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THE SECURITY OF EU CITIZENS WHEN CONFRONTED WITH CLIMATE CHANGE AND DISINFORMATION

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Abstract*: The paper explores the evolving challenges of disinformation campaigns and climate change migration within the European Union (EU) and NATO. It highlights the urgent need for proactive and coordinated responses to safeguard democratic societies and governance systems. Disinformation, propagated through digital platforms, threatens democratic processes and public discourse. Meanwhile, climate change exacerbates societal upheaval and migration patterns, posing complex security implications. The paper emphasizes the imperative of integrating environmental considerations into conflict resolution strategies and leveraging artificial intelligence (AI) technologies to counter disinformation effectively. By elucidating the multifaceted nature of these threats, the paper underscores the importance of collective action to address climate-related security challenges and preserve international stability. Ultimately, it calls for comprehensive strategies that promote media literacy, enhance digital resilience, and foster inclusive dialogue to mitigate the adverse effects of disinformation and climate change migration.*

Keywords: *diplomacy; balance of power; disinformation; climate change; resilience.*

Introduction

Times are changing and at a fast peace; humanity is encountering complex challenges, security crises which require high-level international collaboration and shared resources in order to be deterred or countered. Climate change is impacting humanity on many levels, because it not only triggers unpredictable disasters, but also weather abnormalities like prolonged drought, dangerous rise of sea levels, abnormal temperatures, which continuously impact millions of people worldwide. NATO and EU have taken climate change into consideration as a very serious matter, but at international level, there are other forces at play, which consider that having hegemonic supremacy is more important than the climate security of the planet. The People Republic of China, the Russian Federation and India (Hameleers et al., 2023; Espaliú-Berdud, 2023; Vasist et al., 2023; Sukumar et al., 2021; Mankekar, 2021; Imran et al., 2021; Arias-Zapata, 2022)(Hameleers et al., 2023; Espaliú-Berdud, 2023; Vasist et al., 2023; Sukumar et al., 2021; Mankekar, 2021; Imran et al., 2021; Arias-Zapata, 2022), are among the nations with the biggest demography and pollution (Yarlagadda et al., 2022; Zhang et al., 2022; Pallagiano, 2018; Pinho-Gomes et al., 2023)(Yarlagadda et al., 2022; Zhang et al., 2022; Pallagiano, 2018; Pinho-Gomes et al., 2023) impact on the planet but also which have

employed sophisticated tools like disinformation campaigns in order to influence opinions and mentalities of European and American citizens against climate change countermeasures, seeding lack of trust in NATO and EU amongst member states' citizens.

In this paper we shall focus on the European citizens' security when faced with climate changes, and the disinformation campaigns surrounding this issue and how the EU officials approach the problem. Our paper represents a consolidated review of documents from sources such as the European Union, NATO, the United Nations, as well as some relevant academic studies.

Our hypothesis is that, using the modern means, including artificial intelligence (AI), the European Union can ensure a secure environment for its citizens by building resilience to climate change disinformation and educational hubs in order to nourish constructive and ecological behaviors (Montoro-Montarroso et al., 2023; Schreiber et al., 2021; Yankoski et al., 2021; Lange et al., 2021; Karinshak et al., 2023; Mazurczyk et al., 2023; Kertysova, 2018).

The question that this hypothesis triggers is: does the European Union has what is necessary for ensuring its citizens security, when faced with the ongoing threats in the international arena? (Hameleers, 2023a; Caramancion et al., 2022)

This paper's purpose is to see how the EU navigates through the new glitches of the international system in order to respect all the United Nations 2030 Agenda in regards to climate change and the human security of its citizens with respect to climate change disinformation (Braumoeller, 2008).

The rapid pace of global change underscores the contemporary volatility within the International System, echoing the tumultuous post-World War II era. As conflicts escalate in countries and regions such as Ukraine and the Arab Peninsula and tensions simmer over Taiwan's sovereignty in the South China Sea, the global community faces multifaceted challenges at the onset of 2024. Among these, EU and NATO member states confront two pressing security threats: the proliferation of disinformation campaigns and the complex dynamics of climate change migration (Erlich et al., 2023; Hameleers, 2023b; Hameleers et al., 2023; Hassan, 2023; Humprecht, 2023; Sádaba et al., 2023; Edwards, 2021; Valverde-Berrocoso et al., 2022).

Disinformation, disseminated through digital platforms and social media channels (Aïmeur et al., 2023; Simion, 2023; Petratos et al., 2023; Noguera-Vivo et al., 2023; Saurwein et al., 2020; Weikmann et al., 2023; Hameleers et al., 2020; Krafft et al., 2020; Diaz Ruiz et al., 2023), poses a significant threat to the integrity of democratic processes and public discourse impact (Espaliú-Berdud, 2023; Vasist et al., 2023; Hameleers, 2023b; Hameleers et al., 2023; Hassan, 2023; Humprecht, 2023; Sádaba et al., 2023; Saurwein et al., 2020; Edwards, 2021; Lanoszka, 2019; Freelon et al., 2020; Erlich et al., 2023; Duarte et al., 2023) within the EU and NATO regions. Recognizing its transnational nature, collaborative efforts are being prioritized to counter disinformation and fortify resilience against manipulation attempts.

Concurrently, the adverse impacts of climate change, including extreme weather events and disruptions to ecosystems, amplify the risks associated with migration patterns (Arenilla et al., 2020; Balsari et al., 2020; Elander et al., 2022; Kelman et al., 2019; Issifu et al., 2022; Twinomuhangi et al., 2023; Issa et al., 2023; Tabe, 2019; Burrows et al., 2016; Estok, 2023).

At the European Union level, over recent years, several important initiatives to tackle disinformation have been developed and implemented (such as the European Democracy Action Plan, the European Digital Media Observatory, the Strengthened Code of Practice on Disinformation, the Digital Services Act or the Guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training). These initiatives involved actions directed at the EU member states, EU institutions, online platforms, news media, and EU citizens.

This article examines the intertwined security implications of disinformation and climate change migration within the European Union and NATO member states. By elucidating the

multifaceted nature of these threats and their implications for international stability, it seeks to underscore the imperative for proactive and coordinated responses to safeguard the integrity and resilience of democratic societies and governance systems.

1. Diplomatic and political actions in relation to climate change disinformation

The fall of the communist regimes in Eastern Europe sped up a process that began in the 70's of the twentieth century, namely, the modern implementation of human security in Europe. By acceding to NATO and the EU, most of the Eastern Europe states managed to ensure a level of security that individuals never had before (Kolodziej, 2005). However, disinformation campaigns pose a significant threat to public discourse regarding climate change by spreading false or misleading information that undermine scientific consensus and confuses the public about the severity and urgency of the issue (Bârgăoanu et al., 2023; Krekó, 2020). Such campaigns often promote climate change denial or downplay the risks associated with it, leading to a lack of awareness and action among citizens. This can hinder efforts to address climate change effectively, delaying or preventing the implementation of necessary policies and actions. Furthermore, disinformation campaigns targeting climate change can impact the security of citizens in EU and NATO countries in several ways. Firstly, by fostering doubt and confusion about the reality of climate change, these campaigns can impede efforts to mitigate its adverse effects, such as extreme weather events, rising sea levels, and disruptions to food and water supplies (Elliott, 2021; 2023). This can leave communities vulnerable to the consequences of climate change, including property damage, displacement, and even loss of life (Arenilla et al., 2020; Balsari et al., 2020). Secondly, disinformation campaigns may exacerbate social and political tensions within and between countries, hindering international cooperation on climate change mitigation and adaptation efforts (Espaliú-Berdud, 2023). By sowing division and distrust, these campaigns can undermine collective action and impede the development of effective policies and strategies to address climate-related security threats (Vasist et al., 2023; Caramancion et al., 2022). Moreover, the spread of climate change disinformation can also have economic implications, affecting industries and markets that are vulnerable to the impacts of climate change. For example, false information about the viability of renewable energy sources or the costs of transitioning to a low-carbon economy may discourage investment in clean energy technologies and delay the transition away from fossil fuels (Paine et al., 2023).

The discourse surrounding the concept of human security has been the subject of scholarly deliberation since the onset of the latter half of the twentieth century, with its initial introduction occurring notably within the context of the Helsinki Commission's renowned deliberations, wherein it was delineated as one of the four foundational pillars of democracy. Among the myriad interpretations put forth, the most salient definition posits human security as an approach wherein states and international organizations endeavor to employ a judicious blend of military and diplomatic strategies aimed at optimizing the efficacy of safeguarding national interests (CSCE, 2023). Out of the studied definitions, we consider that the most proper is that international organizations seek to take the best measures that combine the military and diplomatic practice in order to maximize the efficiency of defending the national interest (Buzan et al., 2009). Human security discourse, since its emergence, in the latter portion of the twentieth century, has been marked by profound debate, particularly regarding its relevance within the contemporary global landscape. Initially broached within the esteemed deliberations of the Helsinki Commission, it has evolved into a pivotal framework, intertwined with manifold geopolitical considerations. Such an approach is undertaken with the overarching goal of optimizing the efficacy of safeguarding national interests. Notably, within this paradigm, the proliferation of disinformation emerges as an acute threat, particularly in its capacity to obfuscate the realities of climate change, thereby undermining collective efforts towards sustainable environmental

stewardship (Waleij, 2023; Burrows et al., 2016; Balsari et al., 2020). This approach aims to bolster the efficacy of safeguarding national interests amidst a complex global landscape. However, due to contemporary challenges, such as the proliferation of disinformation, the imperative for effective countermeasures has become increasingly pronounced (Caramancion et al., 2022). In this context, the integration of artificial intelligence (AI) technologies emerges as a pivotal strategy (Karinshak et al., 2023; Schreiber et al., 2021; Yankoski et al., 2021). AI-driven tools offer the potential to analyze vast troves of data, identify patterns indicative of disinformation campaigns, and mitigate their impact on public perception and policy discourse (Kertysova, 2018).

The security paradigm traditionally aligns with the realist conceptual framework, wherein the focal point of security considerations is the state itself. Consequently, the establishment of a secure environment is contingent upon maintaining a delicate balance of power among international actors. This equilibrium is perceived as a deterrent for states seeking hegemonic dominance over the international system, particularly for those endowed with substantial strength. The rationale behind this perspective posits that states, once they have effectively secured their stability and safety, are disinclined to pursue hegemonic power. This is rooted in the understanding that the primary objective of states is to optimize their security rather than pursue an overtly dominant position in the international arena (Waltz, 1979).

In accordance with the discourse advanced by the Diplomatic Network, conflict resolution is defined as *"the systematic endeavor to address and resolve disputes or discordant interactions among involved parties"* (Sperandei, 2006; Trager, 2010). This process encompasses a spectrum of methodologies, notably including mediation, arbitration, negotiation, and litigation (Diplomacy School, 2023). In addition to these established diplomatic mechanisms, supplementary endeavors encompassing economic and military measures are often deployed in pursuit of conflict resolution objectives. Moreover, in the contemporary global context, the exacerbation of conflicts due to climate change impacts necessitates a comprehensive approach that integrates environmental considerations into conflict resolution strategies. Thus, efforts to address climate-related disputes further underscore the multifaceted nature of contemporary conflict resolution paradigms (Paine et al., 2023; Gervais, 2022; Asmelash, 2023; Levine, 2018; Bizikova, 2022).

According to the Diplomacy Network, conflict resolution is "*the process of resolving disputes or disagreements between parties*" (Diplomacy School, 2023), all that being possible through various methods, amongst which mediation, arbitration, negotiation and litigation (Diplomacy School, 2023). To these four diplomatic efforts we can add economic and military measures (Diplomacy School, 2023).

Human security is represented by protecting fundamental freedoms, which are considered the essence of life. The United Nations defines human security in Resolution 66/290 of the General Assembly as "*an approach that supports Member States in identifying and addressing large-scale and cross-cutting challenges to ensure the survival, livelihoods, and dignity of their people"* (UN, 2012).

Since we have mentioned diplomacy as a tool of conflict resolution, we should provide a proper definition. Thus, diplomacy is defined as "*the behavior and relationship between states or other entities on the stage of world politics, by specialized personnel, and by peaceful means"* (Bull, 1977).

Deterrence theory constitutes a cornerstone of strategic discourse, offering insights into the dynamics of international relations and the prevention of conflict escalation. Central to this framework is the recognition of threats and their strategic goal, tailored to the specific context of the threat type or the application of force, with the overarching aim of dissuading adversaries from initiating hostilities or aggression against another sovereign entity (Gartzke et al., 2014). This strategic calculus encompasses a spectrum of deterrent measures, ranging from implicit to explicit forms of threat, including the strategic positioning of limited force.

Implicit within this paradigm is the notion of maintaining the status quo, wherein deterrence serves as a bulwark against the alteration of state actors' positions and the

preservation of prevailing geopolitical arrangements. Thus, deterrence emerges as a multifaceted strategy, underpinned by the judicious application of threats, aimed at fostering stability and deterring adversarial actions in the international arena (Morgan, 2003). Within the framework of countering disinformation, deterrence theory elucidates the strategic calculus underpinning the policies enacted by entities such as the EU and the United Nations (UN). These organizations are actively engaged in mitigating the proliferation of false or misleading information, recognizing its potential to undermine societal cohesion and international stability. In this context, deterrence encompasses the strategic deployment of measures aimed at dissuading actors from engaging in the dissemination of disinformation or perpetrating acts of information warfare targeting member states or global communities Saurwein et al., 2020; Edwards, 2021; Weikmann et al., 2023; Ozawa et al., 2023; Vasist et al., 2023; Espaliú-Berdud, 2023; Hameleers et al., 2020; 2022). Global communities, in the realm of geopolitics, refer to interconnected networks of nations, organizations, and individuals that operate on a global scale, transcending traditional boundaries and exerting influence across multiple regions. These communities are characterized by shared interests, values, and objectives, which often manifest in collaborative efforts to address common challenges and pursue mutual goals. The concept underscores the interdependence and interconnectedness of states and societies in an increasingly globalized world, where events and developments in one part of the world can have far-reaching implications for others (Huntington, 1996).

The EU and UN adopt a multifaceted approach to deterrence, encompassing a range of diplomatic, regulatory, and informational initiatives tailored to the specific nature of the disinformation threat. Diplomatically, they may impose sanctions or diplomatic repercussions on state or non-state actors found to be engaging in malicious disinformation campaigns (Lupovici, 2010; Hynek, 2010; Quackenbush, 2006). Regulatory measures may involve the implementation of legislation to counter disinformation and enhance transparency in digital platforms. Additionally, informational initiatives aim to empower citizens with critical thinking skills and promote media literacy to inoculate populations against the influence of disinformation (Lanoszka, 2019; Hameleers, 2023a).

Implicit within the EU and UN strategies is the commitment to upholding the integrity of information ecosystems, deterring adversarial actors from exploiting vulnerabilities, and preserving public trust in the reliability of information sources (Sádaba et al., 2023; Saurwein et al., 2020; Edwards, 2021). By adopting a proactive and collaborative approach to countering disinformation, these entities endeavour to safeguard societal resilience and uphold democratic values in the face of evolving threats to information integrity (Schreiber et al., 2021; Vasist et al., 2023; Krafft et al., 2020; Bastick, 2021).

2. How secure are the EU citizens when confronted with the ongoing climate changes and disinformation?

In adopting a comprehensive approach to this matter, subsequent to elucidating the key terminologies underpinning our inquiry, we shall commence by addressing the foremost concern therein: the safeguarding of the European Union (EU)'s citizenry.

2.1 NATO's strategy on combating climate change and disinformation

The formidable challenges posed by extreme weather conditions further underscore the complexities faced by military operations in rugged terrains. Given the diverse security challenges faced by European nations, ranging from geopolitical tensions to transnational threats, NATO serves as a cornerstone in fostering collective defense and ensuring the territorial

integrity of its member states. Particularly noteworthy is the evolving security landscape in Eastern Europe, where the specter of Russian aggression looms large following the events in Ukraine. In response to this destabilizing factor, NATO has embarked on a concerted effort to bolster its defensive posture along the Eastern flank, aiming to deter potential adversaries and safeguard the security interests of its allies.

The outbreak of Russian aggression in Ukraine marked a pivotal juncture in NATO's security calculus, prompting a reassessment of defense priorities and strategic imperatives. In light of the multifaceted nature of contemporary security challenges, NATO has undertaken robust measures to enhance its readiness and resilience in the face of potential threats emanating from the East. Central to this endeavor is the implementation of a comprehensive defense strategy aimed at creating a robust deterrent posture along NATO's Eastern frontier. This entails the deployment of military assets, the bolstering of defense infrastructure, and the strengthening of regional alliances and partnerships to ensure a unified and coordinated response to emerging security challenges.

In this dynamic security environment, characterized by evolving geopolitical dynamics and shifting threat landscapes, NATO's commitment to collective defense remains paramount. The Alliance's proactive stance in fortifying its Eastern flank underscores its unwavering dedication to upholding the principles of territorial integrity and collective security enshrined in its founding charter. As NATO continues to adapt to emerging security threats and challenges, its role as a bulwark against external aggression and a guarantor of stability in the Euro-Atlantic region remains indispensable. *"Climate breakdown and the loss of biodiversity stand as formidable forces reshaping our world, with implications extending into the realm of international security. These environmental challenges are not merely ecological concerns; they are potent structural forces that have the potential to profoundly impact the global security landscape"* (NATO, 2024).

Failing to adequately address climate change exacerbates the risk of widespread climatic breakdowns, as witnessed on a global scale in 2023, transcending geographical boundaries and impacting regions beyond Europe and North America. This phenomenon acts as a force multiplier, precipitating significant disruptions across vital societal and logistical networks and potentially catalyzing unrest and instability. Urgent attention and proactive measures are imperative to mitigate the cascading effects of climate change, not only on the European continent, but also on a global scale.

The correlation between climate change and societal upheaval is underscored by the concomitant rise in localized or national disturbances, such as riots and social unrest, alongside the proliferation of organized crime and patterns of migration towards colder regions. Evidentiary support for these claims is observable in the recent occurrences of farm and transporters' riots throughout the European Union, coinciding with escalating temperatures and unprecedented weather phenomena. These disturbances disrupt critical food supply chains, thereby precipitating economic instability and heightened vulnerability, particularly among marginalized social strata, with potential repercussions including food insecurity and mass displacement, thereby reshaping migration patterns and exerting pressure on regional economic and social equilibrium. The intricate relationship between climate change and societal upheaval within NATO countries is further underscored by the emergent phenomenon of localized or national disruptions, such as riots and social unrest, which have increasingly become a salient feature of contemporary socio-political landscapes. Of particular significance is the role of disinformation campaigns in catalyzing and exacerbating these disturbances, particularly evident during the 2022-2024 interval instances of truckers' and farmers' riots observed across the European Union.

Disinformation, characterized by the deliberate spread of false or misleading information, has emerged as a potent tool for manipulating public opinion, inciting discord, and fostering unrest within affected communities. In the context of the truckers' and farmers' riots,

disinformation campaigns have played a pivotal role in galvanizing support and mobilizing participants by disseminating misleading narratives and inflammatory rhetoric through various digital communication channels, including social media platforms and online forums.

These disinformation campaigns often exploit existing societal grievances and amplify perceptions of injustice or marginalization, thereby garnering sympathy and solidarity among segments of the population (Humprecht, 2023; Erlich et al., 2023; Pérez-Escolar et al., 2023). False narratives regarding government policies, economic hardships, or perceived threats to livelihoods serve to mobilize individuals and groups, driving them to participate in protests or acts of civil disobedience (Saurwein et al., 2020; Edwards, 2021; Schreiber et al., 2021; Yankoski et al., 2021; Ozawa et al., 2023; Hassan, 2023; Vasist et al., 2023; Krafft et al., 2020; Bastick, 2021; Soliman et al., 2023).

Furthermore, the proliferation of disinformation complicates efforts to address the root causes of societal unrest and undermines attempts at constructive dialogue and conflict resolution. By perpetuating divisive narratives and eroding trust in institutions, disinformation exacerbates social divisions and impedes the pursuit of effective solutions to underlying socio-economic challenges exacerbated by climate change (Soliman et al., 2023; Hameleers et al., 2020; 2022; 2023; Bârgăoanu et al., 2023).

In sum, the intersection of disinformation with climate-induced socio-economic disruptions underscores the need for comprehensive strategies aimed at combating disinformation, enhancing media literacy, and fostering inclusive dialogue within affected communities.

Addressing the root causes of societal unrest, including economic inequalities and environmental vulnerabilities, requires a concerted effort to counter disinformation and promote transparency, accountability, and social cohesion within NATO countries.

The intersection of disinformation campaigns with the protracted conflicts in the Middle East introduces a dimension of complexity to the evolving security landscape (Bennett, 2020; Shah et al., 2018; Watson, 2002; Steiner et al., 1993). As various actors vie for influence and leverage within the region, the dissemination of false narratives and propaganda becomes a potent tool in shaping public perception and advancing strategic agendas. Disinformation campaigns, often orchestrated by state and non-state actors alike, seek to manipulate information channels and sow discord among populations, exacerbating existing tensions and hindering efforts towards conflict resolution. These campaigns exploit vulnerabilities in digital communication platforms and social media networks, amplifying the spread of misinformation and fueling societal divisions (2019; Do Nascimento et al., 2022; Cohen et al., 2019).

Within this context, the rise of disinformation poses significant challenges for regional stability and security (Bârgăoanu et al., 2023). By fostering distrust and exacerbating sectarian and ethnic divisions, disinformation campaigns exacerbate societal tensions and undermine prospects for peaceful coexistence. Furthermore, the weaponization of information in the context of ongoing conflicts serves to perpetuate cycles of violence and perpetuate grievances, maintaining a cycle of instability and insecurity. In response, efforts to counter disinformation must be integrated into broader strategies for conflict resolution and peacebuilding, encompassing measures to promote media literacy, enhance digital resilience, and foster dialogue and reconciliation among conflicting parties. Ultimately, addressing the root causes of disinformation and promoting transparency and accountability in information dissemination are essential to fostering conditions conducive to lasting peace and stability in the Middle East (Watson, 2002).

2.2 EU measures to counter climate change and disinformation

In report to climate change challenges, the European Union has some strong goals to reach by 2050 (European Commission 2023), namely:

a. A climate-neutral EU by 2050;
b. A reduction up to 55% of emissions by 2030;

c. A clear EU law on climate change;
d. Financing the EU's climate transition.

Since the end of 2019, its leaders agreed that the EU should reach climate neutrality by 2050, meaning by that time, it can emit into the atmosphere the greenhouse gas that can be absorbed naturally by nature. This implied a drastic change in several important if not critical industries, such as that of oil and gas industry, and by extension, to those companies that use and manufacture various products out of them.

In an issue as important as the EU's security we have to mention the Common Defense and Security Policy, and its role in joining hands with the Climate Change and Defense Roadmap (CCDR). The CCDR identifies states that the defense sector has to contribute to the fulfilling of the European Green Deal's goals, that can identify measures in the short term (2020-2021), medium term (2022-2024), yet the long term has still to be determined 2025-beyond (Waleij, 2023).

The roadmap is composed out of three distinct entwined areas such as:

1. The operational dimension
2. Capability development
3. Strengthening multilateralism and partnership.

The roadmap of measures also includes the deployment of an environmental advisor as a standard position in CSDP missions and ops with the role to implement successfully of Standard Operational Procedures (SOPs) in their missions. Another goal is to initiate the development of measurement capabilities and reporting the environmental footprint on water, energy, etc. within the CSDP missions and operations (EEAS, 2022).

In the EU's Climate Change and Defense Roadmap from March 2022, it is stated that "*climate change increases global instability. This will likely increase the number of crisis situations to which the EU might need to respond while at the same time the armed forces will be asked more frequently to assist civilian authorities in response to flooding or forest fires, both at home and abroad*. Another important point on the Roadmap is that that "*the future capabilities will need to adapt to this changing operational environment (..) the armed forces need to invest in greener technologies throughout their capability inventory and infrastructure*" (EEAS, 2022).

The role of the roadmap is that to make sure that climate policy implications become an important component of the EU's thinking and action on issues such as defense research and development, industry and technology, infrastructure, as well as the EU's CSDP (EEAS, 2022).

In response to the mounting apprehensions regarding the proliferation of disinformation and external interference in democratic processes the EU has embarked on a multifaceted strategy aimed at safeguarding the integrity of its information environment. A prominent initiative in this endeavor is the Strengthened Code of Practice on Disinformation, introduced in 2022, signifying the EU's commitment to fostering collaboration among online platforms, civil society actors, and pertinent stakeholders to counteract the dissemination of false information (European Commission, 2022). Simultaneously, initiatives like the European Digital Media Observatory (EDMO), established in 2020, have been instrumental in enhancing transparency and accountability in the digital media landscape (European Digital Media Observatory, 2020). Through collaborative efforts, the EU seeks to bolster its resilience against the propagation of harmful content and mitigate the destabilizing impact of disinformation on its democratic institutions.

Legislative measures serve as a cornerstone of the EU's strategy to address the challenges posed by disinformation and uphold the integrity of its digital ecosystem. Notably, the Digital Services Act (DSA), which came into effect in 2023, with a compliance deadline set for February 17, 2024, represents a significant regulatory milestone aimed at imposing stringent obligations on digital service providers (European Parliament, 2024). By stipulating requirements for transparency, content moderation, and cooperation with authorities, the DSA aims to curtail the dissemination of illicit content, including disinformation, thereby fortifying resilience against nefarious interference in the online sphere. In conjunction with these efforts,

the Revised Audiovisual Media Services Directive (AVMSD), enacted in 2020, reinforces regulatory measures governing audiovisual media platforms, ensuring adherence to standards of accuracy, impartiality, and transparency (European Parliament and Council, 2018).

In March 2022, the European Parliament adopted a resolution on foreign interference, reaffirming its commitment to countering external threats to the EU's democratic processes and information space (European Parliament, 2022). This resolution underscores the EU's proactive stance in addressing the evolving challenges posed by adversarial entities seeking to undermine democratic institutions and sow discord. Simultaneously, the establishment of the Parliament's new special Committee on Foreign Interference (INGE2) underscores the EU's dedication to fostering cross-border cooperation, sharing information, and bolstering resilience-building measures (European Parliament, 2022). Through these initiatives, the EU aims to safeguard its democratic principles and uphold the integrity of its information ecosystems in the face of evolving threats.

In conclusion, the EU's comprehensive strategy to counter disinformation encompasses legislative measures, institutional frameworks, and collaborative endeavors aimed at reinforcing resilience against false information and external interference. By fostering cooperation among stakeholders, enhancing regulatory oversight, and promoting transparency and accountability in the digital domain, the EU endeavors to maintain the trust of its citizens and preserve the integrity of its democratic processes in the digital age. As the threat landscape evolves, sustained efforts to strengthen cooperation, bolster regulatory frameworks, and enhance resilience will remain imperative in safeguarding the EU's democratic values and countering the destabilizing effects of disinformation.

2.3 The CEE Region versus climate change and disinformation

The urgency to confront proliferation of disinformation in Romania and other Central and Eastern European (CEE) countries is underscored by a combination of factors, including the escalating impact of climate change and the pervasive influence of disinformation campaigns. According to the European Commission, these nations have witnessed a surge in online disinformation, particularly anti-EU narratives, alongside vulnerabilities stemming from fragile media systems and the emergence of alternative online information ecosystems, notably through social media platforms (European Commission, 2022). Addressing these challenges requires a comprehensive examination of the phenomenon, encompassing both local and regional dynamics, and necessitates strengthened national and regional collaboration to bolster resilience against disinformation and misinformation, especially in the context of climate change.

The COVID-19 pandemic has further exacerbated the dissemination of disinformation and fake news across the CEE region, amplifying the urgency of addressing this issue. Romanian and foreign actors have increasingly exploited disinformation campaigns to advance strategic and political objectives, while the region's historical context, situated between the Soviet Union and the Western world, has fostered susceptibility to manipulation (Krekó, 2020). Additionally, the region's totalitarian past has not conferred immunity to disinformation but has instead heightened receptivity to deception from various sources. As a result, the CEE countries, as relatively young and fragile democracies, face heightened vulnerability to disinformation campaigns. Following the work of Buturoiu et al. (2021), the CEE countries emerge as particularly vulnerable to the insidious effects of disinformation campaigns, compounded by the challenges posed by climate change. As relatively young and fragile democracies, these nations grapple with a unique set of socio-political dynamics that render them susceptible to manipulation and exploitation by external actors seeking to sow discord and undermine democratic institutions. The transition from authoritarian rule to democracy in the CEE countries has been marked by significant social and economic upheaval, leaving behind legacies of mistrust, political polarization, and institutional fragility. This legacy provides fertile

ground for the spread of disinformation, as societal divisions and grievances are exploited to advance political agendas and undermine public trust in democratic processes. Moreover, the limited experience with democratic governance and the weak institutional frameworks in these countries make them ill-prepared to effectively combat the sophisticated disinformation tactics employed by state and non-state actors. Climate change exacerbates these vulnerabilities by amplifying existing socio-economic challenges and creating new avenues for exploitation. The CEE countries, with their heavy reliance on carbon-intensive industries and vulnerability to extreme weather events, face disproportionate impacts from climate change. These impacts, including disruptions to food and water supplies, increased frequency of natural disasters, and economic instability, provide fertile ground for disinformation campaigns that seek to exploit public fears and uncertainties. Furthermore, the interconnectedness of climate change and security issues exacerbates the vulnerability of CEE countries to disinformation. As climate-related security threats, such as resource scarcity, environmental migration, and geopolitical tensions over water and land resources, become more pronounced, external actors may exploit these vulnerabilities to foment unrest and advance their own strategic interests. In response to these challenges, CEE countries must prioritize efforts to strengthen democratic institutions, promote media literacy, and enhance resilience to disinformation. This requires robust coordination at the national and regional levels, as well as collaboration with international partners and organizations. Additionally, addressing the underlying socio-economic drivers of vulnerability, such as poverty, inequality, and lack of access to information, is crucial to mitigating the impact of disinformation campaigns and building more resilient democracies in the CEE. The CEE region has become a battleground for competing narratives perpetuated by state, non-state, commercial, and political actors, aiming to undermine democratic transformations and European integration efforts, all amid the backdrop of climate change (Krekó, 2020). Disinformation campaigns (Wang et al., 2022) have fueled social polarization, exacerbated distrust in mainstream media, and perpetuated unresolved public controversies. Moreover, narratives exploiting ambivalence towards Western values, such as portraying the EU as weak and indifferent, have intensified anti-EU sentiments, complicating efforts to address climate change and its associated challenges (Bârgăoanu et al., 2023).

Disinformation in the CEE region exploits pre-existing structural weaknesses, including low trust in public authorities, institutions, and politicians, compounded by governance deficiencies and elite quality (Bârgăoanu et al., 2023). These trust deficits, coupled with ongoing conflicts and geopolitical tensions, have further heightened vulnerability to disinformation, particularly in the context of climate change. Moreover, shifts in media consumption patterns, with traditional media experiencing declining trust levels and online platforms emerging as primary sources of news and information, have exacerbated the spread of misinformation (Waleij, 2023). Climate change-related disinformation further complicates the narrative landscape, as seen in the proliferation of conspiracy theories and the amplification of pro-Russian sentiments (Corbu et al., 2022).

In light of these challenges, comprehensive strategies are needed to counter disinformation and promote media literacy, particularly in the context of climate change. Strengthened collaboration at national and regional levels, combined with enhanced regulatory frameworks and efforts to build public resilience, are essential to mitigate the disruptive effects of disinformation and misinformation on climate change discourse and response efforts.

Despite the significance of media consumption in influencing attitudes, a substantial portion of respondents in Hungary (33%), Romania (28%), and Bulgaria (30%) struggle to discern fake news, as noted by the European Commission (European Commission, 2021). According to Bârgăoanu et all (2023), rapid proliferation of technologies, coupled with the global surge in internet usage and the presence of weak media and information ecosystems, underscores the criticality of equipping citizens with the skills to engage with, comprehend, and critically evaluate various forms of media. Notably, amidst the vast volume of deceptive information, a discernible pattern emerges

wherein polluted narratives circulate transnationally or even globally. Often disseminated through private instant messaging platforms like WhatsApp or Facebook, these hyper-personalized contents operate stealthily beneath the radar, evading public scrutiny and content curation, before infiltrating more public or mainstream outlets such as Facebook public pages, newsfeeds, blogs, online platforms, and even traditional media outlets (Bârgăoanu et all, 2023).

Given this context, there is an urgent imperative to investigate and address more the phenomenon, accounting for local and regional nuances through a comprehensive societal approach. Our proposal advocates for a holistic strategy involving diverse stakeholders collaborating to combat the dissemination and repercussions of false information. Recognizing that disinformation transcends mere technological challenges, it is imperative to acknowledge its multifaceted impact across society.

Because one way of tackling the complex problem of climate change mitigation is by doing more towards poverty eradication (Zhang et al., 2022; Kalair et al., 2021; Pallagiano, 2018) (Zhang et al., 2022; Kalair et al., 2021; Pallagiano, 2018), cheap fossil fuel energy represents a double-edged sword (Kalair et al., 2021) (Kalair et al., 2021). On the one hand, access to affordable green energy is essential for promoting economic growth, improving living standards, and lifting populations out of poverty. But green energy innovation is not possible without costly research and due time (Zhang et al., 2022) (Zhang et al., 2022). Cheap energy sources, such as fossil fuels, have historically played a central role in driving industrialization and economic development, particularly in regions with limited access to renewable energy alternatives. However, the reliance on cheap fossil fuels comes at a significant cost to the environment and public health (Pallagiano, 2018) (Pallagiano, 2018). The burning of fossil fuels releases greenhouse gases and other pollutants into the atmosphere, contributing to global warming, air pollution, and environmental degradation. As climate change intensifies, vulnerable communities in Romania and CEE countries are disproportionately impacted by extreme weather events, rising sea levels, and food insecurity, exacerbating existing socio-economic inequalities and perpetuating cycles of poverty (Pinho-Gomes et al., 2023) (Pinho-Gomes et al., 2023). Navigating the trade-offs between cheap energy, poverty eradication, and climate change mitigation requires a nuanced approach that balances short-term economic benefits with long-term sustainability goals. While cheap energy may provide immediate relief for impoverished communities, it also perpetuates a reliance on environmentally harmful practices that undermine the resilience of ecosystems and exacerbate climate-related vulnerabilities. Investing in clean energy alternatives offers a promising pathway for reconciling the trade-offs between poverty eradication and climate change mitigation (Zhang et al., 2022) (Zhang et al., 2022). Renewable energy sources, such as solar, wind, and hydroelectric power, provide affordable and sustainable alternatives to fossil fuels, offering the potential to promote economic development while reducing greenhouse gas emissions and environmental degradation.

Conclusions

Within NATO, there has been a growing acknowledgment of the linkages between climate change, disinformation campaigns, security and geopolitical stability, with respect to the High North region. As such, the organization has been increasingly integrating climate considerations into its security planning and operations. NATO member states have committed to reducing their carbon footprint and enhancing their resilience to climate-related risks. Furthermore, NATO has been exploring opportunities for collaboration with partner countries and international organizations to leverage expertise and resources in addressing climate-related security challenges.

Similarly, the European Union has been at the forefront of global efforts to combat climate change and disinformation. The EU's Green Deal initiative outlines a comprehensive roadmap for achieving climate neutrality by 2050 and transitioning to a sustainable, circular economy. As part of this initiative, the EU has set ambitious targets for reducing greenhouse

gas emissions, increasing renewable energy capacity, and promoting energy efficiency. Additionally, the EU has allocated significant funding towards research and innovation in clean energy technologies and has established mechanisms to support member states in their transition towards a greener economy. This includes initiatives to incentivize investment in renewable energy infrastructure, promote energy efficiency measures, and support the development of clean transportation systems. By prioritizing green energy solutions, NATO and the EU aim to reduce their dependence on fossil fuels, mitigate environmental degradation, and enhance energy security. Moreover, NATO and the EU are leveraging their collective resources and expertise to drive innovation in clean energy technologies and services. Through collaborative research and development initiatives, these organizations are fostering the creation of cutting-edge solutions for sustainable energy production, storage, and distribution. By harnessing the potential of emerging technologies such as renewable energy, energy storage, and smart grids, NATO and the EU seek to accelerate the transition towards a low-carbon economy and ensure a sustainable future for generations to come.

Addressing the proliferation of disinformation in Romania and Central and Eastern European (CEE) countries intersects with the complex trade-offs associated with achieving sustainable development goals, particularly in the context of poverty alleviation and climate change mitigation.

NATO and the EU are demonstrating a shared commitment to addressing the challenges of climate change and environmental sustainability. Through strategic planning, policy development, and collaborative initiatives, these organizations are actively promoting the adoption of green energy solutions and advancing the transition towards a more sustainable future. By working together towards common goals, NATO and the EU can effectively mitigate the impacts of climate change disinformation campaigns, enhance energy security, and promote environmental resilience across the globe. Examples of such disinformation campaigns include spreading false information about the causes of climate change, downplaying its severity, or exaggerating its effects for political gain. These campaigns aim to undermine public trust in climate science and hinder efforts to implement effective environmental policies.

Consequently, fostering national, regional and international synergies becomes essential to enhancing comprehension of the analyzed challenges and nurturing cooperation to counter them. Such a multifaceted approach is indispensable, considering that disinformation poses complex challenges that intersect with various societal sectors. By engaging all stakeholders, it becomes feasible to formulate comprehensive and pragmatic strategies aimed at mitigating the propagation and impact of false information related to climate change.

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