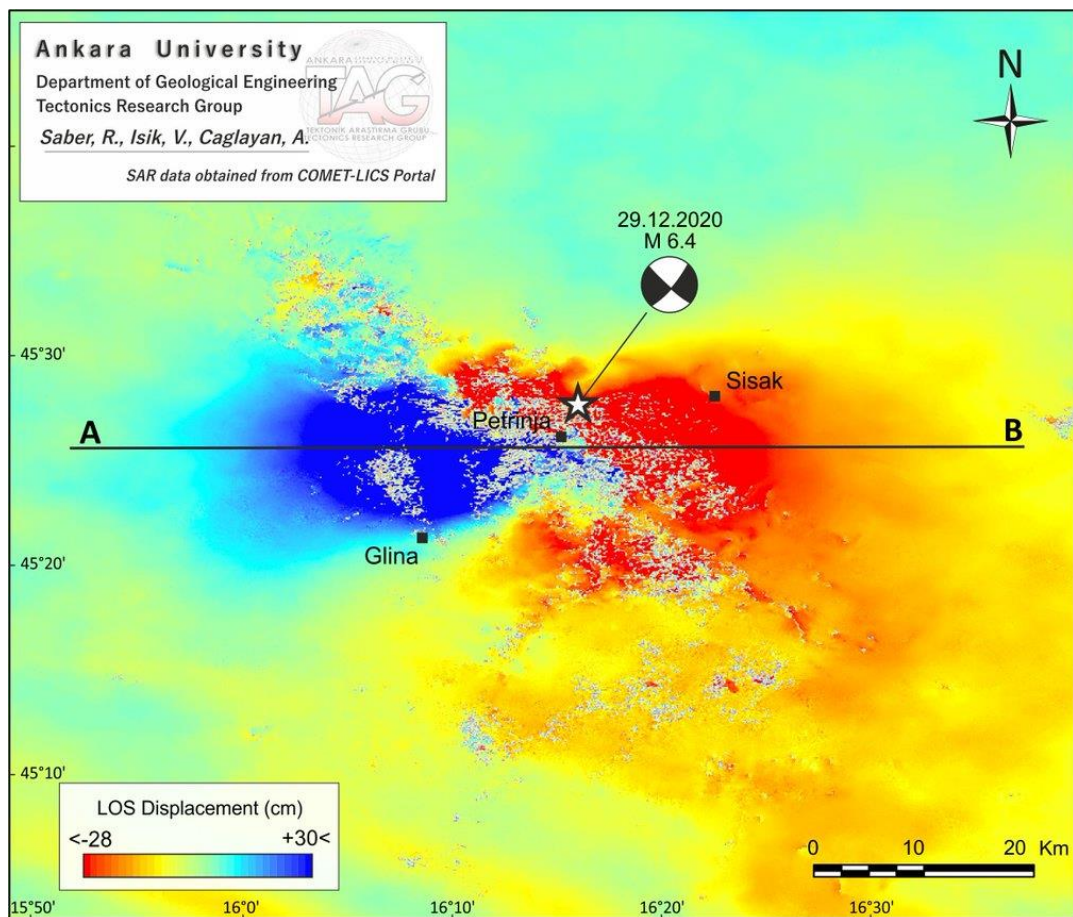
A.2. – Petrinja-earthquake felt reports



A.3. – Seismic activities between 29 December 2020 and 14 November 2021



A.4. – Interferogram of the region

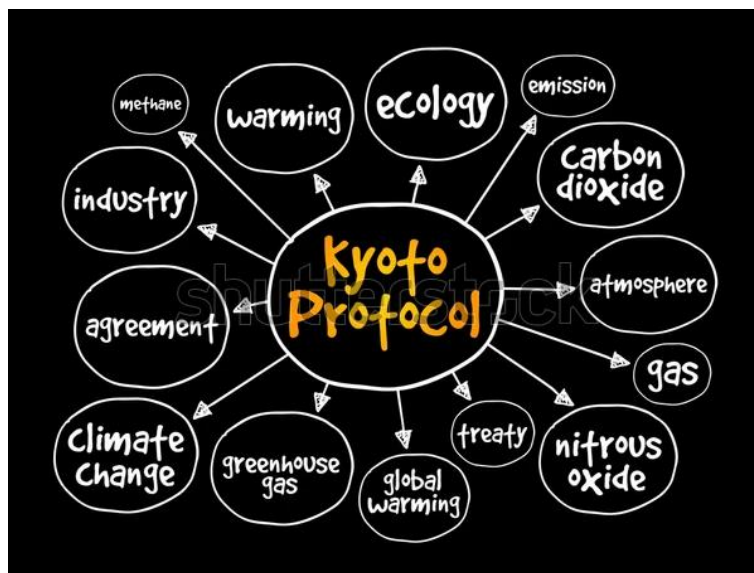


Section B - Climate change and answers from all over the world

B.1. – Four important cities



B.2.1. – Kyoto Protocol



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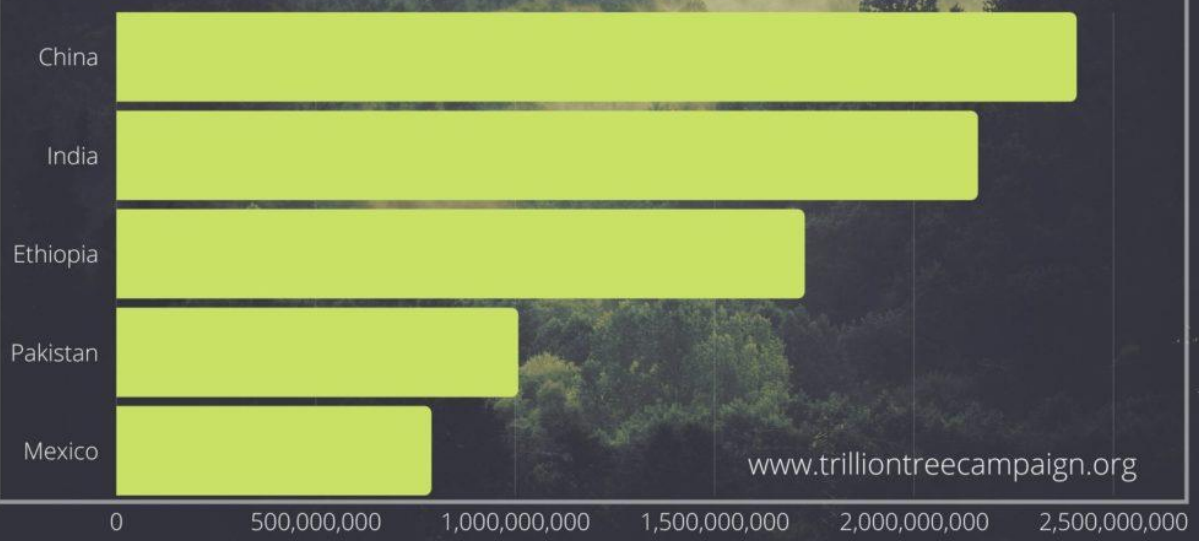
B.2.2. – The Paris Agreement



B.3. – Tree planting programs

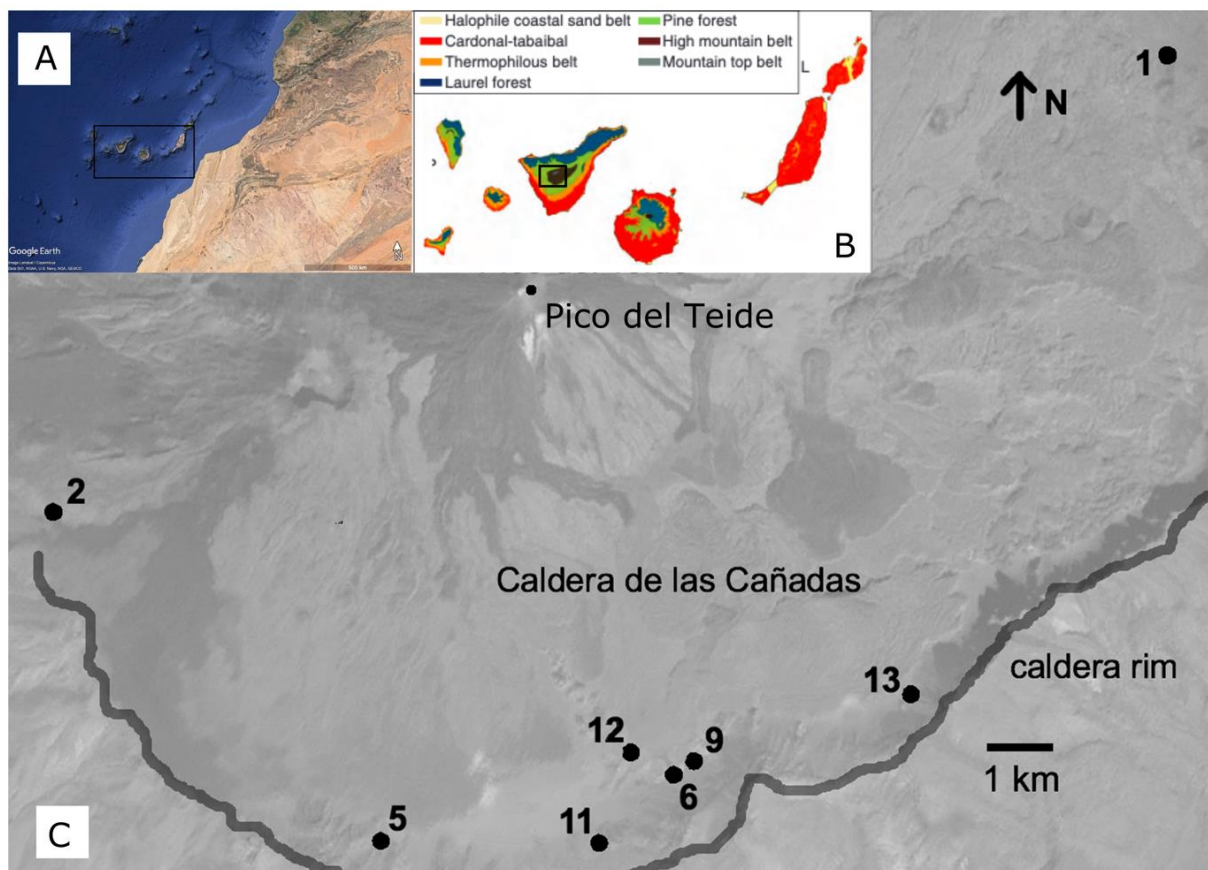


TREE PLANTING PROGRAMS 2019



Section C – Biogeography of the Canary Islands

C.1. The geographical position of the islands (A), vegetation zones (B), and a specific botanical region of Tenerife near the summit region of El Teide (C)



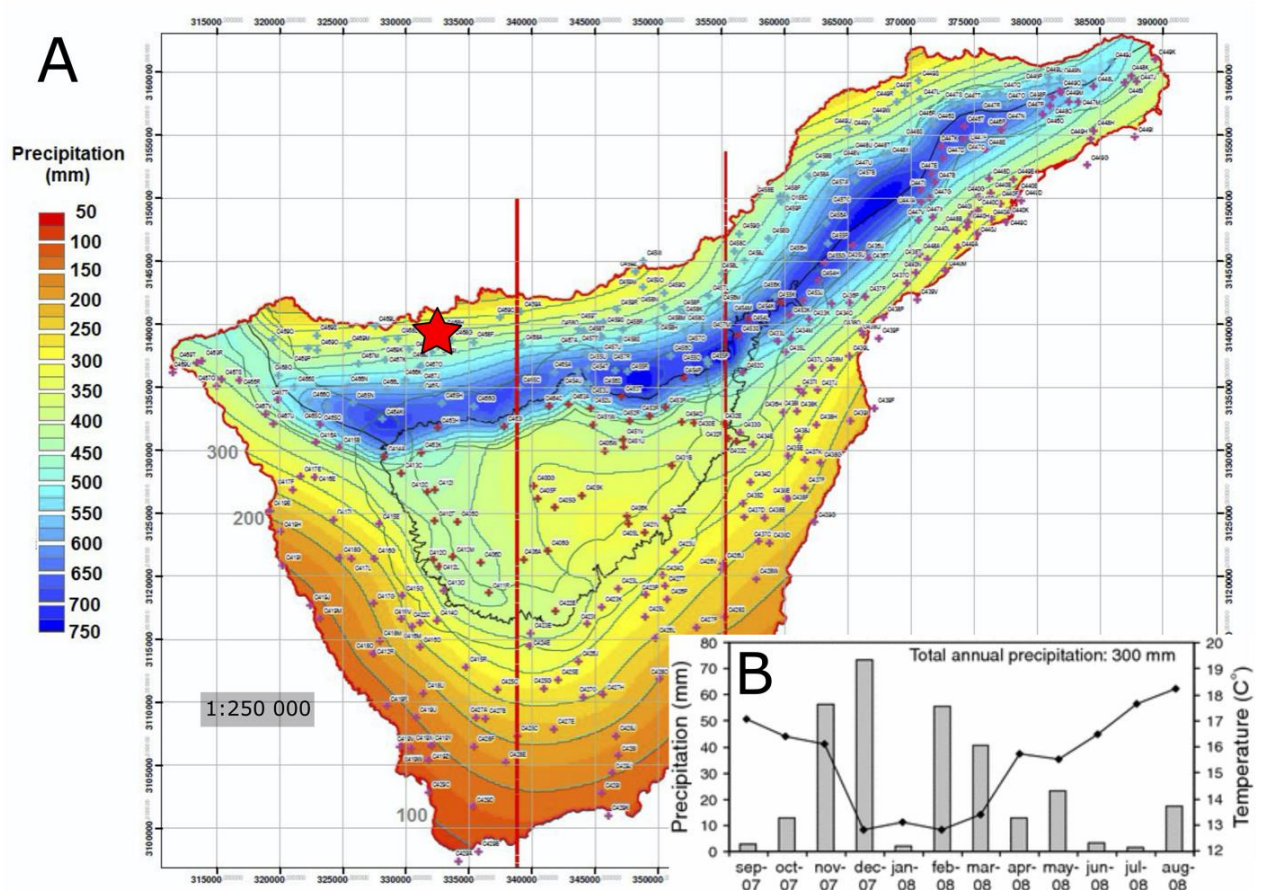
C.2. Two specimens of Tenerife bugloss (*Echium wildpretii*) within the Las Cañadas caldera system



C.3. Contrast between the humid (windward) slopes and the more arid (leeward) slopes. This phenomenon appears both on the north-western (Teno Massif) and north-eastern (Anaga Massif) part of the island



C.4. Spatial distribution of annual precipitation on Tenerife as interpolated with TPS-2D method (A) and annual data of a met station near Icod de los Vinos, indicated with a red star on the map (B)



D.1. Foreign trade between China and selected African countries, 2019

Selected Countries	Import from China (million USD)	Export to China (million USD)	GDP (million USD, current Prices)
Angola	2,057	23,308	84,516
Cameroon	1,676	1,015	39,009
Chad	278	439	10,934
Ethiopia	2,322	343	92,608
Ghana	4,906	2,543	68,353
Kenya	4,984	181	100,458
Madagascar	1073	204	14,105
Nigeria	16,634	2,652	448,120
South Africa	16,560	9,595	387,849
Zambia	970	3,298	23,309

D.2. Chinese investments and economic growth in selected Sub-Saharan countries

Country	Yearly average GDP growth (2006-2019)	FDI inflow from China per capita, USD (2006-2019)
Angola	6%	4.0
Cameroon	6%	1.2
Chad	4%	1.5
Ethiopia	15%	1.1
Ghana	8%	3.3
Kenya	8%	2.2
Madagascar	6%	1.0
Nigeria	7%	0.8
South Africa	2%	8.3
Zambia	8%	11.9

D.3. As China's Investment Strategies Shift, African Partners Face Risks

July 13, 2018, 5:45 AM / by Salem Solomon

When the China-financed Nairobi-Mombasa Railway opened in May 2017, it became Kenya's largest infrastructure project and a high-profile achievement for President Uhuru Kenyatta ahead of his successful bid for re-election. The 440-kilometer line cuts travel time in half and promises to make goods drastically cheaper to ship. But by August, widespread administrative issues, including difficulties with ticket purchases online and on the day of travel, had stymied passengers, leaving some to wonder whether the project had been rushed to completion.

As operational issues smoothed out, deeper concerns emerged. The railway cost Kenya nearly \$4 billion and may take decades to pay for itself. Environmentalists worry about the impact on a vast nature preserve, and an independent analysis suggests Kenya overpaid, according to research compiled by the China-Africa Research Initiative (CARI) at Johns Hopkins University.

Throughout Africa, China is investing in large-scale infrastructure projects like the Nairobi-Mombasa line. A half-dozen railways have launched in recent years, along with dozens of other infrastructure projects, including bridges, dams, roads and power plants. These projects appear to benefit all sides. However, they often lack proper vetting, and deals unfold with little transparency. Experts worry that the drive by African governments to industrialize could backfire, and seemingly useful projects will become white elephants — overpriced, underutilized showpieces that do little to drive economic growth or benefit local communities.

Decades of involvement

Chinese involvement in African infrastructure dates to the 1960s, when talks opened with Tanzania and Zambia to build an ambitious post-colonial railway from Dar es Salaam to Kapiri Mposhi, just north of Zambia's capital, Lusaka. The TAZARA Line, built by China and financed with a more than \$400 million, interest-free loan, still operates, despite ongoing maintenance issues and occasional strikes. It was China's first major African infrastructure project and remains the longest Chinese-built line on the continent.

More recently, China has shifted its engagement from resource-rich countries in West Africa like Angola and Nigeria to emerging economies in East Africa like Kenya and Ethiopia. New partners have brought new approaches. In a 2008 deal widely criticized by the World Bank and others, China offered billions in infrastructure development to Angola in exchange for a decade of tax-free mining in the country. As its focus has moved to East Africa, China has downplayed deals for minerals and interest-free loans with more conventional financing and deeper partnerships. For example, a new railway connecting Ethiopia's capital, Addis Ababa, to Djibouti was financed in large part by a commercial loan from the Export-Import Bank of China.

Chinese motives, African gains

For China, infrastructure investment in Africa reflects a decades-old strategy of soft power called the "Going Out" policy. More recent investments in Kenya and Ethiopia represent the latest chapter, extending Chinese President Xi Jinping's Belt and Road Initiative, a trillion-dollar investment strategy focused on transportation and infrastructure, particularly in Eurasia but also in East Africa.

Beyond strengthening ties in dozens of countries around the globe, China's international investments create export markets for Chinese labour and goods, provide access to natural resources, standardize Chinese technologies, and enable the world's second-largest economy to manage \$3 trillion in foreign assets. The investments also help China lessen risk through a diverse portfolio of projects that complement its increasingly ambitious political and security objectives.

For African countries intent on economic growth and industrialization, China represents a willing partner that can bring massive projects to completion with speed and ease, said Yunnan Chen, a doctoral student at Johns Hopkins University who recently completed fieldwork in West Africa. Short term, African countries stand to benefit from the transfer of skills and technology, job creation, and increased capacities to ship goods and move people. Infrastructure projects bring symbolic benefits as well, highlighting nations' independence and self-determination. That's particularly true for rail projects, which often replace colonial-era lines that were used to move resources out of Africa, before falling into disrepair.

Hidden risks

Unlike colonial-era foreign investment, Chinese-backed projects have intrinsic value for Africa, experts agree. But those real benefits can mask unfairness and corruption, which can result in deals that disproportionately benefit China and projects that aren't driven by real demand, undermining efforts to industrialize.

China, whose \$11 trillion economy is more than five times larger than all of Africa, has signed multibillion-dollar contracts without competitive bidding, raising concerns that African countries have overpaid for projects that could take decades to produce a return on investment. That's a particular concern with the new line connecting Nairobi and Mombasa. It's one of the latest fully operational Chinese-built railways in Africa, but it's not clear that Kenya got a good deal.

In a 2013 analysis of alternatives to the project, the Africa Transport Unit at the World Bank concluded, "There is no economic or financial case for standard gauge in the EAC [East Africa Community] area at this time." Beyond economics, concerns about displacement and environmental damage loom large in discussions about infrastructure projects, especially railways, which often cut through small communities and wildlife preserves. The Nairobi-Mombasa line, for instance, traverses environmentally sensitive regions, said Chen, the Johns Hopkins doctoral student.

An investigation this month by The Standard, one of Kenya's largest news organizations, concluded "Chinese nationals have created a small kingdom in which they run roughshod over Kenyan workers who say they are experiencing neo-colonialism, racism and blatant discrimination." Kenya Railways has launched its own investigation into claims of mistreatment shortly after The Standard's reporting. Despite the potential for negative impacts, planning that could help minimize these effects often falls short.

Without proper planning and oversight, promises of skills training and technology transfer can also fail, further diminishing the value for African partners. And work that could be completed by African laborers is, at times, undertaken by Chinese. "You do see Chinese digging ditches and laying bricks and doing other stuff that's sort of silly because they can — they should be — hiring Africans to do that," said David Shinn, a former diplomat and a professor of international affairs at George Washington University.

'Two or three wins for China'

To protect current and future investments, African countries need more oversight and transparency, experts agree. Chinese firms do have policies to manage social and environmental impacts. But "how they get implemented on the ground or how much attention is paid to them does depend a lot on the capacity of the host government and the host institution," Chen said. "If you don't have adequate monitors, if you don't have a strong enough government on the ground to enforce their own laws and to enforce these policies, then you run into trouble."

African countries carry the brunt of the risk, Shinn said, but China gets the biggest reward. "Keep in mind that this is a loan from a Chinese bank. A Chinese company by contract is required to build the projects on an enormous amount of that loan money that's going to go straight into the pocket of a Chinese state-owned company. It's going to have a percentage of Chinese labour," he said.

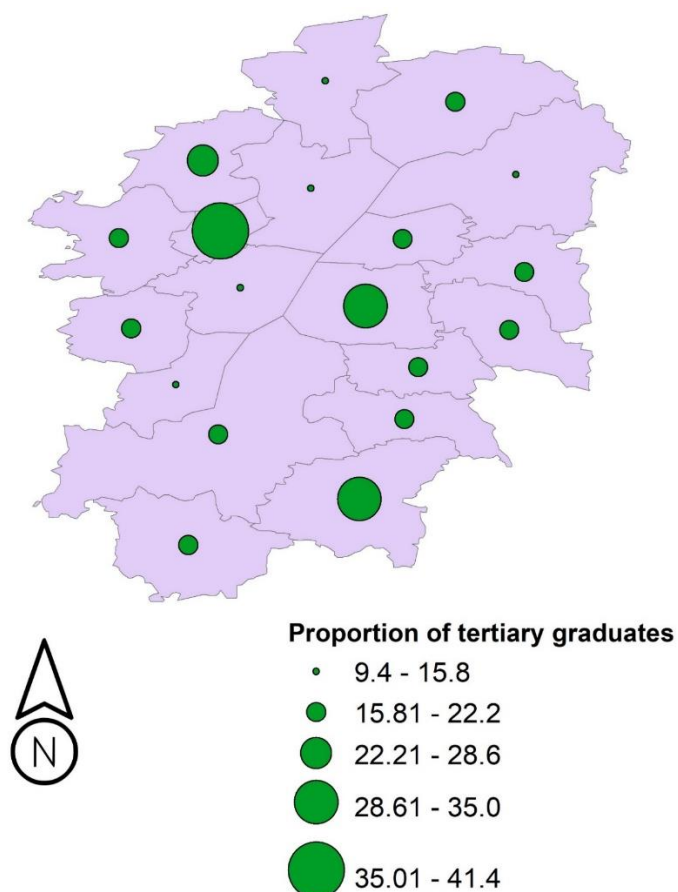
"And most of the material that goes into the project will be manufactured in China. So, Chinese companies are making a profit on that. There are two or three wins for China, you know, [and] one win for Kenya and Ethiopia, being that they get a railway built that no other country is offering to build for them," Shinn added.

Section E – General elections in Ohax

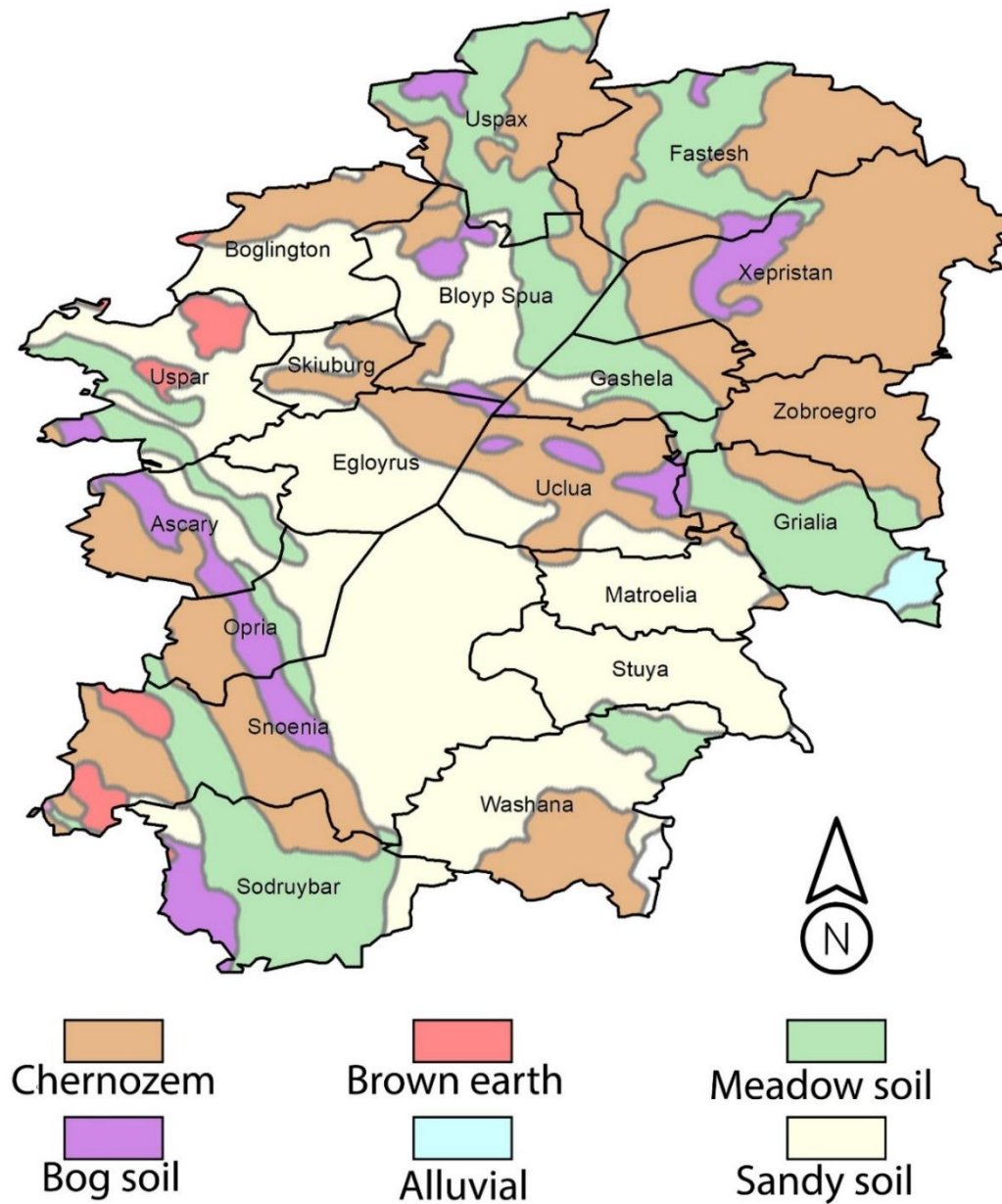
Table E.1. Results of the general elections in Ohax

Province	A	B	C	D	E
Ascary	19	19	8	41	13
Bloyp Spua	15	56	9	10	10
Boglington	27	16	6	37	14
Egloyrus	10	6	43	25	16
Fastesh	8	2	9	32	49
Gashela	20	24	4	36	16
Grialia	19	44	8	12	17
Matroelia	23	20	1	52	4
Opria	1	4	60	18	17
Skiuburg	46	12	10	10	22
Snoenia	23	41	8	20	8
Sodruybar	18	20	5	48	9
Stuya	21	20	6	51	2
Uclua	42	20	6	13	19
Uspar	21	36	10	18	15
Uspax	4	10	41	19	26
Washana	37	14	12	11	26
Xepristan	15	8	24	6	47
Zobroegro	19	11	22	11	37

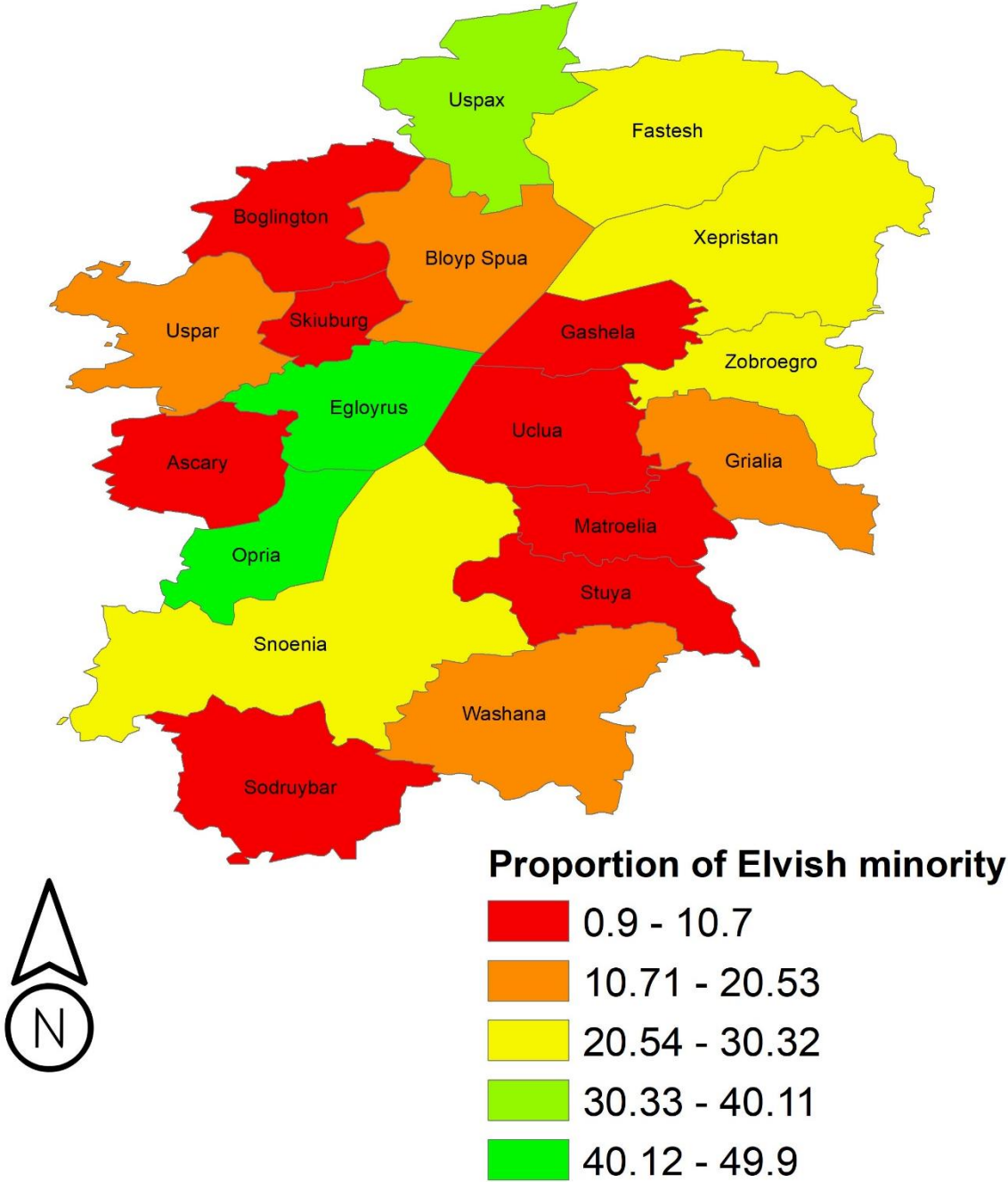
E.1. Proportion of tertiary graduates in Ohax



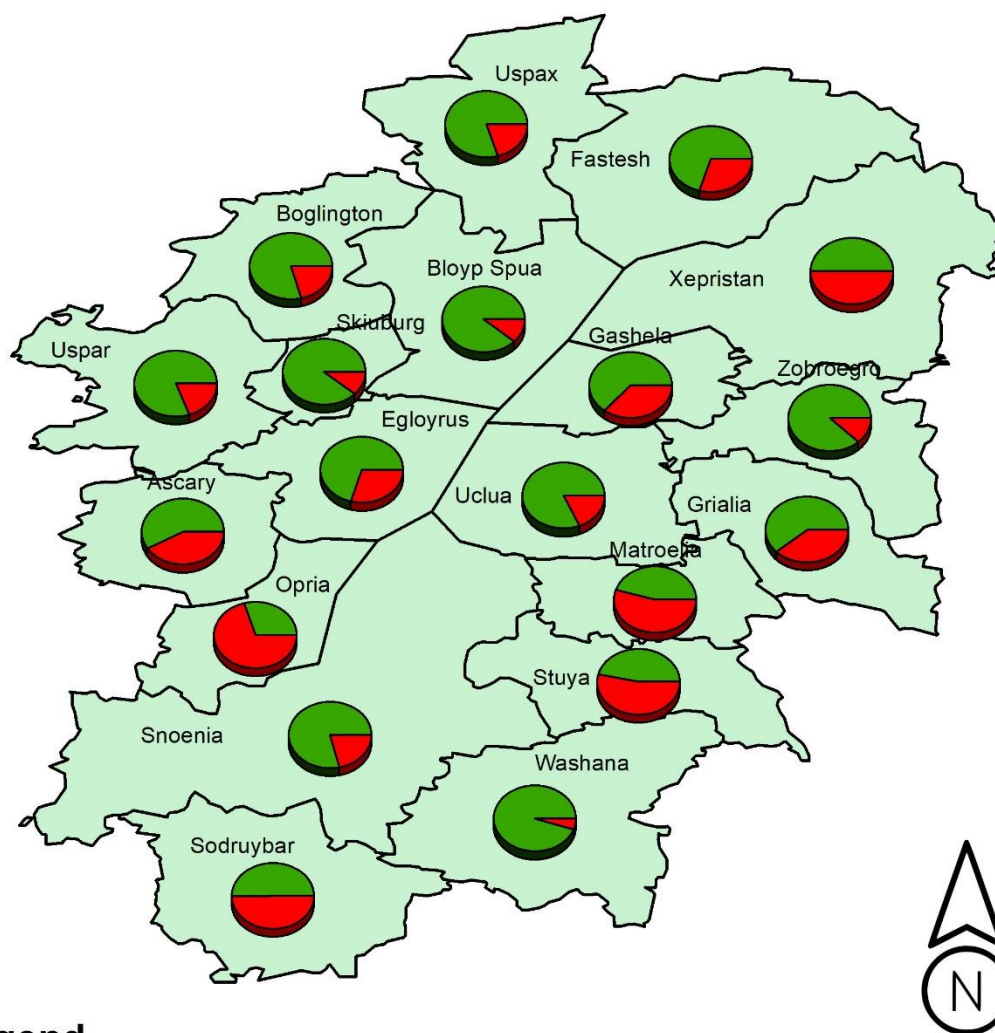
E.2. Soil types of Ohax



E.3. Proportion of Elvish minority



E.4. Acceptance of Elvish-Orcish marriages



Legend

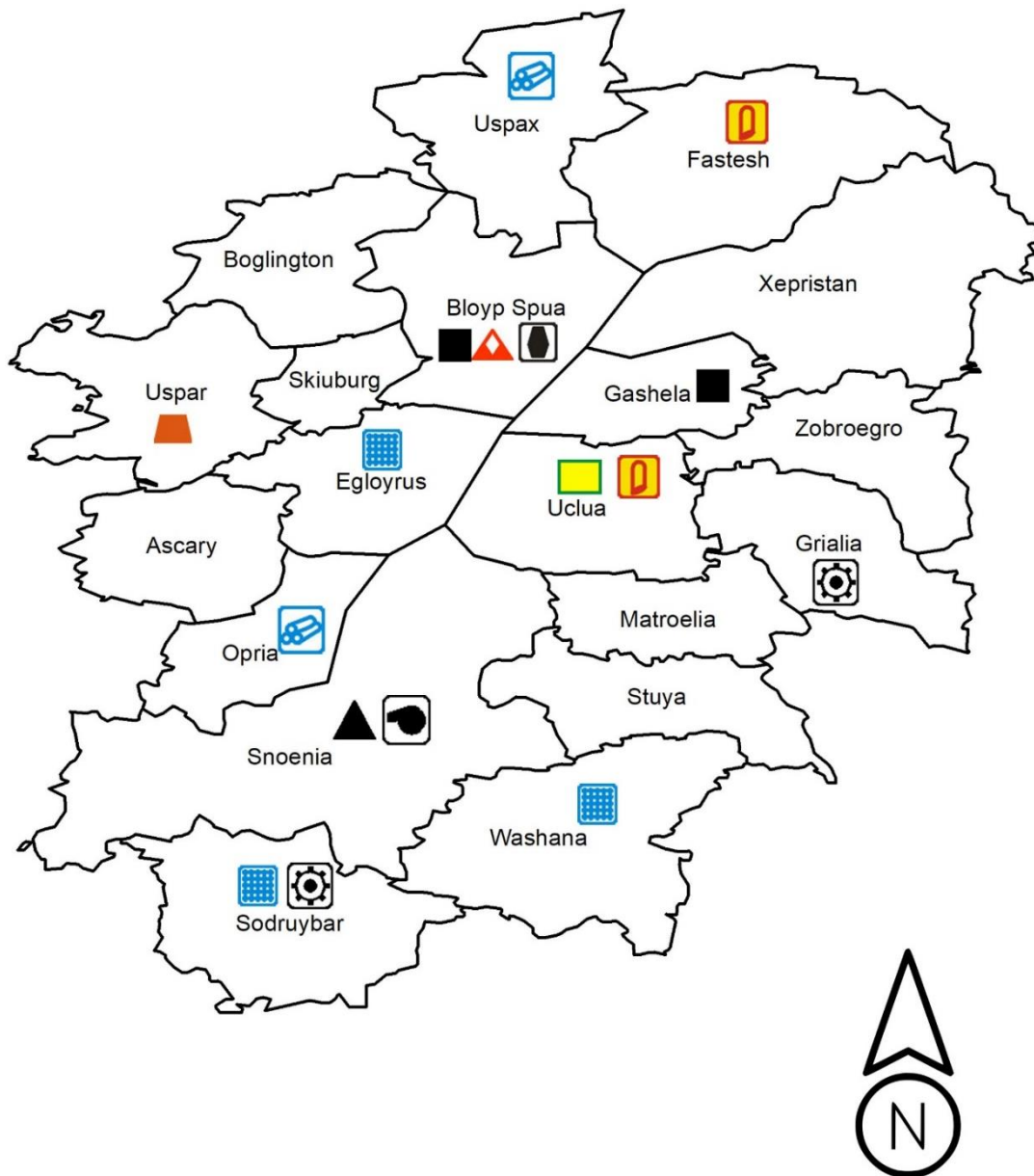
Do you agree with allowing a marriage between an orc and an elf?



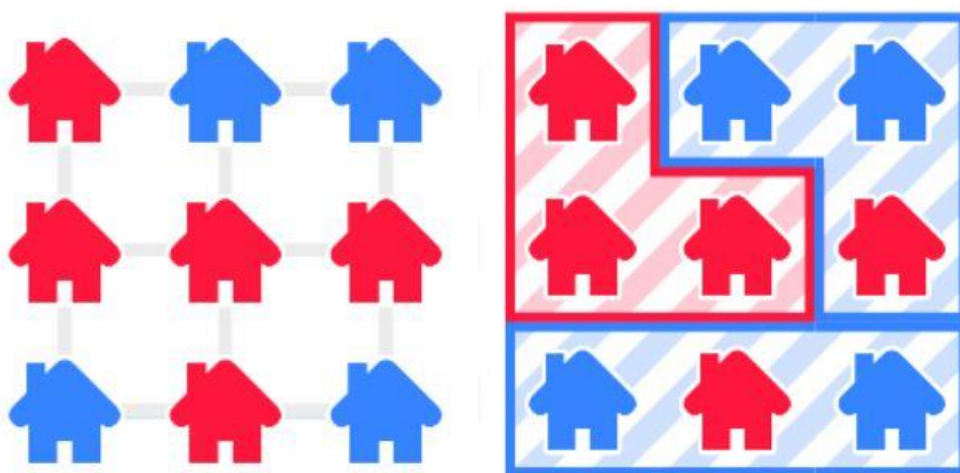
Yes

No

E.5. Economic geography of Ohax

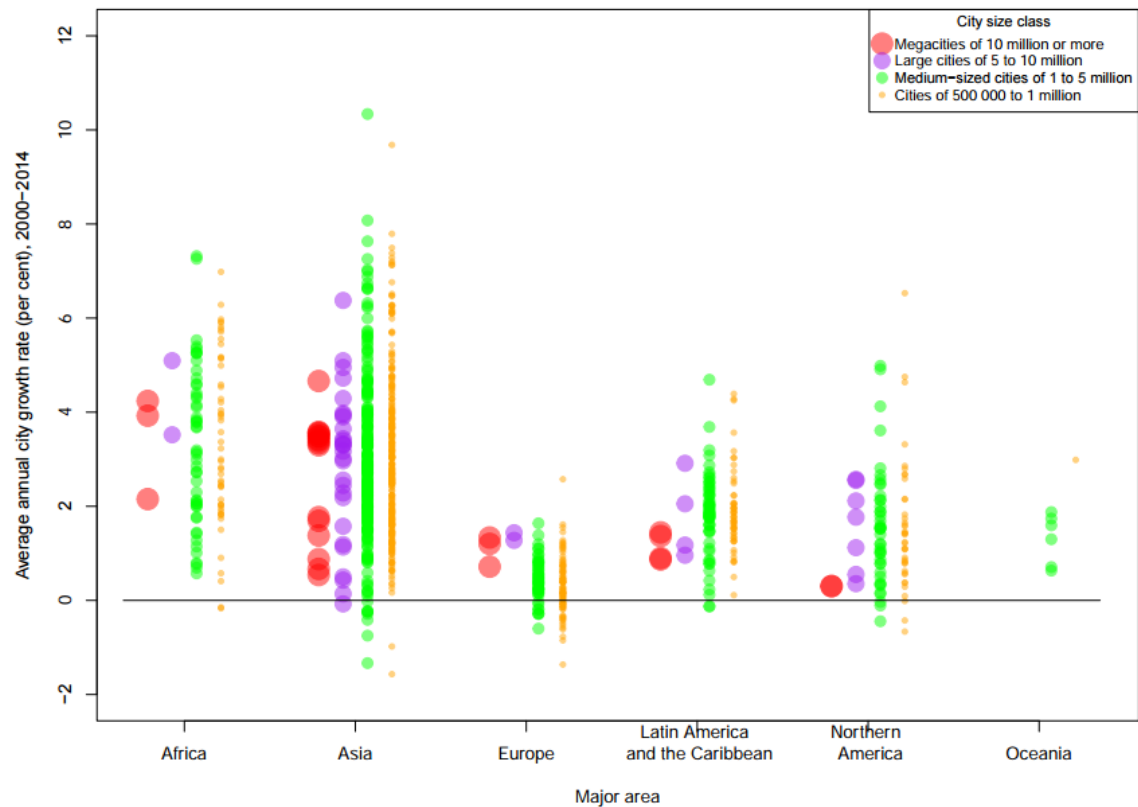


E.6. Sample for gerrymandering



Section F – Urban processes on global scale

F.1.1. City growth and regions

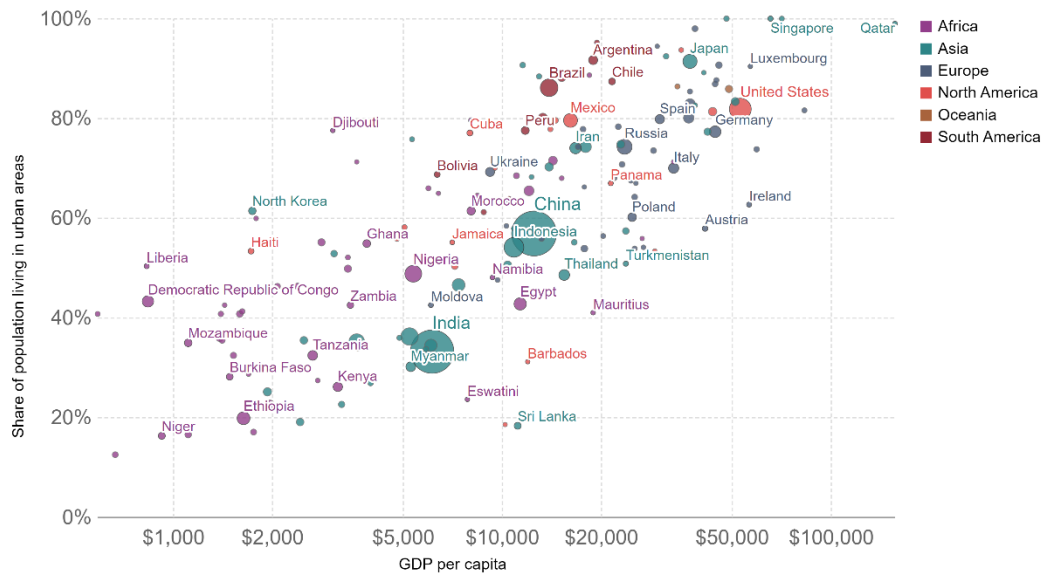


F.1.2. Urban population and GDP per capita

Urban population vs. GDP per capita, 2016

Share of the total population living in urban areas versus gross domestic product (GDP) per capita, measured in 2011 international \$.

Our World
in Data



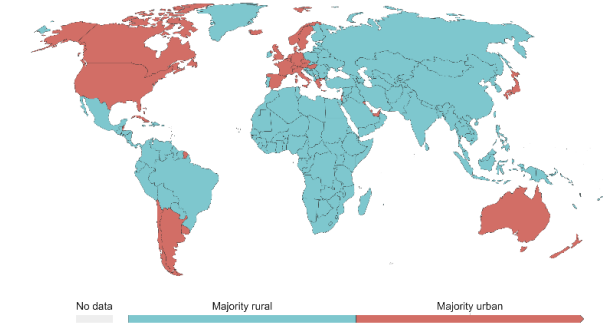
Source: OWID based on UN World Urbanization Prospects (2018), Maddison Project Database 2020 (Bolt and van Zanden (2020))
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F.2. Urban-rural division of population

Do more people live in urban or rural areas?, 1950

Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.

Our World in Data

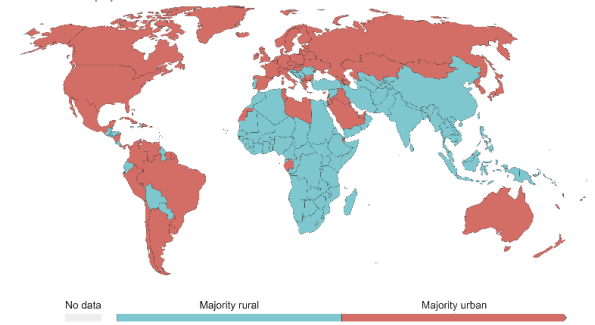


Source: OVID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)
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Do more people live in urban or rural areas?, 1980

Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.

Our World in Data

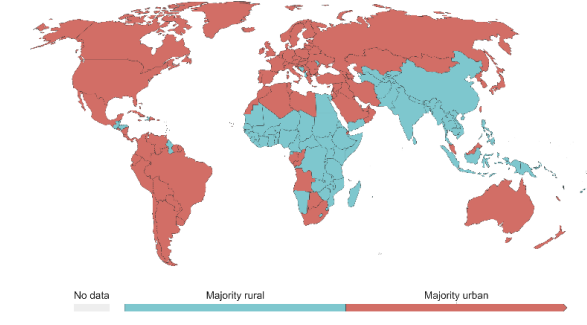


Source: OVID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)
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Do more people live in urban or rural areas?, 2000

Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.

Our World in Data

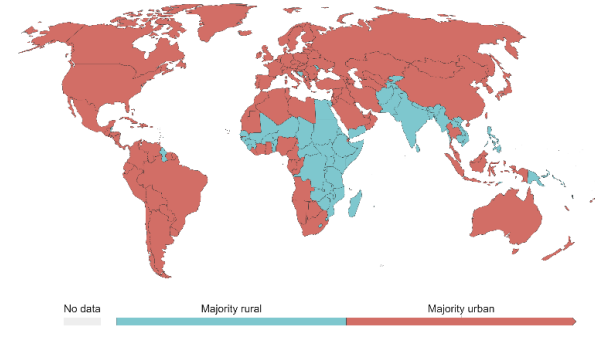


Source: OVID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)
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Do more people live in urban or rural areas?, 2020

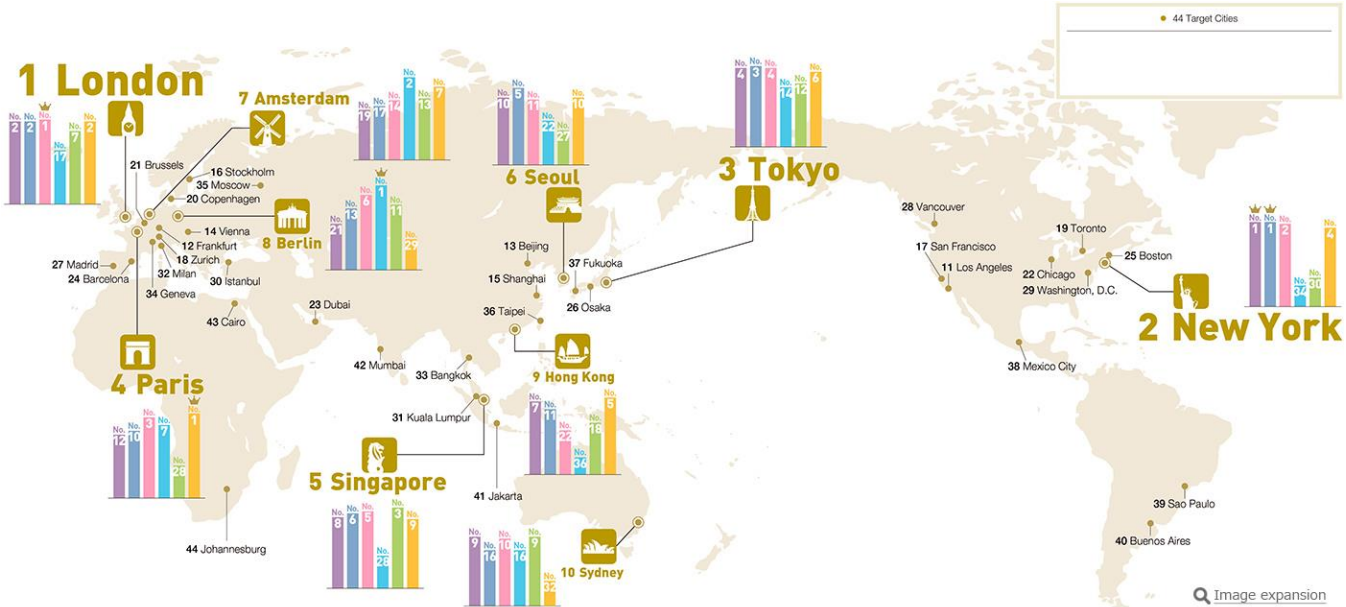
Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.

Our World in Data



Source: OVID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)
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F.3.1. – Global power city index, 2017



F.3.2. Kearney's Global City Index

The top 25 cities in the Global Cities Index

City	2020 Rank	2019 Rank	2018 Rank	2017 Rank	2016 Rank	2015 Rank	Δ '19-'20
New York	1	1	1	1	2	1	—
London	2	2	2	2	1	2	—
Paris	3	3	3	3	3	3	—
Tokyo	4	4	4	4	4	4	—
Beijing	5	9	9	9	9	9	+4 ↑
Hong Kong	6	5	5	5	5	5	-1 ↓
Los Angeles	7	7	6	8	6	6	—
Chicago	8	8	8	7	7	7	—
Singapore	9	6	7	6	8	8	-3 ↓
Washington, D.C.	10	10	11	10	10	10	—
Sydney	11	11	15	17	14	15	—
Shanghai	12	19	19	19	20	21	+7 ↑
San Francisco	13	22	20	23	23	22	+9 ↑
Brussels	14	12	10	11	12	12	-2 ↓
Berlin	15	14	16	14	16	17	-1 ↓
Madrid	16	15	13	13	13	16	-1 ↓
Seoul	17	13	12	12	11	11	-4 ↓
Melbourne	18	16	17	15	15	19	-2 ↓
Toronto	19	17	18	16	17	13	-2 ↓
Moscow	20	18	14	18	18	14	-2 ↓
Boston	21	21	24	21	24	23	—
Vienna	22	25	21	20	19	18	+3 ↑
Amsterdam	23	20	22	22	22	25	-3 ↓
Munich	24	32	32	36	33	38	+8 ↑
Buenos Aires	25	24	25	26	21	20	-1 ↓

Source: Kearney 2020 Global Cities Report