

# The 2022 War in Ukraine as it unfolds

Spring 2022, Tuesdays 1:30 – 3:00 pm

Study Group Facilitators

Roy Campbell and Norm Miller

([rhc@illinois.edu](mailto:rhc@illinois.edu) [nr.millr@gmail.com](mailto:nr.millr@gmail.com))

# About the facilitators

Both authors have expertise at graduate seminars and similar shared learning experiences. We both have general interest in technology, current events, economics, warfare, cyberwarfare, technology, and military history but are by no means expert in all these topics. We welcome input and expertise from the group participants.

# Overview

The study group will seek broad participation and input from the entire group as we read and discuss the history, origins, leaders, military, tactics, strategy, commercial, ethnic, and geopolitical interests involved in the events occurring in the 2022 Ukraine conflict.

We emphasize that we will be studying an evolving situation and that will require us to consider a wide range of views, understanding, current events, and history.

Many of us (including the facilitators) are not experts on all the topics of interest in this discussion group. However, this is a historic and noteworthy event. We will take advantage of the modern information sources available to us (Internet, Google Earth, Satellite Photos, Video, News Photos, Opinion Articles, and topical books) to inform ourselves about this conflict.

# Weekly Agenda (20 minutes per section)

1. Overview of week (E.g. see New York Times, Bloomberg News, BBC, Wikipedia, ... .) Discussion of the whole.
2. Updates from contributory investigations (Slide 6.)
3. Summary of Weekly Theme (Slide 5.) Led by Roy and Norm.
4. Discussion of the whole.

# Weekly Themes

1. Introduction, brief current status of the conflict, geography, relevant 18th century to the 21<sup>st</sup> century history of the Nations involved in the conflict as well as of NATO, the breakup of the USSR, the Russian Federation, and the European Union.
2. Timeline of conflict. Major events. Newspaper, journal, speeches, attacks, events.
3. Origins. Reasons for conflict. Past conflicts. Motivations for conflict. Alliances. Goals.
4. Leaders of the Nations in conflict. Military and Political figures.
5. Resources. Military strengths. Economies.
6. Military Tactics and Strategy. Use of Information and Cyber warfare
7. November through July significant events
8. Cost of conflict. Likely outcomes.

# Suggested contributory investigations (1-2 Individuals per Investigation)

1. The reporters: who are the ones providing the best articles on the different aspects of the conflict?
2. Food, Fertilizer, Refugees: Who is being impacted by the conflict?
3. Who benefits from the war. Individuals, organizations, countries?
4. Leaders watch. Who is on the up and down. Who are the influential leaders?
5. Evolving strategic goals. How have the strategies of Russia, Ukraine, Nato changed?
6. Evolving tactics. What tactics are being employed this week?
7. Politicians: Republican, Democratic, Russian, Ukrainian. Which politician best formalizes the issues?
8. War Crimes? Who, what and when?
9. Battle watch. Who is winning what and where?
10. Peace Talks. Agreement versus disagreements?

Other topics/Better organization?

# Week 1

4/5/2022



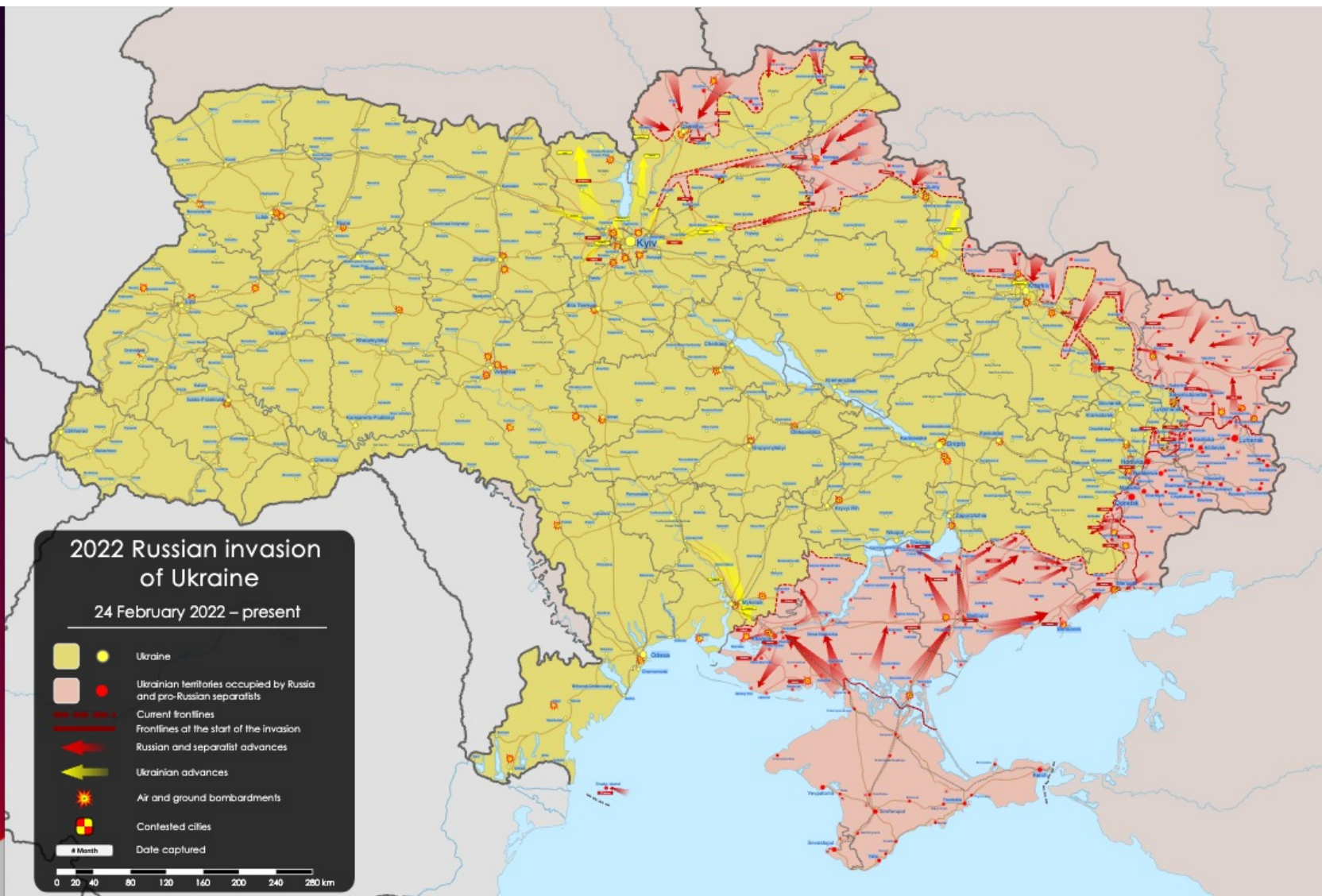
# Week 1 Agenda (20 minutes per section)

1. Overview of week (E.g. see New York Times, Bloomberg News, BBC, Wikipedia, ... .) Discussion of the whole.
2. Updates from contributory investigations  
Discussion of suggested contributory investigations, updates and modifications, call for volunteers for investigations'
3. Summary of Weekly Theme  
Introduction, brief current status of the conflict, geography, relevant 18th century to the 21<sup>st</sup> century history of the Nations involved in the conflict as well as of NATO, the breakup of the USSR, the Russian Federation, and the European Union. Led by Roy and Norm.
4. Discussion of the whole.

# 1) Overview of week (Discussion of the whole)

1. Fall out from Bucha Update Tuesday 4/4/2022  
<https://www.nytimes.com/2022/04/04/briefing/your-tuesday-briefing-the-fallout-from-bucha.html>
2. Zelenskyy accused Russia of [genocide](#) and said that sanctions from the west were not "enough" to respond to Russia's actions. The United States began pushing to suspend Russia from the [United Nations Human Rights Council](#). Putin signed a decree restricting visas to nationals from countries deemed "unfriendly" to Russia.<sup>[351]</sup>
3. Russia accused Ukraine of orchestrating a [false flag](#) in Bucha, claiming that the photos and videos were a "staged performance."<sup>[352]</sup>
4. United States President Joe Biden called for Putin to be tried for war crimes committed by Russian soldiers in Bucha.<sup>[353]</sup>
5. [https://en.wikipedia.org/wiki/Timeline\\_of\\_the\\_2022\\_Russian\\_invasion\\_of\\_Ukraine#4\\_April](https://en.wikipedia.org/wiki/Timeline_of_the_2022_Russian_invasion_of_Ukraine#4_April)

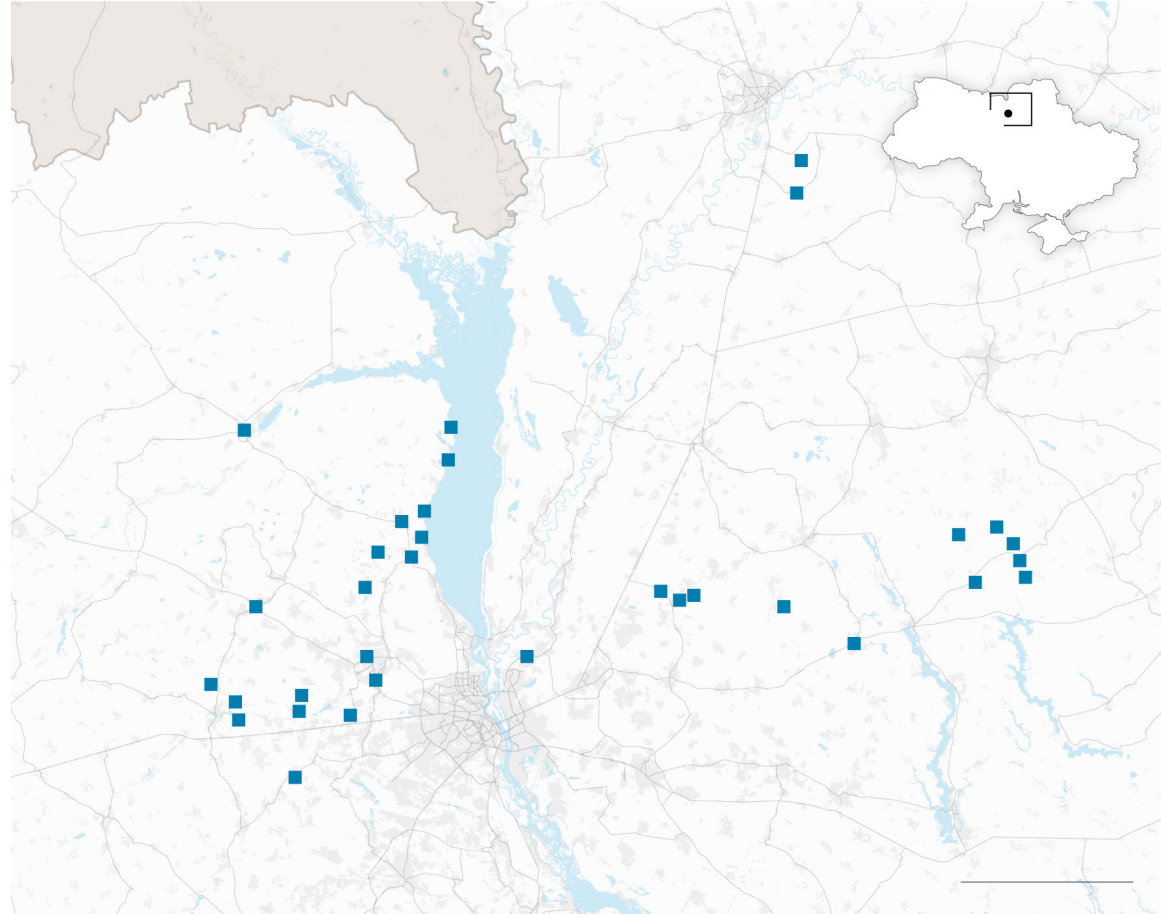
# 1.2) Overview of 4/4/2022



Military situation as of 5 April 2022  
Yellow - Ukraine  
Pink - Occupied Ukrainian territories

[Viewsridge](#) - Own work, derivate of [Russo-Ukraine Conflict \(2014-2021\).svg](#)

# 1.3) Reclaimed Ukrainian Towns



# 1.4) Counterattacks



## 2) Choose a contributory investigations (1-2 Individuals per Investigation) possible list

1. The reporters: who are the ones providing the best articles on the different aspects of the conflict?
2. Food, Fertilizer, Refugees: Who is being impacted by the conflict?
3. Who benefits from the war. Individuals, organizations, countries?
4. Leaders watch. Who is on the up and down. Who are the influential leaders?
5. Evolving strategic goals. How have the strategies of Russia, Ukraine, Nato changed?
6. Evolving tactics. What tactics are being employed this week?
7. Politicians: Republican, Democratic, Russian, Ukrainian. Which politician best formalizes the issues?
8. War Crimes? Who, what and when?
9. Battle watch. Who is winning what and where?
10. Peace Talks. Agreement versus disagreements?

### 3) Introduction

- Timeline of the Russian invasion of Ukraine  
[https://en.wikipedia.org/wiki/Timeline\\_of\\_the\\_2022\\_Russian\\_invasion\\_of\\_Ukraine#4\\_April](https://en.wikipedia.org/wiki/Timeline_of_the_2022_Russian_invasion_of_Ukraine#4_April)

## 3.1) Overview of History

- The Nations of Europe for 2400 years (Roy)  
<https://www.visualcapitalist.com/2400-years-of-european-history/>
- The Rulers of Europe (Roy)  
<https://www.youtube.com/watch?v=lpKqCu6RcdI>
- The History of the Kievan Rus region (Norm)  
[https://www.worldhistory.org/Kievan\\_Rus/](https://www.worldhistory.org/Kievan_Rus/)



## 3.2) Geography (Roy)

- Majority of the country lying within the [East European Plain](#).
- [Second-largest European country](#), after [Russia](#).
- 603,628 square kilometres and 2,782 kilometres of coastline
- Mostly of fertile [steppes](#) and plateaus
- Rivers [Dnieper](#), [Seversky Donets](#), [Dniester](#) and the [Southern Bug](#)
- The [delta](#) of the [Danube](#) forms the border with Romania
- [Carpathian Mountains](#) in the west, of which the highest is [Hoverla](#) at 2,061 metres (6,762 ft)
- Significant natural resources in Ukraine include lithium,<sup>[4]</sup> natural gas,<sup>[5]</sup> [kaolin](#),<sup>[5]</sup> timber<sup>[6]</sup> and an abundance of arable land.

# Topography



# Biomes

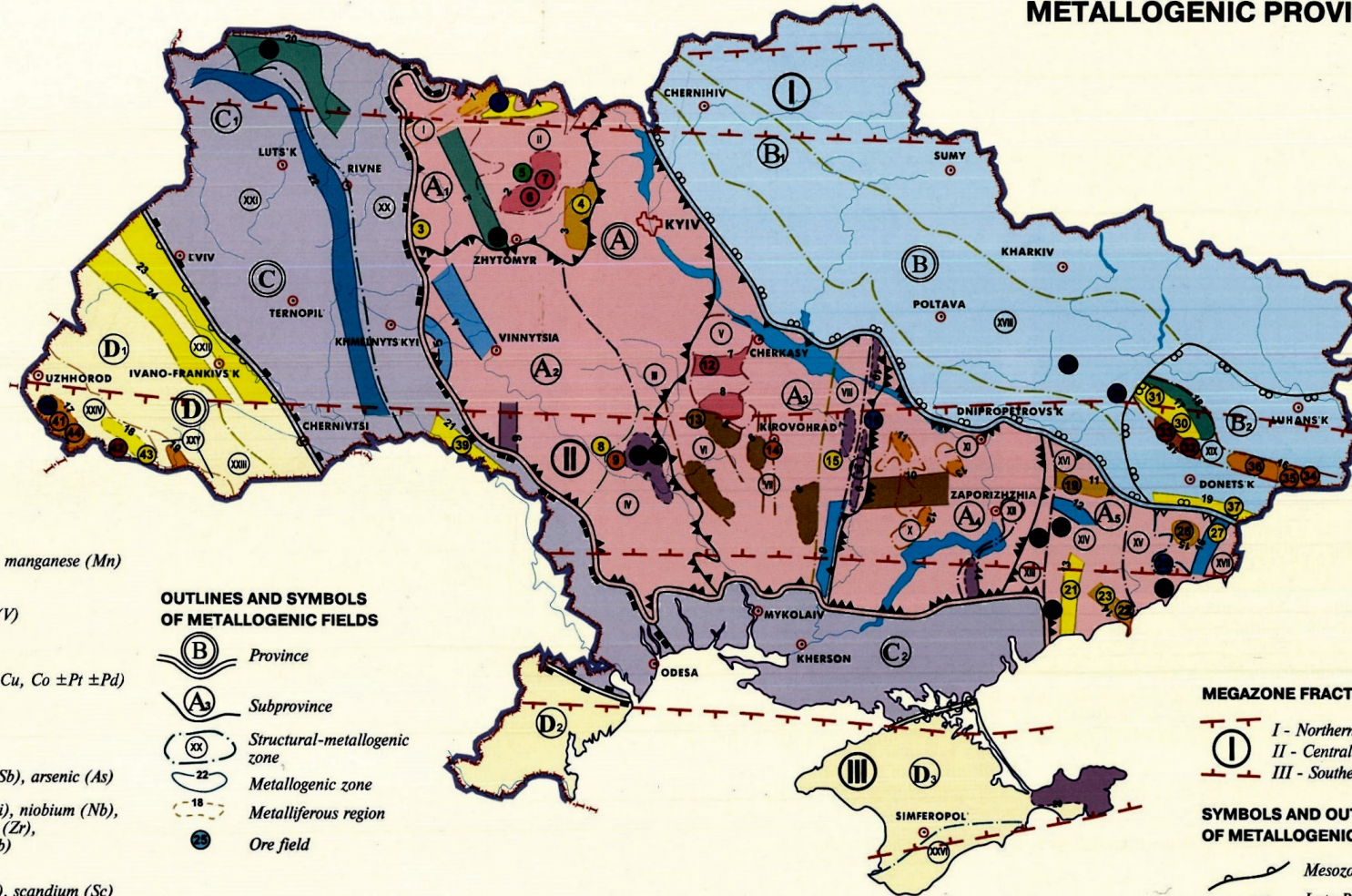


# UKRAINE

## River Map



# METALLOGENIC PROVINCES



## LEGEND

### MINERALIZATION WITHIN METALLOGENIC UNITS

- Iron (Fe), chromium (Cr), manganese (Mn)
- Titanium (Ti), vanadium (V)
- Copper (Cu),  $\pm$ Zn  $\pm$ Pb  
Nickel-copper-cobalt (Ni, Cu, Co  $\pm$ Pt  $\pm$ Pd)
- Lead (Pb), zinc (Zn)  
Molybdenum (Mo)
- Mercury (Hg), antimony (Sb), arsenic (As)
- Beryllium (Be), lithium (Li), niobium (Nb),  
Tantalum (Ta), zirconium (Zr),  
Cesium (Cs), rubidium (Rb)
- Rare earth elements (REE), scandium (Sc)
- Uranium (U), thorium (Th)
- Gold (Au), silver (Ag)
- Apatite (ap), muscovite (mu), graphite (gf), talc-magnesite (t-mg),  
pyrophyllite (pp), kyanite (ki), sillimanite (sl), dolomite (do),  
fluorite (fl), garnet (gr), corundum (cor), sulfur (S), barite (ba),  
alunite (al), common salt (cs), potassic salt (ps)
- Morion (mor), topaz (to), beryl (be), diamond (dim)

### OUTLINES AND SYMBOLS OF METALLOGENIC FIELDS

- Province
- Subprovince
- Structural-metallogenic zone
- Metallogenic zone
- Metalliferous region
- Ore field

### PROVINCES

- Ukrainian Shield
- Dnipro-Donets'
- Dnister-Black Sea
- Carpathian-Crimean

### SUBPROVINCES

- Volyn'
- Podillia
- Kirovohrad
- Mid-Dnipro
- Azov
- Dnipro
- Donets'
- Volyn'-Dnister
- Black Sea
- Carpathian
- Dobruja
- Crimean

### MEGAZONE FRACTURING

- I - Northern Ukrainian
- II - Central Ukrainian
- III - Southern Ukrainian

### SYMBOLS AND OUTLINES OF METALLOGENIC EPOCHS

- Mesozoic-Cenozoic
- Late Paleozoic (Hercynian)
- Early Paleozoic (Caledonian)
- Late Proterozoic
- Middle Proterozoic
- Early-Middle Proterozoic
- Archean-Early Proterozoic
- Archean

# Value of resources



# Russian Gas Export Routes to Europe



Source: Oxford Institute for Energy Studies

# Natural Gas Runs Through Ukraine



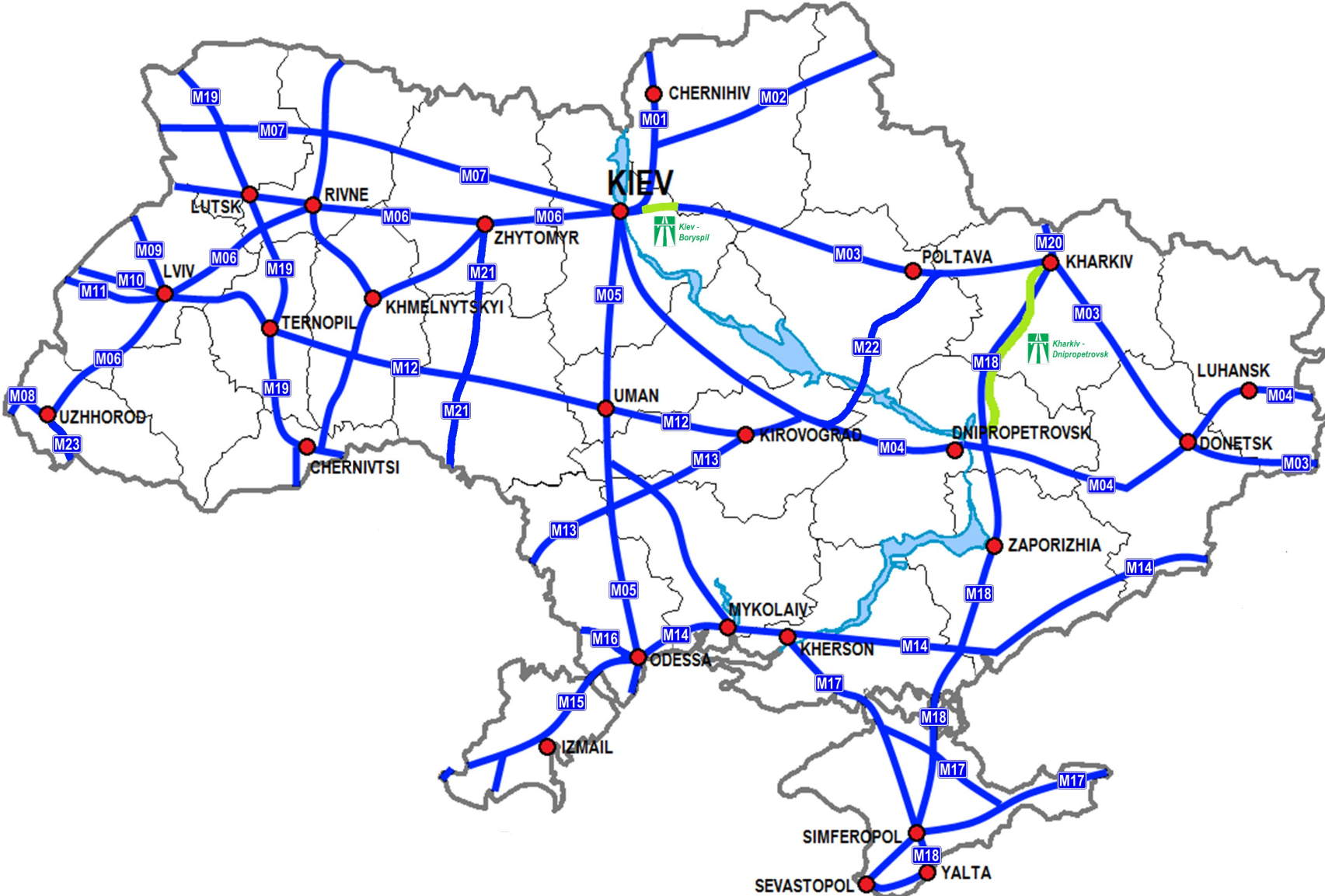
Source: The Oxford Institute for Energy Studies

Note: Only the portion of pipelines that run through Ukraine are displayed on the map

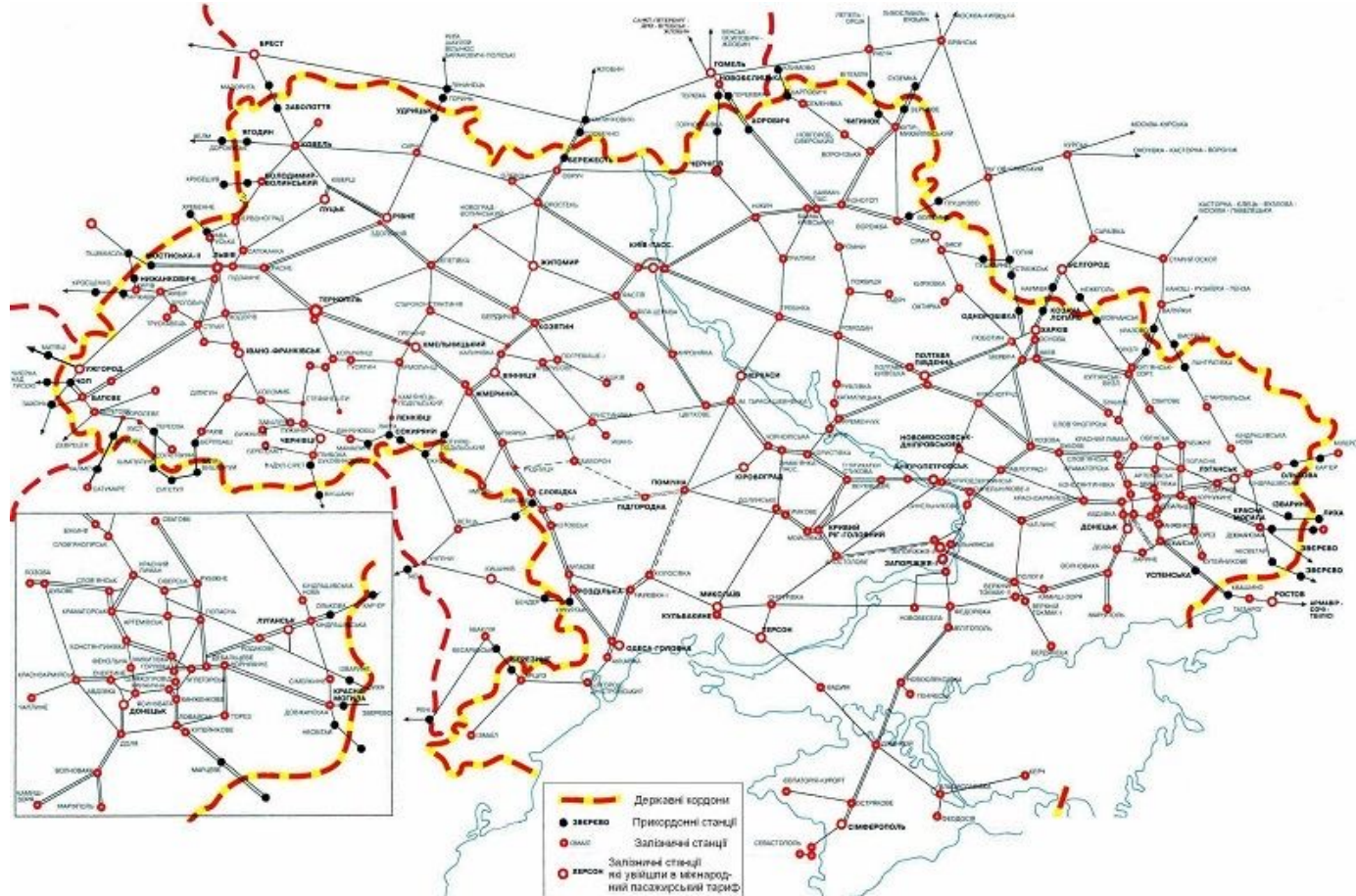
**Bloomberg**



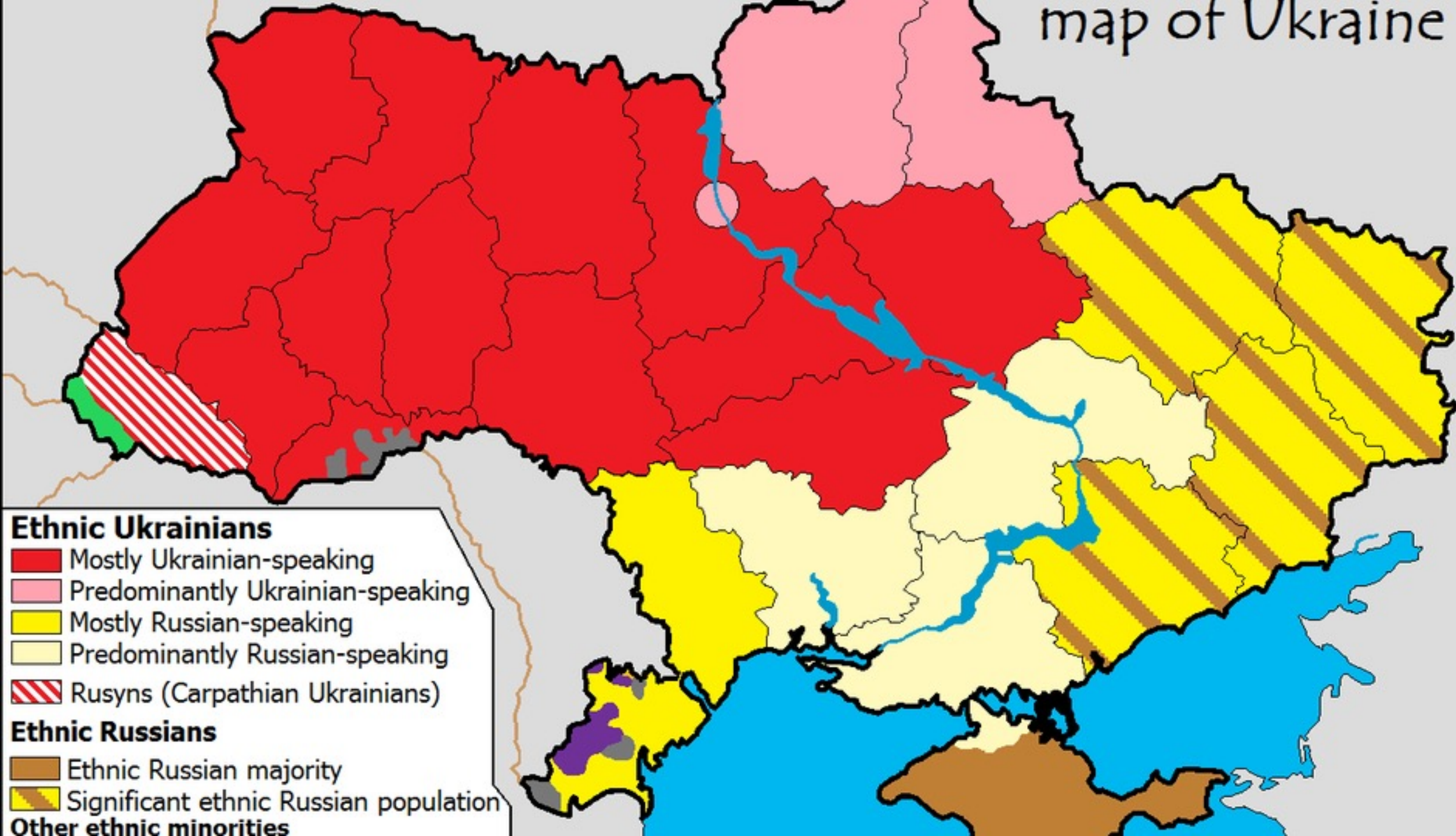
# Roads

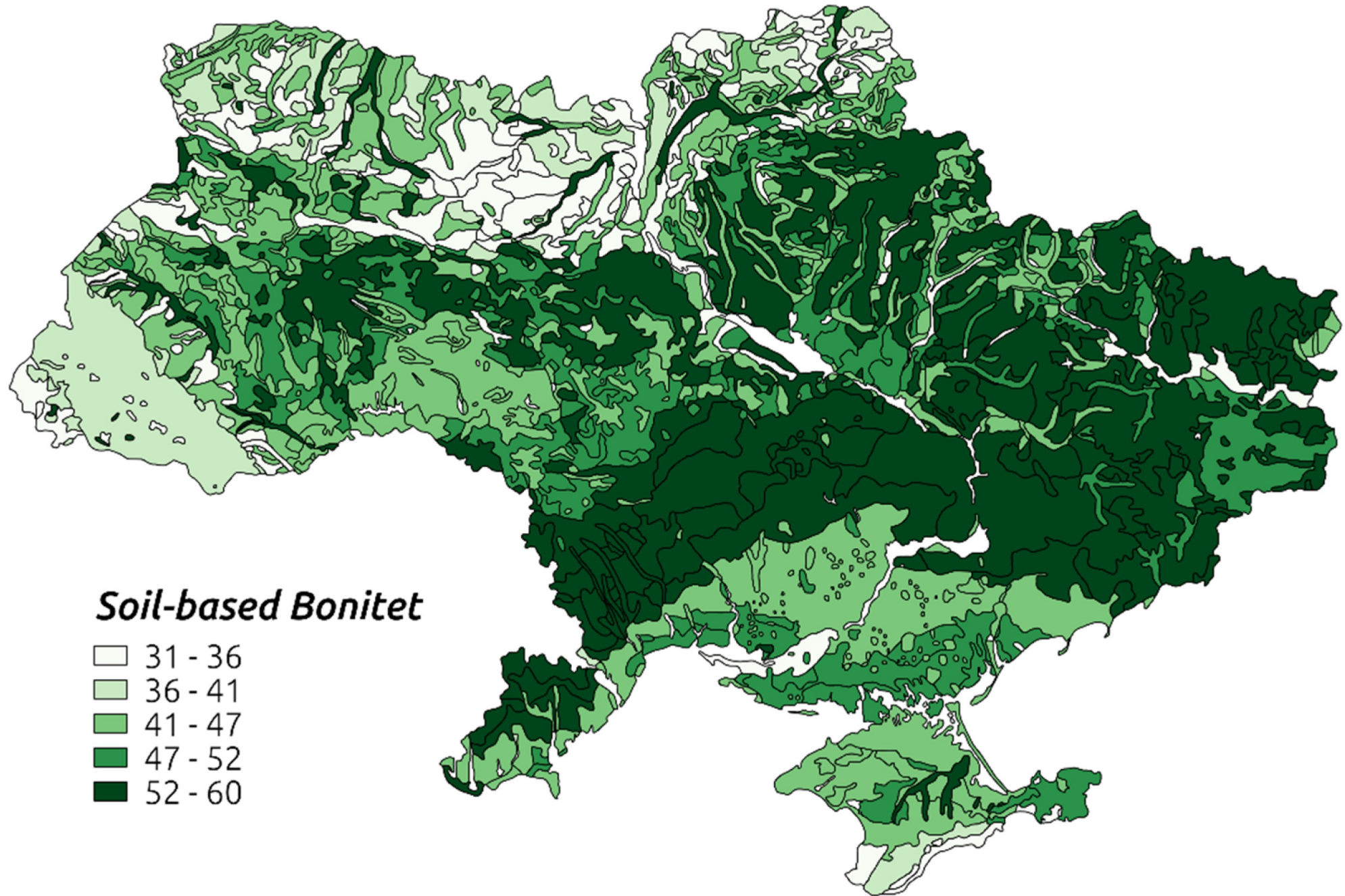


# Railways



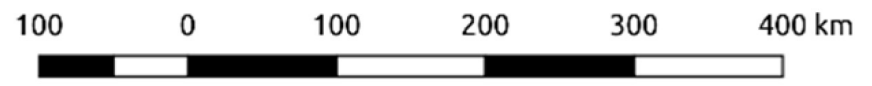
map of Ukraine



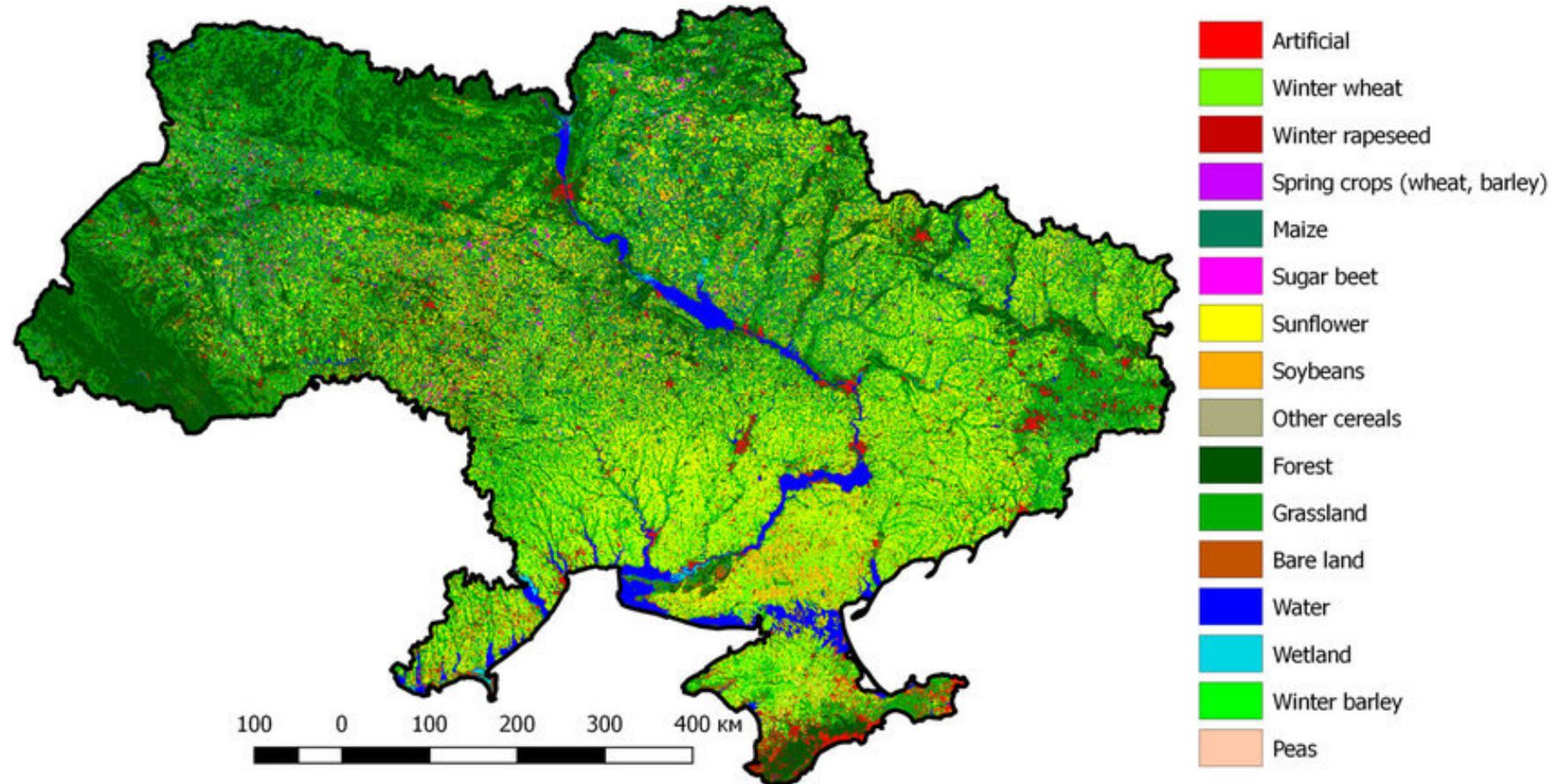


***Soil-based Bonitet***

- 31 - 36
- 36 - 41
- 41 - 47
- 47 - 52
- 52 - 60



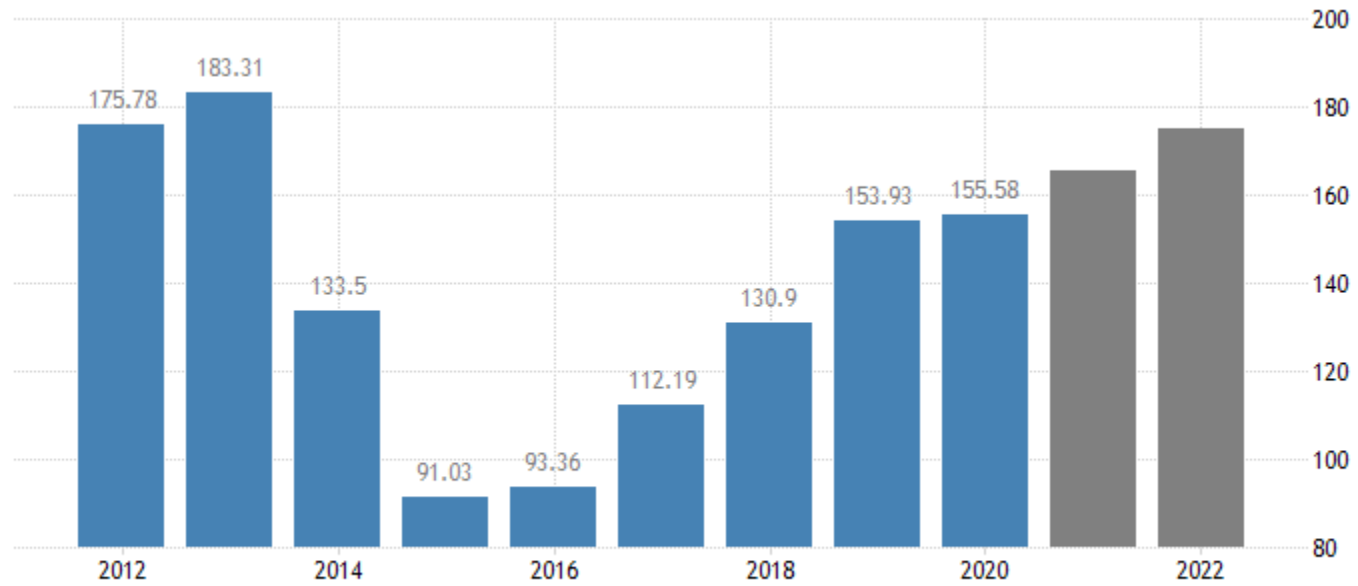
# Crops in Ukraine



# Countries Bordering Ukraine

- [Belarus](#) 891 kilometers (554 mi),
- [Hungary](#) 103 kilometers (64 mi),
- [Moldova](#) 939 kilometers (583 mi),
- [Poland](#) 428 kilometers (266 mi),
- [Romania](#) 169 kilometers (105 mi) on the south and 362 kilometers (225 mi) on the west,
- [Russia](#) 1,974 kilometers (1,227 mi), and
- [Slovakia](#) 90 kilometers (56 mi).

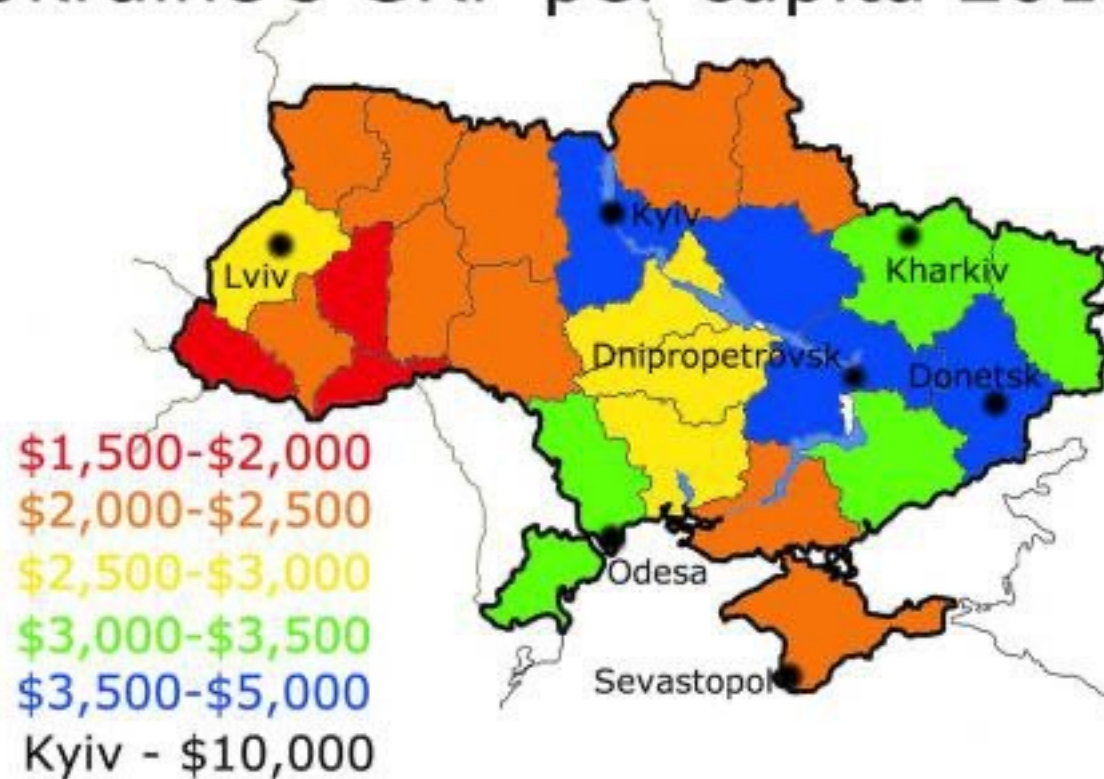
# GDP in USD Billions



# Gross Regional Product per Capita

OpenDemocracy.net

## Ukraine's GRP per capita 2011





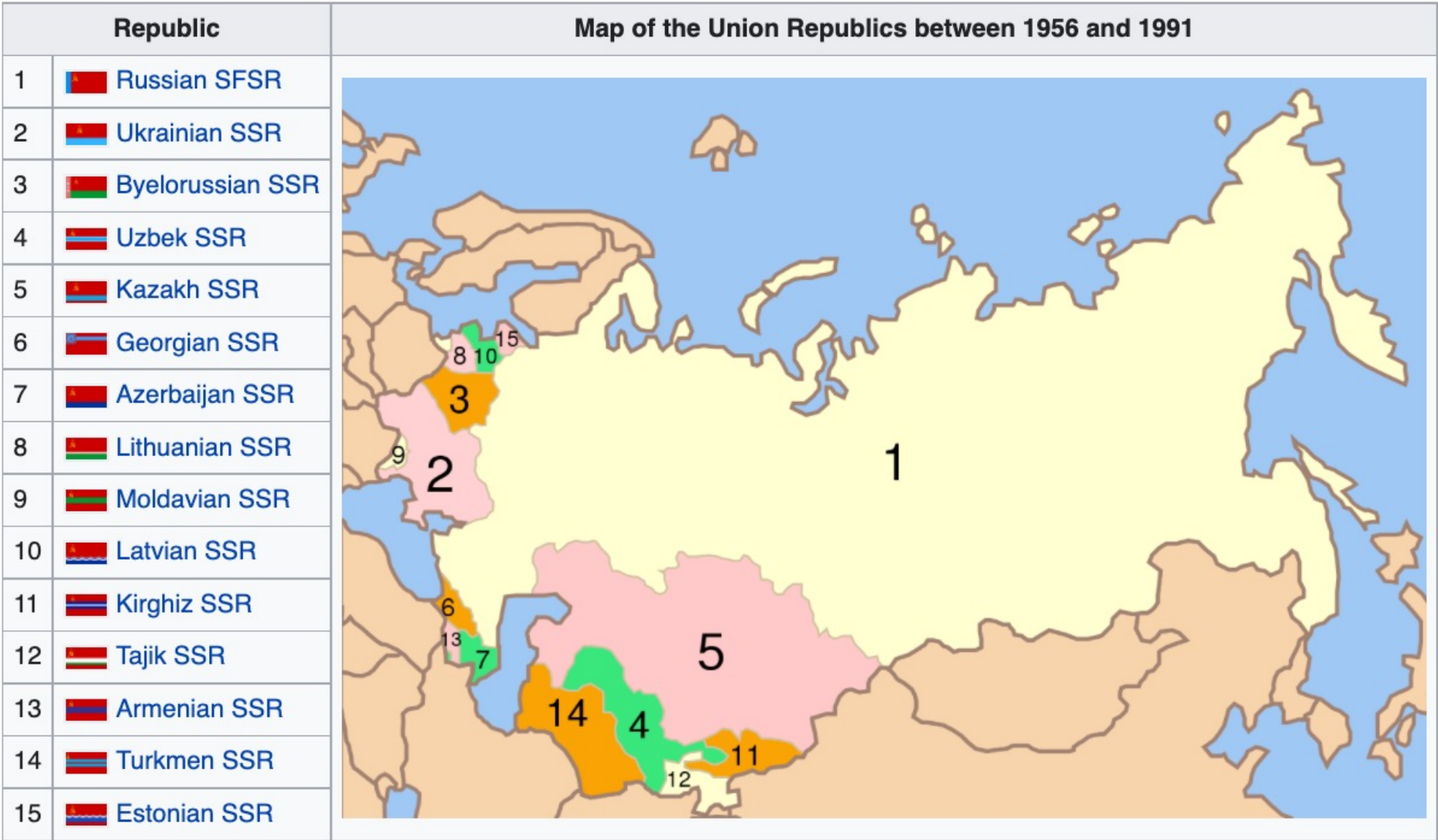
# CNN Why Russia might invade Ukraine (Map)

- <https://www.cnn.com/videos/opinions/2022/01/18/ukraine-russia-crisis-maps-lon-orig-cb.cnn>

## 3.2) Breakup of the USSR

- 1988, USSR abandoned its [war in Afghanistan](#)
- 1989, [Gorbachev refused to interfere in the internal affairs of the Soviet satellite states](#), which paved the way for the [Revolutions of 1989](#).
- August 1989, the [Pan-European Picnic](#) set a peaceful chain reaction in motion at the end of which the Eastern Bloc collapsed. With the tearing down of the [Berlin Wall](#) and with East and West Germany pursuing unification, the [Iron Curtain](#) between [the West](#) and Soviet-controlled regions came down.

# USSR



# Russia, Belarus, Ukraine

- On 8 December 1991, the presidents of Russia, Ukraine and [Belarus](#) (formerly Byelorussia), signed the [Belavezha Accords](#), which declared the Soviet Union dissolved and established the [Commonwealth of Independent States](#) (CIS) in its place.
- Russia was internationally recognized<sup>[63]</sup> as the USSR's [legal successor](#) on the international stage. To that end, Russia voluntarily accepted all Soviet foreign debt and claimed Soviet overseas properties as its own.
- Under the 1992 [Lisbon Protocol](#), Russia also agreed to receive all nuclear weapons remaining in the territory of other former Soviet republics.
- [Ukraine](#) passed laws, similar to Russia, that it is a state-successor of both the [Ukrainian SSR](#) and the USSR
- The parliament of the republic proclaimed the [sovereignty](#) of Belarus on 27 July 1990, and during the [dissolution of the Soviet Union](#), Belarus declared independence on 25 August 1991.<sup>[15]</sup>

# Remainder of the 15 parts of USSR

- Estonia, Latvia, and Lithuania consider themselves as [revivals of the three independent countries](#) that existed prior to their occupation and annexation by the Soviet Union in 1940.
- [Abkhazia](#), [Artsakh](#), [Donetsk](#), [Luhansk](#), [South Ossetia](#) and [Transnistria](#) claim independence from the other internationally recognised post-Soviet states but [possess limited international recognition](#).
- The [Chechen](#) separatist movement of the [Chechen Republic of Ichkeria](#), the [Gagauz](#) separatist movement of the [Gagauz Republic](#) and the [Talysh](#) separatist movement of the [Talysh-Mughan Republic](#) lack any international recognition.

# Change in national boundaries after the end of the cold war



## 3.3) Russia

- It is the [largest country in the world](#) by area, covering over 17,125,191 square kilometres (6,612,073 sq mi), and encompassing one-eighth of Earth's inhabitable landmass.
- Russia extends across [eleven time zones](#) and [borders sixteen sovereign nations](#), the [most of any country](#) in the world.<sup>[a]</sup>
- It is the [ninth-most populous country](#) and the [most populous country](#) in [Europe](#), with a population of 145.5 million.
- It is ranked 52nd on the [Human Development Index](#), with a [universal healthcare system](#) and [free university education](#).
- world's [eleventh-largest economy by nominal GDP](#).
- It is a recognised [nuclear-weapons state](#), possessing the world's [largest stockpile of nuclear weapons](#), with the [fourth-highest military expenditure](#).
- Russia's extensive mineral and energy resources are the world's largest, and it is among the leading [producers of oil](#) and [natural gas](#) globally.

## 3.4 The Russian Federation

- Following the [dissolution of the Soviet Union](#) in 1991, the newly independent Russian SFSR renamed itself the Russian Federation.
- In the aftermath of the [constitutional crisis of 1993](#), a new [constitution](#) was adopted, and Russia has since been governed as a [federal semi-presidential](#) republic.



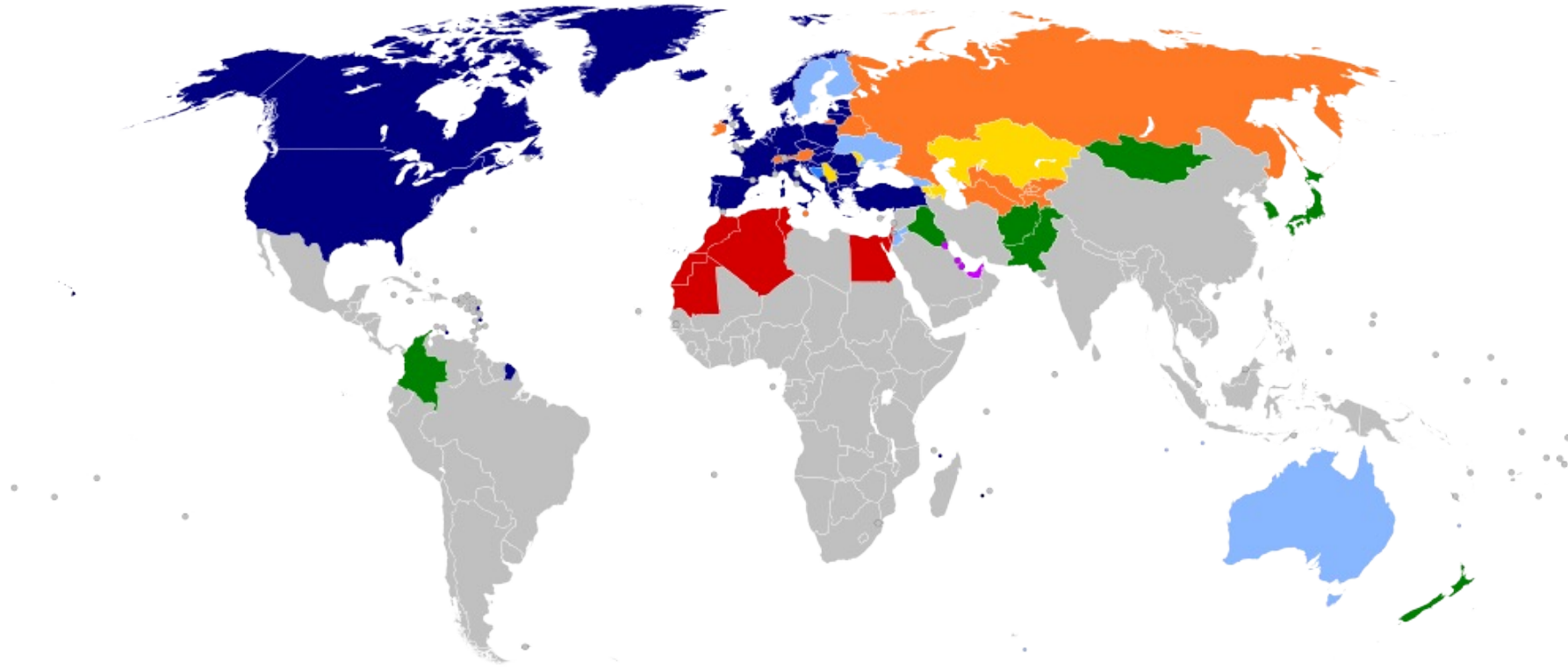
## 3.5) The European Union

- The **European Union (EU)** is a [political](#) and [economic union](#) of [27 member states](#) that are located primarily in [Europe](#).<sup>[6]</sup> The union has a total area of 4,233,255.3 km<sup>2</sup> (1,634,469.0 sq mi) and an estimated total population of about 447 million.
- Containing some 5.8 percent of the [world population](#) in 2020,<sup>[c]</sup> the EU had generated a nominal [gross domestic product](#) (GDP) of around US\$17.1 trillion in 2021,<sup>[17]</sup>
- Through the [Common Foreign and Security Policy](#), the union has developed a role in [external relations](#) and [defence](#).
- 21 EU members are members of NATO<sup>[209]</sup> while the remaining member states follow policies of [neutrality](#).<sup>[210]</sup>

## 3.6) NATO

- The **North Atlantic Treaty Organization** also called the **North Atlantic Alliance**, is an [intergovernmental military alliance](#) between 30 [member states](#), 28 of which are in Europe and the other 2 being part of North America. Established in the [aftermath](#) of [World War II](#), the organization implements the [North Atlantic Treaty](#), signed 4 April 1949. <sup>[3][4]</sup>
- NATO currently recognizes [Bosnia and Herzegovina](#), [Georgia](#), and [Ukraine](#) as aspiring members. <sup>[3]</sup> Enlargement has led to tensions with non-member [Russia](#), with Russian president [Vladimir Putin](#) demanding that NATO provide legal guarantees that it would stop expanding east (to countries such as Ukraine, Georgia or [Moldova](#)).

# NATO and its partner countries



A global map of NATO partners around the world. ■ NATO [member](#) states ■ [Membership Action Plan](#) ■ [Enhanced Opportunities Partner](#)<sup>[1]</sup> ■ [Individual Partnership Action Plan](#) ■ [Partnership for Peace](#) (PfP) ■ [Mediterranean Dialogue](#) (MD) ■ [Istanbul Cooperation Initiative](#) (ICI) ■ [Partners across the globe](#)

## 3.6) Some recent history (Norm)

- Why is Ukraine the West's Fault? Featuring John Mearsheimer, Sep 25, 2015
- <https://youtu.be/JrMiSQAGOS4>
- Or why is the current war in Ukraine all our fault? Irritating, but worth an hour's listen

# Uses of history – the Russian Orthodox Church

- <https://www.ponarseurasia.org/the-russian-orthodox-church-s-conquest-of-the-history-market/>

# Eurasianism

- **The Grand Theory Driving Putin to War**
- [https://www.nytimes.com/2022/03/22/opinion/russia-ukraine-putin-  
eurasianism.html?smid=url-share](https://www.nytimes.com/2022/03/22/opinion/russia-ukraine-putin-eurasianism.html?smid=url-share)
- [https://booksandideas.net/ Jane-Burbank .html?lang=en](https://booksandideas.net/Jane-Burbank.html?lang=en)
- <https://booksandideas.net/Borders-as-Thickening-Zones.html>
- <https://booksandideas.net/The-Persistence-of-Empires.html>

# Putin's Century of betrayal speech

- [https://branko2f7.substack.com/p/putins-century-of-betrayal-speech?r=av0bg&s=r&utm\\_campaign=post&utm\\_medium=email](https://branko2f7.substack.com/p/putins-century-of-betrayal-speech?r=av0bg&s=r&utm_campaign=post&utm_medium=email)

# Equipment and tactics

- **How Ukraine's Outgunned Air Force Is Fighting Back Against Russian Jets**
- <https://www.nytimes.com/2022/03/22/world/europe/ukraine-air-force-russia.html?smid=url-share>
- Russian aircraft:
- [https://en.wikipedia.org/wiki/Sukhoi\\_Su-30](https://en.wikipedia.org/wiki/Sukhoi_Su-30)
- [https://en.wikipedia.org/wiki/Sukhoi\\_Su-34](https://en.wikipedia.org/wiki/Sukhoi_Su-34)
- [https://en.wikipedia.org/wiki/Sukhoi\\_Su-35](https://en.wikipedia.org/wiki/Sukhoi_Su-35)



## 3.7) A Brief Summary of the Recent History of Ukraine

- [A brief history of modern Ukraine - BBC News – YouTube](#)

Late Breaking News from the BBC

- <https://www.bbc.com/news/world/europe>
- <https://www.bbc.com/news/world-europe-60981228>

## Late Breaking News from the BBC

- <https://www.bbc.com/news/world/europe>
- <https://www.bbc.com/news/world-europe-60981228>



4) Discussion Time.

## 5) Next week

1. Overview of week (E.g. see New York Times, Bloomberg News, BBC, Wikipedia, ... .) Discussion of the whole.
2. Updates from contributory investigations (Slide 6.) Come prepared to make a 2 minute update on your investigation.
3. Summary of Weekly Theme. Led by Roy and Norm.  
Timeline of conflict. Major events. Newspaper, journal, speeches, attacks, events.
4. Discussion of the whole.