



THE STRATEGIC INTERPLAY BETWEEN RESILIENCE AND COVID-19 PANDEMIC: APPROACHES, ASSETS, AND AMBITIONS

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ABSTRACT

As the world enters a new decade, the outbreak of Covid-19 suddenly occurred and spread rapidly from certain regions to the entire world. It hence becomes a public health emergency threatening the health and safety of mankind. Over the past months, many studies and analyses have been published concerning the political, economic, and social effects of Covid-19. This article provides a review of the concept of resilience and explores the puzzle of resilience within international organisations, such as EU, NATO, and UN, in the context of the pandemic, along with a case study on the Romanian practical experience in trying to build and increase societal resilience during the first wave of Covid-19.

In the unpredictable real-world environment, international organisations try to redefine their strategies and goals. The aim of this article is to answer at two important research questions, such as *'How can international organisations develop a multi-layered and integrated toolbox in building resilient societies?'* and *'To what extent can member states use this toolbox to increase their strengths and overcome weaknesses in crisis management?'* The article also bears relevance to the area of internal security, and the topic raises the issue of adaptability in concepts and actions, making the transition from an international organisations perspective to nation states in the context of resilience and Covid-19 response.

In terms of methodology, qualitative research methods will be used for the further development of this article, including first-hand sources, such as books, academic papers and working documents, but also official websites and interviews. At the same time, Analysis of Alternatives (AoA) techniques will be part of the case study to highlight decisions and initiatives that have been taken in dealing with Covid-19 challenges.

INTRODUCTION

Motto: 'By failing to prepare, you are preparing to fail'
(Benjamin Franklin)

The whole world is in a critical moment, in a diversity of crises, from sanitary to economic, from conspiracy to fake news. In the fight against the pandemic, international organisations have made full use of their institutional advantage of concentrating resources to accomplish large undertakings. Solidarity and cooperation are important among the international community to overcome the new Coronavirus (SARS-CoV-2); however, there are various obstacles related to language, culture and medical situation in different countries that require particular attention and assistance.

The global Covid-19 pandemic has affected almost all areas of life. Governments worldwide struggle with the social and economic consequences of the crisis. During the early phases of the pandemic, it became evident that certain sectors have been particularly challenged by Covid-19. Starting from issues, such as providing personal protective equipment to the healthcare sector or increasing capacities in intensive care units, more and more challenges emerged during the current pandemic context.

While the origins of the virus are not known and many experts are intensifying their efforts to identify adequate measures for fighting against Covid-19, most of the countries are confronted not only with a public health issue but also a societal and security crisis. Critical infrastructure operators have activated their crisis management plans in various sectors, such as energy, telecommunications, transport and logistics, while the work of healthcare and civil protection authorities has increased considerably within this period of time.

Covid-19 has served to remind us about the importance of resilience, acting as an eye-opener to the whole spectrum of crisis management structures and high impact low probability (HILP) events. From this

point of view, civil preparedness has become even more important, with a focus on healthcare system and continuity supply as part of the continuity process (i.e. keep operational in terms of business continuity, make operational plans for medium and long term, build stockpiles through procurement, donations and trust funds).

Governments and national authorities must take responsibility for disaster risk reduction in all areas to anticipate vulnerabilities and implement business continuity plans. Disaster risk management is primarily aimed at protecting people and properties, but also their health, livelihoods, and vital resources of the economy, environment and cultural heritage. The fight against large-scale disasters can only be ensured through effective collaboration, joint policies and actions to resolve crises. Based on this approach, it is necessary to build partnership frameworks to become more resilient and agile as well as to react promptly to the impact of Covid-19, as it is already known that ‘viruses, bacteria, and various kinds of plants and animals have never respected national borders’ (Pirages and Runci, 2000, p. 178).

The concept of resilience involves a multitude of possible answers adapted to the reality and circumstances. It is an interdisciplinary and multi-layered concept that can be applied at all levels: individual, regional, national or international. As resilience goes hand in hand with vulnerability and fragility, it is important to emphasise that planning and immediate response in crisis management are key tools. Building a more resilient society requires strengthening shock absorption mechanisms and increasing adaptability. However, ‘addressing the Covid-19 pandemic and its effects on society requires more than the actions of healthcare and medical professionals alone. It calls for engagement of citizens, governments at all levels, and a diverse array of organisations and individuals involved in policymaking processes and policy implementation’ (Weible et al., 2020, p. 3).

The role of international organisations must be to help each other, to collaborate for integrative management and governance, allowing learning and flexibility in building adaptability at all levels of society. The international mechanisms of assistance created by NATO, the EU, and the UN increase the level of resilience of their member states, as well as the ability of citizens to react and adapt to the measures needed to ensure continuity

and recovery from a disaster and/or a crisis. International organisations have developed strategies, programmes, and toolbox packages to prevent and increase the level of resilience. However, now they must adjust them to become parts of a more integrated approach.

Each international organisation has a different approach to tackling Covid-19: on the one hand, NATO acts as an integrator, oriented towards an all-hazards approach, highlighting the link between *security* and resilience; on the other hand, the EU is a multi-nodal provider, oriented towards a 360-degrees system approach, having at core the link between *society* and resilience; while the UN serves as a facilitator, oriented towards people's resilience and emphasising the link between *development* and resilience. Thus, in order to make this multilateralist scheme functional, 'there must be consensus on what it is supposed to do, and can realistically achieve' (Trenin et al., 2020, p. 7) through solidarity, international cooperation, transparent approach, considering multiple types of impact and investing more in data collection and epidemic forecast.

Hence, this article will try to bring an answer to the research questions framed as following: '*How can international organisations develop a multi-layered and integrated toolbox in building resilient societies?*' and '*To what extent can member states use this toolbox to increase their strengths and overcome weaknesses in crisis management?*'. In terms of structure, the article consists of two parts: the first part will analyse the involvement of international organisations (i.e. NATO, the EU, the UN) in building resilient societies and tackling Covid-19, while the second part presents a case study of the Romanian strategic response to the pandemic in the context of cooperation with international organisations, civil society, and the private sector. In terms of research methodology, I will be using qualitative data with a focus on primary sources, such as books, academic papers, working documents, official websites and interviews, but also the Analysis of Alternatives (AoA) technique for the case study.

This article has been written during the pandemic period, far from being over and before reaching its second peak. Some aspects related to the topic of this article thus remain underanalysed and deserve more attention in the aftermath of the Covid-19 pandemic. However, a preliminary overview on the measures, coordination processes, and toolbox packages (mechanisms, instruments, and platforms) offered by international

organisations to increase societal resilience during this sanitary crises, backed-up by observations and lessons learned collected at the national level, can definitely help to mitigate the negative effects and consequences of the pandemic.

1. COOPERATION AND RESILIENCE OF INTERNATIONAL ORGANISATIONS IN THE CONTEXT OF COVID-19

1.1 NATO'S APPROACH – THE LINK BETWEEN SECURITY AND RESILIENCE

Resilience is seen by the Alliance as ‘the society’s ability to resist and recover easily and quickly from such shocks and combines both civil preparedness and military capacity. Robust resilience through civil preparedness in Allied countries is essential to NATO’s collective security and defence’ (NATO website). Moreover, resilience is a national responsibility under Article 3 of the NATO Treaty: ‘in order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack’ (The North Atlantic Treaty, 1949).

In this context, resilience represents not only the Allies’ development capacity to ensure collective and individual security, but also their capacity to deal with crisis situations: affected critical infrastructures (transport corridors, communication networks, energy supply), natural disasters, limited access to vital resources, etc. The roots of this concept of resilience can be found in NATO’s New Strategic Concept: Active Engagement, Modern Defence adopted by the NATO Summit in Lisbon back in 2010, discussed in some detail in paragraph 13:

All countries are increasingly reliant on the vital communication, transport and transit routes on which international trade, energy security and prosperity depend. They require greater international efforts to ensure their resilience against attack or disruption. Some NATO countries will become more dependent on foreign energy suppliers and in some cases, on foreign energy supply and distribution networks for their energy needs. As a larger share of world consumption is transported across the globe, energy supplies are increasingly exposed to disruption (NATO, 2010, p. 6).

The concept of resilience extended to civil preparedness was subsequently highlighted at the 2016 NATO Summit in Warsaw in relation to the adoption of the Final Communiqué:

- we have taken a range of steps to reinforce our collective defence, enhance our capabilities, and strengthen our resilience, and
- civil preparedness is a central pillar of Allies' resilience and a critical enabler for Alliance collective defence. While this remains a national responsibility, NATO can support Allies in assessing and, upon request, enhancing their civil preparedness. We will improve civil preparedness by achieving the NATO Baseline Requirements for National Resilience, which focus on continuity of government, continuity of essential services, security of critical civilian infrastructure, and support to military forces with civilian means (Warsaw Summit Communiqué, 2016).

The commitment to enhance resilience is based on 'the recognition that the strategic environment has changed, and that the resilience of civil structures, resources and services is the first line of defence for today's modern societies' (Roepke and Thankey, 2019). At the NATO level, there are three essential functions that a state must perform in all circumstances from the civilian perspective: (i) continuity of governance, (ii) continuity of provision of basic services to the population, (iii) civilian support for military operations. However, baseline requirements for resilience should be seen as a process of implementation at the political and societal level, working in close cooperation with international partners and taking into account a full spectrum of operations, setting the level of ambition, including a variety of means and areas of planning.

The *whole of government approach* is crucial but might not be enough to effectively deal with crises. Implementing a *whole of society approach* will bring benefits on the civil-military cooperation, will enable crisis management efforts, and allow nations to have a cross-sectoral, holistic view of resilience planning and civil preparedness at all times. In essence, the transition from whole of government approach towards whole of society approach reflects the complexity and interdependencies of modern society, and builds resilience at all levels (i.e. civil and military, public and private).

Covid-19 has led to a renewed discussion on the level of ambition and direction on resilience framework, including civil preparedness. NATO remained concerned about the evolution of the new Coronavirus worldwide and during the NATO Defence Ministerial Meeting, it was decided 'to update NATO's guidelines for national resilience to take greater account of cyber threats, the security of supply chains, and consequences of foreign ownership and control' (NATO, 2020a).

The first step was taken by NATO's Civil Emergency Planning Committee (CEPC), which aims at the protection of the civil population and supports NATO's strategic planning for the use of civil resources in support of the Alliance's objectives in a systematic and effective way. CEPC leads and coordinates the civil emergency planning activities to guarantee civil support for NATO's military operations or support for national authorities in civil emergencies. Four specialised groups operate in the context of the CEPC: the Civil Protection Group (CPG), the Transport Group (TG), the Joint Health, Agriculture and Food Group (JHAFG), and the Industrial Resources and Communications Services Group (IRCSG). These groups connect government representatives, industry experts and military representatives to coordinate and develop the emergency preparedness arrangements in these areas (NATO website). This allowed NATO to be directly involved in mitigating the effects of Covid-19, both for its Allies and its partners, by building new modular field hospitals, sending military professionals to help the civilian hospitals, providing new treatments beds, contributing with airlifting capabilities or sending interdisciplinary teams of experts.

Moreover, NATO's efforts to enhance resilience and fight against Covid-19 were also facilitated by a multi-year project launched within the framework of NATO's Science for Peace and Security Programme (SPS). The main partners of the project, Italian National Health Institute, Tor Vergata University Hospital, and University Hospital of Basel University, have defined their main objective as 'enhanc[ing] the speed and efficiency of Covid-19 diagnosis through a multidisciplinary approach, by bringing together experts in the field of immunology, virology, and molecular biology' (NATO, 2020b). By working together, 'scientific and technical experts can help specify the severity of Covid-19 in a population, project its trajectories over time, and estimate the likely effects of different policy responses, from mitigation to suppression' (Weible, 2020, p. 8).

NATO is adapting to new realities and needs to tackle the effects of the pandemic. Thus, as an integrator, NATO has concentrated on logistics and contingency planning, being able to meet a multitude of risks (all-hazards approach) through different levels of cooperation:

- a) *Civil-military cooperation*: the military side has been involved in providing assets and capabilities, medical and non-medical support, transport corridors, access to resources in real time, robust security of supply arrangements and logistics as a key component of the response efforts;
- b) *Cross-sectoral cooperation*: dedicated and scalable planning (contingency planning), especially in sectors, such as energy, transportation, communication networks, food and water. As all of them represent civilian assets in most cases, it is important to protect them and to enhance resilience, as they might be highly vulnerable to internal disruptions and/or external attacks: ‘a high level of interconnectedness [supply, trade and delivery of goods and services] is more efficient and allows for economies of scale. But greater interdependencies also increase the risk of cascading effects in the event of a disruption’ (Roepke and Thankey, 2019);
- c) *International cooperation*: partnership, coordination and harmonisation of similar measures are paramount in order to save lives. The EU is a critical partner in building resilience, being able to overcome HILP consequences through resilient societies. Working together, both NATO and EU can engage with citizens of their member states: ‘resilient societies also have a greater propensity to bounce back after crises: they tend to recover more rapidly and are able to return to pre-crisis functional levels with greater ease than less resilient societies. This makes continuity of government and essential services to the population more durable’ (Roepke and Thankey, 2019).

In conclusion, NATO’s resilience derives from the resilience of each ally. Therefore, steps should be taken by each member state to increase its societal resilience at the national level. Navigating the same waters during the Covid-19 crisis means that everyone should look at the same map to understand the real challenges and work together in crisis management. Thus, civil preparedness and the seven baseline requirements have

energized NATO's approach to resilience in the context of the pandemic, being complementary with the approach of other international organisations and an added value for both its allies and partners.

1.2 THE EU'S MECHANISMS FOR THE CONSOLIDATION OF SOCIETY AND RESILIENCE

At the EU level, resilience is defined as 'the ability of an individual, a household, a community, a country or a region to withstand, to adapt, and to quickly recover from stresses and shocks' (European Commission, 2012, p. 5). As the EU highlights the link between society and resilience, building societal resilience and enhancing additional civil protection instruments and tools represent a step forward in crisis management: 'societal resilience needs to be tackled with a 360-degrees system approach, which help to look at complexities and interconnections' (Giovannini et al., 2020, p. 3).

For the EU, building societal resilience remains the primary target to be achieved: '[B]e able to face shocks and persistent structural changes in such a way that societal well-being is preserved, leaving no-one behind (intra-generational equity) and without compromising the heritage for future generations (inter-generational equity and sustainability)' (Giovannini et al., 2020, p. 5). Hence, trust between citizens and governments plays a key role and people should know that they can rely on state authorities in times of crisis, and simultaneously authorities can rely on citizens. This will lead to a resilient society, aware of its role in challenging situations and willing to work hand in hand with state authorities.

In terms of instruments and tools, the EU is 'mobilising all resources available to help Member States coordinate their national responses, and this includes providing objective information about the spread of the virus, the effective efforts to contain it and measures taken to repair the economic and social damage brought by the pandemic' (European Union, 2020a). In order to further reinforce the collective ability of the EU and its members states to respond to disasters, address recurring and emerging capacity gaps, and enhance its administration procedures, new legislation to strengthen the European policy on disaster management

was introduced in March 2019. In accordance with the amendment, the core elements of the Union Civil Protection Mechanism (UCPM)¹ are now as follows: the Emergency Response Coordination Centre (ERCC), the Common Emergency Communication and Information System (CECIS), the European Civil Protection Pool, the rescEU reserve and the Emergency Support Instrument (ESI) – (Official Journal of the European Union, 2019, L 77 I).

One of the new measures is the rescEU reserve, designed to strengthen the existing capacities, to respond to overwhelming situations as a last resort and to ensure an effective response to severe trans-boundary disasters. It includes a fleet of fire-fighting planes and helicopters, medical evacuation planes, as well as a stockpile of medical equipment and field hospitals that can respond to health emergencies, and chemical, biological, radiological, and nuclear incidents (European Commission, 2019). Taking into account the evolution of the pandemic situation in the EU territory, the European Commission was interested in creating a strategic medical stockpile through rescEU and UCPM, being hosted at the EU level, in its first phase, by Romania and Germany. The rescEU includes ‘medical equipment, such as ventilators, personal protective equipment, vaccines and therapeutics and laboratory supplies’ (European Commission, 2019) and has been extended to six states adding Denmark, Greece, Hungary and Sweden.

Another new measure was introduced with the EU decision to make a step forward in protecting its members states by offering a new instrument in tackling the effects of the pandemic as it is the case of the Emergency Support Instrument launched in 2020. It will include vaccine supplies once the production of vaccines starts at the EU level; treatments with authorised medicines at the EU level to treat Covid-19 (e.g. Remdesivir); transport of essential goods, medical teams and patients to provide medical assistance; essential health related products with a particular focus on the personal protective equipment and training of healthcare professionals in intensive care skills (European Union, 2020b).

¹ The UCPM was established in 2001. In the almost twenty years since its establishment, the Mechanism has been activated for over 300 emergencies, including the Ebola outbreak (2014), the earthquake in Nepal (2015), forest fires in Europe, tropical cyclones Irma and Maria in the Caribbean (2017), floods in the western Balkans (2014), and the migration and refugee crisis (2015).

The Covid-19 pandemic has shown that each EU member state can be affected and that the member states have responded differently based on domestic situation. Uncoordinated responses could lead to inadvertent and undesirable consequences. The variety of responses, especially at the beginning of the crisis, led to inadvertent distortions in the functioning of the single market (e.g. the free flow of goods, in particular the transport of essential goods and services, such as medical equipment, medicines and food supply was disrupted). In addition, many EU citizens staying abroad were unable to return home and in several instances frontier workers experienced severe delays at internal borders.

These unpredictable consequences of the Covid-19 pandemic have further shown the need for more and better EU preparedness for future large-scale emergencies, including HILP. Taking into consideration the proven limitations of the current framework, the interconnected nature of societies confronting the same emergency, and the resulting difficulty in helping each other, it becomes clear that enhanced action is needed both at the Union level as well as between member states.

From the examples presented, it is clear that the EU and its member states tried to ensure their own readiness and resilience to crises to their full extent. However, efficient resilience systems are based on absorptive capacity, adaptive capacity and transformation, but also need 'behavioral shifts and institutional reforms (including changing priorities, challenge beliefs and stereotypes)' (Giovannini et al., 2020, p. 6). Moreover, a long-term resilience approach needs a coherent strategy based on strengthening the level of education and building a culture of preparedness, or culture of safety, especially designed for disasters and emergencies. Increased communication, information and dissemination, together with a '*think of the unthinkable mindset*' can lead to behavioural change and community resilience (Office Journal of the European Union, 2013, C468/124).

This pandemic tested the resilience of societies, showing at the same time a glass half full (development of technological assets and infrastructure, exchange and interoperability of medical personnel, high speed trains used to move infected patients, field modular hospitals and laboratories built, etc.) and a glass half empty (lack of preventive measures, unprepared societies and states to deal with the pandemic consequences, the stockpiling issue, the changing prices, cancelled signing agreements,

fake products, etc.). This way, a mix of targeted measures – as shown in the table below – could increase the level of resilience and highlight the progress made and the things left to be done.

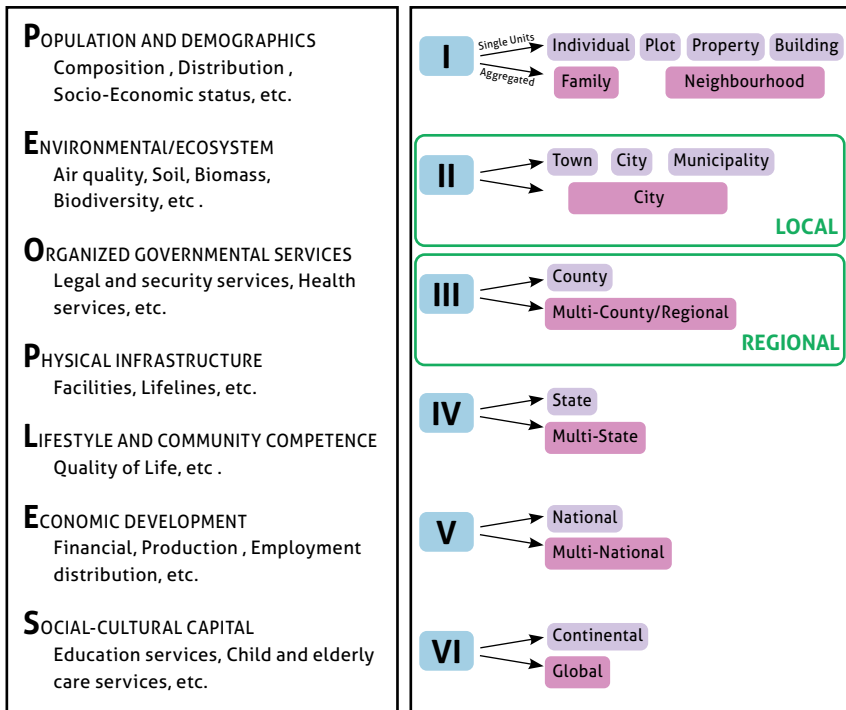
Policies	Aim
Preventive measures	Aim to reduce the incidence and size of shocks (e.g. red zones to limit contagion).
Preparation measures	Aim to prepare for handling them successfully (e.g. reinforcing the health capacity with extra resources to face the emergency, strengthening medical research efforts to find a vaccine).
Protection measures	Required to mitigate the impact and support the absorptive capacity (like state support to economy, SMEs or the most hit sector like tourism, or benefits for families which are forced to telework).
Promotion measures	Serve to increase the adaptive capacity or flexibility.
Transformation measures	Restart and redesign production chains, re-evaluate healthcare and working practices.

(Giovannini *et al.*, 2020, p.8).

In conclusion, strengthening resilience at the EU level requires tailor-made approaches and identification of mechanisms to continuously contribute to sustainable results (as it was the case with rescEU and ESI). It is clear that ‘the current crisis has shown at least one important lesson for Europe: solidarity is not a given and it takes will to fight for what one stands for. The level of cooperation between EU Member States was indeed uncoordinated and far too limited at the beginning of the crisis though followed by a range of actions in medical assistance and recovery funds [however] Europe has a unique role to play in seeking to foster multilateral and regional cooperation’ (Trenin *et al.*, 2020, p. 11). Thus, resilience requires risk-informed programming, but also a comprehensive analysis of strengths, vulnerabilities and pressures (European Commission, 2017, p. 24) taking into account the complex interdependencies among all actors involved.

1.3 UNITED NATIONS THE COMMON GROUND FOR DEVELOPMENT AND RESILIENCE

The UN is a catalyser of sustainable development and resilience, defining the resilience process as ‘the ability of any urban system to maintain continuity through all shocks and stresses while positively adapting and transforming towards sustainability. Therefore, a resilient city is one that assesses, plans and acts to prepare for and respond to all hazards, either sudden or slow-onset, expected or unexpected. By doing so, cities are better able to protect and enhance people’s lives, secure development gains, foster and investible environment and drive positive change’ (United Nations Habitat website).



Description of the PEOPLES Resilience Framework and its associated geographical scale (Renschler, 2013, p.3)

While NATO has seven baseline requirements for resilience and the EU has developed two instruments for multi-layer crisis management (i.e. rescEU and ESI), the UN has proposed the PEOPLES Resilience Framework as a tool for building resilience, with the primary objective of creating frameworks for partnerships and improve pre- and post-disaster cooperation and communication for better crisis management. At the UN level, the approach is similar to both NATO and the EU, with a focus on population and demographics, environment and ecosystems, organised governmental services, physical infrastructure, lifestyle and community competence, economic development and social-cultural capital, having at core the citizens and their society.

From the UN's perspective, building a resilient community is directly related to their level of preparedness and ability to face shocks and deal with multiple challenges, such as education, health, demographic imbalances, climate change, migration, peace and security.

The United Nations, through the UN Office for Disaster Risk Reduction (UNDRR), has its own paradigm ('living with risk') and is geared towards reducing socio-economic and humanitarian disasters through concrete measures. The UN presents an ideology, a worldview through the use of a certain language, namely to build a better and more secure world. Based on the UN's Sustainable Development Goals (SDG), resilience is not an empty ship but a sense of direction in international negotiations in order to reach a resilient society (Wiig and Fahlbruch, 2019).

The UN SDG can be seen from an integrated and interconnected perspective as a path to achieving resilience at community level. Thus, the Covid-19 pandemic reveals 'a rare opportunity to redesign global and national systems for managing deadly risks, using science-based evidence and information communication technology, to identify, track, search, and share timely, valid data among nations, triggering innovation and collective action to build a resilient international community. Bold redesign of existing international organizations – the WHO, OCHA, and UNDRR – that monitor and compare the status of global risk would reinforce cognition in facilitating effective crisis response across the globe by partnering with nations to work with their local communities' (Comfort et al., 2020, p.621).

In the context of the current article, the goal no. 11 on sustainable cities and communities seems to be the most relevant for analysis as ‘cities are on the front line of coping with the pandemic and its lasting impacts [...] Covid-19 is threatening cities and communities, endangering not only public health, but also the economy and the fabric of society’ (United Nations website, 2020). Having already witnessed similar events at a lower scale, such as SARS-COV in Guangdong, China (2002), MERS-COV in Middle East (2012), Ebola outbreak in West Africa (2014–2016), Zika outbreak in Brazil (2015–2016), and now Covid-19 (SARS-COV-2) all over the world, it is important to understand the dynamics related to pandemic and its multiple dimensions of impact, as well as to define clear roles and responsibilities, both for international organisations and member states.

Community-driven solutions, including top-down and bottom-up approaches, can lead to preventive and preparation measures that can help in crisis management situations. National legislation is a key factor in building societal resilience, as it provides legitimacy and support for the population’s trust in local and national authorities. Moreover, ‘awareness of the threat that infectious disease outbreaks could pose to their citizens’ health and to their countries’ economic and political stability encouraged western governments to develop responses in national security terms’ (Davies, 2008, p. 298).

In conclusion, even if the UN was supposed to have the necessary framework to deal with the global pandemic through the World Health Organisation (WHO), it ended up with weak coordinated support and lack of clear communication on some preventive measures for its member states. As a result, health challenges affect ‘the bilateral and regional political relationships between developed and developing countries, and influence strategies for United Nations reform. Although health has long been a foreign policy concern, such prominence is historically unprecedented’ (Fidler and Drager 2006, p. 687).

In this regard, it is of utmost importance that the UN starts to cooperate closely on resilience with the other international organisations, such as NATO and the EU. This is highly recommended to strengthen its work on civil protection and resilience post Covid-19, but also to gain in terms of regulatory function, dialogue and cooperation.

1.4 COMPARATIVE PERSPECTIVE ON NATO, EU AND UN APPROACHES IN BUILDING RESILIENT SOCIETIES

Resilience is still a new concept, there are numerous gaps between theory and practice, the desk and the field, negotiations and talks and real challenges and impact on the ground. Despite Covid-19, the vulnerabilities found in many communities around the globe require a new approach not only from international organisations but also from states themselves. However, this has to be done in full cooperation and partnership, not in competition or isolation. Globally, 'Covid-19 has laid bare the limits of a governance architecture that merely monitors and suggests, rather than enforces [...] pointing to the need for more global coordination and cooperation' (Trenin et al., 2020, p. 8).

After a short overview of the toolbox packages provided by the international organisations, such as NATO, the EU, and the UN for building resilient societies and coping with the Covid-19 pandemic, there is still a lot of work to be done to prepare communities and make societies resilient. In recent years, both NATO and the EU have increasingly assumed responsibility for and leadership of the protection of civilians, and are becoming key players as crisis managers. Even though NATO and the EU have declared that the member state where a crisis occurs bears the brunt of the responsibility for managing its immediate effects, there is a consensus in both organisations that disasters, whether natural or man-made, can overwhelm national resources in civil protection and necessitate outside assistance to manage the emergency (Boin and Lodge, 2016, p. 293).

Even if member states bear the primary responsibility for crisis management, the current crisis has raised questions regarding the organisation of a coordinated response including multi-layer resilience building and the development of an adequate toolbox for crisis management. The role played by national authorities and coordination at the level of international organisations are paramount to dealing with Covid-19. It is important to emphasise that solidarity and unity are not only goals in themselves but also a key to overcoming the challenges created by the pandemic. Moreover, it also becomes a duty of governments to prepare citizens to be resilient and self-sufficient for up to 72 hours.

As nobody can act in isolation, the EU needs a strong partnership with other international organisations, such as NATO and the UN. On the one hand, the dual membership of most European countries in both NATO and the EU emphasises the identity, values, and interests on which the coherence and cohesion of the two international organisations are based. On the other hand, in its position as a global actor, the EU has ‘a particular responsibility to help frame a global response through multilateralism and a rules-based international order, with its partners in the UN [...] re-establishing trade flows and supply routes is of the utmost importance. At the same time, the EU must provide assistance to countries in need’ (The Presidents of the Council and the Commission, 2020, p. 4).

The current crisis highlights ‘the world’s tremendous need for an international system that can actually exercise collective problem-solving authority’ (Trenin et al., 2020, p. 4). From this point of view, Covid-19 represents an unfortunate example. The lack of global solidarity and leadership during the Covid-19 pandemic compared with the Ebola outbreak (2014–2016), which saw cooperation between all actors, is calling into question the role of multilateralism. So far, what we have witnessed is a fragmented and polarised global scene with aspects of nationalism and isolationism. The first reactions to the pandemic cast international cooperation in a negative light. Initially, states resorted to unilateral measures, without cooperating with major partners, and international organisations had limited or even delayed and outdated involvement for various reasons, as seen in public space. At the same time, the Covid-19 brought on an unprecedented global crisis in the era of globalisation which should make international organisations and governments develop resilience tools applicable on a broader and interconnected scale.

Last but not least, medical diplomacy is emerging as a new feature on the global stage. The diplomacy of masks or China’s Belt and Road Initiative as tools for coordination and multilateral action under Chinese leadership in the field of health have shown lack of coordination and weaknesses of the Western states, together with massive disinformation campaigns oriented towards their societies: ‘mass donation of masks and supplies to ailing hospitals and local charities are pivotal in rehabilitating China’s historically maligned and recently ignominious image in particular areas [as well as] emphasis upon establishing long-term dependence relations and patronage networks’ (Wong, 2020). The reform of the multilateral

system must include the global health architecture and lessons learned from the pandemic, respectively the launch of a preparedness initiative as part of the Sustainable Development Goals.

Having looked at various approaches, assets, and ambitions of the international organisations in the first part of the article, the second part will analyse a concrete example of how some of these resilience tools have been applied in the Romanian experience in dealing with pandemic. The case study will highlight the Romanian strengths and weaknesses in tackling the Covid-19 pandemic, first in terms of cooperation with international organisations through their capabilities and mechanisms (including strategies for population's behaviour change on the longer run), and second with civil society and private sector in taking adequate measures at the national level to build societal resilience.

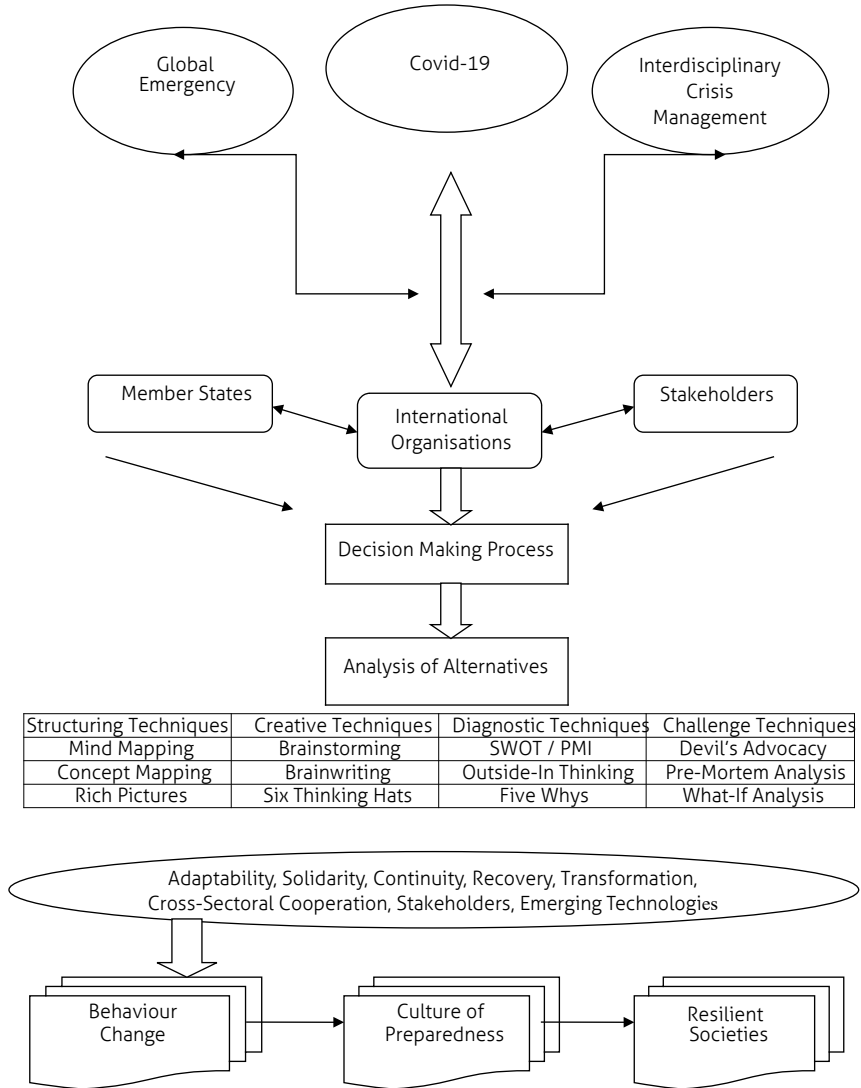
2. CASE STUDY: ROMANIAN STRATEGIC RESPONSE TO COVID-19

This case study will not go into the details of all the aspects related to the Romanian strategic response to Covid-19, but it will discuss cooperation with international organisations (i.e. on airlifting capabilities, mechanisms for civil protection, initiatives for population behaviour change), and cooperation with the civil society and private sector (i.e. on technological initiatives that have been developed to help communities and reach societal resilience).

The current pandemic crisis has renewed ‘attention to the importance of, and how little we know about, learning under stress and urgency in the middle of a crisis’ (Boin *et al.*, 2005, p. 15). Considering the fact that parallel and micro-management represented a challenge at the level of decision-making process, Analysis of Alternatives (AoA) can be used for demonstrating alternatives techniques that can provide added value within coordination and command at the national level. AoA represents an important analytical practice ‘to reduce risk and expand opportunities for innovative solutions, creating space for more timely decisions [...] diagnosing problems, understanding complicated situations, challenging plans’ (NATO, 2017) based to the scheme below:

Following my direct involvement in cooperation and management activities within the Romanian Department for Emergency Situations related to Covid-19 pandemic, I will sometimes make reference to my practical experience to highlight the Romanian government’s cooperation with international organisations, civil society and private sector while still trying to maintain an unbiased perspective.

Top-Down Approach in Decision-Making



Plusses	Minuses	Interesting
Cooperation with international organisations	Lack of stocks / reserves of specialised protective equipment	Innovation through technological solutions
Civil-military cooperation	Lack of preparedness culture	Hybrid challenges and disinformation campaigns
Cooperation with civil society and private sector	Lack of clear and coherent emergency legislation	Green line for psychological and moral support
Integrated command and coordination centre for decision-making	Excessive use of Covid-19 as a playground for political reasons	Telework measures
Interconnectivity of the seven baseline requirements of resilience	Huge return of diaspora	ERCC and EADRCC
Strategic Communication Group	Vulnerability of communities in the light of Covid-19	rescEU, ESI, RVM

Example of AoA Diagnostic Technique: Romanian PMI for decision-making

2.1 ROMANIA'S COOPERATION WITH INTERNATIONAL ORGANISATIONS

The Covid-19 pandemic has severely tested the emergency management capacity of all affected states, having a direct impact on multiple sectors and daily activities. In this context, tools and mechanisms for national and international cooperation were developed and reinforced, both at political and military levels. In Romania, civil-military cooperation played a very important role in the context of the Covid-19 pandemic, showing high adaptability and response. Moreover, the Romanian government, through its Department for Emergency Situations, took advantage of the international mechanisms of assistance to solve unexpected problems during this global emergency, closely cooperating with NATO, the EU, and the World Bank.

The Romanian Department for Emergency Situations is the national point of contact for the European Response Coordination Centre (ERCC) and NATO's Euro Atlantic Disaster Response Coordination Centre (EADRCC). Both ERCC and EADRCC were synchronised in international humanitarian assistance, functioning as two complementary

mechanisms that allowed exchange of information between the EU and NATO as well as increased coordination among member states and their partners. From this point of view, Romania is a fortunate example of a coordinated approach between the mechanisms of the two international organisations.

At the NATO level, Romania has requested NATO's Strategic Air Transport Capability, which operates from the Papa Air Base in Hungary, to conduct an emergency air mission to transport approximately 45 tons of medical equipment from Seoul to Bucharest. At the EU level, the financial advantage of partial or full coverage for humanitarian flights gave Romania the possibility to use its military planes to repatriate and import medical equipment for the strategic stockpile. An important aspect of the repatriation process and the transport of medical equipment was EU support through the reimbursement of transportation costs (i.e. 75% coverage of expenditure through funds allocated to the UCPM or full coverage under ESI).

At the EU level, Romania also contributed to supporting other countries as one of the two countries hosting the medical reserve under rescEU. The medical reserve entered into force in 24 April 2020 and medical protective equipment from the reserve was delivered – using the logistic resources provided by the Romanian Ministry of National Defence and the General Inspectorate for Emergency Situations – to various countries, such as Croatia, Czech Republic, Italy, Lithuania, Montenegro, North Macedonia, Serbia, Spain, and bilaterally to the Republic of Moldova and Ukraine.

At the national level, one of the main weaknesses was the lack of a preparedness culture, which led to increased vulnerability in communities and less resilient societies. To tackle this issue, the Romanian Department for Emergency Situations and the World Bank started to work together to develop a project on behaviour change to identify the social and cultural factors that determine the way Romanian society perceive natural disasters, their level of self-efficacy around preparedness measures, and barriers to adopting preparedness measures. Strategic communication and adequate messages can influence 'individual risk perceptions and risk reduction responses during a crisis like the Covid-19 pandemic. Understanding risks is key to persuading

people and their governments to do something in the face of uncertainty and crisis. They need to know what the risk is, how bad it is, and what they need to do to reduce their risk or help the collective effort' (Weible, 2020, p. 10).

The main pillars of this project are focused on components, such as: (i) *risk perception* (people's assessment about the likelihood and severity of natural disasters); (ii) *beliefs about responsibility* (people's perception of their responsibilities towards themselves, their family and their wider community in preparing for and preventing natural disasters, rather than the expectation that the state will always take a primary role in providing immediate assistance); (iii) *trust* (people's perception of government institutions and the information they provide to the population regarding natural disaster preparedness); (iv) *self-reliance* (people's belief in their own ability to cope with natural disasters, and their ability to adopt preparedness behaviours); (v) *awareness of preparedness requirements* (people's knowledge of the resources and actions required to be prepared for natural disasters).

Over time, Romania has managed to build strong ties with international organisations, both in terms of capabilities and mechanisms for assistance at the NATO and EU level, as well as in terms of innovative approaches, such as the behaviour change research project with the World Bank. This continuous involvement represents a strategic medium and long term vision, having as a main outcome the achievement of an integrated civil protection mechanism at national level. Moreover, Romania took advantage of its membership in international organisations and managed to organise training seminars and a wide range of exercises (including field, tabletop, and virtual/augmented reality exercises) to test its capacities, procedures, and operational reaction, involving observers from NATO, the EU, and the UN, using the toolbox packages that international organisations offer, and sharing best practices with experts and stakeholders from other member states.

In February 2019, the Department for Emergency Situations and the European Centre of Excellence for Countering Hybrid Threats jointly organised a dynamic workshop under the Romanian Presidency of the Council of the European Union that took stock of EU and NATO requirements and methods for civil protection.

The workshop featured a tabletop exercise involving a respiratory virus, the microbiological and epidemiological factors being realistic and based on modern medical knowledge. In this scenario, a highly contagious respiratory virus struck in a situation where the target country and its neighbouring countries were already struggling with forest fires so the national medical capacities had already been pushed to and beyond the limits and respirators and intensive care units (ICUs) were needed for forest fire victims. The effects were further exacerbated by other hybrid operations, such as a cyber-attack against the health sector and disinformation.

Key findings:

- Insufficient stocks of basic and specialised medical materials that would be needed in case of an airborne pandemic and resulting urgent need to pool resources as soon as possible, especially by stockpiling the relevant materials;
- The situation is aggravated by the very complex arrangements and lengthy procedures to step up or even modify the production of these materials in the event of an emergency that is already ongoing;
- The need to plan and be prepared for situations that are inherent to human societies (widespread contagious diseases), even with all the technological and medical progress achieved until now;
- The necessity to improve readiness for a community-level response.

Recommendations:

- Development of common reference scenarios (e.g. for a pandemic) at the EU level while considering expertise from complementing actors/sectors (e.g. ECDC);
- Expert exchange on methods and tools for risk analysis, data collection and homogenisation, joint planning sessions on risk management capabilities by cross-sectoral expert groups (academia, science, policy, private sector, etc.);

Developing an information/knowledge management toolbox to complement UCPM based on the following needs identified during the tabletop exercise: sharing operational rules, sharing strategies for early warning of the population, sharing best practices for ensuring business continuity of civil protection/ emergency management authorities, sharing best practices on carrying out multi-sectoral lessons learned processes to increase resilience at national and international level. Following the conclusion of the workshop, the key findings and recommendations reflected the present day reality where nobody is prepared to deal with a pandemic – neither international organisations nor member states by themselves. A global strategy has to be built for cooperation on resilience, as resilient societies start with resilient citizens. If international organisations do not work and function well, their member states can be confused and lose access to necessary toolboxes (mechanisms, instruments, and platforms). Thus, it is important to build contingency planning at the national level and to create a framework of common rules for member states at the international level.

2.2 ROMANIA'S COOPERATION WITH THE CIVIL SOCIETY AND PRIVATE SECTOR

At the beginning of the Covid-19 pandemic, an unexpected paradox occurred that had not been anticipated at the global level. Instead of strengthening ties between international organisations and member states, international cooperation actually weakened them, leading to a lack of joint, unified, and homogenous measures at both the European and international levels. In this situation, Romania has tried to identify additional resources at the national level and has been actively involved in cooperation with civil society organisations and the private sector.

This cooperation mainly targeted public awareness campaigns and humanitarian convoys, with the main focus on supporting disadvantaged/marginalised areas and the vulnerable and/or isolated population. Following the AoA methodology and techniques, according to the figure presented above, it can be seen that technology is an engine for social change as well as an enabler that annihilates geographical barriers, optimises procedures, helps societies to grow and become more resilient.

Emerging technologies have played a crucial role during the global emergency generated by Covid-19, especially through innovative solutions that provide an added value in different areas from prevention to preparedness, from mitigation to response. Technology is a challenge but can decisively contribute to saving lives if used in the right way. In order to understand the impact of emerging technologies, mainly in the Covid-19 context, I will further present three examples from the Romanian cooperation with civil society organisations and the private sector: cooperation with SAP Romania, Code for Romania, and Bucharest Robots Start-up.

Cooperation with SAP Romania

The initial goal of the cooperation with SAP Romania was to explore technological solutions for helping the Romanian authorities to better respond to the Covid-19 pandemic using artificial intelligence and robots. One of the proposals generated a pilot project related to a chat bot, the main function of which would be to reduce call loads, especially the load of repetitive questions addressed to the Health Authority Management at the local level. Moreover, there have been discussions regarding a web/mobile app for liaising with family doctors and connect with confirmed cases to increase the efficiency in monitoring their symptoms and their overall state of health.

Technology is an important factor in overcoming the crisis, not only at the economic level but also at the societal level: ‘The future has moved into our presence, and we must adapt even quicker than before and find new ways of reaching out to one another. SAP helped its customers adapt to rapidly changing conditions, and provided solutions to directly address many of the issues faced by customers and the broader community caused by Covid-19: understanding and responding quickly to needs, meeting acute sourcing challenges, temporary staffing, managing business travel disruption and remote working’ (interview with Josephin Galla, Managing Director for SAP South East Europe & Ukraine). Transformation and adaptation – especially in crisis situations – are required at global level and SAP proactively

helped governments, Romania being a new-entry on a longer list with Bulgaria, Germany, the Netherlands, and the United States².

Technology is at the forefront of evolving processes, it is an open door to transforming expectations into actions, on the condition of being used in the right way and for the right purpose.

Cooperation with Code for Romania

The NGO's perspective on using technology and finding digital solutions adapted to new circumstances is characterised as follows: 'technology in itself is not a goal and it is not enough to own the tech, but how you channel its benefits to help communities and societies increase response and resilience capacity. Tech in various forms has always been around and has always been a facilitator of progress. If we take a look at the past 10 years, we will see that civic technology, together with gov tech and social tech, has become more and more essential to healthy societies all over the world. Initiatives, such as Code for America, Code for Africa, mySociety and many more, have dedicated immense efforts to solving social and civic issues through the use of software and also hardware' (interview with Olivia Veraha, Co-founder and Chief Operations Officer at Code for Romania).

Cooperation with tech NGOs, such as Code for Romania in developing a Covid-19 ecosystem based on a comprehensive package of technological solutions, useful for both national authorities and the population, resulted in several apps and platforms: *StiriOficiale.ro* (Official News), *Date La Zi* (Current Data), *Ce Trebuie Sa Fac* (What Should I Do), *Diaspora Hub* and *RoHelp*.

² A few examples of SAP's contribution to fighting Covid-19 at the global scale by using technology: Bulgaria – a monitoring system developed specifically for the Covid-19 crisis which provides the citizens with continuous information on the Covid-19 situation, but also identifies risk groups through screening questions and manages voluntary offers; Germany – development of a platform at the request of the German MFA on which citizens stranded abroad could indicate their intention to return home, helping the German government to organise their secure repatriation; Netherlands – cooperation between private stakeholders in order to develop the Corona Warn App. United States – helping to set up an emergency hospital in New York, especially by allowing access to the SAP platform to enhance hospital beds procurement and delivery in a fast-paced manner (i.e. procurement of 500 beds and delivery in 30 minutes).

Since its launch, the platform *StiriOficiale.ro* (official news) was considered as the central hub of the digital ecosystem in terms of communication, each news digital product being linked to this one. According to the data centralised by Code for Romania, one in four adults in Romania has used the platform for information. At the same time, the platform *DateLaZi.ro* (current data) provided daily statistics on the pandemic evolution on the national territory. Moreover, the platform *CeTrebuieSaFac.ro* (what should I do) provided useful content for the pandemic period, demystification, advice for parents, information about the pandemic, etc. *Diaspora Hub* represented a platform designed for both Romanian citizens abroad and various entities informal support groups, NGOs and cult entities that were in need. Last but not least, the *RoHelp platform* included small and medium organisations that carried out local actions that needed fundraising during the pandemic. All of the solutions are still up and running and the subscribers database keeps on growing every month.

Furthermore, the Department for Emergency Situations and Code for Romania, with the support of the World Bank, developed the Resource and Volunteer Management App (version 1.0 RVM) application that can be particularly adapted to the Covid-19 pandemic. The application allows inventory management of available resources, maintains a clear situation regarding the quantities, types of materials and places where they are stored, as well as the status of volunteers organised on distinct skills and specialisations. Almost all CSOs have a set of resources, thus human and material resources can be monitored and even used in case of disasters: headquarters, tents, sleeping bags, high-coverage communication channels, shelter facilities, first-aid kits, or even medical personnel or the adequate infrastructure to raise funds and organise donations in kind, humanitarian activities or awareness campaigns.

Cooperation with the Bucharest Robots Start-up

Civil society organisations and the private sector were involved in building modular field hospitals (medical support units) for non-critical or asymptomatic Covid-19 patients. This project resulted in a 'hospital of the future' using various technologies and artificial intelligence to ensure the minimum contact between the infected persons and the medical staff: automatised patients triage, connected medical services and

fleet of robots (in charge of air/ground disinfection based on UVC rays, serving at the patient's bedside, discussing with the patient on the Covid-19 effects based on its AI module, providing instructions regarding the dining place, bathrooms, Wi-Fi network and internet password). Robots can help a lot during crisis management situations: 'disinfection robots, cleaning robots, delivery robots, telepresence robots – they can all help humans' (interview with Ana-Maria Stancu, CEO Bucharest Robots, board member euRobotics).

Moreover, technology can help in numerous other ways: monitoring existing processes, generating alerts and repeated scenarios to educate the general public in the context of emergency and/or exceptional situations: 'in all these cases, technologies, such as IoT, 5G and robots can become useful tools in deploying solutions for societies. Moreover, at the EU level, strategies for AI were drafted considering the status quo and current situation. When the pandemics started, the European Commission gathered information about available AI and robotics solutions to fight pandemics and launched several funding opportunities to develop new solutions' (interview with Ana-Maria Stancu, CEO Bucharest Robots, board member euRobotics).

*

Interconnectivity among all stakeholders (international organisations, member states, civil society, private sector) was helpful in fighting SARS-CoV-2 and its consequences. Even if not coordinated and complementary in the first phase, states and international organisations managed to find a common path to advance. In the longer run, it is important to identify lessons learned from Covid-19, work together at all levels and help societies become more resilient. Romania tried to work with local actors at the beginning, to identify back-up measures and activate contingency planning, and later on to use the toolbox packages (mechanisms, instruments and platforms) offered by international organisations to increase its strengths and overcome weaknesses in crisis management.

CONCLUSION

This article presented the concept of resilience seen from the perspective of different lenses in the light of the Covid-19 pandemic, but also tried to answer the research questions presented at the beginning.

Regarding the first research question, '*How can international organisations develop a multi-layered and integrated toolbox in building resilient societies?*', we have learned through this article that resilient societies are at the front line in increasing the level of resilient states and international organisations. The set of approaches, assets, and ambitions of international organisations and their member states became visible relatively late. Problems, such as lack of coordination, decrease of international cooperation, gaps in finding a common strategy, bureaucratic decision-making – all these require the review of resilience ecosystems in times of crisis.

However, the strategic interplay between resilience and Covid-19 managed to find solutions and to limit the general uncertainty, in a balanced approach between strengths and weaknesses. The link of resilience with security (NATO), society (EU), and development (UN) represents an interconnected approach at global level and brings specific layers for each international organisation. Once the communication process started, international organisations have activated their coordination mechanisms and control instruments, and the situation started to considerably improve on the ground (i.e. national and international policymaking, crisis response and management, scientific and technical expertise, exchanges between experts at different levels).

For example, NATO EADRCC and EU ERCC have been working as a resilient toolkit in crisis management, being complementary and synchronised, allowing exchange of information and coordinated responses. It is also important to stress the fact that both NATO and EU provided assistance not only to their member states but also to their partners, being able to cope with pandemic challenges. However, at the UN level, the framework of multilateralism was replaced with unilateral measures, limited or delayed involvement, all of these contributing to put international cooperation in a negative light.

NATO, in its capacity as an integrator during the Covid-19 pandemic, was interested in developing multi-layered mechanisms of cooperation, being mainly focused on civil-military cooperation (i.e. logistic assets and transport capabilities, medical and non-medical support), cross-sectoral cooperation (i.e. seven baseline requirements for resilience), and international cooperation (i.e. partnership, coordination and harmonisation). Civil preparedness and the seven baseline requirements have energised NATO's approach to resilience.

The EU, in its capacity as a multi-nodal integrator during the Covid-19 healthcare crisis, was involved in updating its policies, developing multi-layer measures around the 4P: prevention, preparation, protection, and promotion. Risks require adequate and adapted SWOT and PMI analyses, and we have seen the importance of the UCPM arms through its new instruments, such as rescEU and ESI. The EU's support has been beneficial in vaccines supplies, treatment with authorised medicine, transport of medical teams and patients, training of healthcare professionals in ICU, and building strategic stockpiles, all of which have improved the EU's approach to resilience.

The UN, acting as a facilitator during the Covid-19 global emergency, was concerned with improving communication for better crisis management through the WHO, as well as providing recommended health measures. Moreover, through its PEOPLES Resilience Framework and the UN SDG, the UN is focused on citizens and communities as main drivers of societal resilience. Community-driven solutions and reinforced communities to cope with crisis situations have been acted as a catalyser for the UN approach to resilience.

The second research question, *'To what extent member states can use this toolbox to increase their strengths and overcome weaknesses in crisis management?',* highlighted the transition from the international to the national level, based on a case study of the Romanian strategic response to the Covid-19 pandemic.

The link between crisis management and civil protection should provide an open space for effective cooperation among decision-makers and stakeholders that allows integrated, interoperable and interconnected solutions. Thus, we have observed throughout the case study that

Romanian cooperation with international organisations as well as with the civil society and private sector can lead to timely decisions.

Over time, Romania has managed to build strong ties with international organisations, using all the available international mechanisms and instruments for crisis management, as well as building upon strategic partnerships with civil society and private sector, all of these contributing to innovative solutions and quick responses in the benefit of the population. The challenge is not yet over, however: ‘with this greater interconnectivity [...] the policies and practices towards infectious disease outbreaks in the countries of the region, as well as the interplay between regional states and international organisations and institutions, are an important topic for study’ (Lo Yuk-ping and Thomas, 2010, p. 448).

To conclude, Covid-19 highlighted gaps and inconsistencies at the level of both member states and international organisations. Even if we identified over this article multi-layered and integrated toolbox packages in building resilience and overcoming crisis management, it is clear that there is a difference between strategy and practice, exercises and real time emergencies and disasters. Nobody was prepared for the current pandemic and most probably it will still take some time before scientific solutions are put in place. However, the main lesson learned is that most of the nations are far away from having resilient societies and this should be their main priority in the future: build a culture of preparedness and contribute to the behaviour change of their populations. This will help prepare for and prevent future epidemics or natural and man-made disasters.

LIST OF ACRONYMS

1.	AI	Artificial Intelligence
2.	AoA	Analysis of Alternatives
3.	CECIS	Common Emergency Communication and Information System
4.	CEO	Chief Executive Officer
5.	CSO	Civil Society Organisation
6.	EADRCC	Euro Atlantic Disaster Response Coordination Centre
7.	ERCC	European Response Coordination Centre
8.	ESI	Emergency Support Instrument
9.	EU	European Union
10.	HILP	High Impact Low Probability
11.	ICU	Intensive Care Units
12.	IoT	Internet of Things
13.	IRCSG	The Industrial Resources and Communications Services Group
14.	MERS	Middle East Respiratory Syndrome
15.	MFA	Ministry of Foreign Affairs
16.	NATO	North Atlantic Treaty Organization
17.	NATO CEPC	NATO Civil Emergency Planning Committee
18.	NATO CPG	NATO Civil Protection Group
19.	NATO JHAFG	NATO Joint Health, Agriculture and Food Group
20.	NATO SPS	NATO Science for Peace and Security Programme
21.	NATO TG	NATO Transport Group
22.	NGO	Non-Governmental Organisation
23.	PEOPLES	Population and Demographics, Environmental/Ecosystem, Organised Governmental Services, Physical Infrastructure, Lifestyle and Community Competence, Economic Development. Social-Cultural Capital
24.	PMI	Plusses, Minuses, Interesting
25.	RES	Resolution
26.	rescEU	European Reserve of Resources
27.	RVM	Resource and Volunteer Management App
28.	SARS	Severe Acute Respiratory Syndrome
29.	SDG	Sustainable Development Goals
30.	SWOT	Strengths, Weaknesses, Opportunities, Threats
31.	UCPM	Union Civil Protection Mechanism
32.	UN	United Nations

33.	UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
34.	UNDRR	United Nations Office for Disaster Risk Reduction
35.	WHO	World Health Organisation

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