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PERMACRISIS, CLIMATE CHANGE AND SOCIETY. TOWARDS A FRAMEWORK FOR ANALYSIS: RISK PERCEPTION COMPONENT

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The paper discusses the relevance of incorporating risk perception assessment into the analysis of the impact of climate change on the societal dimension of national security. The objective is to develop a framework for analysis that will provide a coherent basis for future strategies and policies in this area. In order to address this issue, it is first necessary to acknowledge that climate change is just one of a number of phenomena and events contributing to the global permacrisis that causes stress and anxiety to the population. The second section of the paper presents a review of the relevant literature. Our aim is to determine whether it is appropriate to assess the risk perception in this context. Having conducted an assessment based on existing surveys, we will then draw conclusions on the essential elements of a framework for analysing climate change-related risks.

Keywords: *climate change; permacrisis; risk; risk perception; vulnerability; hazard; exposure*

The international agenda is currently focused on a number of issues that have the potential to shape the future of humankind. From one perspective, we are confronted with a multitude of global issues, including climate change, pandemics and the economic crisis. These in themselves could be regarded as threats to national and international security. Additionally, there are tendencies that originate from the aspiration of state and non-state actors to exert their influence on the international stage. These include competition for power and conflict, strategic competition in the outer space, and, last but not least, the hybrid actions of certain states.

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Climate change is a phenomenon that affects all countries, regardless of their geographical location, level of development, or status on the international stage. The way in which people represent the associated risks is a defining factor in shaping responses to this threat. In this context, the objective of the project entitled "The Impact of Climate Change on Romania's National Security"[1] is to construct a framework for analysing the aforementioned impact. The purpose of this paper is to discuss the fundamental elements of the analysis of the societal dimension, with a particular focus on the psychosocial aspects.

It is important to note that the perception of risk associated with climate change is not independent from the perception of risk in other areas of social life. A failure to consider the numerous factors that may impact security when measuring climate change would render the methodology employed. Indeed, climate change is itself influenced by and influencing a number of other factors, including societal, economic, military and political ones.

The scientific validity of this approach is supported by a literature review of the methodological frameworks employed in the field, as well as by reference to scientific studies conducted by institutions engaged in the investigation of risk perception in relation to climate change. Thus, in what follows, we will first discuss the relation between the crises affecting humankind, implicitly assuming that climate change is a particularly important element of the global permacrisis. In the second part of the paper, we discuss the role of risk perception in a potential framework for analysing the impact of climate change on the societal dimension of security. Finally, we compare risk perceptions longitudinally (in time) and cross-sectionally (between countries and regions) in order to underline the peculiar characteristics of climate change (it evolves in time and its impact differs from region to region) and to understand the social dynamics associated with this challenge.

1. Does Climate Change Constitute an Element of Global Permacrisis?

In the preceding five years, the overall context has become increasingly complex.

The consequences of the COVID-19 pandemic have been predominantly observed in economic and social area. Consequently, one of Europe's most significant challenges, namely mixed migration, has been less prominent in the public discourse, as national governments have implemented measures to address the health crisis, restrictions on international travel included. Nevertheless, this has not precluded

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the potential for a deterioration of the humanitarian situation in refugee camps or an increase in population movement to European countries as restrictions are lifted. The year 2023 registered the highest level of migration to Europe since the 2015-2016 crisis. Concurrently, the so-called "COVID-19 recession" (Cardani, et al. 2023) has resulted in the intensification of disparities between social groups, on the one hand, and between countries at different levels of development, on the other.

The war in Ukraine has triggered a significant influx of refugees into neighbouring countries and the rest of Europe. Similarly, the ongoing conflict in the Gaza Strip has led to the displacement of over 80% of the population. Furthermore, the political and military crises and conflicts that have emerged or intensified in Africa and the Middle East over the past two years have contributed to an exacerbation of the humanitarian crisis in regions that are already characterised by high levels of poverty.

The pre-war economic crisis was coupled with changing demand in the labour market and the economic outlook after the COVID-19 pandemic had a negative impact on societies and led to a new migration flow. In addition, climate change and related events are causing, now and in the future, not only internal displacement of populations affected by natural disasters (Türkiye, Syria, Afghanistan, Morocco, etc.), but also international migration from areas most vulnerable to the effects of global warming (Africa and Latin America) to developed countries.

We are therefore discussing a considerable number of disruptive events that have been occurring over an extended period of time. In addition to the destructions and human and material losses, the effects and perception of insecurity caused by these events persist. It can be argued that humankind is currently experiencing a *permacrisis*, a period in which significant events and phenomena, including conflicts, crises, persecution, extreme poverty, human rights violations, and natural disasters, occur simultaneously or in succession.[2]

It can be observed that in this series of events and phenomena, climate change appears as a constant. It is defined in Article 1 of the *United Nations Framework Convention on Climate Change* and encompasses not only the factors that determine

[2] A detailed analysis of the events and phenomena presented in this section is provided by the author in the series „Evaluare strategică" (Strategic Evaluation) published by the Centre for Defence and Security Strategic Studies of the "Carol I" National Defence University: "Criza «uitată» a Europei: impactul pandemiei de Covid-19 asupra populației de refugiați și migranți ilegali", in *Evaluare strategică 2020. Securitatea, între pandemie și competiție*, "Carol I" NDU Publishing House, 2021, pp. 69-94; "Migrația internațională în 2021: de la instrumentalizare și securitizare la criză umanitară de durată", in *Evaluare strategică 2021. Coordonate ale insecurității*, "Carol I" NDU Publishing House, 2022, pp. 75-110; „«Permacriză» umanitară? Războiul din Ucraina, insecuritatea percepută și acutizarea crizei umanitare", in *Evaluare strategică 2022. Lumea între pandemie și război*, "Carol I" NDU Publishing House, 2023, pp. 164-207; "Intensificarea mișcărilor de populație ca efect al permacrizei globale", in *Evaluare strategică 2023. Riscuri, incertitudine, război*, "Carol I" NDU Publishing House, upcoming.

it, but also the temporal aspects of climate change: "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" (UN 1992). This definition was further elaborated by a UN agency, the Intergovernmental Panel on Climate Change (IPCC), and the temporal dimension became even more visible: "A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and *that persists for an extended period, typically decades or longer*" (IPCC n.d.).

According to the generally accepted definition, climate change represents obviously a defining element of the global permacrisis. It is therefore imperative to conduct a detailed analysis of its impact on national security in order to identify the most effective strategies for mitigating its consequences for human society.

2. Risks and Society – Theoretical Framework

The available literature and empirical evidence collectively demonstrate that climate change can act as an enabling agent, thereby generating risks in societies that are often already vulnerable. The same literature emphasises that society is not only the passive, referent object of security (which must be protected), but also a producer of security or insecurity, along with all state and non-state actors involved (The Hague Centre for Strategic Studies 2012).

An analysis of this matter should focus on concepts such as climate security, climate change-related risks, resilience, psychosocial representation, social acceptability of climate change, cognitive bias, and so forth. Nevertheless, as the approach is of a very broad nature, at this stage of the project we will restrict our discussion to the issue of risk and risk perception.

In recent years, the term *climate security* has gained increasing attention in academic and policy circles. The Centre for Climate and Security (Washington) proposes a comprehensive conceptual framework based on four interrelated elements: climate change (rising greenhouse gas emissions; rising global temperature; rising sea levels), natural hazards (climate-related events: floods, tropical storms, landslides, heat waves, droughts, forest wildfires), and human systems (risk factors: vulnerabilities such as a lack of adaptive capacity and resilience, as well as exposed elements and socio-economic and institutional sensitivity) (The Centre for Climate and Security 2021, 20). Additionally, there are the drivers of insecurity that affect climate change (adverse impacts: mortality and morbidity, environmental degradation, infrastructure and livelihoods, health problems, inequality, resource availability and quality, social tensions, migration and internal displacement, unstable institutions, etc.) (The Centre for Climate and Security 2021, 20).

The security or insecurity of an actor is contingent upon a number of factors, including the nature and severity of the threat to which they are exposed, as well as the characteristics of the actor themselves, such as their vulnerability and resilience to harmful events.

There are several models for analysing the perception of climate change risk. These range from purely positivist approaches to constructivist ones such as the Climate Change Risk Perception Model (CCRPM) developed by van der Linden (van der Linden 2014) (van der Linden 2015) (van der Linden 2017), to models that combine scientific knowledge with experiential processing, socio-cultural influences and trust in sources of information alongside socio-demographic factors, such as the CCRPM+ (van Eck, Mulder and van der Linden 2020).

One of the most commonly used models of analysis that includes both objective and subjective factors was originally proposed by the IPCC and later commented on by Australian Professor John Handmer, an expert in Risk and Resilience at the International Institute for Applied Systems Analysis.

In the case of the IPCC, the definition of risk has been subject to change depending on the membership of the working groups that were established for the purpose of assessing the impacts of climate change. The IPCC Glossary currently operates with the following definition: "the potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems and species" (van Diemen 2019). It should be noted that the IPCC employs the term "risk" exclusively in reference to the adverse consequences of climate change. In instances where both negative and positive effects are considered, the recommended terminology is "climate impact driver". The definition also encompasses potential consequences for physical, human, and ecological systems. Additionally, it is acknowledged that each individual or community will assess negative consequences to systems according to their cultural model (Reisinger, Howden and Vera 2020). Therefore, this definition includes an important societal dimension and especially a cultural component that, according to various authors, is focused on the previous experience with disasters and perception of risk (Prior, et al. 2017). There are authors who argue that this dimension focuses mainly on societal organization and collective aspects, while the individual is studied more when considering psychosocial trauma related to disaster (Cardona, et al. 2012).

In this framework, there are authors who consider the theory of social representation better suitable for understanding the cultural and social dimensions of risks related to climate change (Joffe 2003) (Machin Suarez 2021). They are

arguing the idea that studying risk perception, even if it claims to study a collective phenomenon, does not contain any other support than the statistical behaviour of these data and is valid only for making decisions on political, economic or social issues (Machin Suarez 2021, 116).

Indeed, social psychology, as represented by the Romanian Serge Moscovici, defines social representations as a system of values, notions, practices related to objects, aspects or dimensions of the social environment. These determine the field of possible communications, values or ideas existing in the shared visions of groups and regulate the allowed behaviours (Neculau 1996) (Seca 2008) (Markova 2004). Willem Doise further emphasizes their main characteristic, defining them as "shared realities" and "position-generating principles" (Doise and Palmonari 1996) (Neculau 1996), thus emphasizing the communication and reaction components. Furthermore, Gerar Duveen argues that representations, supported by the social influence of communication, constitute everyday realities and serve as the primary means of establishing the affiliations by which we are bound to one another (Duveen 2001, 2). Summarizing, W. Wagner, G. Duveen, R. Farr, S. Jovchelovitch, F. Lorenzi-Cioldi, I. Marková and D. Rose, define social representations as a set of thoughts and feelings expressed through the verbal and overt behaviour of actors that constitute an object for a social group (Wagner, et al. 1999, 96).

It can be concluded that both the analysis of risk perceptions and social representations are important in the context of climate change. Strategies and policies to manage the effects of climate change, whether positive or negative, are based on both quantitative and qualitative risk assessment and vulnerability analysis. In this process, subjectivity, uncertainty and even optimistic bias play an important role. It should be noted, however, that the analysis of risk perception has the advantage of employing less costly and more straightforward methods and techniques, whereas the analysis of social representations of risk necessitates the utilisation of more sophisticated methodologies (Lo Monaco, et al. 2017).

Returning to the IPCC model, another element characterized by a high degree of subjectivity is vulnerability. It is a key element in defining risk and is the result of the dynamic interactions between climate hazards, exposure and vulnerability of the affected human or ecological system to hazard (van Diemen 2019).

Hazard is defined as "The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources" (van Diemen 2019). In light of the fact that climate change is regarded as a threat by the most prominent agencies in this field, including the UN (Intergovernmental Panel on Climate Change) and the EU (European Environment Agency), it seems reasonable to suggest that the potential for harm posed by climate change could be considered a security threat in its own

right. However, within the context of Anglo-American intelligence literature, the notion of a threat being posed by a force of nature or climate change is not accepted. Consequently, when the threat originates from an "agent" that is not human, the term "hazard" is employed (Prunckun 2015, 284).

The exposure relates strictly to the presence of units that may be adversely affected: people, livelihoods, species or ecosystems, environmental functions, services, resources, infrastructure, economic, social, or cultural assets in places and settings (van Diemen 2019).

Vulnerability is defined as "The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt." (van Diemen 2019).

The discussion on vulnerability is more complex because vulnerability can be assessed using several methods. They can be quantitative, qualitative or combined and can be centred on the analysis of data on losses (resulting in a comprehensive picture of direct, indirect and intangible losses), of structural data (census or statistical analysis of past disasters, but do not capture the multidimensionality of vulnerability) or of perceptions of vulnerability (useful for understanding social dynamics, but costly and time-consuming) (Prior, et al. 2017).

Building on the foundations of this methodology, as well as the approaches employed by Emergency Management Australia and the Australian/New Zealand risk management standard, John Handmer puts forth an alternative framework that emphasises a proactive and constructive approach to vulnerability, viewing it as an inherent capacity for resilience in the face of change (Handmer 2003). It also emphasizes the limits of the hazard – exposure – vulnerability triangle, especially in the case of complex hazards that may have no clear spatial or temporal boundaries, and possibly no agreed solutions, such as zoonosis (Handmer 2003, 56). He suggests the term "complex unbounded risks" that are hard to quantify due to the lack of acknowledged history, largely invisible, resist definition in space and time, may be accompanied by a climate of fear and an increase of concern and anxiety over time. Also, in this context, the evolution of the situation is getting worse and the impacts may be irreversible and on large scale (Handmer 2003).

Still, strictly in the case of climate change, the triangle of risk suggested by IPCC recognises the uncertainty of both risks and hazards and the need for both quantitative and qualitative evaluation (Reisinger, Howden and Vera 2020).

It can be observed that Handmer's model also incorporates the concept of risk perception, albeit without the use of that specific term. This is evident in his reference to the climate of fear, concern, and anxiety that may increase over time (Handmer 2003, 56). This indicates that the model is concerned with the subjective judgments that individuals make regarding the characteristics and severity of a risk.

Therefore, one of the first steps in analysing the impact of climate change on national security, alongside objective aspects of previous events, should be the measurement of risk perception

3. Risk Perception

The issue of climate change is perceived by a large part of the world as a significant risk. The most comprehensive survey of its kind, the *People's Climate Vote 2024*, was published by the UNDP this year. It comprises a sample of more than 73,000 individuals from 77 countries. The main finding is that there is a growing concern about climate change, with 53% of those surveyed indicating that they are more worried than in the previous year, compared with 15% who stated that they are less worried (Flynn, et al. 2024, 24). Also, 43% consider that extreme weather events were worse than usually this year than the last (Flynn, et al. 2024, 37). In terms of the impact of climate change on their daily lives, 69% of respondents indicate that it is already influencing their major decisions (such as where to live, where to work, and what to purchase), particularly in less developed countries that are most vulnerable to climate change (e.g., Kenya, Afghanistan, Uganda, Niger, Madagascar, Haiti, etc.) (Flynn, et al. 2024, 33-36).

However, where does climate change rank in the plethora of crises mankind is facing in terms of perceived associated risk? An analysis in this respect also needs to be made in relation to the other main security issues covered by the permacrisis. Following a comprehensive review of the most significant reports on risk perception, we have identified four key areas of concern: war, terrorism, economic crises and pandemics. These will be compared with the perception of climate change-related risks. In order to achieve this, the most recently published data from recent reports that sample more than ten countries, both global and regional in nature, will be discussed: *Lose-Lose? Munich Security Report 2024*; *The Global Risks Report 2024. Insight Report* of the World Economic Forum, and *Special Eurobarometer 538. Climate Change* of the European Commission.

The Munich Security Report 2024 identifies a number of risks for analysis, concluding that environmental threats are of particular importance and that the perception of the risk of mass migration as a result of war or climate change is increasing (Bunde, Eisentraut and Schütte, et al. 2024, 2). The security index is a multidimensional assessment of perceived risks, encompassing five key dimensions: overall, trajectory, severity, imminence, and preparedness. This assessment is based on the responses of a representative sample of approximately 1,000 individuals from 11 countries, including members of the G7 and BICS (Brazil, China, India, and South Africa).

The analysis of "climate change generally" as a risk and stress factor in the G7 countries reveals a downward trend in the score. In February/March 2021, the

perceived risk was ranked fourth, while in November 2021 it was ranked first. It then fell to fifth place in the October/November 2022 survey and finally to sixth place in the October/November 2023 survey (Bunde, Eisentraut and Knapp, et al. 2022) (Bunde, Eisentraut and Schütte, et al. 2024). For the BICS countries, this risk is perceived as the most significant over the entire period under analysis, with "extreme weather and forest fires" and "the destruction of natural habitats" representing the next most important issues.

Related to climate change and deriving from it can be considered at least five more risks from the list analysed by the authors of the report: "extreme weather and forest fires", "destruction of natural habitats", "mass migration as a result of war or climate change", "food shortages", and "a future pandemic". The perception of risk with respect to each of these issues is subject to fluctuation. However, in the most recent report, the risk associated with "extreme weather and forest fires" was identified as the most significant, having remained within the top three perceived risks for the past three years. The following table illustrates the aforementioned statements. It should be noted that, for purposes of comparison, this analysis also includes other risks that, at the initial publication of the security index (February/March 2021), occupied higher positions on the risk bump chart.

Table no. 1: Aggregate ranking of selected risks, 2021-2023, according to various editions of the *Munich Security Index*
Source: (Bunde, Eisentraut and Knapp, et al. 2022)
(Bunde, Eisentraut and Schütte, et al. 2024)

Risks (selection)	Aggregate rankings of risks			
	February/March 2021*	November 2021	October/November 2022	October/November 2023
Extreme weather and forest fires	2 —	2 ↘	3 ↗	**1**
Cyberattacks on your country	7 ↗	4 ↘	7 ↗	**2**
Destruction of natural habitats	3 —	3 ↘	4 ↗	**3**
Russia	24 ↗	15 ↗	1 ↘	**4**
Radical Islamic terrorism	14 ↗	9 ↘	22 ↗	**5**
Climate change generally	4 ↗	1 ↘	5 ↘	**6**
Mass migration as a result of war or climate change	15 ↗	10 ↘	12 ↗	7
A future pandemic	5 ↘	6 ↘	18 ↘	**22**
Food shortage	20 ↘	21 ↗	18 ↘	**24**
The coronavirus pandemic	1 ↘	5 ↘	26 ↘	**30**

* In the February/March 2021 report, the aggregate ranking of risks targets the G7 and BRICS countries. In subsequent surveys, however, the score indicates the perception of risk in the G7 countries alone.

In contrast to the MSI, the World Economic Forum (WEF) employs a sample of nearly 1,500 experts in the field to assess global risk perceptions. Furthermore, it conducts network analysis of perceived risks, which the aforementioned report does not. The risk landscape is analysed over three-time horizons: the present (2023-2024), the next two years and the next ten years. In all three periods, environmental risks are identified as the most likely to present a material crisis on a global scale, according to the perception of those surveyed (World Economic Forum 2024, 7). In this category, the WEF introduces six issues, which can be considered either causes or consequences of climate change: "extreme weather events", "critical change to Earth systems", "biodiversity loss and ecosystem collapse", "natural resource shortages", "pollution", and "non-weather related natural disasters".

For 2023-2024 period, the most likely environmental risk to present a material crisis on a global scale is perceived to be "extreme weather events" by 66% of the responders. In short time (2 years), it drops on the 2nd place, after "misinformation and disinformation" (1st), and before "societal polarization" (3rd), "cyber insecurity" (4th) and "interstate armed conflict" (5th). By contrast, in the long-term forecast, the top four positions are occupied by environmental risks ("extreme weather events", "critical change to Earth systems", "biodiversity loss and ecosystem collapse", and "natural resources shortages") (World Economic Forum 2024, 11, 13). Table no. 2 illustrates the evolution of perceptions regarding the aforementioned risks and the risks with which they are in a state of influence.

In terms of correlating different categories of risks, the experts interviewed establish a direct influence relation between all five environmental risks and risks such as "involuntary migration" (high influence node), "chronic health conditions" (medium influence node), "infectious diseases" (medium influence node), and "economic downturn" (high influence node). Thus, "natural resource shortages", "critical change to Earth systems", "extreme weather events", "pollution", and "non-weather related natural disasters" are perceived as directly determining "involuntary migration" as a societal risk. Additionally, another societal risk, "infectious diseases" are regarded by experts as being driven by "critical change to Earth systems", "natural resource shortages", "pollution", "extreme weather events", "biodiversity loss and ecosystem collapse", and "non-weather related natural disasters". "Chronic health conditions" are also perceived as being driven by "critical change to Earth systems", "natural resource shortages", "pollution", "extreme weather events", "biodiversity loss and ecosystem collapse". A further significant risk associated with the environmental issue is the "economic downturn". This is driven by a number of factors, including "natural resource shortages", "critical changes to Earth systems", "extreme weather events" and "non-weather related natural disasters". (World Economic Forum 2024, 44)

Table no. 2: Ranking by severity of selected global risks, on short and long term, according to *World Economic Forum* survey
Source: (World Economic Forum 2024)

Risks (selection)	Global risks ranked by severity		
	Short term (2 years)		Long term (10 years)
Extreme weather events	2	↗	1
Interstate armed conflict	5	↘	15
Involuntary migration	8	↗	7
Economic downturn	9	↘	28
Pollution	10	—	10
Critical change to Earth systems	11	↗	2
Natural resource shortages	13	↗	4
Biodiversity loss and ecosystem collapse	20	↗	3
Infectious diseases	23	↗	19
Chronic health conditions	27	↗	20
Non-weather related natural disasters	33	—	33
Terrorist attacks	32	↘	34

As in the case of the MSI, "extreme weather events" represent the risk perceived as the most severe by the experts interviewed in the WEF report, and the migration related risk ("mass migration as a result of war or climate change", respectively "involuntary migration"[3]) occupies similar positions in the two rankings (7th in the last edition of MSI, respectively 8th place on short term and 7th place on long term in the WEF). Concurrently, the experts interviewed do not anticipate that the risks of "interstate armed conflict" and "terrorist attacks" will remain elevated in the next decade, a perspective that diverges from that of the surveyed population in the case of the MSI, who perceive these risks as significant (Table no. 1).

The *Special Eurobarometer 538 Climate Change*, conducted in May and June 2023 at the European level, indicates that while the proportion of respondents who view climate change as "the single most serious problem facing the world as a whole"

[3] The link between the two risks can be established on the basis of the WEF definition of involuntary migration, which encompasses factors such as conflict and climate change as potential triggers: "Forced movement or displacement across or within borders. Drivers include, but are not limited to: persistent discrimination and persecution; lack of economic advancement opportunities; human-made disasters; natural disasters and extreme weather events, including the impacts of climate change; and internal or interstate conflict." (World Economic Forum 2024, 97).

has declined from 18% in 2021 to 17% in 2023, it remains a significant concern, following "poverty, hunger and lack of drinking water" (20% in 2023, an increase of three percentage points from 2021) and "armed conflicts" (19% in 2023, an increase of 15 percentage points from 2021, when the war of aggression against Ukraine had not yet commenced) (European Commission 2023, 10). By country, climate change is seen as the world's most important problem in Sweden (41%), Denmark (35%), the Netherlands (35%), Finland (25%), Finland (25%), Ireland (24%), Germany (22%), Malta (22%), Belgium (20%) and Austria (18%). In contrast, only 4% of respondents in Latvia, 6% in Bulgaria, 6% in Romania, 7% in Poland, 8% in Estonia and 8% in Slovakia believe that climate change is the most important problem of the entire world, their attention being directed to the war in the vicinity: 28% of respondents in Latvia, 26% in Bulgaria, 18% in Romania, 37% in Poland, 33% in Estonia, and 22% in Slovakia perceive "armed conflicts" as the single most serious problem facing the world as a whole (European Commission 2023, 12).

Another issue related to climate change, namely the deterioration of nature, is the second most frequently mentioned item only in Hungary (11%) and Slovenia (15%), where the most frequently mentioned problem is "poverty, hunger and lack of drinking water", issues that can also be correlated, under certain conditions, to climate change (Table no. 3).

Table no. 3: Ranking the most frequently mentioned item in EU as "the most serious problem facing the world as a whole", according to *Special Eurobarometer 538. Climate change*

Source: (European Commission 2023)

Problems (selection)	Ranking of the most single serious problem facing the world as a whole		
	March/April 2021		May/June 2023
Poverty, hunger and lack of drinking water	1	—	1
Armed conflicts	8	↗	2
Climate change	2	↘	3
The economic situation	4	—	4
Deterioration of nature	5	—	5
Spread of infectious diseases	3	↘	7
Health problems due to pollution	6	↘	8
International terrorism	9	↘	11

In general, it can be observed that, following the end of the pandemic and the emergence of other potential crises and conflicts (such as war, terrorism and cyber-attacks), the public perception of health risks, including the pandemic coronavirus and future pandemics, has shifted. This is in contrast to the findings of the first edition of the surveys, where these risks were considered to be of greater importance. In contrast, environmental risks and climate change continue to be perceived as of significant importance by the surveyed population, with fluctuations related to geographical location, standard of living and quality of life of the surveyed population, and time frame of the survey.

Brief Conclusion and Suggestions Regarding the Framework for Analysis

The analysis of global risk perception reveals that individuals, regardless of their status or expertise, are aware of the vulnerabilities and challenges associated with climate change. Given the simultaneous occurrence of this phenomenon alongside other events and phenomena with an impact on security, it is imperative to analyse it within the context of the global permacrisis. At the preliminary stage of analysis, the term "permacrisis" must be translated into observable events, thus enabling a situation to be evaluated in terms of indicators pertaining to both objective phenomena (material destruction and human losses caused by climate change, along with economic crisis, migration, refugee flows, internal displacement, etc.) and subjective ones (perceived insecurity, adaptation to the new situation of various social group, including refugees and internally displaced persons, perceived stress, etc.).

A framework for analysis dedicated exclusively to the impact of climate change on the societal dimension of national security must take into account, on the one hand, the correlations with other areas of social life and, on the other hand, the two types of phenomena mentioned above. This is due primarily to the fact that while the analysis of structural data allows for the identification of variables that have been repeatedly associated with losses, risk perception provide insight into intangible aspects that can be exploited in order to add depth to the understanding of vulnerability and risk. While the primary challenge associated with this mixed approach is the potential inconsistency between quantitative and qualitative assessments of vulnerability and risk, it remains a viable methodological option as it provides a comprehensive understanding of the phenomenon, thereby facilitating informed decision-making.

Furthermore, it is crucial to consider the inherent uncertainty associated with the impact of climate change on national security. This applies not only to the societal dimension but to the general analysis as well. Risk, hazards (in terms of frequency and magnitude), exposure, and vulnerability are all characterised by a certain level of uncertainty. A comprehensive approach to the phenomenon could facilitate its

reduction; however, it cannot be eliminated, primarily due to the inherent uncertainty of the future and the complex interdependencies among various domains of social life.

A final point to be made regarding this framework for analysis concerns the question of value at risk. Without the identification of such a value, the analysis is incomplete. The answer to this requirement is dependent on a number of factors, including the specific community or society in question, as well as the historical context. Therefore, it is crucial to consider the role of risk perception in developing future strategies and policies, as it provides a coherent basis for decision-making.

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