

CHANGING SECURITY DYNAMICS OF EUROPEAN UNION (EU): A CRITICAL ANALYSIS

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Abstract

The Russia-Ukraine conflict has significantly transformed Europe's security scenario, dictating a reconsideration of conventional defense, political, and economic structures. This article analyses the impact of the war on refurbishing the European defense policy, including both conventional and unconventional security challenges, as well as pre-war security frameworks, including the EU's Common Security and Defense Policy (CSDP) and NATO's strategic aims. The study examines the rapid changes and reforms in the European security framework following the outbreak of Russia-Ukraine war, explaining distinguished changes in regional defense strategies, cyber security protocols, and other collective policies. The NotPetya assault and the Solar Winds hack disclose the critical cyber risks that exacerbate Europe's vulnerabilities. Moreover, the effects of war on energy and food security are critically considered as Europe deals with both resource deficiencies and anxious supply chains. Through a complex analysis of these security aspects, this study provides insights into the contemporary challenges and strategic concerns reshaping Europe's security framework. A mixed method approach was used to analyze the study and the data were collected from both primary and secondary sources.

Keywords: European Security Framework, NATO (North Atlantic Treaty Organization), EU Common Security and Defense Policy (CSDP), Energy and Food Security

INTRODUCTION

Europe remained under relative peace after 1945 predominantly under the European Union. However, the Russia-Ukraine war has disturbed the whole setting of peace, security, and stability. Furthermore, there is also a school of thought in the political elite of Europe that USA is using Europe as bait for its war against her eternal enemy Russia-Ukraine being the latest victim of this war. Consequently, there is a sense of resentment among the nationalist class of Europe towards NATO and the European Union. Hence, to what extent this Russia-Ukraine war would impact the social, political, and security fabric of Europe is an important question to ponder.

The Russia-Ukraine war enormously affected the regional security dynamics of Europe. The security architecture of Europe has been traumatized and experienced considerable modifications particularly as a result of the Ukraine crisis. The conflict brewed as a result of Moscow's annexation of Crimea in 2014 and later in February 2022, it turned into a full-scale war. This war led to humanitarian, economic, security, and political crises in the region and has largely reshaped the geopolitical landscape of Europe. The war is the biggest conventional conflict in Europe since the Second World War and has resulted in widespread re-evaluation of collective defense, military preparedness, and political alliances notably through institutions such as NATO (North Atlantic Treaty Organization) and European Union.

Before the escalation of the conflict, European security paradigm was largely characterized by post-Cold War assurance and collective security charters that focused on diplomacy and economic interdependence with Russia. However, the invasion of Ukraine traumatized these assumptions and reintroduced conventional military threats to the forefront for European strategic thinkers. The Russian invasion resulted massive increase in defense spending of war prone countries such as Germany and Sweden while NATO has boosted its military presence in Eastern Europe. The crisis provoked the neutral states like Sweden and Finland to seek the membership of NATO which reflects the mounting threat perception of European states. Finland joined NATO on April 4, 2023, and Sweden did the same on

March 7, 2024 (Beaver & Lapporte).

Since the emergence of the Ukraine crisis not only the European states but also the other state's sense of insecurity is pushing them towards distrust and security dilemma. European states joined NATO to counter the USSR and defend themselves through collective security. But after the invasion the concept of collective security is waning in Europe. Now states are trying to protect themselves by increasing their defense budget and it shows uncertainty and ambiguity in Europe. Although it may be implicit or explicit, NATO and its allies are supporting Ukraine. NATO's cautious policies about the ongoing crisis are raising multiple questions in the security dynamics. The majority of realists accuse NATO of provoking Russia as Mearsheimer (2014) argued that the West especially NATO is responsible for the Ukraine crisis because they provoked Russia by expanding NATO to its border. Walt (2015) also argued that the enlargement of 'NATO' was the key factor in the Russia-Ukraine war. The primary objective of the formation of NATO was security and regional stability, but in the case of Kyiv, NATO's enlargement and involvement inflamed tension and instability in the region. NATO transformed itself from a defensive alliance to an offensive actor which triggered security issues in the region (McFaul et al., 2014; Sakwa, 2016; Wolff, 2015). On the other hand, few scholars are arguing such as Belkin et al. (2014) stated that the role of NATO is totally defensive and its enlargement was necessary to stabilize Europe after the end of the "Cold War". In the view of Sperling and Webber (2017) cooperation of NATO with Ukraine is essential to counter Russian aggression and it will decide the future of collective security in Europe.

Donaldson (2017) says that the involvement of NATO in the Russia-Ukraine war raises complex questions about regional security besides escalating the conflict. According to Samuel Chirp from RAND Corporation, the Russia-Ukraine war has destabilized the order of security in Europe. Owing to NATO's involvement in this war it may be escalate in the whole region by the intervention of neighboring countries. Hill and Stent (2022) articulated that the Russia-Ukraine war is not only a threat to Ukrainian sovereignty but also a threat to the regional security dynamics of Europe. It will drag the whole of Europe towards an arms race and instability. Ukraine has profound effects on European regional security and it will create a 'cold-war' like political and security environment (Kotoulas & Pusztai, 2022). The war is reshaping regional security dynamics in Europe that's why states are rapidly increasing their defense budgets and it has disturbed the regional security order in Europe especially Georgia, Moldova, and Baltic states (Estonia, Latvia, and Lithuania). The region is now more militarized than in the era of the 'Cold War' and it will have long-term regional impacts will to be felt for decades. Hence, the core aim of this study is to analyze the fluctuating security dynamics of Europe in the context of the Russia-Ukraine war.

RESEARCH METHODOLOGY AND CONCEPTUAL FRAMEWORK

Data related to the topic was collected largely from secondary sources like books, journal articles, research reports, official records, research reports, dissertations and newspapers etc. However, in-depth discussions with the academic experts of the subject were also concluded as a primary source of data to expand the understanding about the issues under discussion. The questions of interviews were mostly unstructured. However, the questions were largely concentrated upon certain issues in Europe such as nationalism, populism, Russia-Ukraine War and its implications on Europe, peace and security, and the future of NATO and European Union etc.

The theories of Neo-Realism and Regional Security Complex were applied to explore the subject under research. Basic assumption of neo-realists was tested which envisage that simpler the international system, the more stable it is. So, bipolar system was more stable than multipolar system and unipolar system would be more stable than bipolar one. Regional Security Complex Theory, on the other hand, is a political ideology that promulgates that the group of governments whose major security problems are sufficiently linked together that their national security cannot be examined apart from one another. Current security system in Europe was regarded to be the best manifestation of the regional security complex theory. So it was investigated, in this study, that how the prevailing security issues such as Russia-Ukraine war going to impact the security system of Europe altogether.

Pre-War Security Frameworks in Europe

Europe was largely operated under the chain of multiple security frameworks that emerged after the "Cold War". From 1991 to 2014 and 2014 to 2022 there was a uniform security framework and any European state did not bother the traditional security issues. The sole reason for their trust and confidence was due to the existence of collective security system under NATO and despite some issues, Europe focuses on cooperation and economic interdependency with Russia. The model of European security was based on regional peace and stability, integrating states into multilateral institutions, promoting dialogues, and establishing legal norms for managing conflicts. Despite several historical factors of war and antagonism within Europe they successfully represented peace and prosperity. However, their security framework failed to prevent Russia from invading Ukraine. The grounds of the security framework were imbedded on key institutions like NATO, "Organization for Security and Cooperation in Europe" (OSCE), and EU.

NATO

NATO was established on April 4, 1949, and the primary objective of this alliance was to counter all forms of military aggression collectively particularly posed by Soviet Union. Collective security was the driving force behind the formation of NATO. Article 5 of its founding treaty clearly states that “an attack on one member is an attack on all” and this was the core principle of its Cold War strategy to deter USSR aggression. NATO successfully protected its members from Soviet expansionist policies during the “Cold-War” but after the disintegration of the Soviet, they shifted their security framework and massively focused on crisis management, cooperative security, war against terrorism and promotion of democratic norms worldwide etc.



Source: CRS Graph

After the 9/11 incident, NATO initiated antiterrorism policies and focused on nontraditional security issues like cyber security. It also developed partnerships with non-member states especially Baltic states through partnership for peace programs. According to NATO’s rule, every member should contribute 2% of its GDP for collective security but the majority of its members never contributed before the Russian invasion of Crimea in 2014. The above figure shows the NATO members and their aspirants (Falkenek, 2024).

Before the Russia-Ukraine war, NATO’s security framework remained primarily defensive, focused on safeguarding peace and stability in Europe, but it was less prepared for a return of large-scale conventional military threats from Russia. NATO tried to maintain its security framework on cooperative security and partnership building, crisis management, and collective defense according to Article 5 of NATO’s founding treaty deterrence and slight military presence in Eastern Europe as well as arms control and disarmament.

NATO initiated a partnership program with the former Eastern Bloc through a partnership for peace program with the collaboration of the EU and United Nations.

NATO participated in international crisis management and peacekeeping missions rather than territorial defense and tried to portray itself as a stabilizing force beyond Europe by joining missions in Afghanistan and the Balkan region. Article-5 of the NATO-Treaty declared that ‘attack on one member is an attack on all’. However after the end of the Cold-War its focus was subdued with emphasis on out-of-area operations and global security engagement rather than European territorial threat.

In Eastern Europe, NATO maintained a nominal military presence to avoid provoking Russia despite several concerns. To reduce the military tension with Russia, NATO initiated arms control and disarmament programs through the Russia-NATO Council (NRC).

NRC was established on May 28, 2002, in Rome and its primary goals and principles were relied on the NATO-Russia Founding Acts of 1997 which addressed security collaboration and bilateral ties. According to NRC, Russia and NATO members collaborated on a variety of security issues on partnership base (Kulhánek, 2009). It was the major

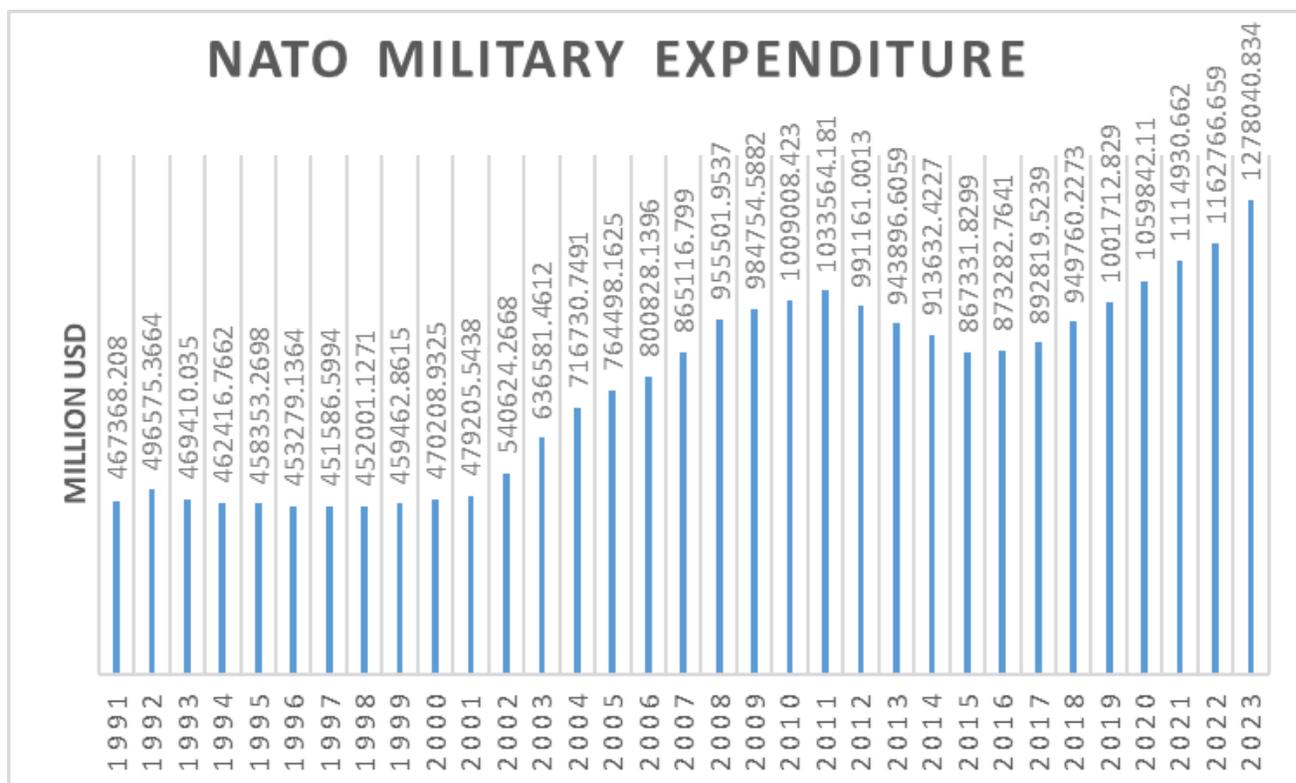
shift in the security framework of NATO and Russia. So we can divide NRC into two categories i.e. practical and political. In this practical part, both parties cooperated in the security domain and they identified nine potential areas for practical cooperation as well as established 17 expert groups and committees. The main responsibility of the experts and committees was to suggest areas for practical cooperation and it was divided into military-collaboration as well as civil and societal cooperation. After a year of NRC, the committee recommended four strategic partnership programs; Russia-NATO threat assessment on possible terrorist threats for forces in Bosnia and Kosovo, a standard concept for the future of Russia-NATO peacekeeping mission, risk analysis of the spread of 'Weapons of Mass Destruction (WMD)' and shared 'Theatre Missile Defense' (TMD).

Since the disintegration of the USSR both Russia and NATO cooperated on equal footing, and the incident of 9/11 played a major role in shaping their security framework and the fight against terrorism was a primary concern of both parties. The cooperation against terrorism encompassed information sharing and consultation, joint threat assessment programs, civil-emergency planning, high-level discussion regarding military capability in countering terrorism, as well as collaboration in the fields of science and technology. According to Antonov and Hoffmann (2020), Russia allowed NATO infrastructure to pass through its jurisdiction in support of the International Security and Assistance Force (ISAF) in Kabul. The anti-terrorism policies of both Russia and NATO produced the most promising results inside the NRC (Sparagno, 2003). Despite historical grievances and rivalry, both were on the same pitch and both supported the Global War on Terror owing to their same national interest because they believed that cooperation in counter-terrorism would mutually increase their security. Russia and NATO cooperated for the joint project counter-narcotics training for Afghan and Central Asian police, cooperative airspace initiative as well as Moscow's cooperation with Operation Active Endeavor showed their counter-terrorism security policy (Cross, 2006; Toktogulov, 2015).

'Anti-Terrorism Action Plan' was initiated in 2004 to enhance cooperation in counter-terrorism strategies and Russia allowed NATO forces to fly over Central Asian States during NATO operations in Afghanistan. In 2003 for secure communication, NATO and Russia installed a direct communication link between NATO Secretary General and Russian Defense Minister. Moscow has joined twice in the 'Operation Active Endeavor' in 2006 and 2008. Both are cooperated in border control, air space management, and nuclear safety and proliferation. Russia and NATO also signed the 'Partnership for Peace Status of Force Agreement (SOFA)'-2004 and indorsed it in 2007. Provisions for foreign forces stationed in another territory was set by SOFA (Mason, 2012). Under the NRC civil and societal cooperation program, they have focused on different initiatives to reduce the huge Russian-military and help the previous military-personnel incorporate interested into civil life. A joint Russian-NATO Center for helping retired Russian military personnel who wanted to return to civilian life was opened in Moscow on July 02, 2002. 'NATO-Russia Centre for the Retraining of Discharged Military Personnel' was responsible for assistance and employment opportunities for military personnel with their due rights and privileges. Interestingly, the center was funded by NATO but operated by Russia (Pugaciauskas, 2011).

Despite multiple cooperation and joint security programs, Russia had exercised its influence against NATO enlargement policies and resisted NATO to include the former Soviet Republic in it. Moscow saw the enlargement policies of NATO as a direct threat to its sovereignty and national security. The Russian Prime Minister Kozyrev showed his serious concern and said that 'NATO's advance towards Russia's borders cannot but be seen as a continuation, though by inertia, of a policy aimed at containment of Russia' (Tsygankov, 2018). In the view of (Tresselt, 2010) the formation of NRC was to prevent Russia from opposing NATO extension. However, under the flagship of partnership for peace, Russia supported the US invasion of Iraq though Germany and France didn't support the US invasion. According to Condoleezza Rice (US-Sectary of State) stated that Washington's post-war strategy would be to "punish France, ignore Germany and forgive Russia"(Gardner, 2017).

According to SIPRI statistics, the following graph shows the military expenditure of NATO member states which has been alarmingly increasing since 1991. The military expenditure of NATO in 1991 was 467368.2 million USD 459462.9 million in 1999, 955502 million in 2008, and 913632.2 in 2014. But after the Russian invasion of Crimea, the military expenditure increased, and in 2019 it reached 1001713 million USD which shows that the military spending of NATO is rapidly increasing. Despite several security frameworks and treaties, no one could stop Russia from invading the Crimea. This invasion triggered a security dilemma in Europe and states started increasing their defense budget rapidly as well as Montenegro, North Macedonia, Sweden, and Finland joined NATO for collective security against the threat of Russia. Before the Russian invasion, majority of the NATO members spent less than 2% of their GDP on defense but now it's increasing rapidly i.e. the defense expenditure of Italy in 2014 was 18427 but in 2022 it reached 28758 million euros (SIPRI).



Source: <https://milex.sipri.org/sipri>

EU’s Common Security and Defense Policy

The EU's Common Security and Defense Policy (CSDP) is the primary part of the EU’s “Common Foreign and Security Policy” (CFSP). It was established to adopt collective actions for security and defense issues. It allows the EU to deploy military and civilian missions beyond its border to support peacekeeping and conflict-preventing missions. The fundamental objective of this initiative was to strengthen international security. The CSDP was established in the ‘Treaty of Lisbon’ in 2009 and it was rooted in earlier treaties like the Treaty of Maastricht 1993 and Treaty of Amsterdam 1999. During its formation, the primary objectives of CSDP were to avert conflicts, improve global security, carryout humanitarian and rescue operations, peacekeeping, and stabilization in the region. It provides support for the EU for quick response at times of crisis and conflict.

CSDP has participated in several civilian and military operations in various parts of Europe and beyond. The peacekeeping mission in the Balkans to anti-piracy operations of the coast of Somalia is one the prominent examples of its contribution. The civilian and military mission shows its inclusive tactic for security. Other examples of such missions are Operation Atlanta in the Gulf of Aden (Middle East), and EU civilian missions in Ukraine, Kosovo as well as Libya.

Permanent Structured Cooperation

The Permanent Structured Cooperation (PESCO) was established in 2017 that enable the EU to participate in defense cooperation and develop military competencies jointly. The structure of PESCO allowed participating countries to work on different projects that enhance the capability of EU defense, particularly in cyber security, military mobility, and strategic airlift. The main goal of PESCO is to harmonize and enhance defense proficiencies by encouraging mutual investments and enhancing strategic autonomy.

European Defense Fund

The European Defense Fund (EDP) was launched in 2017 and the main goal of this initiative was to support collaborative defense research and development programs among the member of the EU by encouraging innovation and competitiveness in the defense industry of Europe. Under this initiative, funds are provided for joint research and development programs to strengthen the military technology and technological advancement program, particularly in the defense sector (Aripuro et al., 2024; Chelioudakis, 2021).

Command and Control: The MPCC and CPCC

The ‘Military Planning and Conduct Capability’ (MPCC) and the ‘Civilian Planning and Conduct Capability’ (CPCC) are the two important components of the EU’s CSDP and together are part of the EU’s desire to strengthen its command and control (C2) structure in coordinating military and civilian missions. The MPCC was established in

2017 and is answerable for operation command and control of EU military missions. It directly supports training operations in countries like Mali, Somalia, and the Central African Republics (Reykers, 2019). MPCC acts as the EU's strategic headquarters and it provides operational planning, deployment, and management. EU aims to enlarge the mandate of MPCC by allowing it to participate in more complex missions and operations. However, the CPCC has to manage the EU's civilian SCDP missions by focusing on stabilizing conflict zones by enforcement of the rule of law and taking institution-building measures. It was established in 2007 and its core objectives are to provide strategic planning, direction for operation, and logistical support to missions like EUCAP Sahel Mali, EUBAM Libya, and others in Ukraine, Kosovo, and the Horn of Africa. CPCC also plays a key role in conflict prevention and stabilization by supporting crisis management through civilian operations. Furthermore, both MPCC and CPCC work jointly to create a comprehensive approach to the EU that incorporates both civilian and military efforts for security and crisis domains (Lipka, 2021).

Pre-War Security Concerns between Russia and NATO

Earlier to the Russia-Ukraine war both parties were aware of the changing security dynamics in Europe and their focus was terrorism, cyber security, and hybrid warfare. Under the flagship of NRC, both parties collaborated on several security issues but their cooperation in counter-terrorism and joint mission for border security were very successful. Before the invasion of Crimea, their focus was nontraditional security threats and they jointly worked on several missions and programs to deal with this evil.

Cyber security was the primary concern of both Russia and NATO. They recognized the risk of cyber-attack on different infrastructures and important databases alike both on civil and military targets. The Russian Federation always showed their concerns due to the cyber capabilities of NATO and both have jointly initiated several programs to deal with cyber security. Since the incident of 9/11, both NATO and Russia jointly introduced multiple programs to counter the threat of terrorism and both are cooperating in US-led Global War against Terrorism. Under the NATO-Russia Council, they executed an information-sharing program, and joint exercise, as well as Russia allowed NATO forces to fly over Central Asian Republics and Russia supported ISDF in Afghanistan. However, NATO accused Russia of using hybrid tactics to destabilize Eastern European states by propagation of disinformation. While on the other hand, Russia viewed NATO's growing influence in post-Soviet states as a type of hybrid encroachment.

Security Shift after the Russia-Ukraine War

The Russian invasion of Crimea, and later the Russian special operation of 2022 have massively affected the security dynamics of Europe and the rest of the world. Since the invasion, a major shift in regional security can be noticed as European states are rapidly increasing their defense budget and states are joining NATO for collective security. NATO and the EU also initiated major security policies and security frameworks to counter Russian aggression.

I. NATO has enlarged its presence in Eastern Europe by deploying further troops as well as establishing new battle groups to respond to the perceived Russian threat. NATO established a multinational naval headquarters in Rostock, Germany to protect the Baltic region.

The table shows the details of NATO military personnel in member states (in Thousands)

Country	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Lithuania	8.6	11.8	11.8	13.5	14.3	14.9	15.1	15.2	17.2	17.8
Denmark	16.9	17.2	17.3	16.7	17.2	16.3	16.9	16.9	17.2	17.5
United States	1338.2	1314.1	1301.4	1305.9	1317.4	1329.2	1346.7	1348.4	1346.4	1346.4
Norway	21.0	20.9	20.5	20.2	20.2	19.2	20.6	22.2	22.6	22.9
France	207.0	204.8	208.1	208.2	208.2	207.8	207.6	207.5	207.1	207.3
Italy	183.5	178.4	176.3	174.6	174.1	176.4	173.4	171.5	174.8	173.9
Croatia	15.4	15.1	14.8	14.8	15.0	14.8	14.7	14.4	15.2	15.2
Belgium	30.5	29.7	28.8	27.8	26.5	23.3	22.8	22.7	22.5	22.4
Türkiye	426.6	384.8	359.3	416.7	444.3	441.8	433.0	439.1	446.9	461.5
Montenegro	1.9	1.7	1.5	1.5	1.5	1.5	1.9	1.6	1.6	1.7
Finland	32.5	31.0	31.3	31.0	31.8	31.1	31.3	31.1	30.5	31.0

Czechia	20.2	21.5	22.7	23.8	24.7	25.3	26.1	26.4	26.9	27.4
United Kingdom	168.7	141.4	139.5	149.4	146.6	144.0	147.3	156.2	156.2	156.2
Portugal	30.7	28.3	29.8	27.8	26.9	23.8	23.7	25.3	22.5	23.6
Slovenia	6.8	6.6	6.5	6.3	6.2	6.0	6.0	6.0	5.9	6.0
North Macedonia	6.5	6.8	6.6	6.3	6.5	6.4	6.4	6.1	6.2	6.4
NATO Total	3229	3125	3090	3163	3210	3213	3243	3273	3295	3368
Romania	65.1	64.5	63.4	64.0	64.0	64.5	66.4	68.6	65.1	81.3
NATO Europe and Canada	1891	1811	1788	1857	1893	1884	1897	1925	1949	2022
Latvia	4.6	4.8	5.2	5.5	5.9	6.0	6.4	6.6	7.5	7.6
Greece	107.3	104.4	106.0	106.9	109.2	102.5	106.6	110.4	111.4	111.7
Hungary	17.5	17.4	17.9	18.7	19.9	18.9	19.8	19.8	21.4	22.3
Estonia	6.3	6.0	6.1	6.0	6.2	6.3	6.7	6.8	6.9	6.9
Bulgaria	27.5	24.9	24.7	24.3	24.4	24.6	25.0	25.7	25.6	26.6
Canada	65.9	70.3	70.5	68.2	70.3	71.8	70.3	71.0	76.2	76.7
Spain	121.8	121.6	121.0	117.7	117.4	117.0	118.7	118.7	118.2	117.6
Luxembourg	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.9
Albania	6.7	6.2	5.8	6.8	6.8	6.8	6.7	6.6	6.6	6.6
Netherlands	41.2	40.6	40.0	39.5	39.3	39.7	40.4	40.8	41.6	42.2
Poland	99.0	98.9	101.6	105.3	109.5	113.1	116.2	120.1	122.5	124.0
Slovak Republic	12.4	12.4	12.2	12.2	12.2	12.7	13.1	13.1	13.8	14.3
Germany	178.8	177.2	177.9	179.8	181.5	183.8	183.9	184.8	188.5	192.2

Source: (NATO, 2021)

II. Due to the Russian aggression the membership of NATO increased. Sweden and Finland joined NATO which reflects a strategic shift in the security framework. The driving force behind their joining NATO was the Russian threat. Both states have also increased their defense spending (Pazzanese, 2022).

Country	Date of Joining NATO	Reason for Joining
Montenegro	June 5, 2017	To enhance national security and protect sovereignty amidst regional tensions in the Balkans. NATO membership provided stability, deterred external interference, and aligned Montenegro with the West.

North Macedonia	March 27, 2020	To secure sovereignty and regional security, especially after resolving the naming dispute with Greece. NATO membership reinforced democratic reforms and alignment with Western institutions.
Finland	April 4, 2023	To strengthen security and deter threats, particularly after Russia invades Ukraine. NATO's collective defense guarantees provided a security framework along Finland's long border with Russia.

III. Besides, the above table shows that the number of NATO military presence increased in Eastern European states significantly such as Estonia, Lithuania, Latvia, Hungary, Romania, and Poland etc. owing to the Russian threats.

Rapidly increase in defense budget and military expenditure of European nations:

Nation	2014 Defense Spending (Million USD)	Projected 2023 Defense Spending (Million USD)	Percentage Change (2014-2023)	2014 GDP Share (%)	2023 GDP Share (%)
Romania	2324	5860	152.15	1.35	2.44
Canada	15562	24515	57.54	1.01	1.38
Latvia	246	731	197.77	0.94	2.27
Poland	8556	24767	189.47	1.88	3.90
Türkiye	11783	16235	37.78	1.45	1.31
Luxembourg	216	508	135.08	0.37	0.72
Greece	4358	6551	50.33	2.22	3.01
France	43936	50616	15.20	1.82	1.90
Spain	10608	16761	58.01	0.92	1.26
United States	660021	743259	12.61	3.72	3.49
North Macedonia	106	216	104.72	1.09	1.87
Portugal	2562	3482	35.90	1.31	1.48
Czechia	1683	3263	93.85	0.94	1.50
Slovak Republic	832	2107	153.20	0.98	2.03
Albania	150	259	72.41	1.35	1.76
Denmark	3399	5884	73.13	1.15	1.65
Finland	3387	6413	89.36	1.45	2.45
Bulgaria	643	1147	78.51	1.31	1.84
Hungary	1035	3826	269.58	0.86	2.43
Lithuania	357	1324	270.64	0.88	2.54

Belgium	4400	5883	33.72	0.97	1.13
Estonia	431	766	77.48	1.93	2.73
Netherlands	8650	15134	74.95	1.15	1.70
United Kingdom	61409	65609	6.84	2.14	2.07
Germany	39274	56641	44.22	1.19	1.57
Slovenia	411	752	83.01	0.97	1.35
Croatia	892	1145	28.43	1.82	1.79
Norway	5865	7348	25.29	1.54	1.67
Italy	20788	28560	37.39	1.14	1.46
Montenegro	59	94	58.61	1.50	1.87

Source: SPRI <https://milex.sipri.org/sipri...>

IV. The war also created new alliances as the US and Western blocks are supporting Ukraine through economic, diplomatic, and military assistance while Russia gained the support of anti-Western blocks like North Korea, Iran, and China which is reshaping global geo-politics.

Donor	Military Aid	Humanitarian Aid	Financial Aid
NATO (Collective Aid)	Military training, logistics, ammunition, and equipment, including anti-tank and anti-air systems.	Support for displaced persons, medical aid, and food provisions within Ukraine and neighboring NATO states hosting refugees.	Financial support for maintaining Ukrainian defense and logistical support for the supply of resources to Ukraine.
USA	Advanced military hardware (HIMARS, Patriot systems, Javelins, drones), intelligence sharing, and training programs.	\$1 billion+ in humanitarian aid, including food, shelter, and medical supplies through agencies like USAID and UN partners.	Over \$40 billion in budgetary and economic support to aid Ukraine's government, and assistance to stabilize its economy.
EU	Military support, including tanks, missile systems, and funding through the European Peace Facility.	Humanitarian corridors, aid for refugees, medical aid, and funding through EU Civil Protection Mechanism.	Budgetary aid and macro-financial support through loans, grants, and assistance packages totaling around €19 billion.
UK	Anti-air and anti-tank weaponry, advanced radar systems, drones, and military vehicles.	Food supplies, shelter, medical aid, and emergency services for internally displaced populations.	Loans and grants to support Ukrainian economic stability, including budgetary aid.
Canada	Artillery, armored vehicles, and surveillance drones. Training for Ukrainian forces.	Support for refugee assistance, medical aid, and essential services through Canadian NGOs and the Red Cross.	Financial support, including \$500 million+ in budgetary aid and economic support.
Germany	Leopard tanks, air defense systems, and ammunition.	Support for medical aid, refugee integration, and emergency shelters within Germany.	Financial aid through loans and grants for rebuilding and economic stability measures.
Poland	Weapons, ammunition, and support for Ukrainian forces at border regions.	Large-scale humanitarian support, including temporary housing and medical care for refugees.	Budgetary support to aid Ukrainian economic efforts and assistance for refugee integration.

Other NATO and Allied States	Various levels of military aid, including anti-air systems, vehicles, and munitions.	Refugee assistance, medical aid, food support, and shelters provided by several NATO and EU countries.	Financial support through international loans, donations, and grants, plus economic packages from international organizations.
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V. Sanctions on Russia and desire of the West to isolate Moscow were another major episode which resulted in the change of regional security dynamics of Europe.

Country/Entity	Type of Sanctions	Details
United States	Financial Sanctions	Banning transactions with major Russian banks, freezing Russian assets in U.S., blocking sovereign debt payments
	Export Controls	Restricting export of high-tech goods to Russia, particularly in electronics, semiconductors, and aerospace
	Individual Sanctions	Freezing assets and travel bans for Russian officials, oligarchs, and companies
European Union	Financial Restrictions	Cutting Russian banks from SWIFT, freezing Russian Central Bank reserves in EU, imposing import bans
	Energy Sanctions	Gradual phase-out of Russian coal, oil, and other fossil fuel imports
	Export Controls	Banning export of technology critical for Russia's energy and defense sectors
United Kingdom	Financial Sanctions	Freezing assets of major Russian banks, banning certain Russian companies from raising finance in UK markets
	Trade Sanctions	Banning export of high-value goods, such as luxury vehicles and high-tech equipment
	Individual Sanctions	Sanctions on Russian officials, oligarchs, and propagandists
Canada	Economic Sanctions	Banning trade of certain goods and services, prohibiting Russian ships from Canadian ports
	Individual Sanctions	Sanctions on Russian officials, politicians, oligarchs, and their families
Japan	Financial and Trade Sanctions	Freezing assets of Russian banks, banning export of semiconductors and technology
	Individual Sanctions	Travel bans and asset freezes for Russian officials and oligarchs
Australia	Financial and Trade Sanctions	Freezing assets of Russian entities, banning exports of aluminum, oil, and gas-related products
Switzerland	Financial Sanctions	Freezing assets of Russian officials and companies, prohibiting Russian financial assets from being managed in Switzerland
South Korea	Financial and Trade Restrictions	Banning financial transactions with Russian banks, imposing export restrictions on strategic goods
New Zealand	Trade Sanctions	Ban on exports to Russian military and security sectors
	Individual Sanctions	Asset freezes and travel bans for Russian officials and military leaders
Other International Actions	-	Various sanctions on Russian media and disinformation campaigns, airspace bans, and diplomatic expulsions

VI. Both blocks are trying to protect their digital infrastructure to secure digital sovereignty. For the protection and security of digital infrastructure, EU introduced the EU Agency for Cyber Security on September 1st, 2005. After the Russian invasion of Crimea, EU approved major changes to its cyber security policy and introduced a new framework EU Agency for Network Information Security (ENISA) (Papakonstantinou, 2022). The Cyber Security Act was amended in April 2023 to tackle new challenges and issues after the war. The Cyber Security Act grants a permanent mandate to the agency and allocates new resources and assignments. Several attacks on EU and NATO members were linked with Russia-based hackers such as Baltic States faced multiple cyber-attacks in 2007 and all attacks were linked to Russia. Later on NATO introduced the Cooperative Defense Center of Excellence (CCDCOE) on May 14, 2008, in Estonia in this regard (Grimaila, 2018). NATO also introduced Cyber Defense initiatives in 2016 and declared cyberspace as an operational domain.

NotPetya Attack

On June 27, 2017, the NotPetya Attack (Cyber-attack through malware) damaged Ukraine's infrastructure and later spread to the whole of Europe. The attack destroyed 10% of all computers in the country and interrupted the banking system, airport traffic and hospital services. It also affects Several EU-based companies such as Maersk was massively impacted with the loss of millions of dollars. Due to the attack, Maersk (A shipping and logistic company) alone lost \$300 million and the estimated cost of replacing equipment lost in that single attack was more than \$10 billion (Carrazana & Colloquium, 2018; Greenberg, 2018). The attack damaged the whole network of the company which hampered 76 port facilities and 800 seafaring vessels which is equal to 1/5th the global shipping capacity (Olenick, 2018). Furthermore, the virus also tried to destroy 150 domain controller backup servers.

Solar Winds Hack

The ‘SolarWinds software’ was using more than 30,000 organizations and government agencies. The SolarWinds attack initially affected the US federal database (Department of Homeland Security and Treasury Department) and later gained access to the NATO servers and computers (Tran, 2021). The attack impacted all computers which were using “Solar Wind” software. The cyber espionage campaign penetrated government networks and private companies and exposed secret data as well as highlighted susceptibilities. According to Shah (2021) the estimated insurance cost of the “Solar Wind” is about \$90,000,000. However Reuters claimed that dealing with hack fallout costs at least \$ 18 million.

Beyond hacking, Moscow has also been accused by the west of disinformation campaigns to influence public opinion and destabilize NATO members. The disinformation campaign mostly targets elections and referendums and propagates social issues in Europe to create insecurity and mismanagement. EU initiated several programs such as the ‘European External Action Service’s East Strat-Com Task Force’ to counter Moscow’s misinformation and such types of threats (Preda & Chiriac, 2021). NATO and the EU also introduced private-public partnership initiatives to enhance cyber security and related research programs. Furthermore, EU members are investing in semiconductor and IT industry to develop homegrown capabilities with the collaboration of member states.

Energy Security

The Russia-Ukraine war has desperately affected the global energy security. This war not only created a humanitarian crisis and change in conventional security dynamics, but also reshaped the energy security dynamics. European states are massively impacted owing to their high dependency on Russian energy exports. Given below some highlights to elaborate that how this war has reshaped the energy security dynamics in Europe.

Shift in European Energy Policies

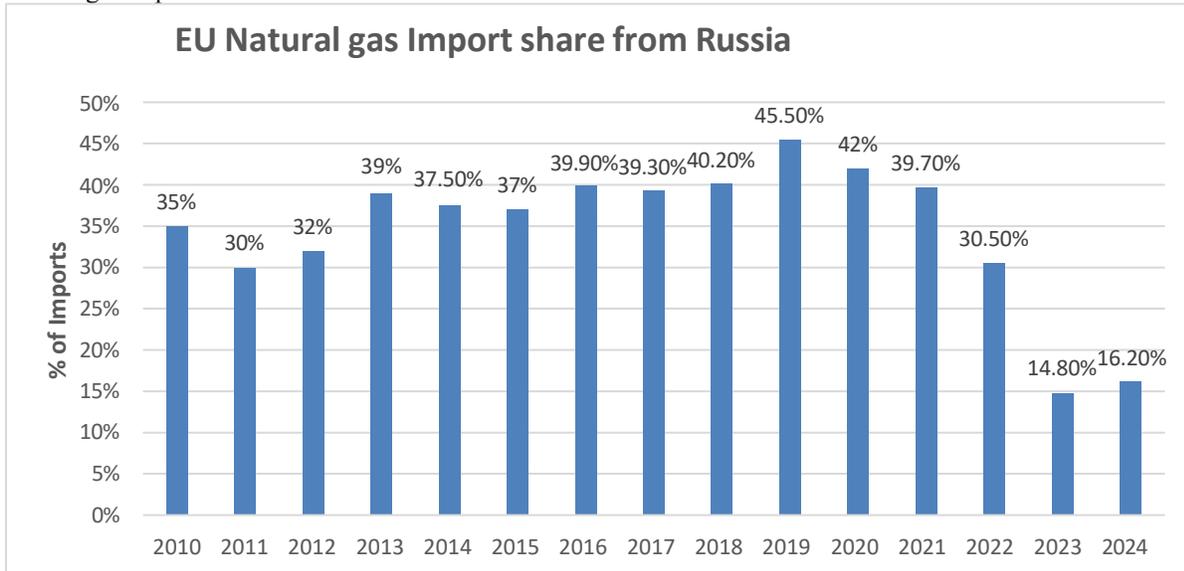
Before the outbreak of Russia-Ukraine war, European countries were massively dependent on Russian energy exports, and European energy imports from Russia were 45.5% of its energy needs in 2019. Russia is the 2nd largest natural gas exporter in the world and fossil fuel is the second major contributor to the Russian economy. After the invasion on February 24, 2022, European nations unanimously criticized it and voted against Russia in UNGA and other international forums. European states also imposed economic sanctions to punish Russia. Politicians and scholars from the West emphasized the EU and other Russian gas importers to cut down the Russian energy imports because gas export is the major contributor to the Russian economy. Moscow heavily relies on fossil fuel exports, earning almost \$730 million per-day from Europe (only from gas) before the war (Lambert et al., 2022). EU imposed six waves of sanctions on Russia by targeting political figures, economic entities, and trade flows. Sanctions like asset freezing, travel bans, and trade restrictions were also imposed to destabilize Moscow’s economy and its ability to fight with Ukraine. A summary of the sanctions related to energy is given below in the table;

Package	Short Summary of Sanctions Related to Energy	Date
1 st	Financial and economic limitations, such as travel bans for 27 prominent people and organizations, including oligarchs and important energy officials, as well as for all members of the Russian State Duma.	February 23, 2022
2 nd	Ban on exporting oil refining technologies and services to Russia, and restrictions on some Russian organizations access to the financial market of Europe.	February 25, 2022
3 rd	Key Russian banks blocked from SWIFT, and a ban on investments in the Russian-Direct Investment Fund.	February 28 & March 2, 2022
4 th	Ban on iron and steel imports, restriction on investments in the Energy-Sector of Moscow (excluding nuclear and energy-transport), limits on financial services, and port restrictions.	March 15, 2022
5 th	Russian coal imports are prohibited, four more Russian banks' assets are frozen, Russian organizations are not allowed to use cryptocurrency services, technology exports are restricted and contracts are prohibited.	April 8, 2022

6th	90% ban on Russian petroleum-products and crude-oil with temporary exemptions for oil supplied to Bulgaria, Croatia, and certain landlocked EU countries via pipeline	May 30–31st, 2022
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Source: (<https://www.consilium.europa.eu/en/policies/sanctions-against-russia/>)

In 2023 Russia exported 131.1 billion cubic meters of natural gas. The bellow graph shows the details of the EU’s natural gas imports from Russia from 2010-2024



Source: (<https://www.statista.com/statistics/1021735/share-russian-gas-imports-eu/>)

The graph shows that Russia was the major contributor to European gas imports and its share was 35% in 2010, 39.9% in 2016 & 17, and 45% in 2019 however after 2022 the share is declining and it was 14.80% in 2023. This decline was due to the sanctions on Russia, due to which Europe cut its reliance on the Russian energy sector. A number of European states have turned to LNG-imports from the US, Qatar, and other LNG suppliers to replace Russian natural gas. EU initiated the ‘REPowerEU’ plan intending to decrease reliance on Russian fossil-fuels by capitalizing in the renewable energy sector and alternate energy imports. The ‘REPowerEU’ plan intentions to rapidly decrease the import of fossil fuel from Russia and by 2027 the maximum energy will be acquired through renewable energy projects. The summary of the plan is given in the below table.

Segment	2030 Target	2027 Projection
Electricity	69%	54% / not available
Solar capacity	592 GW	396 GW / 471 GW
Wind capacity	510	290 GW / 316 GW
Transport	32%	16% / 20%
Heating and Cooling		
Renewable energy share in heating/cooling	Annual growth 2.3% points	Annual growth 0.9 % to 2030
Renewable energy share in industrial sector	Annual growth 1.9 % points to 2030	Annual growth 0.9% to 2030
Renewable energy contribution in buildings sector	60% points of final energy consumption	32% of final energy consumption

Source: <https://www.iea.org/reports/is-the-european-union-on-track-to-meet-its-repower-eu-goals>

According to the plan, the contribution of renewable energy (electricity) must reach 69% by 2030, 32% in transport, and heating and cooling should increase at least 2.3 points annually. However, according to the International Energy Agency Report, to achieve the targeted contribution of renewable energy under the Re-Power EU plan, at least 592-GW of solar and 510-GW (Giga Watt) of wind energy generation projects are prerequisite by 2030 which seems herculean task (EU Solar Energy Strategy). To reach the targeted goals EU would require an average yearly addition of 48 GW of solar and 36 GW of wind power. (Willki & Reeve, 2021)

Rise in LNG and Renewable Investments

Since the start of Russia-Ukraine war, European nations have been trying to rapidly decrease their dependency on Russian energy exports; hence, they initiated several programs for the betterment of energy security. EU increases its

investment in renewable energy infrastructure to meet energy needs. According to the reports of the International Energy Agency (IEA) from 2016-2020, the EU's investment in renewable energy was only \$60 billion, in 2021-23 it reached \$116 billion, in 2024 it reached \$121 billion and predicted that it will reach \$132 billion in 2026. The IEA report further elaborated that the EU is investing 10 USD in clean energy as compared to 1 USD for fossil fuels. Since energy sanctions, the EU was also investing in LNG projects by importing LNG from the US, Canada, and Qatar as an alternative to Russian natural gas. According to IEA statistics, the EU invested \$7 billion in liquefied Natural Gas (LNG) in 2023 and more than 50 billion cubic meters per year to extra LNG import for the replacement of Russian gas by using "Floating Storage Regasification Units" (FSRU). Several countries of the EU like the Netherlands, Italy, Finland, Greece, and Germany assimilated or leased FSRU (Kalafat, 2023).

European Union's sanctions against Russia also targets LNG imports from Russia. The 4th package restricted investment, services, and goods to under-construction LNG projects in Russia. Additionally, the package prohibits the import of Russian LNG to terminals that are not connected to the network of the EU gas pipeline. Since the invasion of Russian in Ukraine, EU's energy imports have fallen dramatically from 41% in 2021 to 8% in 2023. The core reason for this dramatic fall was the EU's sanctions. The alternate energy supply was LNG and the USA supplied 46% of the LNG need of the EU in 2023 as well as some reliable energy supplier contributions increased such as Norway's (49%) in 2023 compared to (30%) in 2021, North Africa (19%), and Azerbaijan (7%) (Ah-Voun et al., 2024). Additionally Qatar also signed energy deals with EU members including long-term contracts with ENI for 1 million metric tons of LNG and with 'Total Energies' and 'Shell' for 3.5 million tones and the tenure of the contract for 27 years (Pande, 2023). EU also initiated several emergency measures to address the energy problems and inflation such as the 'gas solidarity measure', market correction mechanism, and the rules related to permit granting for renewable energy projects.

Food Security

According to the Food and Agriculture Organization (FAO), food security means 'A state in which everyone everywhere has physical, social and financial access to enough wholesome food that satisfies their dietary requirements and food-choices for an active and healthy life'. UN Secretary-General on July 17, 2023, stated that 'conflict, climate change, energy prices and other issues affecting food production and availability' (Guterres, 2023). The war not only devastated the traditional security framework by violating the border and challenging the sovereignty of state, but also created non-traditional security issues. Both Russia and Ukraine are the major producers and exporters of wheat, corn, barley, and sunflower oil and the majority of European nations were dependent on their agricultural products to fulfill their food supply chain. That's why Ukraine is called the bread basket of the Europe. However, this war has significantly impacted food security owing to the disturbance in the global food market due to the limited supply of grains and fertilizer. The share of Moscow and Kyiv in the global export of wheat was about 30% before the outbreak of war and European nations were highly dependent on these supplies (Lin et al., 2023). Russia was also a major exporter of fertilizer (Nitrogen and Potash) holding 15% of global trade in Nitrogenous fertilizer. Russia and Belarus were collectively exporting 33% of Potash fertilizer in the global market which have been disrupted due to Russia-Ukraine war. (Abay et al., 2023; Leal Filho et al., 2023)

In the view of FAO and United Nation's report after February 24, 2022, the Food Price Index (FPI) reached its highest level of 144.7 since 1990 (FAO, 2022). Now according to the FAO website, in September 2024 the FPI index is 124.4. UN has cautioned that the mishmash of COVID-19 and the Ukraine war has led to the largest food-crisis after the Second World War. The disturbance and food supply chain impacted 53 countries owing to rapid increase in price due to food shortages. Both Russia and Ukraine were the top exporters of wheat during 2022-23, Moscow exported 47,500 metric tons and Kyiv exported 17,122. The following table shows the details of the top 10 countries that exported wheat and wheat products from 2014- 2024.

Major Wheat, Flour and Wheat Products Exporting Countries 2014-2024 (1000 metric tons)

States	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Russia	22,800	24,543	27,815	41,447	35,863	34,485	39,100	33,000	47,500
EU	35,455	34,686	27,439	24,895	24,686	39,788	29,736	31,915	35,079
Canada	24,883	22,136	20,297	22,019	24,498	22,987	27,722	14,990	25,309

Australia	16,575	15,782	22,061	15,512	9,829	10,118	19,720	25,958	32,329
USA	23,023	21,811	29,318	23,230	26,202	26,392	26,636	21,501	20,262
Ukraine	11,269	17,431	18,107	17,775	16,019	21,016	16,851	18,844	17,122
Kazakhstan	5,507	7,600	7,257	8,519	8,780	6,888	8,128	8,455	9,862
Argentina	4,200	8,750	12,275	14,000	12,680	13,608	9,597	17,651	4,681
Turkey	4,135	5,605	6,320	6,725	6,676	6,633	6,571	6,646	6,953
Brazil	-	-	-	-	594	408	911	3,105	2,689

Source: <https://www.statista.com/statistics/190429/principal-exporting-countries-of-wheat-flour-and-products>

The statistics shown in the above table promulgates that after the war, wheat exports of Ukraine were massively impacted. In 2021 its wheat export was 18,884 metric tons, in 2022 it was 171202 mt. and in 2023 it was 12,500 mt. According to Lin et al. (2023), the ongoing conflict will create troubles for countries that depend on the Ukraine wheat-supply such as Mongolia, Egypt, Turkey, Georgia, and Azerbaijan. The global wheat price would increase by 3 to 12% and on the other hand states heavily depend on Ukraine wheat, price will upsurge up to 46% and wheat import will drop 30-60%. Furthermore, access to safe and sufficient food is the primary concern of all human beings, and 'Zero-Hunger' is the second most significant Sustainable Development Goal (SDG) of UN. Owing to the Russia-Ukraine conflict, it seems impossible to achieve zero-hunger till 20230 (Agboklou et al., 2024). Hence, European Union introduces the following initiatives to tackle food security;

Initiative	Description
European Food Security Crisis Preparedness and Response Mechanism-(EFSCM)	A coordinated mechanism to assess and address food security risks, monitor food prices, and provide real-time updates across the EU.
European Agricultural Fund for Rural Development-(EAFRD)	Emergency funding to support farmers with rising production costs, especially due to increased prices for energy, feed, and fertilizers.
Temporary Trade Liberalization for Ukrainian Products	Temporarily lifted tariffs on Ukrainian agricultural products to facilitate exports into the EU, supporting Ukrainian farmers and securing European food supply.
Green Deal and Farm-to-Fork Strategy Adjustments	Adjustments and delays in certain Green Deal regulations to maximize short-term food production while balancing sustainability.
European Food Banks and Aid Programs	Enhanced funding and logistical support to food banks and aid programs to address immediate food insecurity among vulnerable populations within the EU.
Research and Innovation for Alternative Fertilizers	Investments in research to develop sustainable, locally-produced fertilizers as alternatives to reduce dependency on Russian imports.
Promotion of Circular Economy in Agriculture	Emphasis on resource efficiency and waste reduction in agriculture through circular economy principles, enhancing resilience and sustainability in food production systems.

Source: European Commission, FAO, Council of the EU & (Zachmann et al., 2022)

CONCLUSION

The Russia-Ukraine War has triggered substantial deviations in Europe's security frameworks, with long-term implications for both regional and global security. Before the war, European security structure was typically characterized by the established frameworks, including the EU's Common Security and Defense Policy, NATO's deterrent posture against Russian aggression, and an emphasize on diplomatic conduits for conflict resolution. This war surfaced substantial discrepancies in European security system especially in Eastern Europe requiring a reassessment of these approaches. NATO has experienced a considerable security shifts marked by heightened military preparedness and deployment along its Eastern borders. NATO not only increased its military personnel in

Eastern Europe but also enhanced defense expenditure. Sweden and Finland joined NATO and other several states increased their defense budget after the Russian invasion of Ukraine. Despite several agreements and protocols between Russia and NATO, now the European nations are in ambiguity due to the rapid shift in the European security structure. Several political analysts are blaming NATO for provoking Russian aggression, and now the questions are arising about the future of collective security and NATO in Europe.

The Russian invasion of Ukraine not only created troubled borders but also raised concerns about cyber security, food security, and energy security. Cyber Security has emerged as a paramount concern underscored by incidents such as the NotPetya and Solar Winds attacks, which highlighted the need for improved defensive and counteractive measures in digital landscapes. As cyber warfare increasingly defines modern conflicts, Europe has responded by strengthening joint cyber security policies inside the EU and enhancing intelligence-sharing among NATO allies. Furthermore, energy security has been considerably compromised by disruptions in Russian energy supplies compelling the European Union to diversify its energy sources and invest in renewable energy alternatives. After the outbreak of the war, EU massively invested in the sources of renewable energy projects as well as in importing LNG from the USA and Qatar to minimize the dependency on Russian gas.

Food security was also disrupted due to the conflict upsetting vital agricultural supplies from Ukraine necessitating Europe to adapt its agricultural policies and seek alternate trade partners. These interconnected security concerns indicate a thorough and ongoing evolution of European defense and resource sustainability strategy. As Europe seeks to address these difficulties, the war has accelerated regional cooperation and a redefined notion of strategic autonomy, signifying a substantial transformation in European security architecture in response to growing threats. To deal with the growing threat to food security, EU initiated several reforms in the agriculture sector and an alternative food supply chain was developed with the cooperation of friendly states. New fertilized companies and research institutes are granting subsidies and research grants to improve the quality of fertilized and enhance the yield of crops etc. To crown all, Russia-Ukraine war has resulted in the transformation of all the security dynamics of European contemporary social, economic, and geo-political settings.

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