ASSESSMENT STUDY OF THE ROLE OF NDMAs IN COVID-19 CRISIS RESPONSE AND IMPACT OF COVID-19 ON NDMAs OPERATIONS

Report

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COVID-19 RESPONSE
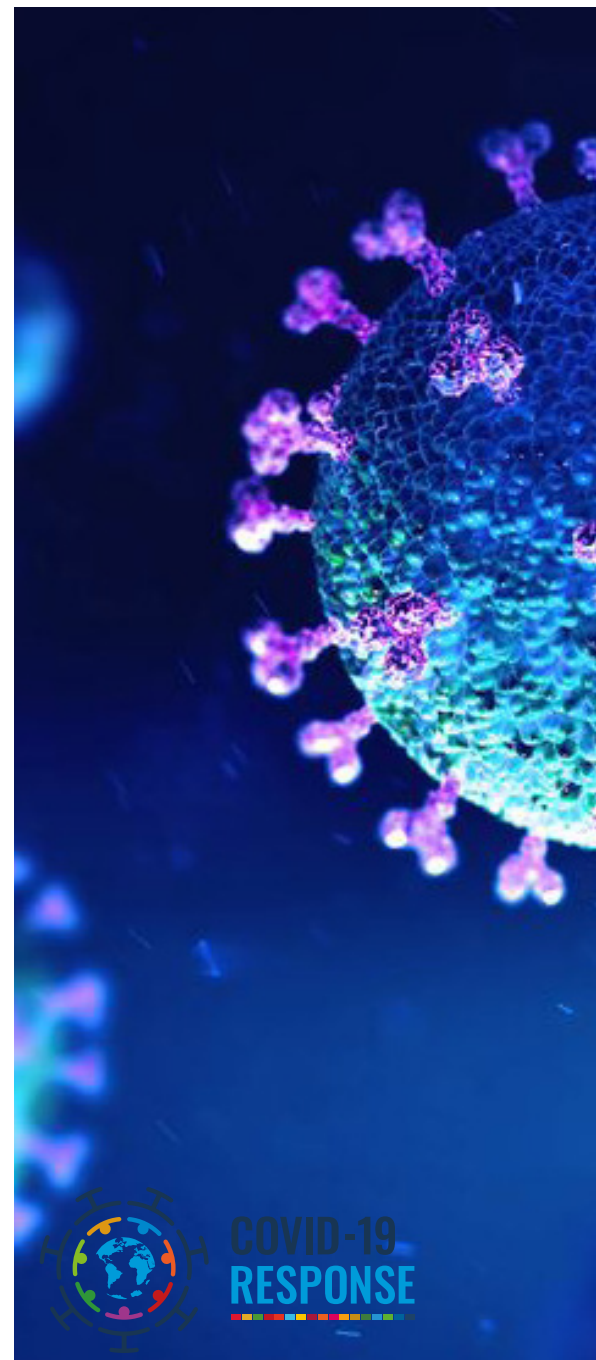
EXECUTIVE SUMMARY

As an emerging systemic risk and "a crisis like no other", the COVID-19 pandemic is affecting the countries and territories around the globe in an unprecedented way. The "pandemic crisis of our lifetime" is causing record loss of lives and severe human suffering with more than 2.1 million deaths and 100 million people affected (as of 02 February 2021), leaving long-term consequences and impacting the societies and economies at their core i.e. biggest economic decline since the Great Depression, heavily impacting the communities exacerbating the existing and creating new vulnerabilities. The countries and territories in Europe and Central Asia[1] have not been spared: since the first case reported in North Macedonia on 26 February 2020, there are more than 5.8 million cases with an approximate mortality of 1.4% of reported cases or 82 thousand deaths (as of 26 January 2021). All countries and territories were affected with progressive transition from incidental cases to widespread local transmissions throughout all regions. Consequently, the resilience of their societies and communities are being severely affected resulting in falls in gross domestic products, decreased income generation, increased unemployment and poverty rates, fewer remittances, reduction in access to services, increased food insecurity, worsened provision of risk reduction and emergency management services, etc.

The COVID-19 pandemic crisis emphasized the crucial role that the national and local governments play in mitigation and response to this type of complex crises, which impacts are cascading across the regions and countries and territories, challenging their preparedness and response systems and capabilities. The pandemic crisis brought anticipation, preparation, response and recovery needs to high-consequence, low-probability risk at the forefront of the resilience agenda, while strengthening the importance of robust risk governance. The approach towards this crisis and many more that we will face in the future needs, to begin with, the re-coding of our approach to disaster risk governance towards the designing of new models for mitigation, preparedness, response and recovery from complex disasters and high-consequences, low-probability events: the overall imperative will be to strengthen disaster risk governance for long-term resilience goals, with a key focus on the systemic and emerging risk.

This Assessment Study is commissioned by the United Nations Development Programme (UNDP) through its Istanbul Regional Hub and the United Nations Office for

Disaster Risk Reduction (UNDRR) through its regional office for Europe and Central Asia. The study provides an overview and findings of the comprehensive analysis of the role and effectiveness of the National Disaster Management Authorities (NDMAs) across the South-Eastern Europe, Eastern Europe, South Caucasus and Central Asia region (Europe and Central Asia - ECIS) in the response and recovery efforts to the COVID-19 pandemic crisis. Its findings aim to support UNDP, UNDRR, UNCTs, NDMAs and other stakeholders in the region to draw lessons from the implementation approach to the COVID-19 response and forward-looking recommendations for the prevention, mitigation, preparedness and response to the future pandemic/ biohazards crisis incorporating best practices and lessons learnt, identifying needs and resources, while ensuring the sustainability of the actions. It was conducted during the period October – December 2020 and its process deployed several tools including an on-line survey of key respondents from the ECIS countries and territories and semi-structured interviews with representatives of UNDP, UNDRR, the European Science and Technology Advisory Group (ESTAG), NDMAs, national DRR platforms, Disaster Preparedness and Prevention Initiative (DPPI), Center for Emergency Situations and Disaster Risk Reduction (CESDRR) and others. Besides, COVID-19 pandemic response snapshots of five countries from the four sub-regions of ECIS were prepared to reflect the various national approaches and experiences in fighting the COVID-19 pandemic crisis emphasizing the specific roles and responsibilities of the NDMAs i.e. Armenia from the South Caucasus sub-region, Bosnia and Herzegovina and North Macedonia from the Western Balkan and Turkey sub-region, Kyrgyz Republic from Central Asia and Moldova from the Eastern Europe sub-region.

MAIN FINDINGS

➢ *This assessment underlines the extent to which NDMAs, while key entities within the disaster risk management systems in the countries and territories have only played a limited role during the response to this pandemic crisis.* NDMAs proved nevertheless critical in providing crucial coordination, communication and support services to the national and local response structures and mechanisms. Some of the main reasons for this can be identified in the existing legislative and institutional frameworks, where health emergencies are predominantly linked to the ministries of health and adjacent health emergency structures; as well as the insufficient mainstreaming of disaster risk reduction in public health and vice versa. This insufficient integration of public health aspects, which was confirmed during the response to the COVID-19 pandemic crisis, impacts the overall resilience of national and local risk management systems.

- *NDMAs are especially active in the provision of various services for facilitating the pandemic crisis response efforts through the provision of their essential risk management services as well as the implementation of new ones required by the "new normal".* In this sense, NDMAs in the ECIS region showed a great level of transformability and quality e.g. improvisation, flexibility and adaptability to the existing pandemic crisis. Within their responsibilities for supporting the pandemic response, NDMAs delivered a set of activities aimed at supporting the citizens and the institutions while ensuring their regular functions. Many of these actions are beyond the essential competencies, but the NDMAs were implementing them successfully proving that in the absence of previous experience, precise response plans and recommendations for action, ongoing improvisation and creativity are important factors for successful emergency management during the response to the pandemic crisis.

- *The COVID-19 pandemic as an emergent systemic risk needs a systemic response where the NDMAs from the region are partners and in many cases leading entities, since they have the required expertise and knowledge, past disasters experience, available resources.* The prolonged continuation of this crisis without knowing the ending scale and magnitude of its impact, as well as the potential of future pandemics/biohazards and other complex disasters, which scope is too big to be handled by any institution alone, emphasize the need to "*re-frame*" the disaster risk management while ensuring convergence of disaster risk governance and health, addressing emergent and systemic risk and threats from pandemics and biohazards, and accordingly updating the "scope of work" of NDMAs.

- The pandemic crisis has a significant impact on the national DRM systems in the ECIS region pressuring their finite resources and chronically stressing the coping capabilities of the NDMAs. As a complex crisis, with many uncertainties i.e. severity, length, impact, it means that the *NDMAs should further adapt to the situation and to absorb the external shocks while transforming themselves to continue operations as per the "new normal".* One thing is essential, the starting point on this transformational journey is to adapt the strategic and operational planning documents and processes to the "new normal", with better integration and prioritization of the pandemic risk/biohazards and public health in general, followed by capacity development, resource allocation and provision of fiscal stimulus. Some of the NDMAs will continue the development journey to better understanding the "noises from the future" using foresight or other future-oriented methodologies for planning to high-consequences, low-probability events, whether the majority of them will continue to operate within the existing or updated frameworks, with pandemics included. Transitioning of the disaster risk governance to the new reality and new uncertainties may drive the decisions and actions for mitigating the long-term effects of the pandemics – this may call for a paradigm shift of contemporary disaster risk governance to be better prepared for future systemic risk.

- *NDMAs together with other institutions involved in the pandemic crisis response in the ECIS countries and territories do not have experience in this type of complex disasters and therefore they should assess and evaluate their response aimed for better preparedness and response for future complex disasters and crisis.* Good examples and best practices can be learned from the countries and territories that have previously experienced serious pandemics e.g. Hong Kong Special Administrative Region of China, Singapore, South Korea, Thailand.

- *Ongoing pandemic crisis revealed a lack of effective global and regional health risk governance cooperation, with the main emphasis placed on the cooperation regarding the return of nationals, travel restrictions, cross-border controls or emergent supply of protective equipment and materials.* NDMAs needs to more actively cooperate on fighting this and future pandemic crises through timely information sharing, cross-border cooperation, as well as development and standardization of SOPs and other protocols. Regional initiatives provided overall coordination support in information and knowledge sharing and can play a significant role in future sub-regional and cross-border endeavour.

- *The COVID-19 Recovery Needs Assessment (CRNA) for assessment of the economic losses and human and social impacts on the most vulnerable citizens and the formulation of a recovery strategy are needed for the resilient recovery phase.* Given the existing experience and lessons learnt from the past disasters, implementation of Post-disaster Needs Assessments and Resilient Recovery Frameworks, as well as the capacities for provision of coordination and support services, the NDMAs needs to be positioned as a key partner in the post-COVID-19 recovery process.

- *Like the other complex disasters, the COVID-19 pandemic crisis requires the engagement of various institutions and entities in a multi-sector way to ensure timely and efficient response and resilient recovery.* In that sense, the National Platforms for disaster risk reduction can play a prominent role as a forum for advancing the disaster risk management systems in the countries and territories. In the

ECIS region, they were not engaged in most of the countries and territories in which they are established, but there are positive examples from Armenia and the Kyrgyz Republic where they contributed to the implementation of small-scale actions and public awareness and information dissemination activities. On the other side, there are many evidences of active engagement of the national Red Cross/Red Crescent societies, civil society organizations, citizens-led initiatives and volunteers, which provided a crucial contribution no one to be left behind during the pandemic crisis response.

➢ *ICT innovative tools are the foundation for timely, efficient, effective and inclusive emergency management throughout the phases of the disaster cycle.* There is evidence of successful use of the ICT technologies and innovative solutions for resilience in the ECIS region including this pandemic crisis response. Nevertheless, there is an impression that the existing solutions do not reach everyone in the society, especially the citizens with disabilities. Designing innovative solutions, especially for information, early warning and alerting, needs to be implemented in an inclusive and participative manner, integrating the needs of the beneficiaries.

➢ *Complex disasters including the pandemic crisis such as the COVID-19, emphasize the importance of breaking the silos of the traditional disaster risk management, allowing for better mainstreaming of the biological hazards and health emergencies.* Prioritization of the strategic and operational actions is *a modus operandi* for the NDMAs development and broadening of their scope of competences. Accordingly, they should be managing the continuity of the existing response, followed by resilient recovering while emerging stronger, and finally, they should be better prepared for understanding the potential futures and to enable transformational changes and action to move from a static to a dynamic model of actions i.e. to foresight the futures and insight the strategies and actions. This should lead to a development of the so-called *Next Generation (NextGen) NDMAs framework*, where they should be better organized and prepared for anticipation, prevention and reaction to new and complex risks and threats, with additional knowledge and expertise gained expanded competencies and availability of specific resources.

➢ *The COVID-19 pandemic is not a typical crisis and therefore the response and the post-crisis recovery needs to be untypical, evaluating the past, understanding the presence and envisaging the future.* Its lessons learned indeed demonstrated that countries and territories that had in place disaster risk management strategies, multi-hazard, multi-risk and multi-sector assessments, which cover health emergencies and improvised while responding,

found themselves better prepared to react to pandemic risk/biohazards.

EMERGING LESSONS-LEARNED

➢ The pandemic crisis highlights the need to modify the existing frameworks for resilience by integration of the pandemic risk/biohazards in the strategic documents (Target E of the Sendai Framework) and operational planning documents for better mitigation, response and recovery from crises of this magnitude.

➢ High-consequences, low probability events will be more frequent in the future and the multi-hazard, multi-risk assessments integrating the pandemics risk/biohazards needs to be forward-looking, non-linear, understanding the future.

➢ The "new normal" contributed to the transformation and business continuity of the NDMAs by the provision of new emergency services and the use of e-communication tools and solutions for continuous operation.

➢ Leveraged multi-sector approach enables enhanced coordination and cooperation beyond the existing response and better planning and mitigating the future pandemic risk/biohazards.

➢ Expertise and potential exist, but it is needed to further invest in professional knowledge and specialized training of the emergency responders on the pandemic risk/biohazards.

➢ Resilient recovery of emergency responders needs to be established during this type of complex disasters with follow-up and psychological support contributing to their overall well-being.

➢ Re-designing of emergency services (ambulance and medical) resulted from the impact of the COVID-19 aimed for better provision of services to the citizens.

➢ Continued engagement of volunteers and community members, as well as citizens-led initiatives during this pandemic crisis, ensured no one is left behind.

➢ "Green Recovery" considers as a modus operandi for mitigating the impacts of existing pandemic crisis and prevention of future pandemic risk/biohazards.

➢ Local authorities need to be granted greater competences and responsibilities from the health emergency area enabling them to become effective and efficient first preventers and first responders.

KEY RECOMMENDATIONS

Based on the findings of this assessment study and the lessons learnt from countries and territories aimed at mitigating the prolonged impacts of the COVID-19 crisis or any future pandemic crisis, this report lays out a set of recommendations:

General recommendations:

- Strengthen the disaster risk governance in the ECIS region for future pandemic risk/biohazards through their integration in the relevant strategic documents contributing to the achievement of Sendai Framework Target E and operational planning frameworks reflecting the systemic nature of the risk and better preparing the national risk management systems for the prevention and response to complex disasters.
- NDMAs shall lead the process of adoption of the multi-hazard, multi-risk and multi-sector risk and hazard assessments and disaster response plans, on behalf of the national and local governments.
- Scenario planning and training exercises are vital for testing the capabilities and readiness of the national systems for better preparedness and response to pandemics and needs to be fully integrated into NDMAs work.
- Develop NDMAs contingency plans and ensuring the NDMAs business continuity given the potential disruptions resulting from the pandemic crisis and complex disasters.
- Application of the CRNA methodology for assessments of the recovery needs and formulation of recovery frameworks, led by the NDMAs resulting from their previous engagement with PDNAs and Resilience Recovery Frameworks.
- Enhance the decentralization and/or transfer of competencies from national to local levels for improved disaster risk governance enabling timely, effective and efficient identification and response to the existing palette of risks and threats, while being prepared for the new futures.

Recommendations related to the COVID-19 pandemic crisis response:

- "Understanding what went well and what were the gaps during the pandemic crisis response" is aimed for improved follow-up response and codification of lessons-learnt for better preparedness and response for future complex disasters and crisis.
- Proactive approach and strengthening of the disasters-humanitarian coordination, cooperation and communication during the pandemic crisis response fully utilizing the capacities and resources of the NDMAs.
- Given the complexity and the impact of the COVID-19 pandemic crisis, standard operating procedures and other protocols to be regularly reviewed to reflect the existing response experiences, lessons-learnt enabling better operational response and preparedness for the future pandemic crisis.
- Support the response efforts to pandemic risk/biohazards with the use of ICT innovative solutions, especially for information, early warning and alerting, implemented in an inclusive and participative manner, integrating the needs of all beneficiaries.
- Use of existing sub-regional mechanisms and initiatives for disaster risk reduction and further promotion and strengthening of the cross-border and regional cooperation for resilience.
- Ensure gender-equal and inclusive response to and recovery from the pandemic crisis.
- Leverage the power of partnerships for pandemic crisis response and recovery while leaving no one behind.

Recommendations related to the future pandemic risk/ biohazards :

- Create enabling policy and normative environment for resilience ensuring a better understanding of the systematic risk, greater mainstreaming of health aspects and pandemic risk/biohazards, as well as the potential of the high-consequence, low probability events.
- Build the capacities and expertise of the NDMAs for the pandemic risk/biohazards through professional development and specialized training of staff as articulated in the Sendai Framework for Disaster Risk Reduction 2015 – 2030.
- Integrate the research & development in partnership with academia and the private sector for designing innovative solutions for prevention and response of pandemics/biohazards.
- Provide stable and regular financing of NDMAs for risk reduction and resilience activities including for complex emergencies, such as the combination of COVID and disaster from natural hazards.

THE WAY FORWARD - POTENTIAL NDMAs DEVELOPMENT PATHWAYS

Following the assessment review framework and the needs for the transformational change of the NDMAs as part of the efforts for *re-framing* the overall disaster risk management, three development pathways for the NDMAs in the ECIS region were identified:

➢ *Status Quo Scenario (Business as usual)* – The NDMAs continue to operate within the existing legal and institutional arrangements adapted to the pandemic crisis response. This scenario is least disruptive to the existing structures and relatively simple to implement. Time framework is continuous, up to twelve months: it is most likely to happen in

most of the countries and territories.

➢ ***Linear scenario (Emerging stronger)*** - Essential improvement of the NDMAs normative and operational frameworks resulting from the experiences and lessons learnt from the pandemic crisis. It shall be based upon integration of the systemic risk and health emergency aspects as well as provisions of more competencies for mitigation, response to and recovery from complex disasters. This scenario is more difficult to implement and can be disruptive to the existing normative and institutional structures. The approximate time framework is 12 – 24 months: it is somewhat likely to happen and only in some of the countries and territories.

➢ ***Dynamic scenario (Thriving into uncertainty – NextGen NDMAs)*** – Establishment of new normative and operational frameworks and comprehensive transformation of NDMAs and their working operations, fully prepared for anticipation, prevention, response and recovery from complex disasters, with established foresight for development capacities. It leads to the establishment of *Next Generation (NextGen) NDMAs*. This scenario is most difficult to implement and can be disruptive to the existing NDMAs institutional structures and professionals. The reviewed time framework is two to four years; it is least likely to happen and only in a few of the countries and territories.

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ABBREVIATIONS

AL	Albania
AM	Armenia
AZ	Azerbaijan
B	Billion
BIH	Bosnia and Herzegovina
BY	Belarus
CA	Central Asia
CAX	Computer Supported Excercise
CESDRR	Center for Emergency Situations and Disaster Risk Reduction
CoV	Coronavirus
CRNA	COVID-19 Rapid Needs Assessment
CSOs	Civil Society Organizations
DPPI	Disaster Preparedness and Prevention Initiative
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECA	Europe and Central Asia
ECIS	Europe and the Commonwealth of Independent States
EE	Eastern Europe
FBIH	Federation of Bosnia and Herzegovina
FTX	Field Training Excercise
GAR	Global Assessment Report
GE	Georgia
GDP	Gross Domestic Product
GDP p.c.	Gross Domestic Product Per Capita
HDI	Human Development Index
ICTs	Information and communication technologies
ICU	Intensive Care Unit
IRH	Istanbul Regional Hub
KG	Kyrgyz Republic
KS*	Kosovo*
KZ	Kazakhstan

* All references to Kosovo shall be understood to be in the context of the Security Council Resolution 1244 (1999).

M	Million
MBBF	Multiple Breadbasket Failure
MD	Moldova
ME	Montenegro
MERS	Middle East Respiratory System
MK	North Macedonia
NDMAs	National Disaster Management Authorities
NEPHC	National Extraordinary Public Health Commission
NICS	Next-Generation Incident Command System
PDNA	Post-disaster Needs Assessment
REACT	Rapid Emergency Assessment and Coordination Team
RRF	Resilient Recovery Framework
RS	Republika Srpska
SARS	Severe Acute Respiratory System
SC	South Caucasus
SDGs	Sustainable Development Goals
SIMEX	Simulation Excercise
SOPs	Standard Operating Procedures
SRB	Serbia
TJ	Tajikistan
TM	Turkmenistan
TR	Turkey
TTX	Table-top Training Excercise
UA	Ukraine
UN	United Nations
UNCTs	UN Country Teams
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UZ	Uzbekistan
VUCA	Volatility, uncertainty, complexity and ambiguity
WB & TR	Western Balkans and Turkey
WHO	World Health Organization

1. INTRODUCTION

1.1 Background

The Europe and Central Asia region is among the most exposed regions to natural and human-made disasters in the world. Almost all types of disaster are present, ranging from earthquakes, floods, landslides, mudflows to droughts, extreme temperatures, and storms. Each country and territory has a history of devastating disasters, in one way or form. In recent years, they are increasing in frequency, intensity, magnitude and impact on societies and communities. From 2000 onwards[2], in total 1,337 disasters were fatal for 55,000 people, affected more than 17 million citizens and had a price tag of approx. 30 billion USD. With the "impact of climate change that can be seen and felt in the region through temperature variations, changes in river runoffs and precipitation and the more frequent incidence of extreme weather events"[3], it is expected that these numbers will double. From the catastrophic flooding in Western Balkan to more widespread and prolonged droughts in the countries of Central Asia, extreme climate events are threatening decades of hard-won development achievements, increasing the vulnerabilities and affecting the people and communities with the most vulnerable ones having the greatest impact.

During recent years, new and complex risks and threats emerged which present acute shocks and long-term stresses to the resilience of the societies globally, including the ECIS region i.e. continuous migrant/refugee crises from 2015, complex disaster (e.g. Japan earthquake 2011) and climate-related events (unprecedented wildfires, frequent hurricane seasons, powerful flash floods), emerging cyber-infrastructure related attacks, previous outbreaks of Ebola, MERS, SARS, etc. The contemporary world is becoming more and more multi-hazard profiled one, where the nature of the risk is rapidly evolving to be systemic and consequent disaster impacts are cascading across sectors and life aspects in unpredictable ways. In this sense, the COVID-19 pandemic is far more than a typical health crisis and as an emerging systemic risk is affecting the countries and territories around the globe in an unprecedented way, heavily impacting not only the public health but also the societies and economies at their core i.e biggest economic decline since the Great

A '***systemic risk***' is a risk that is endogenous to, or embedded in, a system that is not itself considered to be a risk and is therefore not generally tracked or managed, but which is understood through systems analysis to have a latent or cumulative risk potential to negatively impact overall system performance when some characteristics of the system change.

Source: UNDRR (2019). Global Assessment Report on Disaster Risk Reduction. Geneva, Switzerland: United Nations Office for Disaster Risk Reduction (UNDRR).

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2   https://public.emdat.be
3   https://www.eurasia.undp.org/content/rbec/en/home/climate-and-disaster-reslience.html

Depression[4] and exacerbating the existing and creating new vulnerabilities. In almost all of them, the impact of the pandemic is devastating, causing the health care systems to collapse, with unprecedented response measures being taken e.g. lockdowns, quarantines, curfews and cease of most of the economic and other activities for months. The pandemic has moved like a giant wave, affecting all segments of the societies and governments including the disaster risk management systems with the ECIS region has been no exception.

"*The COVID-19 disaster serves as a reminder to all Member States of the risk of pandemic specifically. But more than that, it shows that we rarely face one hazard at a time. In our contemporary and connected world risk is systemic and impact cascades*"[5]. Consequently, the COVID-19 pandemic crisis has emphasized the crucial role that the national and local governments play in prevention, mitigation and responding to this type of complex crises which impacts are cascading across the regions, countries and territories challenging their preparedness and response systems and capabilities. Given its complexity, intensity and magnitude, it will continue to stress testing the risk governance capacities of the countries and territories transforming the pandemic crisis to a chronic shock to their societies and emergency management systems for a prolonged time. Consequently, the COVID-19 pandemic placed the needs of anticipation, preparation, response and recovery, also, to high-consequence, low-probability risks at the forefront of the resilience, while strengthening the overall risk governance. Disaster risk management structures in the countries and territories need to transformationally change their approach to reducing the disaster risks while accepting the risks from the future events i.e. "*black swans, black elephants, jellyfishes, butterflies and other animals from the horizon scanning Zoo*"[6] and defining their *modus operandi* of functioning in "*the new normal*". In other words, the disaster risk governance shall timely, effectively and efficiently identify and respond to the existing palette of risks and threats, in the meantime being prepared for the new futures.

Therefore, in line with the Sendai Framework for Disaster Risk Reduction 2015 – 2030 (Sendai framework) and the 2030 Agenda for Sustainable Development, UNDP and UNDRR are supporting countries and territories in strengthening their risk governance capacities and building resilient societies with strong governance arrangements having a greater ability to manage risks, and hence, being able to make good progress in substantively reducing their losses and impacts from hazards or other threats and shocks. UNDP provides technical support to strengthen harmonized policy, legal and institutional arrangements that foster greater accountability and integrated solutions for risk reduction, preparedness, response and recovery. As the custodian agency for the Sendai Framework, UNDRR accompanies member countries and territories in implementing global priorities for risk reduction and resilience building and is working with national authorities to help test and better understand capabilities to reduce risk and mitigate impacts in the face of complex and systemic scenarios.

Both UNDP and UNDRR engage with institutions that have a mandate for disaster risk management, such as National Disaster Management Authorities, Civil Protection and Protection and Rescue Departments, Ministries for Emergency Situations, etc. Many countries and territories have put in place provisions for emergency or crisis management coordination that involve various state entities including the highest level of political authority, such as the Office of the President or Prime Minister, crisis management centres, the disaster risk management institutions, relevant line ministries such as health, social protection, foreign affairs, local authorities and communities, etc. Similarly, many countries and territories have in place National Platforms for DRR, which offer multi-stakeholder mechanisms to improve coordination around risk management priorities. While these structures vary in certain cases, the NDMAs have found themselves at the centre of the operational COVID-19 response that requires solid, agile, trained human resources, swift and tested response mechanisms, systems and procedures, and adequate financial resources.

1.2 Purpose of the Assignment

The **overall objective of this assignment** is to assess the role and effectiveness of National Disaster Management Authorities (NDMAs) in COVID-19 pandemic response in the ECIS region, analyze the impact of the pandemic crisis on their working operations and national risk management systems and provide a set of forward-looking recommendations on how to strengthen the role of NDMAs in future pandemic crisis.

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4 https://www.bbc.com/news/business-51706225
5 UNDRR. *COVID-19 Engagement Strategy. Interim Report.* October 2020. p. 7.
6 https://www.ennakointikupla.fi/blog/index.php/2016/04/11/the-horizon-scanning-zoo

1.3 Assessment Report

The **Assessment Study** provides an overview and findings of the comprehensive assessment of the role and effectiveness of NDMAs in the COVID-19 response enabling UNDP, UNDRR, NDMAs and other stakeholders to draw lessons from the implementation approach to the COVID-19 response and forward-looking recommendations for the prevention, mitigation, preparedness and response to the future pandemic/biohazard crisis incorporating best practices and lessons learnt, identified needs and resources, while ensuring the sustainability of the actions.

1.4 Assessment Review Framework

With the aim to implement this assignment, a suitable approach and methodological framework as per the subject of the research, its objectives and specifics were defined and applied (outlined in Annex I). Following assessment parameters/criteria were foundations of the assignment process:

Parameter	Description
Relevance	The extent to which the pandemic risk/biohazard is integrated into the strategic priorities and policies of the NDMAs, including National DRR Strategies.
Response	Role of the national crisis management structures and NDMAs in COVID-19 response and the role of National DRR Platforms in this context.
Effectiveness	A measure of the extent to which the NDMAs attains their objectives and whether the desired results were achieved.
Impact	Positive and/or negative changes produced by COVID-19 pandemic to the NDMAs operations, directly and/or indirectly, intended and/or unintended.
Lessons Learnt and Recommendations	Identifying lessons learnt and modus operandi on how pandemic/biohazard crisis should be integrated in the NDMAs future operating working framework.

Figure 2 - Table presenting the Assessment Parameters

2. COVID-19 OUTBREAK IN THE EUROPE AND CENTRAL ASIA REGION

2.1 Background

The COVID-19 pandemic risk is a part of a set of new and unexpected risks with a low probability of appearance and high consequences as mentioned above. It is expected that they will dominate the risk profiles in the future, and therefore a systematic approach to their prevention and response is essentially needed. In November 2019 in Wuhan, China first cases were reported whether on 31 December 2019 the Government of the People's Republic of China reported a cluster of cases of the new pandemic from the newly detected coronavirus. Since then, the infectious disease named *"COVID-19"* has exponentially spread around the globe affecting millions of people in almost all countries and territories. The COVID-19 disease was labelled as a **pandemic** by WHO on 11 March 2020. Since its outbreak, the coronavirus has spread to every continent including Antarctica. The number of global confirmed cases have exceeded 99 million cases[7] with an approximate mortality of approx. 2.1% of reported cases (2.1 million deaths). The Europe and Central Asia (ECIS) region is not an exception from this. Out of the total number of reported cases in Europe (33,312,852[8]), 1/17 or 5,885,182 are reported in these countries and territories.

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7   As of 26 January 2021.
8   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
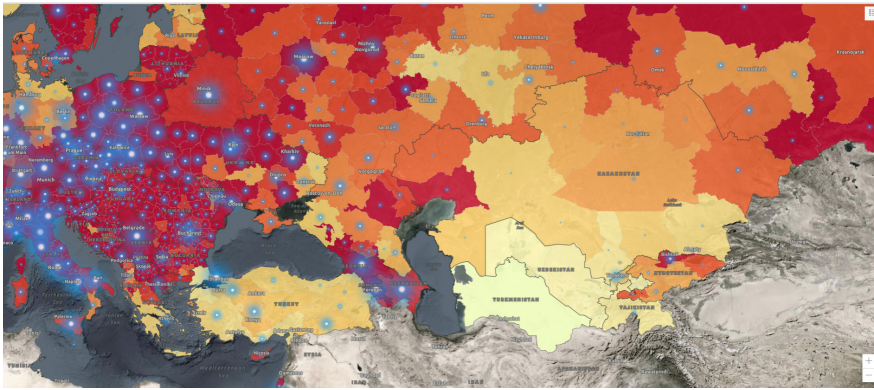
Figure 3 – Map of COVID-19 cases in most of Europe including the ECIS region as of 26.01.2021[9]

The appearance and the consequent exponential expansion of the pandemic in the ECIS region followed the global patterns, with the first case reported in North Macedonia on 26 February 2020 and the first death resulting from the COVID-19 reported in Georgia on 05 March 2020.

Figure 4 – Timescale of first reported cases of COVID-19 in ECIS countries and territories

Figure 5 – Timescale of first reported death cases of COVID-19 in ECIS countries and territories

Consequently, all ECIS countries and territories were affected with progressive transition from incidental cases to widespread local transmissions seriously pressuring the societal resilience and affecting all regions and communities. During the initial period of the pandemic crisis response, different countries and territories implemented different restrictive measures. In general, they followed the global practice of taking decisive measures and steps to suppress the pandemic through the declaration of national and local emergencies, country-wide full or partial lockdowns (or stay-at-home, shelter-in-place orders), restrictions of movement of citizens, closing of national borders for passenger movement, the temporary reintroduction of border control at the national borders e.g. the Schengen Area member states[10], closing of businesses, educational, cultural and other facilities, ban of public events, etc. Having into consideration that pandemic of this scale has not happened before, the main response of the national governments was to prevent the exponential transmission to lessen the initial pressure to the health systems, while consolidating the responding mechanisms and available resources, ensuring timely supply and provision of protective materials, enhancing the existing response policies and procedures, developing health protocols COVID-19 related, etc. In other words, all these measures were implemented to flatten the pandemic curve and to ease the pressures on the health systems. Nevertheless, in a much smaller scope, some of these measures continued to be implemented throughout the year, while some stricter restrictions were re-introduced during the "second wave" of the disease i.e. since November 2020.

As it can be seen from the timescale presented below, different countries and territories in the ECIS region implemented different approaches at a different time i.e. some of them took early preventive restrictions immediately after the first cases were reported e.g. Albania, Montenegro, Kosovo*[11], Serbia, Turkey, Moldova, Bosnia and

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9   https://experience.arcgis.com/experience/3a056fc8839d47969ef59949e9984a71
10   https://tinyurl.com/y7waayqp
11   *All references to Kosovo shall be understood to be in the context of the Security Council Resolution 1244 (1999).

Herzegovina, Kyrgyz Republic, Armenia, Kazakhstan, Uzbekistan, etc. whether others waited on the increase of the reported cases while still keeping active the socio-economic sectors e.g. North Macedonia, Ukraine, Georgia, Azerbaijan.

Figure 6 – Timescale of declared emergencies/lockdowns due to the COVID-19 pandemic in ECIS countries and territories

2.2 COVID-19 ECIS countries and territories overview

Nowadays, the mortality rate and the latest trends of spreading of the pandemic i.e. so-called "the second peak" are following the global trends and they are in a steady growth line. Based on the available data, the country-specific situation on 26 January 2021 is presented in the table below. Nonetheless, considering the different approaches to testing, availability of tests and testing resources, publication of results, classification of COVID-19 cases and related deaths, transparency level of results varies with Turkmenistan as the only country from the region that has not officially reported a single case of COVID-19 disease. Despite the lower incidence of the virus in some of the countries and territories, the impact of the pandemic is strongly felt across the region disrupting the everyday lives of people and creating immediate challenges to societies and communities, as well as risks to their resilience outlooks. However, Tajikistan is the first country from ECIS that has officially declared that from January 2021 there are no new cases of COVID-19.[12]

#	Countries and territories	Sub-region	Total cases	Total deaths	Cases last 7 days	Deaths last 7 days
1	Albania	WB & TR	73,691	1,332	5,123	45
2	Bosnia and Herzegovina	WB & TR	120,532	4,621	2,149	112
3	Kosovo*	WB & TR	58,647	1,461	2,275	51
4	Montenegro	WB & TR	59,345	777	2,367	19
5	North Macedonia	WB & TR	91,161	2,812	1,769	86
6	Serbia	WB & TR	387,206	3,924	11,407	133
7	Turkey	WB & TR	2,442,350	25,344	42,569	1,016
Sub-total:			**3,232,932**	**40,271**	**67,659**	**1,462**
8	Armenia	SC	166,427	3,056	1,206	40
9	Azerbaijan	SC	229,358	3,100	1,662	68
10	Georgia	SC	255,564	3,108	5,630	121

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12   http://www.president.tj/ru/node/25006

Sub-total:			**651,349**	**9,264**	**8,498**	**229**
11	Belarus	EE	239,482	1,668	10,766	67
12	Moldova	EE	156,972	3,381	3,466	99
13	Ukraine	EE	1,200,883	22,202	28,845	944
Sub-total:			**1,597,337**	**27,251**	**43,077**	**1,110**
14	Kazakhstan	Central Asia	227,165	3,035	7,638	79
15	Kyrgyz Republic	Central Asia	84,175	1,405	745	13
16	Tajikistan	Central Asia	13,714	91	0	0
17	Turkmenistan[13]	Central Asia	n/a	n/a	n/a	n/a
18	Uzbekistan	Central Asia	78,510	621	347	1
Sub-total:			**403,564**	**5,152**	**8,730**	**93**
Total:			**5,885,182**	**81,938**	**127,964**	**2,894**

Figure 7 – Breakdown of COVID-19 status per individual countries and territories in the ECIS region as of 26 January 2021 [14]

2.3. COVID-19 impact on the ECIS region

The COVID-19 pandemic is expected to continue beyond 2021 until so-called "*herd immunity*"[15] is achieved. The medium- and long-term impacts of the pandemic crisis remain uncertain, but it significantly affects the sustainable development of the societies and makes the achievement of SDGs and overall sustainable and resilient development critical. Consequently, the least developed countries and countries in development are affected more by reversing the hard-earned gains of sustainable development and aggravated inequalities across societies. People who are being left behind find themselves with little protection as the crisis unfolds and are likely to be massively impacted as local economies and the global economy itself will begin to contract. Considering the complexity of the COVID-19 pandemic crisis which is far more than a health crisis, its socio-economic impacts have created unprecedented socio-economic crisis which adds to the existing stresses and shocks linked to climate change effects. More than ever

"Our region, Europe and Central Asia, like the rest of the world, is facing a combination of shocks - disruption of value chains and trade, reduction in demand on the overall service industry, especially tourism, and a decrease in oil prices. When you note that these shocks are coupled with "preconditions" of our region, such as high degrees of economic informality, inequalities, overreliance on remittances, rapid depopulation and brain drain, and the consequences of a systemic de-investment in the public health system and other social safety nets, it is not difficult to see the strain that the pandemic has put on the countries of the region."

Agi Veres, Deputy Director, UNDP Regional Bureau for Europe and CIS
Source: *https://tinyurl.com/yde4uecd*

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13   As of 26 January 2021,Turkmenistan has not officially confirmed any cases of COVID-19
14   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
15   https://apic.org/monthly_alerts/herd-immunity/

before, it is now vital to address the systemic nature of risk [16], build resilience of the societies and communities and through a resilient recovery to adapt and transform our societies to the new realities and unseen futures.

The pandemic crisis affected all the countries and territories in the region in the same pattern, pressuring the health systems, impacting the socio-economic systems, halting manufacturing and service supplies, disrupting the supply chains, challenging the physical and psychological well-being of the citizens, with the most vulnerable ones being disproportionly affected, etc. The impact of this crisis is devastating for the global resilience i.e. *"estimated cost of the COVID-19 pandemic is $8 trillion to $16 trillion, including $5.8 trillion to $8.8 trillion of 3 to 6 months of social distancing and travel restrictions (6.4% to 9.7% of global GDP)."*[17]

The gravity of the pandemic crisis impact can be felt asymmetrically in different countries and territories of the ECIS region given their context, policies and measures implemented, follow up support of the businesses and population resilience in the pre-COVID-19 times. Consequently, impacts can be felt across all sectors i.e. as **direct impacts to the GDP** (in Ukraine is considered to shrink by 7%[18]), **increased inflation rates** (projection for the Kyrgyz Republic is up to 10.6% this year[19]), **poverty increase** (for example, Central Asia would account for 58% of the new poor—equivalent to 1.4 million additional poor people and Turkey would contribute 11 % of the new poor in the region[20]), **increased unemployment rates** (in Ukraine it will reach 11.5%[21]), **increased numbers of returning migrants** (Armenia has 33% of population and Moldova 28% of the population living abroad[22]), **fewer remittances** (in Tajikistan they dropped more than 28% during the first half of 2020[23], similar to the decreased forecast for the overall Central Asia region[24]), **increased food insecurity** (in Tajikistan 41 per cent of families have reported reducing their food intake[25]), **and gender inequalities** (as per the recent UN Women survey[26] 10–18% of respondents from Turkey, Azerbaijan and BiH indicated that they believed discrimination or prejudice was increasing), etc.

As it can be seen, not only the COVID-19 pandemic crisis is severely affecting the health sectors in the

countries, and territories and it's far-reaching impacts are cascading through socio-economic and other sectors (e.g. environment, food and nutrition security), shaking the foundations of the resilience of societies and communities globally and slowing the achievement of sustainable development goals. Therefore, the

> **Multiple Breadbasket Failure**
>
> "Climate shocks and consequent crop failure in one of the global cereal breadbaskets might have knock-on effects on the global agricultural market. The turbulences are exacerbated if more than one of the main crop-producing regions suffers from losses simultaneously – a scenario often described as *multiple breadbasket failure.*"
>
> *Source: UNDRR, GAR 2019*
> https://tinyurl.com/yxncl3jm

approach towards this crisis and many more that we will face in the future needs to begin with the **re-coding our approach to disaster risk governance towards the designing of new models for mitigation, preparedness, response and recovery from complex disasters and high-consequences, low-probability events**.

2.4 COVID-19 impact on risk governance

The COVID-19 pandemic crisis has several characteristics i.e. one of the biggest crisis in history, the biggest global disaster event in this century which effect is bigger than the 2007 - 2008 financial crisis, but, also, it is labelled as a *"crisis of disaster risk management"*[27]. The impact of the crisis is unprecedented, with medium- and long-term consequences still uncertain and the short-term effect localized on the immediate response, rapid impact on the societies and economies and the overall management of the health crisis. We are living in a world where societies are ever more interconnected, networked and globalized, the nature and the scale of the risk is changing contributing to the emergence of large-scale systemic risks, that cut across the three dimensions of sustainable development: economic, social and environmental. These systems are challenged by drivers of disruptive influences such as infectious disease outbreaks, food shortages, social unrest, political and financial instability and increasing inequality (UNDRR, 2020: 19[28]). In principle, the COVID-19 pandemic is a health crisis utterly surprising the countries and

16   https://gar.undrr.org/sites/default/files/chapter/2019-05/Chapter_2.pdf
17   https://ipbes.net/pandemics-marquee
18   https://tinyurl.com/ybhqz475
19   https://tinyurl.com/y2fralj6
20   World Bank Group: COVID-19 and Human Capital: Europe and Central Asia Economic Update, Office of the Chief Economist Fall 2020. (2020). p. 11.
21   https://tinyurl.com/y9xf7jnf
22   https://tinyurl.com/ya65njbe
23   https://www.unicef.org/eca/stories/ cash-assistance-struggling-families-tajikistan-amid-pandemic
24   https://tinyurl.com/yb5fr33x
25   https://www.unicef.org/eca/stories/ cash-assistance-struggling-families-tajikistan-amid-pandemic
26   https://tinyurl.com/yczhzw7g

27   https://news.trust.org/item/20200502101806-mzqtf/
28   https://www.undrr.org/publication/ undrr-covid-19-engagement-strategy-interim-report

territories and their response mechanisms. Consequently, its impact has a domino-effect across the societies and communities, the effect on one sector triggers the next, and the impact raises cumulatively. This discloses its complex systemic risk nature: risk of breakdown of the whole system rather than the failure of its separate parts while challenging national risk governance mechanisms.

The Sendai Framework for Disaster Risk Reduction (2015 – 2030) puts "health risks and health resilience at the heart of global DRM efforts, through advocating for the involvement of the health sectors throughout planning for emergency proactive and reactive measures globally, as well as highlighting the critical role of science and technology.[29]" Furthermore, it highlights biological hazards such as pandemics and epidemics as one of the potential risks of this century, characterized by a highly inter-connected and globalized world. Alongside the natural and human-made hazards, they shall be placed in the centre of the focus of the disaster risk management and four of the seven Sendai Framework global targets have direct links to health, focusing on reducing mortality, population wellbeing, early warning and promoting the safety of health facilities and hospitals.

The COVID-19 pandemic is not a "black swan" since we cannot say that "nothing in the past can convincingly point to its possibility"[30], as well as because the pandemics are predictable, especially the coronavirus induced ones. There were "at least six pandemics since the Great Influenza pandemic of 1918 - three caused by influenza viruses (HIV/AIDS, SARS, and COVID-19), and their frequency is increasing"[31]. The last pandemic happened in 2009 (*Influenza pandemic - H1N1*) and it was known that the next one will follow. Especially the coronavirus caused diseases were known that will be replicated and scaled up into pandemics since there was a series of coronaviruses that were identified i.e. SARS-CoV (2003), Human coronavirus HKU1 (2004), and MERS CoV (2012). Furthermore, the UK Government Risk Registry identified the possible threat from these sources and contains entries for" influenza-type disease pandemic and non-flu-based "emerging infectious diseases", even specifically citing the risk of a novel coronavirus"[32], but the consequent planning documents build a strategy for response that is less useful in the case of COVID-19.

A **"black swan"** is an event that:

1) is beyond normal expectations that is so rare that even the possibility that it might occur is unknown;

2) has a catastrophic impact when it does occur, and

3) is explained in hindsight as if it were actually predictable.

Source: Investopedia
https://tinyurl.com/y6y3um4e

This pandemic crisis shows that health hazards are not among the most profiled ones or substantial parts of the national strategies and planning frameworks.[33] Either they are not well-elaborated or their elaboration is one-dimensional, referring to the critical health infrastructure aspects, without taking into consideration the health risks cascading effects. The public health sector in the countries in transition considered to be fragile, with limited abilities for preparedness and response to pandemic risk/biohazards. The existing public health infrastructure is in poor condition, human and material-technical resources are insufficient and the funding is inadequate (Figueras et all, 2004)[34]. Other challenges that are exacerbating this situation are access to health services i.e. half of the world population don't have access to essential services[35], lack of specialized and trained personnel and increasing trend of patients with chronic diseases and emerging of new diseases and health conditions that are additionally pressuring the scarce and overstretched resources, insufficient manufacturing of the protective equipment and its outsourcing, etc. All of these contribute to increased vulnerability of the health system and inefficient and ineffective mitigation, preparedness, response and recovery from health emergencies and crisis. This is emphasized, especially when complex disasters happen or there are cascading effects from the health sector to others or vice versa.

In this sense, the COVID-19 pandemic crisis has further exposed existing shortcomings of the weak public health systems, economic mechanisms, social protection schemes and services and other critical sectors, including national risk management systems. It has highlighted a lack of a comprehensive framework for health risk management or emphasized the existing institutional gaps and overlaps. Overall preparedness for this high-consequence, low-probability event was challenging, given the velocity of the exponential spread, effects to the societies and the

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29   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7223383/pdf/13753_2020_Article_274.pdf p.207
30   https://tinyurl.com/yxke7apo
31   https://ipbes.net/pandemics-marquee
32   https://tinyurl.com/y65s4bt5
33   Some of them address biological hazards in strategies for DRR and few of them address this hazard type in action plans and budgets.
34   Figueras, Josep, et all. *Health systems in transition: learning from experience.* European Observatory on Health Systems and Policies. 2004.
35   https://tinyurl.com/y5522f6l

communities, complexity of coordination and immediate response. Also, it has emphasized the key role that the government institutions play in preparing, responding and recovering from complex crises and that good disaster governance and political commitment and decision-making are essential for timely and efficient management of a crisis of this magnitude. The COVID-19 pandemic is not only stress-testing the overall risk management capabilities of the countries and territories and the communities globally but also their essential risk management concepts and programs and expertise on how to address the challenges brought by the global coronavirus pandemic.

Consequently, based on the initial insight of the NDMAs involvement in the pandemic crisis, it can ben noticed that they were not too much involved in the overall pandemic response with most of the activities implemented for support of the health authorities and provision of immediate response with many response actions implemented for the first time. So, *in the absence of previous experience, precise response plans and recommendations for action, ongoing improvisation and creativity are important factors for successful emergency management during the response to this invisible enemy, the Coronavirus.*

Since March 2020, this pandemic crisis has triggered Governments' awareness of the critical importance of addressing disaster risk through a more systemic risk lens, highlighting the need for better anticipation, analysis, mitigation and response to disasters, while ensuring the resilience of critical societal functions, including in the face of biological hazards. Actually, the COVID-19 crisis emphasizes the needs to *re-framing the disaster risk management systems on global, regional, national and local levels, as well as to update the "scope of works" of the NDMAs.* The way ahead to recovery planning is an opportunity to rethink the NDMAs approaches to the future pandemic crisis, mainstreaming their competences across sectors, and increasing their role in reducing existing and preventing future risks, through a better understanding of the complex risk landscape. This should lead to building NDMAs capacities to respond to the quick transition of pandemics to other types of crisis through strengthening their mitigation competencies and forward-looking strategies i.e. multi-risk and multi-hazard risk assessments incorporating public health risks, multi-hazard preparedness integrated across sectors, next generation of disaster management integrating resilient recovery following the public health emergencies. So, *the overall imperative is to strengthen disaster risk governance more broadly and in the long run, enabling comprehensive addressing of the systemic and emerging risks.*

The COVID-19 pandemic is not a typical crisis and therefore the response and the post-crisis recovery needs to be untypical, evaluating the past, understanding the presence and envisaging the future. Its lessons learned indeed demonstrate that Some of them address biological hazards in strategies for DRR and few of them address this hazard type in action plans and budgets." that had in place disaster risk management strategies, multi-hazard, multi-risk and multi-sector assessments, which cover health emergencies and improvised while responding, found themselves better prepared to react to pandemic risk/biohazards. Given the complexity of the crisis, the principle approach to risk management should be built upon non-linear understanding and assessment of the future where complex disasters including pandemics shall be frequent and needs to be centrally addressed while leaving no one behind. Prioritizing investment in human, technical and technological capacities for prevention, response, preparedness, recovery and resilience-building is vital now. In that sense, the essential roles of the NDMAs needs to be transformed and adapted to the "new normal" with having more and more complex crises on the horizon.

This crisis is an opportunity not only to re-frame the risk management but also to ensure convergence of disaster risk governance and health, addressing emergent and systemic risks and threats from pandemics and biohazards. The COVID-19 crisis confirms that societies and communities face a growing threat from biohazards. "*The risk of pandemics is increasing rapidly, with more than five new diseases emerging in people every year, any one of which has the potential to spread and become pandemic. The risk of a pandemic is driven by exponentially increasing anthropogenic changes.*"[36] It will continue to chronically stress the resilience of the societies and communities with acute shocks resulting from outburst of new pandemics. Therefore it is needed to leverage the prevention, preparedness and response to the pandemic risk/biohazards through strengthening sustainable risk reduction and health emergency capacities to respond to emergent threats. Pillars of this approach should be based on understanding and mitigating pandemic risks, mainstreaming of health risks into disaster risk management planning and vice versa, integration of policy coherence, stimulating national regional and global cooperation and coordination, effective and efficient use of resources, timely and focused response addressing the immediate and short-term effects of the pandemics and resilient recovery affecting the mid-term ones. Transitioning of the disaster risk governance to the new reality and expecting the unexpected shall drive the decisions and actions for mitigating the long-term effects of the pandemics. Finally, *we need a paradigm shift as a main driver of the contemporary disaster risk governance to be better prepared for the new futures.*

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36   https://tinyurl.com/yymagjr9

3. EUROPE AND CENTRAL ASIA – DISASTER RISK PROFILE

3.1 General disaster risk profile

The new coronavirus added itself to an already complex list of hazards of the ECIS region, as well as steadily climbing among the top disasters in terms of overall damages and losses. Accordingly, to understand the existing level of resilience of the region, a brief overview of the regional disaster risk profile is presented further in this section. The region of Europe and Central Asia spans from the Adriatic Sea on the west until the borders with China on the east. Its disaster risk profile is complex with almost all-natural and human-made disasters being present, ranging from geophysical (earthquakes, landslides, mudflows, rock falls), through hydro-meteorological (floods, storms and avalanches), climatological (extreme temperatures, droughts and wildfires), to biological ones (disease epidemics and insect/animal plagues). The regional risk context is complex with many past conflicts, inter-ethnic tensions, potential food security issues, industrial and transport accidents, high environment degradation rate, air pollution and legacy of uranium sites in the Central Asia countries, as well as toxic sites across the region. Furthermore, the projected climate change impact, increased urbanization, poverty levels, as well as the threat of pandemics and other low-probability, high-impact risks shall only aggravate the regional profile resulting in increased frequency, complexity and severity of disastrous events.

As presented in the table below, in terms of occurrences, hydro-meteorological and climatological disasters dominate the profile accounting for 77% of 374 disastrous events recorded between 2000 and the first half of 2020, followed by geophysical disasters and epidemics. Within this total number of events, floods were the most frequent type of disaster with 44% of the recorded events, followed by extreme temperatures, earthquakes, storms, landslides, wildfires, droughts and epidemics.
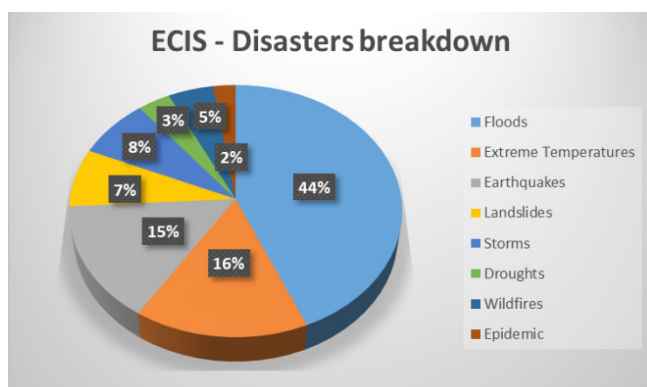
Figure 8 – Breakdown of disasters by type in the ECIS region (2000 – 2020)[37]

The entire region is exposed to *floods* with 17 out of 18 ECIS countries and territories having the floods as the most frequent disaster (except Belarus). Following the available data compiled for this period, out of 164 flood events, 30% of floods happened in Turkey and Tajikistan, with the latter being the most vulnerable to floods given the specific resilience of the country. They are followed by Western Balkan countries (Serbia, Bosnia and Herzegovina), Georgia, Kazakhstan, Albania, North Macedonia and other countries and territories with less than ten events during the period.

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37   The Table of breakdown of disasters by type in the ECIS region is compiled by the author based on the data from the EM-DAT database https:// public.emdat.be/

Countries and territories	Sub-region	Floods	Extreme Temperatures	Earthquakes	Landslides	Storms	Droughts	Wildfires	Epidemic
Albania	WB&TR	12	4	4		2		1	1
Armenia	SC	1	1		1	3	1		
Azerbaijan	SC	3	1	3	1		1		
Belarus	EE	1	6			1			
Bosnia and Herzegovina	WB&TR	16	4		1	1	2		1
Georgia	SC	13		2		3	1		
Kazakhstan	CA	13	2	1	1				1
Kosovo*	WB&TR	3	1	1					1
Kyrgyz Republic	CA	3	2	6	7	2	1		1
Montenegro	WB&TR	5	2					2	
Moldova	EE	4	4			1	3		
North Macedonia	WB&TR	10	6	1		1		2	1
Serbia	WB&TR	19	10	1		1			
Tajikistan	CA	24	3	11	9	1	2		3
Turkmenistan	CA			1					
Turkey	WB&TR	25	5	24	8	7		3	
Ukraine	EE	10	8			6	1		
Uzbekistan	CA	2		1			1	8	
Total:		164	59	56	28	29	13	8	9

Figure 9 – Table of disaster frequency in countries and territories of the ECIS region[38]

Serbia is most exposed to the effect of *extreme temperatures*, followed by Ukraine, North Macedonia and Belarus. *Earthquakes* are present in all sub-regions, but the most vulnerable are Turkey, Central Asia and Albania. *Storms* are dominant in Turkey, Ukraine, Armenia and Georgia, whether the *landslides* are determined by the mountainous relief in Central Asia countries (Tajikistan, Kyrgyz Republic) and Turkey. *Droughts* are the dominant slow-onset disaster seriously affecting Moldova, Tajikistan and Bosnia and Herzegovina. *Wildfires* are frequent in Uzbekistan, Turkey North Macedonia and Montenegro. Finally, *epidemics* of local infectious diseases are most frequent in Tajikistan.

In terms of damages resulting from these events, Tajikistan is among the top ten countries globally in terms of average annual percentage losses relative to GDP resulting from extreme temperatures.[39] Given the price tags of individual disasters, *floods* are most costly with a cost of 8.865 B USD, followed by *droughts* (2.816 B USD), *earthquakes* (2.766 B USD), and *storms* (1.014 B USD). The estimated cost of damages and losses of other profiled hazards are well below 100 M USD i.e. *extreme temperatures* (30.3 M USD), *wildfires* (25 M USD) and *landslides* (1.5 M USD). Accordingly, the most expensive top 5 disasters in the ECIS region are the following:

- *Floods* in Bosnia and Herzegovina, May 2014: 2.6 B USD;
- *Floods* in Serbia, May 2014: 2.4 B USD;
- *Drought* in Ukraine, April 2012: 1.69 B USD;
- *Earthquake* in Turkey, October 2011: 1.5 B USD, and
- *Flood* in Ukraine, July 2008: 1 B USD.[40]

3.2 Institutional DRM framework in the ECIS region

Concerning the establishment of relevant DRM institutional frameworks in the ECIS countries and territories, in general, we can differentiate three main types of the DRM institutional frameworks i.e. *independent government bodies* – ministries for emergency situations, *departments/sectors within the framework of the existing ministries of internal affairs or interiors*, and the last group where the NDMAs are *independent government agencies* (outlined in Annex II). Differences among these three frameworks for DRM can be identified in the government approach to DRM, degree of independence of the entities, essential emergency management curriculum i.e. the ministries of emergency situations are in line with the tradition from the former Soviet Union and they are more robust entities

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38   The Table of disaster frequency in countries and territories of the ECIS region is compiled by the author based on the data from the EM-DAT database https://public.emdat.be/
39   https://www.preventionweb.net/files/61119_credeconomiclosses.pdf p.5
40   Calculations of disasters damages and losses in the ECIS countries and territory during the period 2000 – 2020 were made by the author based on the data from the EM-DAT database https://public.emdat.be/

with broad responsibilities e.g. including the civil defence, whether the others have a more focused approach on natural and human-made disasters, with the civil defence either not existing or being under the ministries of defences competencies, the robustness of the institutions (again ministries are more robust structures integrating all emergency management services, whether the other types of NDMAs are more specialized, with some of the emergency management services being transferred to other entities or being decentralized), etc. Nevertheless, the DRM requires an integral approach by all institutions and capacities in the country, especially the pandemic risk/biohazards that are impacting the broad sectors and services.

Ministries of emergency situations	Ministries of internal affairs	Independent bodies
Armenia	Albania	
Azerbaijan	Bosnia and Herzegovina	North Macedonia
Belarus	Georgia, Kosovo*	Moldova
Kazakhstan	Montenegro	Tajikistan
Kyrgyz Republic	Serbia	Ukraine
Turkmenistan	Turkey	

Figure 10 – Institutional DRM framework in the ECIS region

Consequently, alongside the NDMAs in the countries and territories, many other key stakeholders are ensuring the multi-sector approach to disaster risk management e.g. key line ministries, government agencies, academia, NGOs, Red Cross and Red Crescent National Societies, research institutes private sector, media, etc. Besides, as a foundation of the global disaster risk reduction, the Sendai Framework emphasizes the importance of better disaster risk governance led by the governments, in an inclusive and participatory approach with various actors, stakeholders and entities on board. Accordingly, the **national DRR platforms** are considered as multi-sectoral, multi-disciplinary and functional mechanisms for the provision of advocacy, advisory, coordination, analytical, research and awareness services aimed at strengthening the DRM systems. They have an important role in supporting the all-of-government and all-of-society approach, especially during the prevention and mitigation phases contributing to better preparedness of the systems. Across the ECIS region, there are National DRR Platforms established in 11 countries as per the table below.

Western Balkans and Turkey	South Caucasus	Eastern Europe	Central Asia
BIH, ME, MK, SRB, TR	AM	BY, UA	KG, KZ, TJ

Figure 11 – National DRR Platforms across the ECIS region

4. FINDINGS FROM THE ONLINE SURVEY

4.1 Background

For the needs of the ***assessment of the role and effectiveness of NDMAs in COVID-19 pandemic crisis response and its impact on the NDMAs operation***, an online survey using a semi-structured questionnaire was implemented. The main objective was to obtain the necessary qualitative and quantitative information from the key respondents from the participating countries and territories in Europe and Central Asia providing input for the development of the regional recommendations. The content of the on-line survey questionnaire consists of precisely formulated questions, which were grouped into the following categories:

I. Background information;
II. Position of the NDMAs;
III. COVID-19 pandemic crisis and NDMAs response;
IV. NDMAs and the future pandemic crisis/biohazard framework.

The structure of the on-line questionnaire was designed for a comprehensive approach in collecting the necessary information related to several aspects. The *first group of questions* relates to the general, background information profiling the key respondents. The *second group of questions* contains purposefully formulated questions on the position of the NDMAs within the individual countries and territories DRM frameworks, as well as the existing level of mainstreaming of the pandemic risk in normative and strategic frameworks. The *third group of questions investigate* institutional set up for the ongoing response to COVID-19 pandemic crisis including coordination and communication, various aspects of the NDMAs response i.e. preparation of related planning documents and procedures, review of individual strengths and weaknesses, use of adequate tools, impact on their work and operation, as well as the provision of insights in the best practices and lessons learnt. Finally, the *last group of questions* relates to the follow-up actions on better preparedness of the NDMAs for future pandemic risks/biohazards.

Summary of the background information profiling the key respondents (outlined in Annex V) presents some key features of the survey that contributes to the credibility and relevance of the research i.e. good gender representation (39% of the respondents were female), wide regional participation (17 out of 18 ECIS countries and territories), good age distribution, solid work experience and valuable expertise, various professional backgrounds, etc.

Results below present the views of key respondents' perspective related to the COVID-19 response and the impact on the NDMAs. This survey was an initial stocktaking exercise, and it is not an exhaustive study.

4.2 II. POSITION OF THE NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)

The second part of the on-line survey contains a group of questions related to information about the position of the NDMAs within the national DRM structures, as well as the existing level of mainstreaming and integration of the pandemic risk/biohazards in the national strategic and normative frameworks. The purpose of these questions is to collect general information about each country and territory from the region that shall be further correlated with questions from other parts of the on-line survey.

II.1 National DRM strategic/operational framework and pandemic risk/biohazards

The Sendai Framework emphasizes the needs for the adoption of national DRM strategies and this is stipulated as one of the seven global targets – *"Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020."*[41] It emphasizes the need for enhanced risk governance coordination through the adoption of various documents aimed for better prevention, response and recovery. In this context, the comprehensive approach to resilience building of them requires the strategic framework to be supplemented with multi-hazard, multi-risk and multi-sector assessments and other operational planning documents. Therefore, the initial point of understanding of the contemporary DRM framework in the ECIS countries and territories was the existing situation regarding this matter.

Most of the respondents (23) replied that there are National Disaster Management Plans (34%) adopted in their respective countries and territories, followed by National DRM Strategies (31%), National Risk and Hazard Assessments (24%) and other types of documents (11%). Twelve of the them have adopted National Disaster Management Plans, the other 10 have National DRM strategies, 8 have National Risk and Hazard Assessments, whether in 8 of them there are additional normative acts and planning documents.
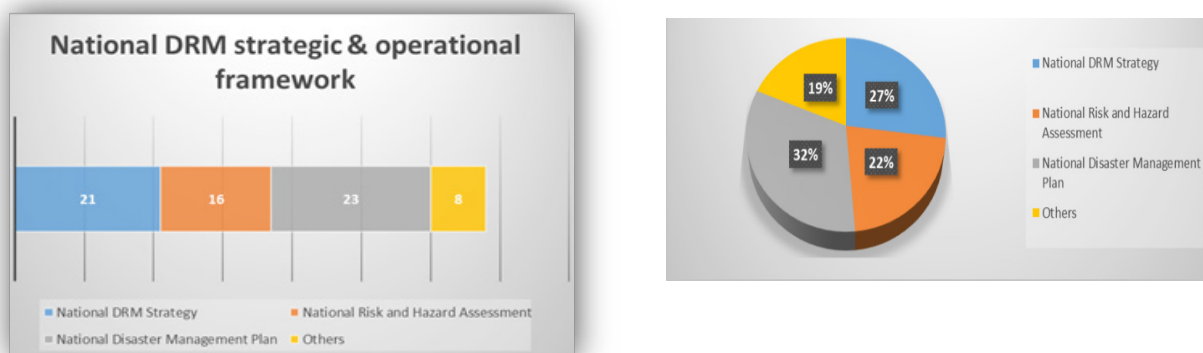

Figure 12 – National DRM strategies and operational documents in the ECIS countries and territories

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41   https://www.preventionweb.net/files/44983_sendaiframeworksimplifiedchart.pdf

Breakdown of adopted strategic and operational planning documents is presented in the table below and diversity in approaches can be detected. Out of ten countries and territories with DRM strategies, in two of them, the document Is still in the procedure of adoption as a draft-texts. A similar situation is with the other two normative frameworks i.e. national plans and assessments, where approx. half of the countries and territories have adopted these documents.

	WB&TR	SC	EE	Central Asia
National DRM Strategy	BIH, ME, KS*, SRB, TR	AM, GE	BY	KG, TJ, UZ
National Risk & Hazard Assessment	BIH, KS*, MK, SRB	AM, GE	MD	KG
National Disaster Management Plan	BIH, KS*, ME, TR	AM, GE	BY, MD	KG, KZ, TK, UZ
Others	KS*, ME, MK, SRB		BY, MD, UA	KZ

Figure 13 – Table of strategic and operational documents per country and territory

Under the section *Others* from this question, some of the key respondents (8) listed other types of normative acts that are considered as relevant for the research subject and they can be grouped into four main groups as presented in the table below:

Other Strategic Documents	
National Protection and Rescue Strategy	MK
National Security Strategy	UA
National Strategy for Protection and Rescue in Emergency Situation	SRB
Public Health Strategy 2016 – 2018	SRB
Other Legislative Acts	
Law for Protection Against Natural and other Disasters	KS*
Law on Civil Protection	MD
Civil Protection Code	UA
Other Programme Documents	
Program of the Health Sector Response to Crisis and Emergencies in the Republic of Serbia	SRB
National Programme for Health and Environment	SRB
National DRR Platform	MK
Other Planning Documents	
Response Plan	KS*
National and municipal plans for protection and rescue	ME
National Protection and Rescue Plan	MK
Preparedness and Response Plan of the Healthcare System when coping with Emergencies, Crises and Disasters	MK
Comprehensive Plan to Prevent Spread of COVID-19 Infection in Belarus	BY
Action Plan for Improvement of Communicable Diseases Surveillance and Response System in Serbia 2017-2020	SRB
National CBRN Defence Plan	SRB

Figure 14 – Table of other strategic and operational documents in the ECIS countries and territories

Nevertheless, to further understand the importance of these documents, this question needs to be seen in correlation with the question on the specific inclusion of the pandemic risk/biohazards in the national strategic and operational framework in the ECIS countries and territories as presented in the table below.

	WB&TR	SC	EE	Central Asia
National DRM Strategy	KS*, ME, TR	AM, GE		TJ, TK, UZ
National Risk & Hazard Assessment	BIH, KS*, MK	GE		
Local Risk & Hazard Assessment	BIH, MK	AM, GE		
National/Local Disaster Management Plans	BIH, KS*, ME, MK, TR	AM, GE	BY	KG, KZ, TJ, TK, UZ
Sectoral Plans	BIH, KS*, ME, MK	AM	BY, MD	KG, KZ, TJ, TK
Others	KS*, SRB		UA	

Figure 15 – Strategic and operational documents containing pandemic risk/biohazards per country and territory
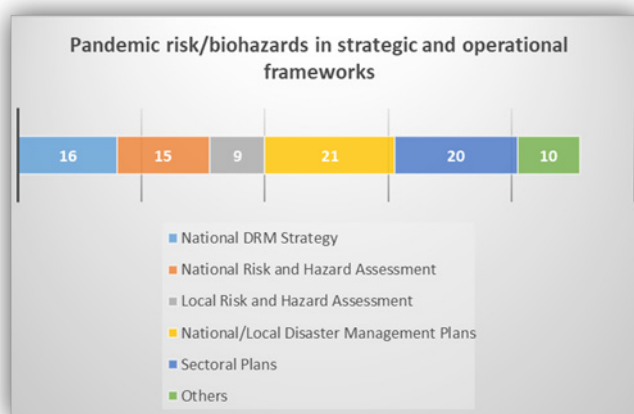

Figure 16 – Inclusion of pandemic risk/biohazards in national strategic and operational documents

Observations:

A brief review of **national DRM/DRR strategies** highlights that pandemic risk/biological hazards are differently recognized in existing strategic documents. The most common approach is to stipulate them as part of the existing hazard profiles of the countries and territories, as well as to mention the existing infectious diseases present on the territories without taking into consideration the others e.g. MERS, SARS, H1N1 "Swine Flu", etc. Most of the countries and territories also include epizootics as a hazard, but without further elaboration. Concerning pandemic risk/biohazards, there is no mentioning of related disaster data, vulnerability factors, and especially socio-economic impacts of biohazards. Only the national DRR strategies of **Belarus, Kosovo*, and Uzbekistan** do not have references to the epidemics of biohazards. In the National DRR Strategy of **Armenia** outbreak of epidemics are one of the existing hazards and the Ministry of Healthcare is the responsible institution for preparedness and response to them. In the case of **Tajikistan,** they are only referred to as one of the frequent disasters. The Implementation Plan of the Sendai Framework by the **Kyrgyz Republic** went one step further in the inclusion of biohazards, and they are classified within the framework of *bio-social disaster risks* with the most specific infectious diseases for the country presented: Siberian anthrax, typhoid fever, brucellosis, rabies, foot-and-mouth disease. **Montenegro** recognizes that epidemics could be secondary hazards resulting from earthquakes and they are classified within the group of biological hazards. Accordingly, a brief epidemiological profile of the country is given with emphasizing that there

could be a potential import of epidemics from other parts of the world e.g. MERS, SARS, bird flu, etc. The responsible entity for epidemiological prevention and response is the Montenegrin health services and epidemiological measures are part of the operational measures. Finally, in the case of the DRR strategy of *Georgia* highest level of inclusion can be identified. Biological hazards are included in the natural and man-made disasters classification with the epidemics and pandemics defined. Considering the response to them, it is recommended to establish flexible mechanisms for detection and response. They are included in the Action Plan for the period 2017 – 2020 with the stipulation of operational measures implemented in the multi-sectoral modality and led by the Ministry of Labour, Health and Social Affairs i.e. risk assessment, preparation of response plans, communication with the stakeholders and the broader public, establishment of emergency supplies, as well as implementation of the periodical simulation exercises coordinated by the Ministry of Internal Affairs.

Concerning the ***assessments, disaster management plans, and sectoral planning documents*** from the survey, it can be concluded that in most of them, the pandemic risks/biohazards are part of the overall national/local disaster profiles with data on past events and incidence rates. Furthermore, coordination, communication, and cooperation mechanisms i.e. with the health ministries and institutions being competent for the health risks are defined alongside the recommendations on the implementation of general and specific measures for mitigation, preparedness and response. The assessments are focused on the health risk analysis and evaluation with the provision of general measures and recommendations, whether the plans are elaborating the operational aspects of the preparedness and response to epidemics/biohazards. Sectoral plans are defining the epidemics/biohazards related competencies of the health sector e.g. ***Moldova*** (Health Sector Preparedness Plan), ***North Macedonia*** (Preparedness and Response Plan of the Health Care system when coping with Emergencies, Crises, and Disasters)[42] and ***Serbia*** (Law on Disaster Risk Reduction and Emergency Management and the Public Health Strategy). Under the *Other* section, the respondents referred also to newly adopted COVID-19 related documents e.g. ***Kosovo**** (Manual for Protection Against the Spread of COVID-19) and **Kazakhstan** (State Measures to Prevent the Spread of the Coronavirus Infection COVID-19 in the Republic of Kazakhstan). In this sense, the specific case is ***Ukraine*** with the adoption of the National Security Strategy (2020)[43] where biohazards are identified as one of the threats to the national security and they shall be additionally elaborated in the National Biosecurity and Biodefense Strategy which is commissioned for development.

Key finding #1

There is an essential coverage of the pandemic risk/biohazards in the existing national DRM strategic and operational frameworks documents providing foundations for functioning of the national risk management systems. Nevertheless, the pandemic risk/biohazards and health sector-related aspects are not integrated sufficiently, without details and specificity on the modus operandi on integration of DRR in the health emergency response and vice versa. Also, there is an insufficient integration of the public health aspects, which was confirmed during the response to COVID-19 and potentially affect not only the efficient and effective response but also is impacting the resilience of the national systems.

Most of the countries and territories are lagging behind the fulfilment of the Sendai Framework Target E: Number of countries and territories with national and local DRR strategies by 2020. Therefore, the countries and territories that have already adopted DRM strategies need to review them not only to better integrate the pandemic risk/biohazards but also to adequately reflect the systematic nature of the risk and better address the needs of the public health systems. Others should initiate the process of preparation and adoption of these strategies. Similar situation can be found in the the national operation planning and other documents section. Exceptions are the plans from the health sector, but in this case, the DRR aspects are not fully mainstreamed. Therefore, this pandemic crisis and the lessons-learnt alongside the identified needs is the excellent opportunity to initiate the process of a comprehensive update of the operational planning documents.

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42   https://tinyurl.com/yyyetaq7
43   https://zakon.rada.gov.ua/laws/show/392/2020#n2

II.2. Institutional responsibility for coordination of the pandemic risk/biohazards

Most respondents (25 or 66%) indicated that the Ministry of Health is the major institution with the overall responsibility for coordination of the pandemic risk/biohazards response, followed by NDMAs (12 responses) and other regular and ad-hoc entities and bodies mainly related to the health emergencies (16 responses).
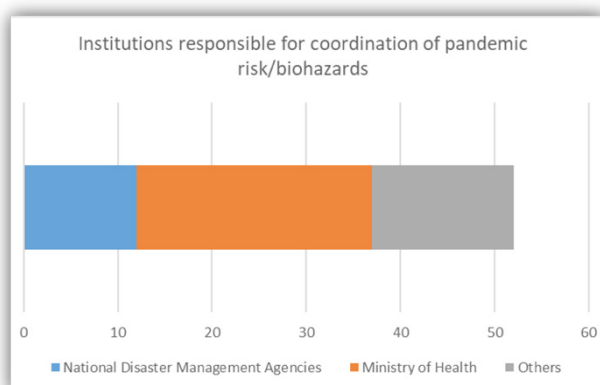

Figure 17 – Institutions responsible for coordination of pandemic risk/biohazards (n=53)

Observations:

On the individual level, there is a diversity of approaches in institutional coordination of the pandemic and biohazard risks response. The sub-regional division is presented in the table below.

➢ *Single institution coordination responsibility approach* - in **Belarus**, **Turkey**, **Turkmenistan** and **Ukraine**, the national ministries of health are in charge, whether in **Azerbaijan** it is the TABIB (the State Health Agency) and in **Montenegro** is the National Coordination Body for Communicable Diseases.

➢ *Dual institutions approach* i.e. **Armenia** (NDMA and the Ministry of Health), **Bosnia and Herzegovina** (NDMA and the Ministry of Health), **Georgia** (Ministry of Health and the Interagency Coordination Council to combat the Novel Coronavirus under the leadership of the Prime Minister of Georgia), **Kazakhstan** (Ministry of Health with support of the Sanitary Epidemiological Service of Kazakhstan), **Kosovo*** (NDMA and the Ministry of Health), **Moldova** (Ministry of Health and the Commission on Exceptional Situations under the Prime Minister for emergencies beyond 60 days of duration), **Serbia** (NDMA and the Government supported by the crisis coordination headquarter during crises) and **Tajikistan** (Ministry of Health and the Republican Headquarter for the fight against COVID-19 under the Prime Minister).

➢ *Multi-stakeholder coordination approach* is applied, when all of the proposed institutions are included in the coordination e.g. **North Macedonia** (NDMAs, Ministry of Health and ad-hoc Crisis Coordination Headquarter), **the Kyrgyz Republic** (Republican Task Force, NDMA, Ministry of Health) and **Uzbekistan** (NDMA, Ministry of Health, Ministry of Internal Affairs and other relevant institutions).

Sub-region	WB&TR	SC	EE	Central Asia
NDMAs	BIH, KS*, MK, SRB	AM,		UZ, KG,
Ministry of Health	KS*, TR, MK	AM, GE	MD, UA, BY	UZ, KG, KZ, TK, TJ
Others	ME, MK, BIH, SRB	GE, AZ	MD,	UZ, TJ, KG, KZ

Figure 18 - Table of responsible agencies for coordination of pandemic risk/biohazards per country and territory

Based on the desk review and the survey, it can be identified that the engagement of the NDMAs during the COVID-19 response is mainly through participation in the multi-sector response mechanisms contributing to the enhanced coordination, cooperation and communication, providing support services, alongside implementation of COVID-19 response-related activities on the top of their regular ones.

Key finding #2

There is an essential coverage of the pandemic risk/biohazards in the existing national DRM strategic and operational frameworks documents providing foundations for functioning of the national risk management systems. Nevertheless, the pandemic risk/biohazards and health sector-related aspects are not integrated sufficiently, without details and specificity on the modus operandi on integration of DRR in the health emergency response and vice versa. Also, there is an insufficient integration of the public health aspects, which was confirmed during the response to COVID-19 and potentially affect not only the efficient and effective response but also is impacting the resilience of the national systems.

Most of the countries and territories are lagging behind the fulfilment of the Sendai Framework Target E: Number of countries with national and local DRR strategies by 2020. Therefore, the countries and territories that have already adopted DRM strategies need to review them not only to better integrate the pandemic risk/biohazards but also to adequately reflect the systematic nature of the risk and better address the needs of the public health systems. Others should initiate the process of preparation and adoption of these strategies. Similar situation can be found in the the national operation planning and other documents section. Exceptions are the plans from the health sector, but in this case, the DRR aspects are not fully mainstreamed. Therefore, this pandemic crisis and the lessons-learnt alongside the identified needs is the excellent opportunity to initiate the process of a comprehensive update of the operational planning documents.

II.3 Pandemic risk and the DRM framework on a national level (roles and responsibilities)

Almost two-thirds of the respondents (26) replied that the roles and responsibilities of the entities involved in dealing with the pandemic are clearly defined in the existing framework. Also, this ratio (28 respondents) applies to the inquiry whether the pandemic risk considered for the assessment of disaster risk management capability at the national level.

Observations:

Concerning the roles and responsibilities, only in two, there is a reflection that they are not identified, in five of them there are mixed responses with YES prevailing as a summative response and in eight there is a unison response on the clarity of the roles and responsibilities. On the other hand, the respondents from half of the countries and territory think that the pandemic risk is well considered within the assessment of the disaster risk management capabilities at the national level, with respondents from only four of them with opposite opinion. These questions correlate with the section on the national response to the COVID-19 pandemic.

Key finding #3

With regards to the identification of the roles and responsibilities for the pandemic risk, as well as its integration within the assessment of the DRM capabilities, it is recommended to comprehensively review the national contexts of the countries and territories, alongside the revision and update of the strategic and planning frameworks.

II.4 Standard Operating Procedures (SOPs) for response to the pandemic risk

Almost, two/third of the respondents (27) replied that the necessary standard operating procedures for response to the pandemics have been adopted. Only respondents from two countries responded that there are no SOPs for the response to the pandemic risk.

Observations:

This question is a good indicator of the status of the development of relevant operating procedures which result in better disaster preparedness and response. In different countries and territories, they are on a different level of development and integration of the pandemic

SOPs are a standardized set of rules and procedures with clearly identified roles and responsibilities of the competent institutions, within the defined time framework and allocated resources, logical sequence of actions and measures ensuring efficient and effective coordination and cooperation of the DRM institutions.

risk aspects. In some of them, SOPs only relates to certain hazards and are applied partially in separate systems e.g. DRM, health, whether in others they are consistently applied across the entire DRM system ensuring uniform and successful disaster management. A best-practice in this sense is the example from **North Macedonia**, where a set of *SOPs for communication, coordination and cooperation among the Crisis Management System entities in a declared crisis situations[44]*. Accordingly, the management (response and support) of the outbreaks of epidemics is precisely defined with clear logical sequencing of the actions and the responsibilities and detailed time framework during the various phases of direct management of the epidemic, provision of assistance to the, directly and indirectly, affected population, logistical support, and dealing with consequences of the epidemic.

Key finding #4

SOPs is a key tool for the implementation of the disaster management plan in a timely, effective and efficient manner ensuring smooth coordination and cooperation of the involved responders. In most of the countries and territories of the ECIS region, there are previously adopted SOPs which are contributing to the national disaster management system. Nevertheless, given the complexity and the impact of the COVID-19 pandemic crisis, it is recommended to review them to reflect the existing response experience, lessons-learnt and to enable better preparedness for the future pandemic crisis.

II.5 Pandemic risk/biohazards in the scenario development and trainings portfolios

As per half of the respondents (20) the Scenario Development is the main area where the pandemic risk is included for better preparedness of the national systems. It is followed by simulation exercises – TTX (11 respondents) for testing the response capacities and resources, whether only 7 respondents reflected the more complex, "near real-life" situations of testing the disaster preparedness and response systems in their countries and territories for the pandemic related events.
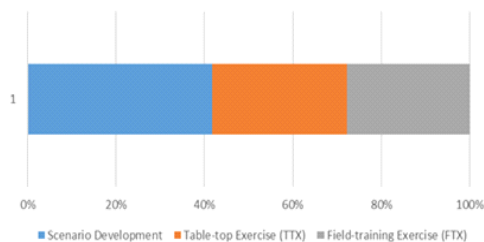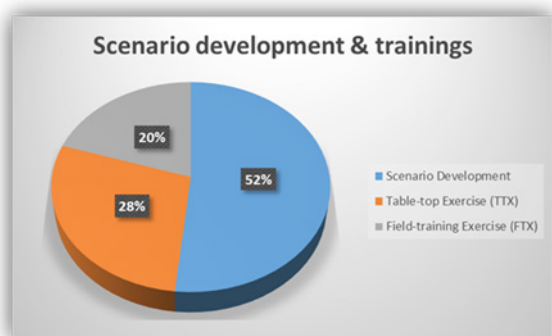

Figure 19 – Level of inclusion of the pandemic risk in scenario development and trainings exercises in ECIS countries and territories

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44   http://cuk.gov.mk/files/Standardni%20operativni%20proceduri%20B5%20eng.pdf

Observations:

Following the analysis of this aspect of the preparedness to pandemic risk/biohazards, the level of mainstreaming of the risk and hazard assessments in the development of scenario planning documents can be identified, as well as their practical testing through the two mentioned modalities. In general, integration of the pandemic risk/biohazards i.e. mainly epidemics are satisfactory. As can be seen from the table below, all countries and territories from the region have engaged in certain scenario development and training modalities.Montenegro, Turkey, Armenia, Moldova, Ukraine, Kazakhstan, Turkmenistan and Kosovo* declared that they have integrated these risks in all three modalities, whether the others have implemented them in two or only in one modality. Nevertheless, the analysis of the level of mainstreaming of pandemic risk/biohazards in the developed scenarios and conducted training exercises have not been tasked under this assignment

	WB&TR	SC	EE	Central Asia
Scenario Development	BIH, KS*, ME, MK, SRB, TR	AM, AZ	BY, MD, UA	KG, KZ, TJ, TK, UZ
TTX	KS*, ME, TR	AM, GE	MD, UA	KG, KZ, TJ, TK
FTX	BIH, KS*, ME, MK, TR	AM	MD, UA	KZ, TK

Figure 20 – Pandemic risk in scenario development, TTX and FTX in ECIS countries and territories

Furthermore, following the learning-by-doing approach, there is a positive example of conduct of a *simulation exercise* during the COVID-19 pandemic crisis in **Bosnia and Herzegovina** where the Armed Forces of Bosnia and Herzegovina organized a simulation exercise with participation of civil emergency structures i.e. civil protection and local authorities, which resulted in better and coordinated preparedness and response to the pandemic crisis.

Key finding #5

Scenario development is vital in the COVID-19 or similar pandemic response. With proper scenario planning, countries and territories can anticipate potential risks of pandemics and needs for better preparedness and with implementation of consequent training exercises, they can test the capacities, capabilities and readiness of their multi-sector systems for provision of timely, efficient and effective response in near-life situations. Furthermore, these events need to be always followed by evaluation and codification of lessons-learnt aimed not only to their operational enhancement but also supporting the transformation of the systems to a more resilient ones. Consequently, the NDMAs in the ECIS region needs to review the mainstreaming of pandemic risk/biohazards in the developed scenarios and conducted training exercises. This can be done either within the scope of the functional analysis of the national/sub-regional DRM systems or evaluations of the response to the pandemic crisis. Accordingly, customized recommendations and actions can be formulated for better integration of these risks and system response preparedness.

II.6 NDMAs engagement in cross-border cooperation in the prevention and preparedness of pandemic risk/biohazards

Half of the key respondents (19) responded that the NDMAs from their countries and territories are involved in cross-border cooperation in the prevention and preparedness of pandemic risk/biohazards activities.

Observations:

Twelve countries and territories in the ECIS region informed on the cross-border cooperation regarding the mitigation, preparedness and response to the pandemic risk/biohazards. On the sub-regional level, division is as per the table below:

WB&TR	SC	EE	Central Asia
BIH, KS, ME, MK, SRB,	AM, AZ, GE	BY	KG, KZ, TJ, TK

Figure 21– Table of countries and territories that have reported cross-border cooperation activities on pandemic risk

Cross-border cooperation is mainly considered to be done either by joint cross-border projects on disaster risk reduction activities, through the WHO sub-regional activities, or following the outburst of previous pandemics and infectious diseases. Usually, the main approach in this manner is to adopt cross-border cooperation procedures for the provision of services and emergency responding support, as well as humanitarian aid and supply of protection materials and equipment (e.g. provision of materials and equipment from Kazakhstan to the Kyrgyz Republic[45] or from Uzbekistan to the Kyrgyz Republic[46]). Positive examples can be drawn from the work of the two sub-regional DRM initiatives i.e. DPPI and CESDRR which have implemented a series of consultative and training events, provided expert support or information sharing. Furthermore, the CESDRR is issuing daily information on the COVID-19 status in the Central Asia countries, travel regimes, openness of the borders and the restrictions imposed. Also, they actively contributed to the immediate response following the Sardobin Reservoir Dam burst and flooding in Uzbekistan and neighbouring Kazakhstan.

Key finding #6

Response to COVID-19 and other pandemics and biohazards requires not only concerted international cooperation but also promoting and developing stronger sub-regional or trans-national cooperation. The COVID-19 pandemic revealed a lack of effective global and regional health risk governance cooperation, with the main emphasis placed on the cooperation regarding the restricted movement of the citizens or cross-border controls, etc. NDMAs need to more actively cooperate on fighting this pandemic crisis through timely information and data sharing, cross-border cooperation, as well as development and standardization of SOPs and other protocols.

4.3 III. COVID-19 PANDEMIC CRISIS AND NDMAs RESPONSE

The third part of the on-line survey contains a group of questions related to the response to the pandemic crisis including its timeliness, effectiveness and efficiency, institutional response framework, including the involvement of the NDMAs, mutual coordination and cooperation, use of various tool and resources, as well as identification of obstacles, strengths and weaknesses during the response alongside with identification of best practices and lessons learnt.

III.1 COVID-19 response in my country was timely and efficiently organized.

Most of the respondents (20) agree that the COVID-19 response in their countries and territories was timely and efficient, two respondents strongly agree with this statement and seven were neutral. On the other side, eight respondents disagree and one contributor to the survey was strongly disagreed with this statement.

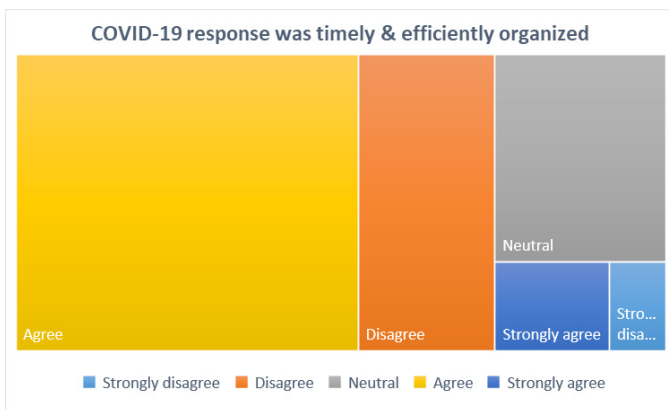Figure 22 – Reflection on the timely and efficiently organization of the COVID-19 pandemic response

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45   https://www.for.kg/news-677129-en.html
46   https://ru.sputnik.kg/society/20200402/1047680297/kyrgyzstan-uzbekistan-gumpomoshch-gruz.html

Observations:

Feedback to this question of the survey relates to the overall response of the national systems to the pandemic crisis provided during the so-called "*second wave of COVID-19*" that is happening with widespread, local transmission, acute stresses to the health system, economic uncertainty of the business, prolonged restrictive measures and extended remote working and studying modalities. This assessment is not thoroughly reviewing the individual country and territory dossiers and case studies on COVID-19 pandemic response, but on an accumulative level is focused on the NDMAs and the effects upon their work and operations. Furthermore, the countries and territories from the ECIS region do not have prior experience in response to the pandemic crisis, like the countries of Southeast Asia or West Africa for example. Nevertheless, it can be seen that the main feedback is that the national systems timely and efficiently responded to the pandemic crisis, based upon their capacities, capabilities and available resources, while being supported by the international community.

Respondents from one country unanimously stated their disagreement with the efficiency of the response, whether in the cases of the other five countries there is a disagreement of one of the respondents. Main feedback provided by respondents that disagree with the efficiency of the COVID-19 response relates to challenges during the initial response i.e. lack of strategic vision and action plans how to organize the response during the first phase of the crisis, lack of contingency planning, insufficient provision of protective materials, and ineffective coordination among the responders and different sectors of government.

On the other side is the positive feedback provided by the respondents emphasizing the following aspects of the efficient response: activation of the crisis coordination bodies and mechanisms, mobilization of experts bodies and emergency responders, activation of the NDMAs emergency operation centres and situation rooms for better planning and coordination of resources, support and provision of the business continuity, constant assessment and needs prioritization, implementation of restrictive measures to prevent the spread of the disease, imposing of quarantine and isolation measures, preventive measures for disinfection, crisis communication with the general public and the citizens, allocation of COVID-19 response funds, etc. Furthermore, some of the countries provided humanitarian support to the neighbouring countries or others e.g. ***Kazakhstan, Turkey, Uzbekistan and Azerbaijan***.

However, all respondents agreed that a disastrous event of this magnitude has not happened before and that the challenges for effective response were great. Their countries and territories for the first time were forced to respond to a high-consequence, low-probability event.

Key finding #7

Provision of timely, effective and efficient response to a pandemic crisis requires development and implementation of multi-hazard, multi-risk and multi-sector assessment, planning and coordination activities, alongside comprehensive capacity building of the personnel, provision and supply of resources, as well as flexible mechanisms for financing of the response and recovery phases. Based on the feedback from the respondents, overall response to the pandemic crisis until now is considered to be timely and efficient. However, the NDMAs together with the involved institutions do not have experience in this type of complex disasters and therefore they should assess and evaluate their response aimed for better preparedness and response for future complex disasters and crisis. Good examples and best practices can be learned from the countries and territories that have previously experienced serious pandemics e.g. Hong Kong Special Administrative Region of China, Singapore, Korea, Thailand.

III.2 Organization of the response to the COVID-19 pandemic on national levels

The organization of the response to the pandemic was differently structured across the region, based on national DRM and health emergency profiles, and inter-sector cooperation and coordination frameworks. Following the key respondents' feedback, it can be seen that response was organized and led through the health emergency structures (19), followed by ad-hoc crisis coordination structures (18), DRM structures (17) and others (7). The Ministry of Health (21%) is considered as the key institution for response, alongside the key line ministries and municipalities (16% each), NDMAs (13%), CSOs (12%), agencies (11%), academia (7%) and other (4%).
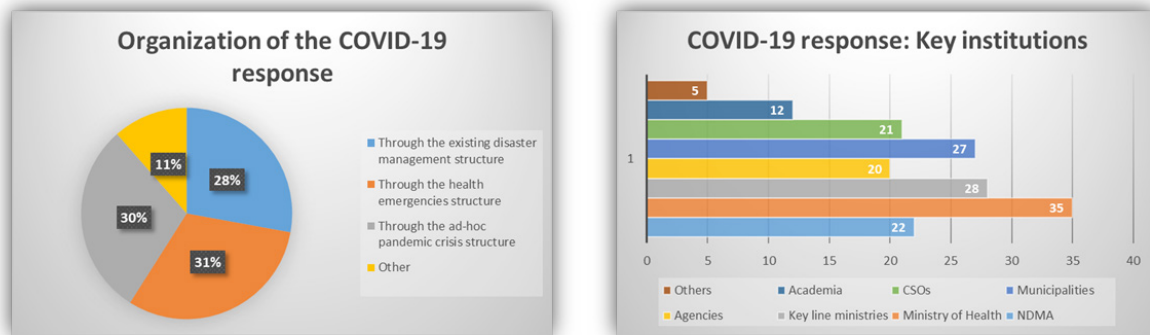

Figure 23 – Institutional organization for the COVID-19 response in the ECIS region

Observations:

Organization of the COVID-19 response in the countries and territories generally was following their national contexts, DRM frameworks, as well as health emergency systems. Almost in all countries and territories in the world, the Ministry of Health is the focal point that is competent for response to health risks. Usually, it is coordinating the health emergency response mechanism, while in the situation of more complex events or when the emergency or crisis are declared, the coordination is transferred to the governmental crisis coordination bodies, whether in less complex ones, the existing DRM structures are taking over the lead. In the case of the ECIS countries and territories, except Georgia and Ukraine where the NDMAs were in charge, and Turkey and Belarus – health emergency authorities, in all others the organization of the response was done by ad-hoc coordination bodies in cooperation with the health emergency authorities and with support of the NDMAs. The ministries of health are leading the response, with a contribution of other key line ministries given the specifics of the COVID-19 impacts e.g. socio-economic where competent ministries were contributing to response through creation and adoption of specific policies and measures. They are followed by the municipalities/local authorities. They are considered as first responders to disasters, but in this situation they got the role of first preventers, implementing most of the local level preventive measures with their local resources e.g. disinfection of public spaces and facilities, provision of facilities for isolation and medical triage, supporting the nationally imposed restrictive measures, organization of local-level support for infects citizens in isolation, persons in quarantine and vulnerable citizens in times of lockdown, etc. NDMAs implemented various services from its emergency response portfolio, whether the CSOs were active in the organization of volunteering teams for support of vulnerable citizens, public awareness activities, as well as resource mobilization and distribution of protective materials.

Key finding #8

During pandemics, the health emergency system are mobilized for providing immediate response through implementation of specific actions i.e. early detection of cases, stopping of the transmission of the virus, surveillance and rapid assessments of the situations, assessing the needs and communicating the responding measures and actions. NDMAs are providing essential support to the health emergency sector either through fulfilment of their essential competencies or responsibilities or through additional ones, which can fit within the scope of their expertise.

III.3: Involvement of the NDMAs in the pandemic crisis response and their efficiency

Most of the respondents (46%) provided feedback that the NDMAs were involved in the response as part of their regular competencies, followed by the ad-hoc pandemic crisis structures (26%), health emergency structures (15%) and being involved through other modality (13%). Furthermore, more than a half of the respondents agreed with the statement that the NDMAs involvement in the COVID-19 response was efficient (55%), with two of them strongly agreeing with this statement (8%), some of them being neutral (32%) and only two respondents disagreed. If we correlate this question with the one on the timeliness and efficiency of the system, we will see that unlike in that case, in this one there is no strong disagreement.
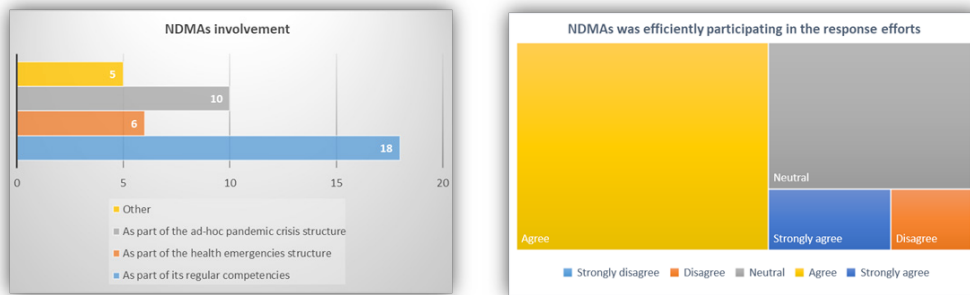
Figure 24 - Involvement of the NDMAs in the pandemic crisis response (n= 39) and their efficiency

Observations: Positive feedback from the respondents mainly related to the significant contribution by the NDMAs in the support to the crisis coordination of the response and commanding on all levels, essential coverage with planning documents and procedures, provision of immediate response and mitigation measures as per the available expertise and resources, supply and provision of protective materials and equipment, provision of support to the local level authorities and the health emergency system, professional communication and information dissemination, and coordination of international assistance. ***Disagreeing statements*** relates to the de-focusing from the essential civil protection area competencies, shortcomings of the existing normative frameworks with stipulation for complex disasters and lack of initial preventive response i.e. testing of population.

Respondent's statement:

"NDMA was maximally loaded to resolve technical issues to combat the pandemic up to providing monitoring points throughout the country. Organizational measures of the Civil Protection System remained out of sight."

Key finding #9

The COVID-19 pandemic response of the governments' mechanisms in different countries and territories is different due to variations of the national contexts, available capacities and capabilities of the emergency management systems, etc. This situation was especially challenging for the ECIS region that have not responded previously to a complex pandemic crisis of this magnitude. Nevertheless, the NDMAs and their mechanisms were activated and efficiently participating in the response efforts valuably contributing to the response through support to the coordination of the pandemic crisis response operations.

III.4 Interaction of NDMAs with other ministries and stakeholders to curb the spread of the pandemic

Observations:

There is a consensus among the key respondents that the NDMAs were working closely with other ministries and stakeholders to curb the spread of the pandemic, both on national and local levels. No major disruption in this interaction were noticed or reported by the respondents. Most of the activities implemented were mentioned above, so additional qualities and expertise that is embedded within the NDMAs needs to be mentioned i.e. creativity and solutions finding for timely and efficient response, provision of crisis management centres (**Georgia, North Macedonia**) or coordination done by the emergency operation centers (**Kosovo*, Kyrgyz Republic**) for better management of the pandemic crisis, providing guidance and coordination of the activities of the operational headquarters, which includes interested state and local authorities (**Kazakhstan**), support to enhancement of the legal aspects of the pandemic risk and the continuity plans of the central and local institutions based on the manual of the public health authorities (**Kosovo***), asset management and provision of support from the state reserves (**Kazakhstan**), provision of aviation services by the MES to provide emergency medical assistance to the population and evacuation citizens in needs (**Kazakhstan**), re-designing the premises of the Manas airport to a temporarily hospital (**Kyrgyz Republic**).

> **Key finding #10**
>
> NDMAs in the ECIS region are key-institutions in the multi-sector response to the COVID-19 pandemic crisis ensuring timely and beneficial interaction with other stakeholders. Alongside the already mentioned positive supporting activities, there are many more operational functions that are emerging from NDMAs capacities and capabilities and they were implemented successfully.

III.5 Existence of the national preparedness, mitigation and response strategy or preparedness and response plans

Out of 38 respondents, the majority of them (21) replied that there is existent national preparedness, mitigation and response strategies or preparedness and response plans. On the other side, 17 of them have not agreed on the existence of these kinds of documents.

Observations:

On a country/territory level, thirteen of the them (or 76%) declared that they have some document that fits in this category, whether only three of them stated the non-existence of these documents within the framework of their DRM national systems as presented in the table below:

	WB&TR	SC	EE	Central Asia
Existence of strategies/plans	BIH, KS*, ME. TR	AM, AZ, GE	BY, MD, UA	KZ, TJ, TK
Non-existence of strategies/plans	SRB			KG, UZ

Figure 25 – Breakdown of countries and territories with or without strategies/plans for guidance on the COVID-19 pandemic response

These strategies and plans can be divided into two groups: *DRM related* and *COVID-19 related*. The *former* refers to the overall disaster response, whether the *latter ones* are related either to the pandemic influenza or they are adopted following the outbreak of the pandemic. So, in the group of DRM related are the following ones: **Tajikistan** (Republican Plan and Response Strategy of REACT Group adopted and agreed with Prime Minister of Tajikistan), and **Turkey** (National Disaster Response Plan, 2013). Two of them are having the so-called *hybrid approach* i.e. they have

adopted both types of documents: **Kosovo*** (Response Plan, the COVID-19 Coronavirus Protection Manual and the COVID-19 Pandemic Prevention and Control Act) and **Kazakhstan** (Civil Defense Plan of the Republic of Kazakhstan and the State Measures to Prevent the Spread of Coronavirus Infection (COVID-19) in the Republic of Kazakhstan, 29.01.2020). Finally, the third group adopted the *response plans related to the pandemic risk* in particular: **Armenia** (as part of the New Coronavirus Disease (COVID-19) Prevention, the Ministry of Health has developed a model (temporary) emergency response plan, which is subject to implementation by all health care providers), **Bosnia and Herzegovina** (Pandemic Influenza Preparedness and Control Plan), **Georgia** (based on Ordinance No.347 of the Government of Georgia of May 13, 2014 "On approval of the especially dangerous pathogens and biological incident response plan" the actions and activities are carried out to combat COVID-19), and **Moldova** (Covid 19 Preparation and Response Plan in the Republic of Moldova). The specific cause can be found in **North Macedonia**, with the following distinct features. There is a plan for the response of the health sector during emergencies, crisis and disasters, an Action Plan of the Government for the COVID-19 response during the declared crisis situations, as well as early engagement of the municipalities in preparation and adoption of local response action plans incorporating some DRR competencies.

Key finding #11

The COVID-19 pandemic identified the needs of the countries and territories to comprehensively anticipate health risks and to better plan for pandemics prevention, response and recovery. Even though that the ECIS region has a good record of prevention strategies or preparedness and disaster response plans, still, there is a need of updating with the recent events and their enforcement by the NDMAs. These plans should outline the roles and responsibilities of the entities of the system and the implementable actions and measures alongside with realistic allocation of resources. The positive side is that some of the countries and territories engaged in their early adaptation or preparation of COVID-19 related ones, even though, not all aspects of the pandemics were known at that stage. Improvisation and adaptation to new circumstances of the risk are features of transformative and adaptive risk management approach. Given the fact that the NDMAs are the key institutions during the disaster response, they should lead a process of adoption of these multi-disaster and multi-sector plans, on behalf of the national and local governments.

III.6 Obstacles identified during the NDMAs response and how they could be improved

More than two-thirds of the respondents identified obstacles during the NDMAs contribution to the COVID-19 response from different sources.

Observations:

Identified obstacles can be summarized in two groups: *related to the DRM system* (its establishment and framework) and *the public health sector, including the pandemic risk/biohazards specific*.

DRM related obstacles	Health sector-related
• Insufficient mainstreaming of the pandemic risk in DRM normative frameworks;	• Insufficient mainstreaming of health risks in DRM, so they are considered as two separate areas;
• Insufficient guidance on institutional frameworks and mechanisms for pandemic risk mainstreaming in DRM;	• Lack of vision, action plan and methodology for assessing the risk of the epidemic;
• Lack of DRM institutional capacities to react in pandemic crisis;	• Lack of integrated emergency management system;
• Establishment of ad-hoc coordination bodies outside the existing DRM structures;	• Political interference;
• Local authorities cannot act as first responders in pandemic crisis due to lack of normative regulation and strict vertical hierarchy;	• Decision and policymakers still don't have a clear understanding of the essential roles of the NDMA;
• Insufficient professional expertise and training of responders for pandemics crisis response;	• Lack of sufficient financial resources for a comprehensive response to the pandemic crisis;
• Insufficient implementation of adequate mitigation measures;	• Inadequate application of measures and inefficient inspection services;
• Lack of early warning and alerting in event of pandemic/biohazards crisis;	• Insufficient adequate health infrastructure;
• Insufficient funds for financing immediate response and early recovery activities during;	• Insufficient specialized health resources;
	• Lack of adequate knowledge of the health emergency personnel;
• Lack of contingency planning in events of complex disasters;	• Lack of protective equipment and tools;
	• Insufficient number of testing sites, staff and tests for early detection of affected citizens;
• Insufficient enforcement of relevant legislation during the pandemic crisis.	• Non-compliance with prevention/mitigation measures by part of the population;
	• Poor lessons-learnt codification by the health emergency entities.

Figure 26 – Table of identified obstacles by the key respondents

Key finding #12

Identified obstacles are emerging from the DRM and health emergency frameworks, existing capacities, professional expertise and knowledge, available response resources, rules and procedures, as well as health response measures to the crisis. They are referring to various aspects that need to be enhanced aiming to have a successful mitigation, preparedness and response to future pandemics and/or complex disasters. Also, they can be correlated to other parts from the survey e.g. existence of strategic and planning frameworks, cooperation and coordination, strengths and weaknesses of the NDMAs response, etc. Therefore, they have to be reflected in the evaluations of the response phase and adequately addressed in the follow-ups recovery plans or improvement of the normative and institutional frameworks for reduction of the pandemic risk and response to complex disasters.

III.7 Strengths and challenges in the NDMA response to COVID-19 pandemic

Observations:

The respondents stated their opinions regarding the strengths of the response and its weaker parts/existing challenges. As summarized in the table below, there are slightly more strong aspects of the NDMAs involvement in the pandemic crisis response than the weaker ones.

Strengths	Weaknesses/Challenges
- Flexibility of the NDMAs to COVID-19 response; - Technical capacities of NDMAs to support the management of the pandemic crisis response and coordination of activities; - Experienced personnel from previous disasters; - Existing assessments and planning documents; - Experienced personnel to mitigate and respond to various disasters and crisis; - Rapid response to the pandemic crisis during the initial phases; - Mobilization of additional resources, volunteers and NGOs; - Timely response during the initial phases and implementation of restrictive measures; - Activation of crisis management centres and emergency operations centres for crisis response; - Professional and dedicated health and emergency responders. - Communication and information dissemination using different channels and targeting all citizens - Use of ICT tools and innovative solutions for information dissemination on the pandemic, availability of emergency services and recommended behaviours and procedures; - Efficient implementation of protective measures by NDMAs including support to executions of the restrictive measures; - International solidarity; - Cross-border cooperation and provision of support by neighbouring countries/regional partners; - Each agency quickly implements the actions under its jurisdiction according to the approved plans; - Support of NDMAs in establishment monitoring points, mobile units/facilities, triage centres; - Red Cross has already developed preparedness and response plans for epidemics; - Cooperation, coordination and communication; - Rapid building rapid of alternative alternative-care/mobile hospitals sites; - Efficient development of COVID-19 pandemic protocols and procedures for all sectors.	- Lack of effective coordination among systems; - Insufficient mainstreaming of health risks in the DRM strategic and planning documents; - Lack of comprehensive assessment of the health emergency sector; - Insufficient knowledge and expertise in management of the pandemic crisis response; - Lack of specialized capacities and trainings of the involved health personnel and responders; - Potential ill communication between DRM agencies and the health institutions; - Limited capacity of the health facilities to accommodate COVID-19 patients; - Limited competencies of the local authorities in response to health emergencies; - Lack of vision, action planning for sustainable recovery in post-COVID-19 times; - Political interference in decision-making during response to the pandemic crisis; - Lack of pandemic risk related SOPs. - Lack of human resources and health facilities for efficient response e.g. testing facilities, medical personnel; - Insufficient involvement of NDMAs on local level pandemic response; - Lack of a comprehensive risk assessment to ensure the preparedness of the health system for surge of cases; - Fatigue and exhaustion of responders; - Potential infection of the responders leading to shortage of specialized staff; - Insufficient provision of psychological support to the first responders affecting their overall well-being; - Limited focus of the media; - Many fake news and misinformation on the nature and impact of the pandemic; - Weak provision of special equipment in all regions; - Poor availability of medicines and breathing apparatus. - COVID-19 related waste management protocols and procedures.

Figure 27 – Table of Strengths vs. weaknesses/challenges in NDMAs response

These statements are contributing to the SWOT analysis of the NDMAs role in the future pandemics, as well as they are in correlation with other answers related to the interaction of NDMAs with other entities from the response mechanisms, impact on the work and operation, positive changes or negative impacts.

Key finding #13

Strengths and challenges that were identified by the respondents are more or less similar in the most of the responses, despite various professional background. Main areas of strong attributes of the NDMAs and the DRM systems were identified, alongside the existing challenges, mainly, in the public health sector and the unprecedented and unexpected impact of the pandemic crisis. As a follow up it is necessary to support further integration of these sectors, together with capacity strengthening of the key institutions and empowering others to prevent and protect.

III.8 Impact of the COVID-19 pandemic on the work and operations of the NDMAs

Observations:

The impact of the pandemic on the NDMAs work and operations can be qualitatively analyzed and can be seen through the positive/negative changes resulting from the crisis, as well as numbers of measures/actions implemented. These questions were answered by all respondents and they are summarized below:

Figure 28 – Most important action/measure implemented by the NDMAs during the pandemic response

The impact of the COVID-19 pandemic crisis on the work and operation of NDMAs can be summarized as the following:
- Lack of capacities, knowledge and resources for this type of complex disasters;
- Strong learning opportunity for the NDMAs given their inexperience in the pandemic risk/biohazards mitigations and response;

Identification of existing weaknesses and vulnerabilities of the DRM and health emergency response systems, as well as opportunities and modalities for their improvement;
- Most of the NDMAs adapt to the existing situation and due to the inexistence of previous expertise and knowledge improvised[47] a lot in their response measures and actions. This led to experienced-based development of skills and knowledge.
- The COVID-19 pandemic emphasized the absence of an adequate pandemic risk framework, expertise and related infrastructure.
- Given the specific profile of the pandemic crisis, no assessment of the needs and disaster impact

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47   Kendra, James, Wachtendorf, Tricia. *Improvisation, Creativity, and the Art of Emergency Management.* 2007.

could have been done. Existing PDNA methodology does not cover the impact of the pandemic risk/biohazards and the NDMAs could not have proceeded with the consequent assessment.

· Direct impacts to the NDMAs were reflected in reduction of the staff, either due to the specific protocols for working operations during COVID-19 or infected personnel, as well as postponing of the working programmes and projects, and investments. Accordingly, less dangerous modality of working operations were defined, either to remote-working or work from office in shifts and respecting the physical distancing.

> "In the absence of previous experience, precise frameworks, plans and recommendations for action, the rule was once again confirmed that improvisation and creativity are important factors for successful emergency management."

· Long-term response and engagement of the personnel cause overwhelming, fatigue and stress to the emergency responders.
· Difficulties in coordination and communication with local and international partner organizations for the implementation of projects and activities.
· Expanding of the existing portfolio of competences with specific ones deriving from the pandemic crisis e.g. securing the quarantine and isolation centres, etc.
· Lingering financing by the national and local authorities.
· Due to travel restrictions, difficulties in the provision of logistics and operational support, especially during the initial phase of the pandemics.
· Complex procedures for public procurement of necessary protection materials and equipment in most of the countries and territories.

On the other side, the **most important measures/actions** were identified as follows:
· Coordination with other national and local stakeholders;
· Activation of national response plans;
· Establishment of Emergency Operations Centers and Crisis Management Centers;
· Communication, information dissemination and public awareness-raising;
· Establishment of call-centres and hot-lines for COVID-19 related information of citizens;
· Provision of logistic and operational services;
· Provision of transportation services on behalf of the health authorities;
· Implementation of various preventive epidemiological measures;
· Support to enforcement of the restrictive measures and quarantines, as well as the provision of board and lodging for citizens in quarantine and isolation;
· Disinfection of public spaces and facilities;
· Coordination, acceptance and distribution of international aid;
· Supply and provision of protective materials and tools and equipment to the health facilities.

Negative and positive changes resulting from the COVID-19 pandemic

In total 36 out of 38 key respondents (95%) stated their opinion regarding the positive and negative changes resulting from the pandemic.

General negative changes resulting from COVID-19: loss of life, socio-economic slowdown and stagnation, increased unemployment and poverty levels, exacerbated inequalities and vulnerabilities, increased number of citizens in needs, worsened psychological and mental health of the part of the population resulting from the pandemic and isolation/quarantine measures (especially in the urban areas), changed patterns in the everyday life e.g. social/business/education, increased vulnerability of women, temporary lack of opportunities for the youth, reduction of movement of the elderly, reduced participation of elder people in active life, worsened physical and mental health of the elderly, limited access to services, increased levels of fear and uncertainty about the future amongst the citizens, poorer educations services and access to education, increased financial costs of services, decrease of social cohesion due to limited social interactions, exacerbation of vulnerability of informal workers and citizens disproportionally affected by the crisis.

Negative changes on the NDMAs work and operation	
Planned activities of NDMAs postponed e.g. operational development, investments in resources and trainings, etc.	Reduction of normal activities and provision of services due to the prioritization of the response to the pandemic crisis that potentially lead to exposure and vulnerability of the population
Procedures for adoption of strategic and planning documents, normative acts postponed	Lack of sufficient quantities of protective equipment
Political influence on the decision making in critical situations	Broken supply channels for provision of protective and other equipment
Some of the NDMAs faced difficulties in management of handling disastrous events in parallel to the pandemic crisis due to lack of resources	Rapid utilization of available resources for efficient response to the pandemic i.e. financial, material-technical, etc.
Deficiencies in the planning process	Delay of non-essential health services
Unpreparedness of the part of the government institutions to switch to remote/online modality of work	Misinformation and production of fake news seriously affecting the credibility of NDMAs work and the trust of the general public
Increased number of responders affected by COVID-19 affecting the level of operational preparedness of NDMAs	Absence of joint operational response plans for pandemic risk/biohazards and complex disasters
Fatigue and decreased motivation of the emergency personnel	Identification of organization gaps and bottlenecks
Overall well-being of the responders affected by the severity of the pandemic crisis	Decrease of motivation of the personnel
Lack of counselling and psychological support to the responders	Unpreparedness to work remotely for the prolonged time
Stress and traumatic experiences of the emergency responders	Working long hours and shifts

Figure 29 – Negative effects on NDMAs work and operation resulting from the COVID-19 pandemic

General positive changes resulting from COVID-19: increased solidarity among the population, sense of collectiveness among citizens, support to national economies, efficient introduction of the working-from-home modality, support to national tourism, digitalization of public services, designing of innovative solutions, improved practising of WASH, positive impact on the environment (e.g. less pollution, decrease in greenhouse gasses emission, cleaner air), people have become more attentive to their health, etc.

Positive changes resulting from COVID-19	
DRM system	*Health emergency system*
Strengthening of the overall DRM systems	Learning-by-doing approach for professionals
Opportunities for overall improvement of the NDMAs work	Construction or adaptation of new health facilities
Strengthening cohesion and NDMAs capacities	Rapid mobilization of health resources
Introduction of the virtual modality of work	Supply of necessary medical equipment
Business continuity of NDMAs	Rapid introduction of health protocols
Positive changes resulting from COVID-19	

DRM system	Health emergency system
Improvement of the risk and hazard assessment resulting in update of the risk and hazard assessments integrating the pandemic risk/ biohazard	Activation and testing of the national emergency response plans and procedures followed by an update of the existing documents and SOPs
Improvement of the operational planning process resulting in the adoption of new and update of existing plans	Digitalization of the emergency services through the designing of E-solutions and tools and mobile applications
Identification of gaps and prioritization of needs for NDMAs development	Observance of the health protocols by the majority of the population
Specialized professional development of the emergency responders for pandemics	Emergence of the biosecurity as a salient topic for the emergency management professionals
Learning and skills development opportunities for the personnel	Increased awareness of the broad public and citizens on risk reduction
Testing of the emergency response mechanism in a real-life situation	Flexible working options in the public sector contributed to increased productivity
Attainment to the *Build-Back-Better* principle in post-pandemic recovery frameworks and plans	Improvement of the inter-institutional coordination and cooperation
Evaluation and codification of best practices and lessons learnt	Building trustful partnerships among responding institutions
Activation of regional mechanisms for support	Multi-sector approach in response
'Stress test' which should help in pivoting toward 'building forward better'	Specialization of medical personnel for pandemic response
Continuous preparedness under the new normal	Volunteering teams
Possibility for improvisation during the response to the crisis	
Need to start to understand new threats and risks	

Figure 30 – Positive effects to NDMAs resulting from the COVID-19 pandemic crisis

Observations:

Similar to the other sectors, there is evidence that the pandemic crisis has a strong impact on the work and operations of the NDMAs across the ECIS region. Nevertheless, since they are generally and continuously prepared to respond to sudden events i.e. disasters and accidents, the magnitude was lower and at certain phases of the crisis, the effects were absorbed. Principally, the impact and the negative effects can be understood through the lenses of the internal and external aspects. Concerning the former ones, most immediate was felt in the working operations of the NDMAs due to the restriction of the staff, remote working modalities, infected personnel, increased workload, difficulties to manage more than one

Respondent's comments:

"NDMA was able to establish uninterrupted video-conference communication with all ministries, departments and regions around the clock, allowing prompt decision-making by the Republican headquarters. I used my technical potential to the maximum."

disaster at the same time, lack of adequate planning documents and procedures, increased responsibilities, insufficient resources, the fatigue of responders, etc. The latter ones resulted in complex coordination and cooperation with other entities, less financial allocations, political influence on the decision-making process, increased regulation, lack of adequate capacities, knowledge and expertise for complex disasters including pandemics, inadaptability of the state system to crisis, absence of pandemic recovery needs assessments, variances between the DRM and health emergency management systems, etc. On the contrary to this, this crisis provided an opportunity for NDMAs to develop further through adaptation to the existing situation and transformation of their roles and responsibilities, as presented in the table above. Among the other positive effects, some of them are very important to be further mainstreamed in both systems i.e. need for convergence between DRM and health emergency systems, the emergence of the pandemic risk/biohazards as a prominent topic among the emergency management professionals, necessary business continuity of operations and contingency planning, the potential for improvisation in the emergency management, as well as the obvious need to start to analyze new risks and threats and to be prepared for high-consequence, low-probability events, beyond the current business-as-usual working mode.

III.9 What has not been done by the NDMAs and can be done in future?

Within the structure of the on-line survey, key respondents had an opportunity to provide feedback on what has not been done by the NDMAs during the COVID-19 pandemic crisis, but it can be done in the follow-up response or during future pandemic crisis. Accordingly, key respondents from 8 countries and territories provided feedback. However, the absence of responses from other participants in the survey does not mean that in their countries and territories everything has been done during the response to the COVID-19 pandemic or it cannot be done in the future.

#	Countries and territories	Description
1	Armenia	• Active participation in management of the quarantine activities at all levels; • Scenario-based planning.
2	Bosnia and Herzegovina	• Utilization of online platforms; • Involvement of different stakeholders in solving of problems and issues; • More strategic approach in planning of procedures.
3	Kosovo*	• Timely establishment of the coordination structure during the initial phase of COVID-19; • Capacity building, training and responsiveness of entities and emergency response services for pandemics/biohazards; • Greater political support during the whole duration of the response.
4	Kyrgyz Republic	• Activation of the Inter-sectoral Committee of Civic Protection and Scientific and Technical Council of the Civil Protection; • The unified integrated system for monitoring and forecasting emergencies with their operational forecast and assessment of disaster risks, especially in terms of biological and social manifestations, was not launched.
5	Moldova	• Pandemic risk assessment.
6	Montenegro	• More involvement of NDMA in mitigation activities; • Preparation and adoption of National Disaster Risk Assessment.
7	Tajikistan	• Deployment of mobile hospitals.
8	Ukraine	• Pandemic/epidemic planning to include sufficiently in the NDMA strategic planning.

Figure 31 – Actions have not done by NDMAs and can be done in future

III.10 Participation of the National DRR Platforms and/or other entities

In total 21 key respondents confirmed that the National DRR Platform and/or other entities from the national DRM systems participated in the COVID-19 pandemic crisis response providing various services or support. Furthermore, these entities were activated in 10 out of 17 ECIS countries and territories.
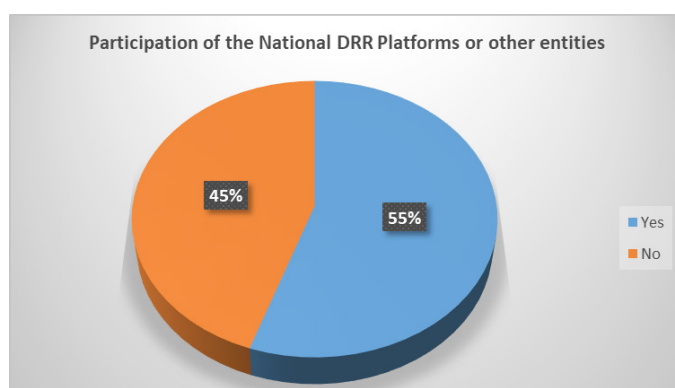
Figure 32 – Participation of the National DRR platforms or other entities in the COVID-19 pandemic response

Observations:

As mentioned above, National DRR Platforms are established in 11 countries of the ECIS region as presented in the table below.

Western Balkans and Turkey	South Caucasus	Eastern Europe	Central Asia
BIH, ME, MK, SRB, TR	AM	BY, UA	KG, KZ, TJ

Figure 33 – Countries from the ECIS region with established National DRR Platforms

In particular countries, this activation of the platforms and other entities was different, being contextualized to the national DRM framework, level of participation of the external entities and organizations, provision of resources, centralized or decentralized profiles of the emergency management systems, etc. Armenia is one of the rare countries globally where the National DRR Platform (ARNAP Foundation[48]) was engaged in providing support to the pandemic crisis response by implementing project activities (more on this in the Armenia COVID-19 Snapshot section). Also, the Secretariat of the National DRR Platform in the Kyrgyz Republic together with an Alliance of NGOs worked on the development of recommendations for enhanced response. Also, examples of involvement can be identified either on the side of the government structures or the NGOs and others. Regarding the former following examples were

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48   http://www.arnap.am/?lang=en

identified as follows. In Ukraine, the State Commission for Technological and Environmental Safety and Emergencies was activated and actively engaged. Uzbekistan initiated the Government System of Prevention of and Activities in Emergency Situations represented by all key ministries and governed by the presidential decree. On operational response levels, in Montenegro and North Macedonia municipal protection and rescue teams, were activated for providing support to the medical, emergency and other required services from the public sphere to the local authorities during the local level response to the pandemic. Moldova activated the National Commission on Exceptional Situations (during the emergency period) and the National Commission for Emergencies in Public Health to provide specialized and focused support to the pandemic response. Also, there are evidences of the utilization of available armies' resources in Bosnia and Herzegovina and North Macedonia. As for the involvement of the NGOs and others, in North Macedonia, Red Cross of the Republic of North Macedonia was the backbone of the local level operations through the delivery of packages and services for the citizens in isolation and the citizens in needs.

Key finding #16

Like the other complex disasters, the COVID-19 pandemic crisis requires engagement of various institutions and entities in a multi-sector way to ensure timely and efficient response and resilient recovery. Even though the National DRR Platforms were not engaged in most of the region where they are established, they can play a prominent role, not only in the implementation of small-scale actions and public awareness and information dissemination activities but especially through their role as a forum for strengthening of the disaster risk management systems. As a multi-institutional and multi-sector mechanisms for advancing DRR and resilience building, they can initiate thematic discussions on the pandemic crisis response, research and development activities following the pandemic crisis, knowledge and experience sharing, recommending better mainstreaming of health risk and emergencies for advancing of the system and improvement of the mitigation, preparedness, response and recovery for the benefit of all citizens. Especially the cross-cutting aspects of DRR can be adequately reflected e.g. gender, disabilities, youth, etc. Other above-mentioned institutions are valuable entities of the systems and contributors to the resilience of the countries and territories and cooperation and partnership with them should be strengthened and stimulated in the future.

.III.11 BEST PRACTICES AND LESSONS-LEARNT

Within the framework of the online survey, the respondents had the opportunity to list the best practices achieved so far in their countries and territories, as well as identified lessons-learnt. They are the following:

#	Countries and territories	Best practice
1	Armenia	• Engagement with local and regional administrations; • Assessment of 3 health facilities under the WHO Hospital Safety Index methodology done by the ARNAP Foundation; • Observance of safety rules during disinfection works.
2	Belarus	• Continuation of working operations in the new normal.
3	Bosnia and Herze-govina	• Coordination meetings facilitated by online apps with a high participation rate of the partnering institutions; • Utilization of internal DRM plans.
4	Georgia	• Securing the provision of the quarantine and isolation measures.
5	Kosovo*	• Secondment of experienced staff to the Emergency Operations Center; • Governance continuity plan during the COVID-19 pandemic; • Preparation of the Manual for protection against the spread of COVID-19.
6	Kyrgyz Republic	• Opening of daily and night stationary points in the regions of the country; • Support to establishment of temporary hospitals.
7	Moldova	• Development of online information tool for COVID-19 status; • Engagement of volunteers.

8	Montenegro	• Timely communication with citizens and mass media.
		• Deployment of protection and rescue units for disinfection works during crises in the municipalities of Debar and Centar Zhupa;
		• Distribution of the protective materials and equipment;
9	North Macedonia	• Provision of mobile camps for hospitals;
		• Volunteering practices for supporting the distribution of food, medicines and protection equipment to the citizens in need;
		• Efficient communication with citizens.
10	Serbia	• Fast procurement of essential supplies from countries where they were produced;
		• Quick hiring of staff.
11	Tajikistan	• Public information and coordination.
12	Ukraine	• Wide use of information technology and information management systems;
		• Relatively early start of the recovery planning featuring multi-sectoral approaches.
13	Uzbekistan	• Provision of support to people through consulting medical centres (at the Expo Centre).

Figure 34 – Identified best practices during the COVID-19 pandemic crisis response

Lessons-learned:

- National DRM strategy needs to establish foundations for building a DRM system that shall be ready to mitigate, respond and recover from complex disasters, including the high-consequence, low probability events.
- The normative framework should be adequately modified for better mitigation, response and recovery from a crisis of this magnitude.
- Based on multi-risk, multi-hazard and multi-sector assessments, risk scenario-based contingency plans for all disaster, including pandemic needs to be developed "leaving no one behind". Capacities for mitigation, preparedness and response to pandemics/biohazards need to be established, both on national and local levels.
- The focus of the planning process MUST be increasing the level of resilience of the whole DRM system plus training of citizens to react adequately to disasters and crisis.
- More involvement of NDMAs in mitigation activities, allocation of dedicated budget, stockpiling of medical and other equipment.
- Joint implementation of the actions by all the crisis management entities on the local level resulted in the most efficient response.
- It is crucial to start implementing the necessary measures timely and adapt to the changing conditions in pandemic.
- The recovery strategy needs to be prepared and adopted following the needs assessment ensuring resilient recovery of society and communities.
- Re-designing of emergency services (ambulance and medical) resulted from the impact of the COVID-19 aimed for better provision of services.
- Need for timely and planned approach to stockpile of medical and personal protective equipment.
- Planning and rapid construction of alternative health facilities in the events of the massive influx of infected citizens.
- Local authorities need to be granted greater competences and responsibilities from the health emergency area.

Respondent's statement:

"We need to implement forward-looking risk assessment and improvisation during the response because we faced a completely new risk."

Key finding #17

In the ECIS region, there is sufficient evidence of successful best practices and lessons learnt from the ongoing response to the COVID-19 pandemic. Given the uncertainty of its future magnitude and duration, these practices and lessons can be transformed in normative acts, workable solutions for enhanced risk management, strategic and operational planning, transfer of competencies from national to local level, decentralizing the risk reduction responsibilities, "green" and resilient recovery, as well as "leaving no one behind".

III.12 Use of ICT innovative solution or GIS tool as supporting tools in the NDMAs response to COVID-19 pandemic crisis

ICT innovative tools or GIS tools as supporting tools in the NDMAs response to the COVID-19 pandemic crisis were used in 11 out of 17 countries and territories and 17 key respondents confirmed it.

Observations:

Contemporary risk management relies on the systematic use of ICT technology, GIS tools for analysis and visualization as well as resilience-related innovative solutions. NDMAs in the region are on different level of utilization of these risk-reduction tools and solutions, mainly for data collection, hazard mapping risk analysis, operational response and early recovery. Accordingly, in in most of the cases, NDMAs continued to use the existing platforms with modification for pandemic risk, whether in some of the newly designed solutions were applied either on their own or in cooperation with external entities such as the private sector, academia, and CSOs that are a frequent source of innovations, which is also a case in the COVID-19 pandemic crisis response. Besides, NDMAs from utilized various platforms and tools for successful maintenance of their core functions and coordination with the crisis response entities through virtual/on-line meetings/trainings e.g. ZOOM, Skype Business, Microsoft Teams, WEBEX, etc. due to the new protocols on remote working modality functioning during the COVID-19 pandemic. In some of the countries and territories, social media platforms (Facebook, Twitter, Instagram, Vkontakte, etc.) were used for sharing notifications and information to the broad public and citizens, as well as to a limited interaction.

Existing ICT solutions	*New ICT solutions*
Bosnia and Herzegovina ***North Macedonia*** ***Ukraine*** ***Kosovo****	***Armenia*** (Use of KoBo toolbox for data collection and analysis during the COVID-19 socio-economic impact assessment and *"StayHome"*[49] mobile application for self-isolated persons and contacted persons). ***Azerbaijan*** (Use of *texting messages* for issuance of permission to leave the households during the lockdown). ***Kazakhstan*** (Use of *"Saqbol"*[50] mobile app to control the spread of COVID-19 and timely localize the infection spots and *"Smart Astana"*[51] mobile app for enforcement of quarantine). ***Kyrgyz Republic*** (Use of Telegram for communication between the members of the HQ and launching of web sites e.g. covid.kg). ***Moldova*** (*COVID-19 situations dashboard*)[52]. ***North Macedonia*** (*"StopKorona!"*[53] COVID-19 tracing mobile app and *Coronavirus Situations Dashboard*[54]). ***Turkey*** (*Online database* for monitoring of the capacities of students dormitories and expenditures of the cities). ***Uzbekistan*** (Use of *Telegram* channel for communication among responders)[55].

Figure 35 – Breakdown of ICT solutions implemented in ECIS during the COVID-19 pandemic response

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49   https://news.am/eng/news/590560.html
50   https://egov.kz/cms/en/information/about/Saqbol_mobileapp
51   https://privacyinternational.org/examples/3628/kazakhstan-cities-use-mobile-app-enforce-quarantine
52   https://tinyurl.com/160oli4d
53   https://balkaninsight.com/2020/04/16/north-macedonia-leads-region-in-covid-19-tracing-app/
54   https://www.arcgis.com/apps/opsdashboard/index.html#/2096bd4b051b42948ac3f5747e80c3a5
55   https://t.me/s/koronavirusinfouz

Key finding #18

ICT innovative tools are the foundation for timely, efficient, effective and inclusive emergency management throughout the phases of the disaster cycle. There is an evidence of successful use of the ICT technologies and innovative solutions for resilience in the ECIS region including this crisis responses. Nevertheless, there is an impression that the existing solutions do not reach everyone in the society, especially the citizens with disabilities. Furthermore, there is a potential for future growth and development of this segment of the risk management activities, especially in terms of data analysis e.g. big data and risk communication with the citizens with different capabilities. Designing of innovative solutions, especially for information, early warning and alerting, needs to be implemented in an inclusive and participative manner, integrating the needs of the beneficiaries.

4.4 IV. NDMAs AND THE FUTURE PANDEMIC CRISIS/BIOHAZARD FRAMEWORK

The last group of questions relates to the follow-up actions on better preparedness of the NDMAs for future pandemic risks/biohazards and what is the *modus operandi* of their integration of the NDMAs competences and responsibilities.

IV.1 NDMAs is better prepared for pandemic risk reduction and future pandemic crisis

Achievement of this target can be done as per the following actions suggested by the respondents:

Respondent's comments:

- Establish a holistic system for assessing risks and response capacity to the pandemic.
- Development of response mechanisms.
- Maximum use of modern ICT and GIS technologies by NDMA."

- Starting point is a gap assessment and evaluation of the NDMAs performance during the response to understand what was good and what went bad with follow-up recommendations to be integrated into the relevant DRM documents.
- New normative framework integrating the pandemic risk/biohazards;
- Update of existing strategic and operational planning frameworks;
- Risk and hazard assessment, non-linear, taking into consideration the "noise" from the future and anticipating the high-consequence, low-probability events;
- Development of multi-risk scenarios for integrated approach to preparedness and response by NDMAs and other entities;
- Coordination and communication, dissemination of information, reaching everyone in the communities;
- Training and professional development of professional staff based on the updated or new operational plans and procedures on how to respond to complex disasters;
- Training and education of citizens for increased awareness on the pandemic risk/biohazards;
- Use of innovative ICT solutions for better analysis, evaluation and supporting the coordinated response;
- New approaches in financing pandemic risk/biohazards;
- Regular evaluation and codification of lessons-learnt for enabling the system to consequently transform and develop;
- Empowerment of the communities for mitigation, preparedness and response to pandemic risk/biohazards through diversity, equity and transformation.

Key finding #19

Key respondents provided a clear vision of what has to be done for better preparedness for pandemic risk and future crisis. Accordingly, transformational changes are needed on different levels of functioning of NDMAs and the DRM system, integrating more comprehensively the health emergencies and the pandemic risk/biohazards. Furthermore, it is recommended to run an internal evaluation whether the NDMAs are ready for broadening of the competencies, since in most of the countries and territories they would rather run "the business-as-usual", which, unfortunately, after the COVID-19 pandemic crisis would not be the case.

IV.2 Plans for update of the strategic and operational frameworks with the pandemic/biohazard risks

The significant majority of respondents (32) replied that the strategic and operational frameworks is planned to be updated with the pandemic risk/biohazards. This is an emergent lessons-learnt that appeared even in the early phases of the pandemic crisis response.
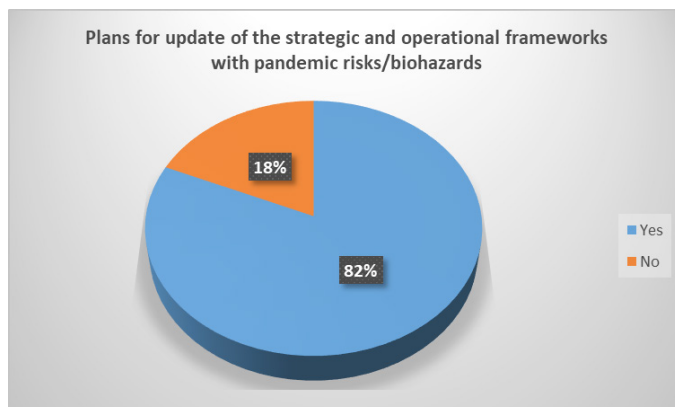
Figure 36 – Plans for an update of the existing strategic and operational frameworks

Observations:

Analysis of the responses provides different approaches by the countries and territories ranging from review and update of strategies, risk assessments, planning documents, to the adoption of procedures and rules that were not existing in pre-COVID-19 times. Out of 16 that answered positively, reflections from ten of them are presented below:

#	Countries and territories	Description of approach/es
1	**Armenia**	• Development of Strategy and Action Plan on COVID-19 Recovery; • Integration of the pandemic risk in the new Law on DRM and Civil Protection; • Development of a new strategy to deal with pandemic risk/biohazards; • Ongoing reviews of normative acts with recommendations for modification.
2	**Bosnia and Herzegovina**	• Following the early evaluation of the COVID-19 pandemic response and the impacts on civil protection to propose adequate measures/frameworks.
3	**Georgia**	• Update Georgia's "National Threat Assessment Document" based on the current pandemic outbreak lessons learned, as well as update the National Emergency Response Plan; • Update pandemic risk reduction activities within Georgia's "National Disaster Risk Reduction Strategy".
4	**Kosovo***	• Amendments to the DRM Strategy, including biohazards; • Review of the risk assessments on the national and local levels with the integration of biohazards; • Review of the Response Plan and update with COVID-19 lessons learnt; • Initial consideration of using the VUCA foresight concept for mainstreaming pandemics into DRM frameworks.
5	**Kyrgyz Republic**	• Analysis of the response of the government agencies and local self-government bodies, followed by proposals on strategical and operational measures.
6	**Moldova**	• Mainstreaming of pandemic risk/biohazards in the national DRM strategic document that is currently developed.
7	**Montenegro**	• Preparation of the National Disaster Risk Assessment; • Adoption of the National Plan for protection and rescue from chemical and biological risks.

8	North Macedonia	• Update of the National Strategy for Protection and Rescue; • Update of the national and local risk and hazard assessments; • Update of the national and municipal plans for protection and rescue; • Development of the National DRM strategy.
9	Serbia	• Development of by-laws and SOPs on pandemic risk/biohazards.
10	Ukraine	• Development of National Biosecurity and Biodefense Strategy.

Figure 37 – Breakdown of ICT solutions implemented in ECIS during the COVID-19 pandemic response

Key finding #20

NDMAs in most of the countries and territories in the ECIS region have a challenging agenda of review and update of existing frameworks and documents and/or adoption of new ones following the COVID-19 response lessons-learnt. Following the general re-framing of the disaster risk management in post-COVID-19 times, these modifications should ensure transformational changes of the NDMAs, raising to the next level and building the capacities and resources for complex disasters including the high-consequences, low probability disasters.

IV.3 Identified measures for reduction of the future pandemic risk

Figure 38 – Word cloud of identified measures for reduction of the future pandemic risk

Observations:

As it can be seen from the generated word cloud, various measures from the COVID-19 response are identified for the reduction of the future pandemic risk, which might or might not be similar to this one. At the core of the pandemic risk reduction measures, the following are the most prominent ones:

Identified measures	
Professional development and training of responders	Training of citizens
Establishment of a coordination platform	Improvement of health resources

Improvement of the emergency management system	Access to health services
Improvement of the emergency communications	Construction of new hospitals and health facilities for COVID-19
Integration of DRR in the education	Improvement of solidarity in the country
Early warning and notifications provided to the citizens	Enhanced cross-border, regional and global cooperation
ICT solutions for monitoring of the COVID-19 response	Mobile app on access to the hospitals and health facilities
Strengthen communication and coordination	Supply and provision of protection materials
Stockpiling necessary materials and equipment	Biohazard/biosecurity strategy
Update or/and adoption of appropriated documents	Health risk assessments
Pandemic risk assessment	Increased budget for emergencies
Adoption of specialized SOPs	Public awareness

Key finding #21

Summarized presentation of identified measures from the response to COVID-19 acknowledges good approach in building blocks for resilience to future pandemics. Namely, replication and scaling up of these measures contribute to a better understanding of the risk of future pandemics or biohazards, and consequences that they might have to the society and communities. It is recommended these measures to be embedded in foundations of the future response to the pandemic risks, enabling effective response.

IV.4 Top three priorities for the establishment of pandemic inclusive and forward-looking NDMAs:

Over two-thirds of the respondents (29) prioritized the potential actions that can contribute to the establishment of pandemic/biohazards inclusive and forward-looking NDMAs.

Figure 39 – Word cloud of identified "top three priorities"

Observations:

As it can be seen from the generated word cloud from the prioritized actions, two groups of identified priorities are highlighted, meaning that they were included in most of the responses of the key respondents e.g. capacity-building, risk assessment and technical capacity, as well as the response mechanism, biohazard and foresight. Being translated in practical language, the first group of priorities refers to the continuous building of the overall capacities and specific pandemic/biohazard technical capacities of the NDMAs staff, alongside the strengthening of the risk assessment process aimed for comprehensive integration of general health risks, as well as the pandemic risk. The second group of priorities is founded on the development of adequate response mechanisms for addressing the complex health crisis, broad integration of biohazards in the overall scope of the NDMAs work and operation, as well as the gradual introduction of the foresight methodologies and tools to engage in the horizon scanning and anticipation of the potential futures and to initiate the contingency planning for adverse but possible and probable scenarios.

Deloitte's Resilient Leadership Framework [56]

Complex disasters or pandemic crisis such as the COVID-19, emphasize the importance of breaking the silos of the traditional disaster risk management, allowing for better mainstreaming of the biological hazards and health emergencies. Prioritization of the strategic and operational actions is a modus operandi for development of the NDMAs and broadening their scope of competences. For example, the Deloitte's Resilient Leadership Framework defines three time frames of the COVID-19 pandemic crisis: respond, recover and thrive. The first one refers to the ongoing period up to 18 months, the second one refers to the mid-term period (18-24 months) and the third one is long-term oriented i.e. from 3 – 5 years.

| RESPOND (Managing continuity) | RECOVER (Learn & emerge stronger) | THRIVE (Prepare for the new normal) |
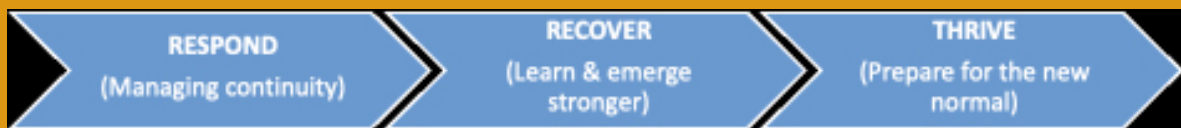
Figure 40 – Deloitte's Resilient Leadership Framework

Accordingly, within the given framework, the NDMAs should be managing the continuity of the existing response, followed by resilient recovering and emerging stronger, and finally, they should be better prepared for understanding the potential futures and to enable transformational changes and action to move from a static to a dynamic model of actions i.e. to foresight the futures and insight the strategies and actions. This should lead to a development of the so-called Next Generation (NextGen) NDMAs framework, where they should be better organized and prepared for anticipation, prevention and reaction to new and complex risks and threats, with additional knowledge and expertise gained, expanded competencies and availability of specific resources.

4.5 SWOT Analysis of the NDMAs roles in prevention and response to pandemic risk/biohazards

The SWOT analysis approach was used for helping the relevant staff better understand the existing strengths, weaknesses, opportunities and threats of the NDMAs roles in prevention and response to the pandemic risk and biohazards. The matrix table below is built upon the implemented desk review and surveys and shall help the NDMAs to build on what they do well, to address what they are lacking, to minimize potential risks and to take the greatest possible advantage of their chances for success. Accordingly, it can be used as a starting point in the consequent regional and national discussions on the functionality of the existing and designing of the future normative, institutional and operational frameworks of NDMAs.

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56   https://tinyurl.com/y7fn2zfd

SWOT Analysis of the NDMAs roles in prevention and response to pandemic risk/biohazards

SWOT Analysis of the NDMAs roles in prevention and response to pandemic risk/biohazards	
S - STRENGTHS	**W-Weaknesses**
• NDMAs possess an unique trans-disciplinary expertise, experience and know-how in disaster resilience. • NDMAs have a variety of resources and solutions for preparedness and response to disasters. • Experienced, knowledgeable, trained and dedicated personnel. • Repository of successfully implemented emergency management actions and measures. • Positive record in provision of emergency supplies, logistics operations and humanitarian aid. • Emergency Operation Centers are the core facility for timely, effective and efficient management of disasters. • Territorial dispersion of forces and resources across the countries and territories. • Communication and information dissemination reaching everyone in the communities. • International, regional and sub-regional cooperation.	• Lack of awareness of the NDMAs role among other sectors of the society. • Insufficient DRM mainstreaming in public health and vice versa. • Health emergency systems not in the focus of the DRM framework. • Response to pandemic risk/biohazards are more comprehensive and complicated. • Insufficient expertise of the emergency responders on the pandemic risk/biohazards. • Lack of specialized capacities and trainings of the involved health personnel and responders. • Financial uncertainty and resource mobilization due to COVID-19 impact. • Postponing of development programmes and projects due to the crisis. • Potential lack of resources and supplies during a prolonged crisis. Increased misinformation.
O - Opportunities	**T - Threats**
• Growing evidence of the value and importance of the NDMAs work in response to disasters. • Potential for expansion of the emergency services provided by NDMAs considering biohazards. • Enhancement of the strategic and operational planning documents integrating the pandemic risk/biohazards. • Development of standard operating policies and procedures and response plans for future pandemics/biohazards. • Knowledgeable and trained emergency responders for response to various disasters. • Potential for institutional growth – NDMAs can emerge as leading entities for management/coordination of complex disasters. • Opportunities for education of the personnel on pandemic risk/biohazards. • New multi-sector exploration of resilience to pandemics. • Integration of research & development in partnership with academia and the private sector for designing innovative solutions for prevention and response of pandemics/biohazards. •Integration of data collection and risk knowledge of NDMAs on pandemic risk.	• Continuation of COVID-19 and potential future pandemics/biohazards are unknown. • Most probably it will never be business-as-usual again. • Some of the emergency services might not be implemented as in pre-COVID-19 times. • Stagnant financing of the NDMAs due to the impact of the COVID-19 pandemic. • Increased regulation of DRM system and adjacent areas and practices. • Return of the coronavirus or outbreak of a new pandemic. • Rapid transmission of COVID-19 or other pandemic disease and impact on the NDMAs work and operations. • Higher chances of the emergency responders contracting the COVID-19 or other pandemic disease.

Internal Factors (left side label for top row)

External Factors (left side label for bottom row)

5. REGIONAL DRM INITIATIVES AND THE COVID-19 PANDEMIC CRISIS

5.1 Introduction

During the assessment phase, semi-structured interviews were done with the representatives from the two regional initiatives from two different sub-regions of ECIS: the Disaster Preparedness and Prevention Initiative (DPPI) and the Center for Emergency Situations and Disaster Risk Reduction (CESDRR). The former is active in the region of Southeast Europe and the latter one is one of the key regional DRM initiatives in Central Asia. The objective of the interviews was to learn more about the regional aspects of the COVID-19 response, their activities, as well as forward-looking plans in terms of pandemic risk/biohazards.

5.2 DISASTER PREPAREDNESS AND PREVENTION INITIATIVE (DPPI)[57]

5.2.1 Background

DPPI Member States:
Albania, Bosnia and Herzegovina, Bulgaria, Croatia, North Macedonia, Montenegro, Romania, Serbia, Slovenia and Turkey.

The DPPI has been conceived as an activity that seeks to provide a framework for South Eastern European nations to develop programs and projects leading to strengthened capabilities in preventing and responding to natural and human-made disasters. It also brings together donor countries and international governmental and non-governmental organizations to coordinate ongoing activities and identify unmet needs to improve the efficiency of national disaster management systems within the regional cooperation framework. The main objective of DPPI is to foster regional cooperation and coordination in disaster preparedness and prevention for natural and human-made disasters in South-Eastern Europe, without creating new structures or layers of bureaucracy.

5.2.2 DPPI and COVID-19 pandemic crisis

Within the scope of the existing framework, DPPI does not have a direct competence in operational aspects of the response to the COVID-19 pandemic and the implemented actions were aimed at knowledge and information sharing among the members' states and strengthening of their capacities with regards to the pandemic risk/biohazards. Valuable lessons from civil protection operations in relations to the COVID-19 pandemic can be seen in all DPPI SEE member states and they were shared internally and externally.

> ➢ The first online exchange between the member states on this topic happened in June 2020 when earthquake preparedness and response during the pandemic crisis was discussed in the context of the Zagreb earthquake[58] from 22 March 2020.
> ➢ At the 40th DPPI SEE Regional Meeting (02-03 December 2020), the main topic of discussion was civil protection and COVID-19 and how DPPI SEE can support the member states in this context. In summary, the role of the civil protection organizations was seen through the following actions that are globally implemented by the emergency management agencies:
> > • Establishment of coordination structures for the pandemic crisis response at the national and local levels;
> > • Provision of logistics support to the health authorities including storage and transport of personal protective equipment and other health-related materials;
> > • Establishment of triage centres;
> > • Provision of disinfection of public spaces and facilities;
> > • Engagement of volunteers to support public health response and reach out to the most vulnerable citizens;
> > • Repatriation of citizens from other countries, and,
> > • Provision of psychosocial support to emergency responders.
> • The main conclusion of this regional meeting was that the DPPI SEE needs to continue recognizing the importance of the Host Nation Support in times of emergencies including the COVID-19 pandemic crisis, exchange of best practices and lessons-learnt, organization of trainings in a multi-hazard environment and development initiatives on the establishment of early warning systems.

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57   http://www.dppi.info/
58   https://tinyurl.com/y62cawce

> ➤ Preparedness and response to pandemic risk/biohazards are amongst the topics of the Bulgarian chairmanship with DPPI SEE in 2022 which is in line with the Strategic Development Plan 2021-2025 (it has 3 pillars: training programme, project management and research and analytics). Consequently, the annual work plan for the upcoming year envisages continuation of the training program with a focus on logistics in emergencies including online simulation exercise; continuation of the SPHERE Handbook Train of Trainers program; support to the 1st Earthquake Engineering in Zagreb and a Cave Rescue Training in Slovenia. Continuation of the Project Development Working Group is envisaged together with analytical activities.

5.3 CENTER FOR EMERGENCY SITUATIONS AND DISASTER RISK REDUCTION (CESDRR)[59]

5.3.1 Background

CESDRR is a permanent intergovernmental body, an international organization established to ensure effective mechanisms to decrease the risk of emergencies, to mitigate the consequences, to organize a joint response through agreed measures of the member countries and to stimulate regional and international cooperation.

CESDRR – Regional situation Room
Source: https://tinyurl.com/y5qwpng5

CESDRR's main objectives are to:
- Develop cooperation in DRR, prevention and elimination of emergency situations;
- Mitigate factors of disaster risk, identify, assess, forecast and monitor emergency situation hazards;
- Coordinate mutual efforts and strengthen preparedness for effective and timely response to emergencies;
- Implement regional and international cooperation in DRR and emergency management;
- Increase the safety of life activities of the population during natural and man-made emergencies;
- Involve international and non-profit organizational grants for disaster risk reduction, development, and implementation of joint international projects;
- Implement international and other programs in DRR, prevention and elimination of emergencies;
- Preparation of daily emergency operations briefings for the Republic of Kazakhstan and the Kyrgyz Republic[60] summarizing the current emergencies, weather and emergency forecasts, as well as operational centres information.

5.3.2 CESDRR and the COVID-19 pandemic crisis

Within the scope of its existing competencies, CESDRR does not have direct competencies in operational aspects of the response to the COVID-19 pandemic and the implemented actions aimed to provide sharing of best practices, lessons-learnt, timely information, knowledge and expertise in the region. Accordingly, activities undertaken can be summarized as following:

> "In the context of a global pandemic, when disasters can have far greater consequences and impacts, there is a need to increase resilience at all levels and sectors, and develop strategies that address a large range of hazards and socio-economic factors."
>
> Mr. Octavian Bivol, Chief Regional Office for Europe, UNDRR (17.09.2020)

Hosting the online event in partnership with UNDRR and WHO *"Dialogue of UN Member States on the COVID-19 crisis sharing experience and strategies for responding, overcoming transition and building resilience in Central Asia"*[61] (17.09.2020). More than 90 participants from emergency management services and health care institutions of Central Asia countries, UN agencies, EU, IFRC and other organizations analyzed best practices from the ongoing COVID-19 pandemic response, the potential for cascading effects, and effective measures to recover and build back better, alongside the multi-hazard approaches to building resilience in the face of pandemic risk.

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59   https://cesdrr.org/en
60   https://tinyurl.com/y5ng7fnv
61   https://tinyurl.com/y23r3haq

• **Dissemination of daily information** on the spread of the COVID-19 pandemic in the countries of Central Asia[62] containing information on the number of infected cases and fatalities, monthly trends, measures and actions implemented by individual countries, as well as very important information on the border-crossing status given the imposed restrictive measures following the widespread of the pandemic.
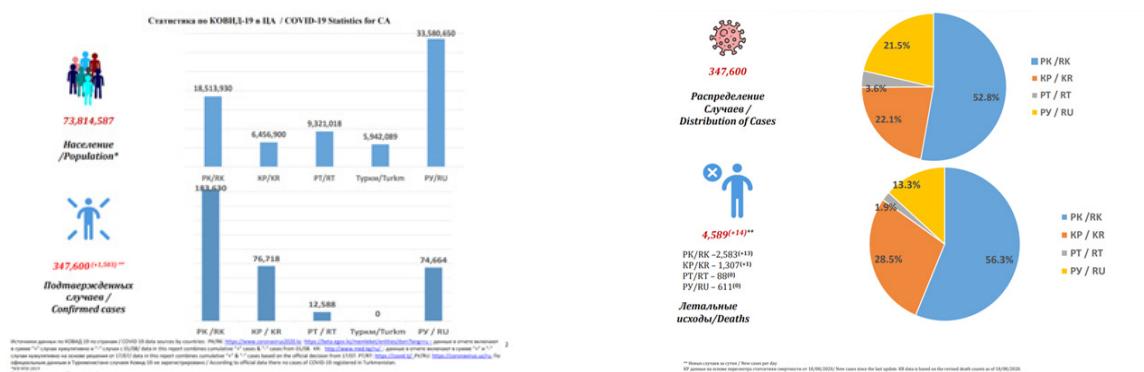

Figure 40 – Snapshots of the Daily Information on the spread of the COVID-19 pandemic in Central Asia

• Following the outbreak of the COVID-19 pandemic crisis and it's complex and severe impact on the countries in the region, CESDRR on the annual meeting of the heads of NDMAs in the region, on 11 December 2020, presented the draft Regional Strategy and the Regional Risk Profile which have integrated the pandemic risk/biohazards. For example, the draft strategy has a section on biohazards and in the attached action plan, relevant response measures are stipulated, whether the Regional Risk Profile has a section on the infectious pandemic. These are good examples, how the current trend needs to be addressed timely in the strategic and operational planning frameworks. Furthermore, it is an example for the countries in the region how to mainstream these risks in their existing frameworks.

BEST PRACTICE: CESDRR IN ACTION

Following the collapse of the Sardobin Water Dam on 02 May 2020, which is located on the territory of Uzbekistan, border areas of the Turkestan region of Kazakhstan was heavily flooded. As a result of the collapse of the dam, on the territory of the Maktaaral district, 631 residential buildings in 5 settlements, in which 6,127 people lived and 3,600 hectares of land were flooded. Besides, 31,000[63] citizens were timely evacuated to 10 previously identified evacuation points.

Flooded area in the Turkestan Region in Kazakhstan, May 2020 Source: https://tinyurl.com/y2xkpmn8

Consequently, during the period 18 May – 21 May 2020, CESDRRs' representatives made a field visit together with the representatives of the Red Crescent of Kazakhstan to conduct a detailed assessment of the situation and determine the amount of necessary assistance to the affected population in the villages of Nurlyzhol, Zhanaturmys, Ferdowsi, Orgebas, Dostyk and Zhenis. This detailed assessment was done during the imposed quarantine measures on the territory of the whole country and it was the first major disastrous event that happened during the COVID-19 pandemic. For the period of the mission, CESDRR representatives effectively interacted and cooperated with the local authorities, divisions of the Emergency Situations Committee of the Ministry of Internal Affairs of the Republic of Kazakhstan, heads of the Akimat of the Makhtaaral District, the Department of Emergency Situations of the Turkestan Region and the City of Shymkent.

As a result of the detailed assessment, measures have been taken for the establishment of an open communications and information sharing channel ensuring exchange and updating of information about the affected population between the emergency response headquarters, CESDRR and the Red Crescent of Kazakhstan. Accordingly, in the shortest possible time, supplies and goods for life and social support of the population affected by the disaster have been provided alongside the placement of sanitary facilities. During the field mission, all protective measures for COVID-19 prevention were implemented.

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62   https://tinyurl.com/y3xdvusf
63   https://tinyurl.com/yay56otd

6. FOUR SUB-REGIONS – FIVE COUNTRIES IN FOCUS

6.1 Introduction

In this section of the assessment study, COVID-19 response snapshots of five countries from the four sub-regions of Europe and Central Asia are presented i.e. Armenia from the South Caucasus Sub-region, Bosnia and Herzegovina and North Macedonia from the Western Balkan and Turkey Sub-region, Kyrgyz Republic from Central Asia and Moldova from the Eastern Europe.

These snapshots are a result of the desk review of available documents and open data source[64]s and semi-structured interviews and consultations with various key informants from these countries held in December 2020. These interviews were structured on learning more on the practical experiences of NDMAs response to the pandemic, key features, and involved stakeholders in this response, existing challenges, as well as emerging lessons-learned that will have to be addressed during the follow-up phases of the pandemic crisis response and resilient recovery.

6.2 ARMENIA (Sub-region: South Caucasus)

COUNTRY PROFILE:
- **Population:** 3.010 Million
- **Surface Area:** 29,743 km2
- **GDP (2018):** 12.43 Billion USD
- **GDP p.c (2018):** 4,212 USD
- **HDI (2019):** 0.776 (81/189)
- **INFORM 2020 Index:** 3.6 (101)
- **GINI INDEX (Income Equality Coefficient, 2011):** 33.60

DISASTER PROFILE:

Top Hazards:	Top 5 Disasters					
	Disaster type	Date	Fatalities	Injured	Affected	Damages USD
Earthquakes	**Drought**	06.2000	/	/	297,000	100 M
Floods	Hailstorm	05.2013	/	/	64,000	60 M
Storms	Storm	08.2018	/	/	9,900	1.8 M
Droughts	Cold wave	12.2013	/	/	12,000	/
Mudflows	Hailstorm	06.2019	/	/	11,700	/
Landslides	Note: No epidemics were reported during this period.					

Armenia - Frequency of disasters (2000 - 2020)

Legend: Earthquakes, Floods, Droughts, Landslides, Extreme temperatures, Storms, Wildfires, Epidemics

(Storms 43%, Earthquakes 15%, Droughts 14%, Landslides 14%, Extreme temperatures 14%)

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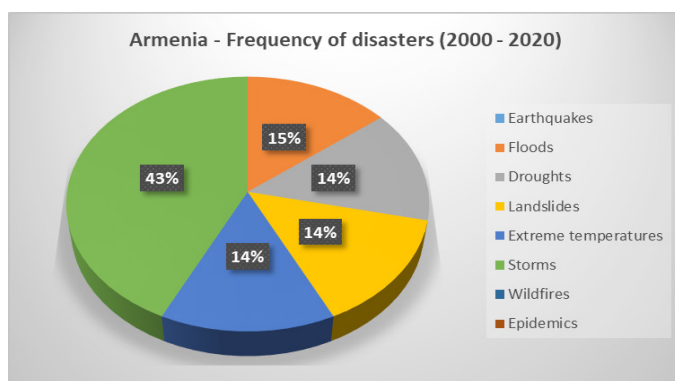
64   Disaster profiles for each country were compiled by the author based on the available data from the EM-DAT.

NATIONAL DISASTER MANAGEMENT AUTHORITY: Ministry of Emergency Situations of the Republic of Armenia[65]

Main competences:
- Elaboration and implementation of policies in the area of emergencies;
- Development of unified state policy on civil defence and protection of population in emergencies;
- Coordination of emergency response and disaster response measures, etc.

National Disaster Risk Reduction Platform: 02.12.2010 (established)

The goal of the *ARNAP Foundation - DRR National Platform[66]* is to establish a multi-sectoral and multi-disciplinary mechanism for disaster risk reduction and resilience building with the involvement of all stakeholders. Following its goals, the DRR National Platform performs the following types of services: prevention of natural and technological disasters; implementation of rescue activities in mountainous areas and other territories, accompanying groups, provision of water rescue services, implementation of anti-fire protection as ordered by organizations, installation, and servicing of anti-fire, air conditioning and other systems in buildings, and conducting scientific and research studies, development and introduction of new technologies.

COVID-19 PANDEMIC CRISIS CONTEXT IN ARMENIA

Background

In Armenia, the first case was reported on 01 March 2020 and the first fatality was reported on 26 March 2020. As of 10 December 2020, Armenia registered 145,240 cases with 2,416 fatalities[67]. Initial responses to prevent the exponential widespread was through the implementation of restrictive measures – on 16 March 2020 a state of emergency was declared, and consequently extended until 13 June 2020 and then until 11 September 2020. The state of emergency was then lifted and replaced by a quarantine in place until 11 January 2021.
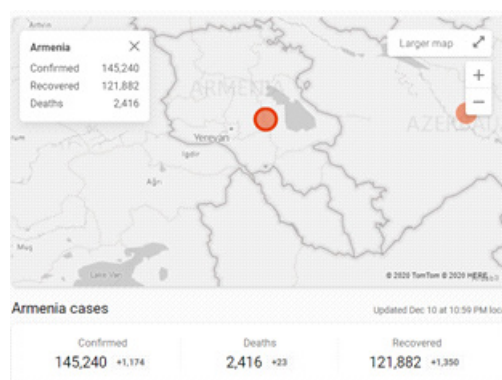
In Armenia, as of 28 June 2020 , COVID-19 patients were being treated in 19 medical facilities across the country (7 in the regions and 12 in Yerevan) with a capacity of over 2,500 hospital beds out of which 300 ICU beds. Several public secondary and tertiary care multi-profile hospitals were repurposed to manage COVID-19 patients.

Source: WHO, 10.12.2020

In October/November 2020, about 26 medical centres across the country were re-profiled for treatment of COVID-19 patients. As of 18 November 2020, all the COVID-19 beds in Armenia were full, and a critical lack of oxygen was reported. Testing is conducted in 8 laboratories including the National Reference Laboratory and some of its regional branches, the laboratory of the Infectious Disease Hospital, and 2 private laboratories.[68]

COVID-19 pandemic crisis emergency management structure

Following the declaration of the State of Emergency on 16 March 2020, the Interagency Office on the Prevention from the Coronavirus was transformed to a *"**Command Office**"* led by the Commandant, the Deputy Prime Minister. Members of this body were the Prime Minister's Chief of Staff, Minister of MES, alongside other key ministers and heads of key state bodies. The Commandant Office is in charge of all immediate needs and issues. It has been noted that the Government cannot keep extending the State of Emergency (most recently to 11 September 2020) and they are working towards a legal solution for enforcing anti-epidemic measures. The **Ministry of Health** is leading the national response to COVID-19 and together with the **National Centre for Disaster Control** are coordinating surveillance communications and international reporting.[69] The Ministry of Emergency Situations is providing necessary coordination, cooperation, communication, and support to commanding activities.

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65   http://mes.am/en/news/page/35/
66   http://www.arnap.am/?lang=en
67   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
68   https://tinyurl.com/y5fpw58u
69   https://tinyurl.com/y48llz5b

Governing legislative act for emergencies is the Law on population protection in emergency situations where pandemic risk is only mentioned without further elaboration. Accordingly, the new version of the law is in the preparatory process and shall significantly improve the regulation of this area. Concerning the pandemic risk planning documents, there was a National Pandemic Preparedness Plan dated 2009, but since it was outdated it was not activated, but during the later stage, it was activated. Furthermore, as part of the New Coronavirus Disease (COVID-19) Prevention, the Ministry of Health has developed a model (temporary) emergency response plan, which is subject to implementation by all health care providers until the main model horse is approved.

KEY FEATURES OF THE PANDEMIC CRISIS RESPONSE:

➢ *Always prepared for timely, effective, and efficient response -* The Ministry of Emergency Situations performs a crucial role in support of the timely, effective, and efficient inter-sectorial response to the COVID-19 pandemic crisis. It is the key national institution that has adequate knowledge and available resources for successful disaster response even though its focus is not on the pandemic hazard itself. During this response, MES implemented a variety of actions and implemented measures while some of them are beyond its essential mandate:

a) Disinfection of public areas and facilities by the specialized team of the Monitoring Division of Radiation, Chemical and Biological Situations of the Population Protection and Disaster Risk Reduction Department of the Rescue Service of the MES;
b) Establishment of a Call Center for public information;
c) Provision of information from the MoH "Stay Home" application through the connected system with Policy on alerting in cases of violation of the "stay-at-home" order;
d) Provision of public campaigns on measures for protection from COVID-19;
e) Provision of protective equipment and materials;
f) Delivery of supplies for the citizens in isolation and quarantine and the most vulnerable;

Figure 41 – Public campaigns[70] and disinfection of public spaces[71] performed by the Ministry of Emergency Situations (Photo: Courtesy of MES)

➢ **New normal is the current reality for emergency management –** The Ministry of Emergency Situations like most of the NDMAs in the ECIS region quickly adapted to the "new normal". Since the initial phase of the pandemic crisis response, the MoES implemented a series of internal procedures and protocols both for the protection of the staff, as well as for the modification of the working process and its operations during the COVID-19 pandemic. For example, three shifts of 50 persons maximum were introduced for conducting of regular duties of contacting people per information of MoH, alongside shifting to remote working, use of virtual platforms and tools for meetings, trainings, internal and external communication, and information dissemination. Also, MES through its Crisis Management Centre provided technical support to the State Command and other bodies for enhanced communication, coordination, cooperation and commanding.

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70   http://mes.am/en/news/item/2020/06/01/173001062020/
71   http://mes.am/en/news/item/2020/10/29/1056/

➢ **Adjustment of the normative framework for resilient futures –** The process of modification of the DRM legislation i.e. new Law on Civil Protection and Emergency Situations was started before the pandemic crisis. Nevertheless, the impact of the crisis on the resilience of the society, as well the systemic nature of the risk emphasized the need for better integration of the pandemic risk/biohazards in the normative framework with consequent reflection in the institutional framework.
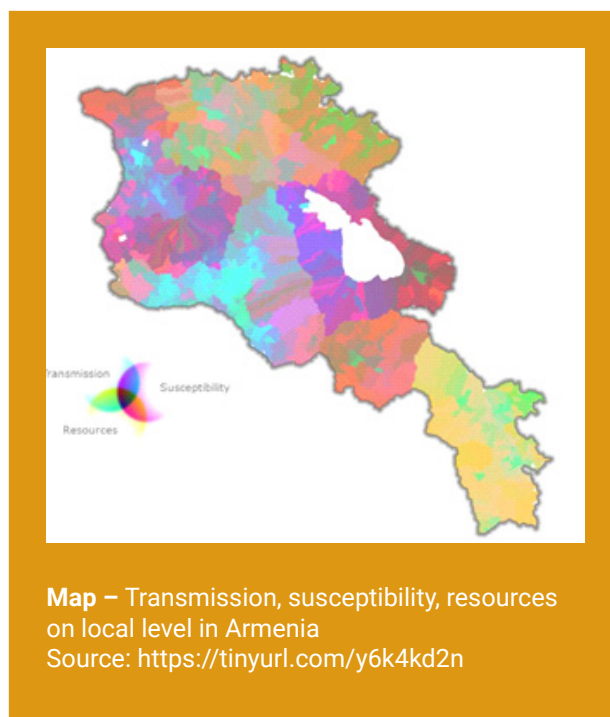
➢*Bridging the preparedness and response for better resilience –* ARNAP Foundation was one of the rare national DRR platforms that is active during the COVID-19 pandemic. Within the framework of the UNDP COVID-19 Rapid Response Programme, ARNAP Foundation piloted the program for strengthening the disaster risk management capacities of three medical facilities: "Vagharshapat Medical Center", "Ijjan Medical Center", "and Professor "O. Yolyan Hematology Center"[72]. The approach was comprehensive consisted of several activities: application of WHO "Hospital Safety Index" methodology, testing the MES designed "Model CRR Plan for Medical Institutions", carrying out a seismic vulnerability assessment of these hospitals, development of disaster risk management plans, and their testing through the conduct of trainings and staff exercises on earthquakes and pandemics. The ultimate goal of this pilot project is to establish a model of DRR capacity development of medical institutions considering the COVID-19 crisis and potential future pandemics, existing risk exposure, as well as lessons learned from the Spitak Earthquake from 1988. Besides, the ARNAP Foundation provided protective equipment and disinfection solutions for 15 schools, supported the conduct of the socio-economic survey on the COVID-19 pandemic crisis impact,[73] as well as provided online training on the distribution of humanitarian aid during the COVID-19 pandemic related quarantine. Target groups were UNDP volunteers, who distributed the UNDP-provided in-kind assistance to 1,600 single elderly people over the age of 65 in 100 settlements across the country.

➢*Comprehensive understanding of the COVID-19 pandemic impact on the resilience of the communities* – One of the essential features of the COVID-19 pandemic crisis response in Armenia is the contribution to the early recovery of the COVID-19 pandemic impact through supporting the UNDP socio-economic impact assessment at the community[74] level led by UNDP on behalf of the UN System in the country and cooperation with the Government of Armenia. On the community level, the crisis not only seriously affected the economic well-being of the citizens but also devastatingly affected their health status with a much stronger negative impact on the psychological and emotional health of people. With regards to the crisis management provision on the community level, "*service providers did not acknowledge a major impact in emergency services being offered. However, positive improvements were noticed for ambulance services in the marzes. This discrepancy can be explained by the fact that during the pandemic ambulance cars were asked to always use sirens, even when there was no emergency. Some media reports claimed that some ambulance services lacked personnel and drivers.*"[75] Other impacted areas on community levels that influence their overall resilience are the decreased access to education (lack of devices for online classes, no internet, poorer quality of education services, etc.), access to limited social services on the community level with many of them cut, as well as poorer infrastructure.

➢ **Real-time information matters –** Regular information sharing regarding the COVID-19 pandemic was done using different solutions and tools. Official web sites dedicated to the pandemic crisis, its development, protection procedures, and protocols, as well as information dissemination for the general

Map – Transmission, susceptibility, resources on local level in Armenia
Source: https://tinyurl.com/y6k4kd2n

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72   http://www.arnap.am/?m=202006
73   http://www.arnap.am/?p=9452
74   https://tinyurl.com/yxae4pkf
75   https://tinyurl.com/yxae4pkf p. 52/53

public and the citizens, was done through the official web site for COVID-19[76] and the web sites of the Ministry of Health[77] and the National Center for Disease Control.[78] An innovative approach for data collection and analysis of the surveyed results for the COVID-19 socio-economic impact study was done through the use of the KoBo toolbox.[79] *"Stay Home Armenia"*[80] mobile application is an innovative solution for monitoring the self-isolated persons and contacted persons. MES contributed through the provision of system links with the law enforcement services. GIS Story Map *"COVID in Armenia"*[81] identifies the vulnerability of communities to the COVID-19 pandemic in Armenia based on the accessibility to health facilities/hospitals and their vulnerability based on demographic and economic data. Accordingly, transmission risk (virus might get transmitted much faster than other places), susceptibility risk (locations where the people are more vulnerable to get infected due to their age or poverty), and insufficient resources risk (no nearby hospitals and some poverty) are calculated identifying the most vulnerable communities to the pandemic crisis and defining the immediate measures and actions that should be taken by the government and MES.

CHALLENGES:

- Insufficient competencies of the local authorities regarding the pandemic risk/biohazards.
- Insufficient financial resources for response and early recovery measures.
- Lack of internet connections or mobile smartphones for the utilization of the mobile app and information of the citizens.
- Lack of access to necessary health, psychological and social support services.
- Lack of psychological support for the emergency responders.
- Lack of sufficient resources for prevention, mitigation, preparedness, response, and recovery from pandemic risk/biohazards.
- Lack of qualified medical doctors – specialists.

EMERGING LESSONS-LEARNED

➢ *Modernization of the DRM normative framework shall be based on pandemic risk/biohazards mainstreaming in strategic and operational documents –* This is a fundamental approach for the enhancement of the overall DRM system. Accordingly, it is recommended to update the text of the National DRR Strategy with the elaboration of the pandemic risk and to design an implementable Action Plan for the period 2021 until 2030. Also, the whole set of operational and planning documents needs to be updated with better integration of the pandemic risk/biohazards, ranging from national and local risk and hazard assessments, response plans, up to SOPs for the system, and the various entities.

➢ *Enhancing the roles of first responders and first preventers* – The pandemic crisis emphasized the need for greater autonomy of the local authorities during the response, as well as during other phases of the disaster cycle i.e. prevention, mitigation, preparedness, and recovery. So, in order, the local authorities to fulfil the role of the first responders' additional competencies and resources should be provided. These investments should lead to their transformation to first preventers, actively investing in prevention and mitigation, before crises and disasters happen. Follow-up decentralization of some of the emergency situations services could be a solution for this.

➢ *Green recovery could be a modus operandi for mitigating future pandemic risk/biohazards –* The occurrence of this type of pandemics results also due to the environmental disbalance in the natural habitats of the animals, as well as increased environmental degradation. Therefore "green recovery" from the impact of the pandemic is highly elaborated as *a modus operandi* for resilience. In terms of the DRM, one of the solutions is implementing Nature-based-Solutions[82] for the prevention and mitigation of future disasters, whether in the terms of the climate change it can lead to slowing climate change.[83]

➢ *Continuity of emergency management services is crucial for disaster preparedness and timely,*

76   https://covid19.gov.am/
77   https://moh.am
78   https://tinyurl.com/y59w8sw6
79   https://www.kobotoolbox.org/
80   https://news.am/eng/news/590560.html
81   https://tinyurl.com/y6k4kd2n
82   https://www.iucn.org/theme/nature-based-solutions
83   https://news.un.org/en/story/2020/12/1079602

efficient and effective response – As a result of the crisis, on a community level, many emergency services were affected e.g. lack of ambulance vehicles, lack of resources, etc. A possible solution for this is to establish local ambulance by forming a pool of local community cars that can be used as alternative ambulances covering the emergency needs of the citizens and profiling a roster of volunteers for emergency response on community-level based on their capacities and capabilities.

➢ *The Health system responded to the COVID-19 crisis within the framework of existing capacities and resources,* but for better preparedness and diversification of services provided with a sufficient number of hospital facilities and beds, it is needed to evaluate the response with a gap analysis and forward-looking recommendations. Accordingly, better operational plans and procedures can be implemented, with an increased number of facilities, especially in the regions easing the access to health services of the citizens. Training and specialization of the staff should follow based on the updated pandemic risk/biohazards curricula and protocols.

➢ *COVID-19 impacted not only the psychological well-being of the citizens and the responders but also stigmatized infected citizens and their families –* During the early recovery phase and afterwards it is needed to design and implement comprehensive psychological support both for the citizens and the emergency responders customized as per their specific contexts. Furthermore, stigmatization needs to be addressed through a comprehensive set of measures for the whole family and communities.

6.3 BOSNIA AND HERZEGOVINA (Sub-region: Western Balkan & Turkey)

COUNTRY PROFILE:
- **Population:** 3.531 Million
- **Surface Area:** 51,197 km2
- **GDP (2018):** 20.16 B USD
- **GDP p.c (2018):** 6,066 USD
- **HDI (2019):** 0.780 (73/189)
- **INFORM 2020 Index:** 3.6 (100)
- **GINI INDEX (INCOME EQUALITY COEFFICIENT, 2011):** 33

DISASTER PROFILE:

Top Hazards:	Top 5 Disasters					
	Disaster type	**Date**	**Fatalities**	**Injured**	**Affected**	**Damages USD**
Floods	**Flood**	**05.2014**	**25**	**/**	**1,000,000**	**2.6 B**
Droughts	Drought	08.2000	/	/	/	158 M
Landslides	Drought	05.2003	/	/	/	145 M
Wildfires	Flood	06.2010	/	/	14,910	87 M
Extreme temperatures	Flood	04.2004	/	/	275,000	/
Earthquake	Note: One event of epidemic registered in 08.2000 with 400 affected.					

SPECIFICS OF THE DISASTER RISK MANAGEMENT SYSTEM IN BOSNIA AND HERZEGOVINA

Overall set-up of the disaster risk management system in BIH is specific given the political structuring level and consists of institutions on state and entities' and the Brchko District levels. In that sense, the main institution on the state level is the ***Ministry of Security (Sector for Protection and Rescue) as the NDMA*** and the responsible institutions on the entity level i.e. in the Federation of Bosnia and Herzegovina ***(Federal Administration for Civil Protection)***[84], Republika Srpska ***(Republic Administration for Civil Protection[85])*** and the Brchko District (***The Department of Public Safety[86]***). In general, the Ministry of Security is coordinating the administration of emergency management for the whole state of Bosnia and Herzegovina and does not have operational resources. On the other side, the entities' and the Brchko District organizations of civil protection are responsible for the implementation of activities for civil protection on the territory of the relevant entity. These civil protection departments have the main human and material-technical resources and have the operational capacity for implementation of activities for prevention, mitigation, preparedness, response and recovery from natural and human-made disasters, including epidemics.

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84   http://www.fucz.gov.ba/
85   https://ruczrs.org/en/
86   http://vlada.bdbih.gov.ba/Publication/Read/TEST301?lang=bs

NATIONAL DISASTER MANAGEMENT AUTHORITY:
Ministry of Security (Sector for Protection and Rescue)[87]

Main competencies:
• Implementation of international commitments and cooperation in carrying out civil protection;
• Coordination of disaster risk management activities in Bosnia and Herzegovina;
• Coordination of the entities' plans in the event of natural or other disasters affecting the BIH territory;
• Adoption of programmes and plans for protection and rescue.[88]

NATIONAL DISASTER RISK REDUCTION PLATFORM: 23.03.2013 (est.)

The National DRR Platform is a permanent forum for the exchange and provision of opinions, proposals and achievements contributing to disaster risk reduction in all areas of human activities. Also, it is contributing to the systematical reduction of various risks, through all social and economic activities.

COVID-19 PANDEMIC CRISIS CONTEXT IN BOSNIA AND HERZEGOVINA

Background

In Bosnia and Herzegovina, the first cases were reported on 05 March 2020 and the first fatality was reported on 21 March 2020. As of 09 December 2020, Bosnia and Herzegovina registered 96,021 cases with 3,081 fatalities[89]. Initial responses to prevent the exponential widespread was through the implementation of a set of restrictive measures. A state of emergency was declared at the entity level by the Governments of FBIH and RS on 16 March 2020 and a day later on 17 March 2020 the Council of Ministers of BIH adopted a Decision on Declaring a State of Natural or Other Disasters Caused by the Coronavirus Pandemic. Given the specific system of emergency management with operational competencies of the entities, various restrictive and isolation measures have been implemented during the period that follows, but as of 10 August 2020, the state of natural or other disasters in BIH remains in effect.

Figure – Confirmed cases & new cases (per 100 K) as of 08.12.2020
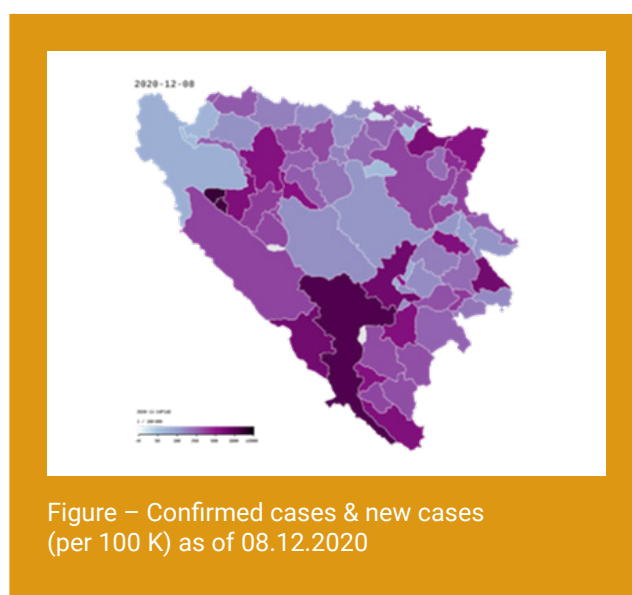
Physical resources to admit the COVID-19 patients were non-existing during the onset of the pandemic. Nevertheless, the health authorities in the entities organized several hospitals for acceptance and treatment of the COVID-19 patients e.g. Republika Srpska – 15 facilities, Federation BIH – 19 hospitals as well as adaptation of former military hospital units and temporary hospitals in sports arenas or student centres.[90]

COVID-19 pandemic crisis emergency management structure

In addition to the disaster risk management system, health care is a competency of the entities' governments of FBIH (10 cantonal governments in coordination and governance of the FBIH Government), RS and the Brchko District. At the state level, the **Ministry of Civil Affairs** has a legal role to coordinate activities related to population health and health care services, including some activities related to international engagement and data collection, as well as coordination of the responses of all BIH entities within the health sector. The **Ministry of Security** is in charge of the border management, police and coordination of civil protection. Monitoring and surveillance of the health situations is done by the public health institutes of FBIH, RS and the Brchko District, while the Ministry of

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87   http://www.msb.gov.ba/onama/default.aspx?id=1641&langTag=en-US
88   http://www.msb.gov.ba/onama/default.aspx?id=1653&langTag=bs-BA
89   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
90   https://tinyurl.com/y5m6zf4z

Civil affairs coordinates the monitoring and surveillance at the state level.

Given the gravity of the situations after the declaration of the state of natural or other disasters, on 17 March 2020 the Council of Ministers of BIH activated the **Coordination Body for Protection and Rescue from Natural and Other Disasters in Bosnia and Herzegovina**. The Ministry of Security provides necessary administrative and experts support to the Coordination Body that is comprised of representatives of 21 institutions both from state-level (all ministries) and entities level and the Brchko District (civil protection administrations, key ministries and institutions). On the other hand, on the entity level, in FBIH, the **Federal Headquarter of Civil Protection**[91] was established, whether in RS an **Emergency Headquarter** was established, initially governed by the Ministry of Health of RS and later on under the responsibility of the Prime Minister of RS. In Brchko District, the **Headquarter for Protection and Rescue** was activated for the sake of management of the local level pandemic response.

COVID-19 pandemic crisis response – normative framework

In general, the essential normative framework for the COVID-19 response includes the normative acts from various levels of government and various areas (DRM, health, governance, etc.). Concerning the planning documentation, *the Pandemic Influenza Preparedness and Control Plan in Bosnia and Herzegovina* was adopted by the Council of Ministers in 2009, but it was not fully implemented during the COVID-19 pandemic crisis response. On the other side, there is *the National Protection and Rescue Plan (2013)*, as well as protection and rescue plans adopted by the state-level institutions and on entity, cantonal, local and organizational levels that were useful and essential tools for the response to the COVID-19 pandemic.

KEY FEATURES

➢ **Good coordination is a basis for an effective response –** The Ministry of Security provided key coordination of the support to the pandemic crisis response through provision of administrative and expert support to the Coordination Body for Protection and Rescue from Natural and Other Disasters in Bosnia and Herzegovina, governing the body during the initial period of the crisis response, as well as the ensuring efficient cooperation and coordination with other institutions and the management of the international donors' assistance. The Ministry of Security followed the *4C approach to emergency management*: communication, coordination, cooperation and collaboration ensuring, alongside the implementation of the Host Nations Support role for BIH.

➢ **Human resources are the core value of the organization –** Knowledgeable and professional staff of the NDMA was contributing to the successful implementation of the allocated tasks and actions. In unprecedented disaster events like this one, it is necessary to have qualified human resources that will establish qualitative institutional and personal relations with other partners ensuring efficient realization of given tasks. Furthermore, given the magnitude of the pandemic crisis and a lot of unknowns related to it, the dedication of the staff and their enthusiasm for the achievement of the objectives was on a higher level.

➢ **Good coverage with planning documentation eases the response –** Most of the institutions from the DRM system in the country, including the NDMA, have already developed protection and rescue plans that contains certain aspects of the epidemics allowing them to actively organize the response.

➢ **Always prepared for timely, effective and efficient response –** Within the existing DRM framework, operational response to the COVID-19 was done on entities' level through active engagement of their civil protection resources. They perform a crucial role in operational response to the pandemic crisis. Civil protection institutions have knowledge and resources for operational response even though their focus is not on the pandemic hazard itself. During this response, they have implemented a variety of actions and implemented measures while some of them are beyond its essential mandate:

a) Provision of support to disaster risk management;
b) Disinfection of public areas and facilities;
c) Provision of protective equipment and materials;
d) Provision of humanitarian assistance;
e) Delivery of supplies for the citizens in isolation and quarantine and the most vulnerable;
f) Facilitated the return of BIH nationals from abroad to the country;
g) Support to the entities' and local response headquarters,
h) Provision of field support (mobile units and tents) for quarantines at the border crossing[92];
i) Crisis information and communication with citizens, etc.

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91 http://www.fucz.gov.ba/koronavirus-naredbe/
92 http://www.fucz.gov.ba/fucz-postavila-satore-za-karantin-na-14-bh-granicnih-prelaza/

Figure 42 – Disinfection of public spaces[93] and gyrocopter air taxi transport of tests[94] by the FBIH Federal Administration for Civil Protection

Figure 43 – Disinfection of public schools[95] by the Republic Administration for Civil Protection of RS

Furthermore, the role and support provided by the **Armed Forces of Bosnia and Herzegovina** to the civilian structures on their request was crucial for effective and efficient response. In particular, their valuable support can be seen from the following good examples: the establishment of the fully equipped tent camps at the border crossings[96] for control checkups and initial acceptance of the infected passengers, the establishment of military ambulances on their locations[97], provision of disinfection of public spaces and facilities in selected municipalities[98], as well as the conduct of CAX/SIMEX simulation exercise „COVID- 19" to review all aspects during the processes of planning, organization and implementation of tasks and actions while supporting the civilian institutions in the COVID-19 pandemic crisis response.[99]

Figure 44 – Disinfection of public areas and conduct of the CAX/SIMEX simulation exercise „COVID-19" (Photo Credit: Armed Forces of Bosnia and Herzegovina)

> ➢ **Timely call can save a life** - Civil protection emergency numbers where activated and citizens could get information and instructions by calling 121 in municipalities, cities, cantons, entities.

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93   https://tinyurl.com/y5jmvkl2
94   https://tinyurl.com/yxtwls73
95   https://tinyurl.com/yyzfb59t
96   http://www.mod.gov.ba/aktuelnosti/vijesti/?id=78860
97   http://www.mod.gov.ba/aktuelnosti/vijesti/?id=79511
98   http://www.mod.gov.ba/aktuelnosti/vijesti/?id=79810
99   http://www.mod.gov.ba/aktuelnosti/vijesti/?id=82037

➤ ***Essential innovation solutions contribute to efficient operations and broad information dissemination*** – During the response to the pandemic crisis, the NDMA and the participating organizations of the system ensured the continuity of their working operations while quickly adapting to the new normal e.g. working remotely, organizing meetings and activities using the video-conferencing solutions and tools, using social media for information dissemination, data collection using mobile app for daily coordination, as well as digitalization of working processes. Furthermore, the Ministry of Security based on a successful cross-sectoral cooperation with the Ministry of Civil Affairs of Bosnia and Herzegovina and the Ministry of Foreign Affairs of Bosnia and Herzegovina and with technical and financial support of UNDP launched the web portal "*COVID-19 BIH*". This web platform provides integrated information related to the pandemic crisis in Bosnia and Herzegovina. "COVID-19 BIH" is updated daily and contains various data and information for timely and credible information of public and citizens' i.e. interactive presentation of the COVID-19 statistics, news and information, global travel information, border crossings regimes, list of health institutions, decisions made on each level of governance, etc.

Figure 45 – Web portal *"COVID-19 BIH"*[100] (l) & statistics for the period 02.04 – 22.12.2020 (r)

➤ ***Assessing the response*** – Another feature of the BIH COVID-19 pandemic response is the assessment of the COVID-19 crisis response and the impacts on the civil protection system. This provides an opportunity to well understand how they respond to the pandemic crisis, what was the impact of the pandemic crisis on their work and operation, what has gone wrong, what was done successfully and what could have been done differently while summarizing recommendations for the follow-up actions. Surveying was done on two different levels: assessing the inter-institutional cooperation during the crisis response and assessment of the COVID-19 impact on the civil protection structures. Accordingly, these findings were translated into forward-looking recommendations allowing further development of the system and its adaptation to the new normal.

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100   https://www.covid19.msb.gov.ba/en

CHALLENGES:

- During crises of this magnitude, there is always a political interference that sometimes hinder the decision-making process and implementation of regular emergency management activities.
- Vertical coordination sometimes was interrupted due to the different political establishments on state, entities, and cantonal, local levels.
- Not all responsible institutions have a similar level of enthusiasm, expertise, and knowledgeability of the staff.
- For some institutions, this type of crisis was happening for the first time and they needed more time to adapt to it and to effectively respond.
- The normative framework needs to be modified aiming to provide a sustainable framework for efficient and effective protection and rescue system in the state.
- Insufficient data collection and information sharing.
- Availability of human, material-technical, and financial resources.
- Essential operational planning documents exist, but not all of the institutions have implemented them. Some of the reasons for this are insufficient resources and a lack of institutional memory.

EMERGING LESSONS-LEARNED

➢ ***Updated normative framework is one of the pillars of resilience –*** Existing normative DRM framework including pandemic risk/biohazards needs to be updated given the recent experiences, lessons-learned and systemic nature of the risk enabling an efficient and effective framework for prevention, mitigation, preparedness, response and resilient recovery in the same time ensuring enhanced cooperation between the different levels of government, clear definition of competencies, as well as rational and efficient use of available resources.

➢ ***Collected and analyzed data should support the decision-making process for resilience*** - To make comprehensive assessments, prepare operational plans, timely and quality decisions and reporting, it is necessary at the state level to establish a platform for data collection and analysis through web applications and integrated databases on hazards, exposure, and vulnerability of critical risk elements i.e. population and critical infrastructure, capacities of the system, and territorial dispersion of the resources.

➢ ***Expertise and potential exist,*** but it is needed to further invest in technology and multi-risk, multi-hazard, and multi-sector assessment and operational planning, as well as in broadening the knowledge of the emergency responders on the pandemic risk/biohazards. Following a crisis of this magnitude, it is necessary to mainstream the multi-dimensional aspects of risk and accordingly built the internal human capacities in the Ministry of Security and other institutions to be strengthened, followed by the development of scenarios and implementation of simulations and exercises for practical testing of the capabilities of the system and respective planning documents.

➢ ***Resilient recovery of emergency responders -*** Psychological support is one of the key elements for the successful recovery of the responders either from the civil protection or from the health sectors. Within the framework of existing systems, no follow-up support is considered, and therefore mechanisms for psychological support mechanisms during the response and early recovery phases need to be established aimed at achieving the well-being of the responders.

## 6.4 KYRGYZ REPUBLIC (Sub-region: Central Asia)

Country profile:
- **Population:** 6.133 Million
- **Surface Area:** 199,900 km2
- **GDP (2018):** 8.093 Billion USD
- **GDP p.c (2018):** 1,281 USD
- **HDI (2018):** 0.697 (120 out of 189)
- **INFORM 2020 Index:** 3.5 (100)
- **GINI INDEX (Income Equality Coefficient, 2017):** 27.30

DISASTER PROFILE:

Top Hazards:	Top 5 Disasters					
	Disaster type	*Date*	*Fatalities*	*Injured*	*Affected*	*Damages USD*
Earthquakes	*Earthquake*	17.11.2015	/	/	16,780	120 M
Floods	*Flood*	06.2010	3	/	2,050	2.6 M
Droughts	*Landslide*	05.2002	/	/	1,002	1.5 M
Mudflows	*Drought*	2009	/	/	2,000,000	/
Landslides	*Flood*	04.2007	/	/	845	200,000
Avalanches	*Note: One event of epidemic registered in 2010 with 141 affected.*					
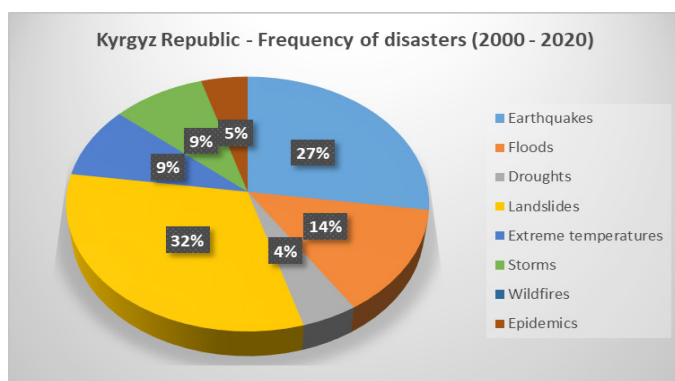
The Kyrgyz Republic has substantial issues with **uranium legacy wastes** from past uranium mining and milling as a regional centre, as well as with waste from mining industries, storage facilities for obsolete pesticides, agriculture, chemical factories, landfills, and waste treatment facilities. On the territory of the country, there are **92 facilities with radioactive and toxic waste.**
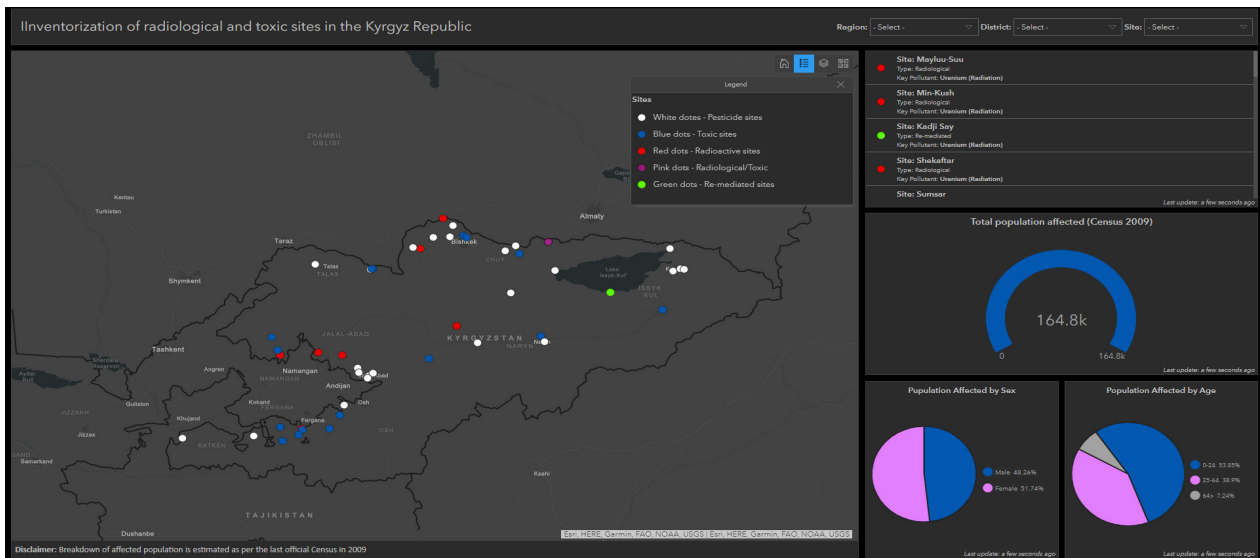
Figure 46 – GIS Dashboard of inventoried radioactive and toxic waste sites in the Kyrgyz Republic[101]

NATIONAL DISASTER MANAGEMENT AUTHORITY:
Ministry of Emergency Situations of the Kyrgyz Republic[102]

Main competencies:
- Implementation of monitoring and forecasting of dangerous natural, technogenic processes and phenomena;
- Implementation of prevention and protective measures from emergencies and mitigation of their consequences;
- Provision of fire and radiation safety;
- Organization and carrying out search and rescue, emergency and recovery and other urgent works;
- Preparation of governing bodies, civil protection forces and population for actions in emergencies, etc.

National Disaster Risk Reduction Platform:[103]
 17.06.2011 (established)

The National Platform for Disaster Risk Reduction of the Kyrgyz Republic is a national mechanism for coordination and strategic leadership in the field of DRR, which are multi-sectoral and multidisciplinary, with the participation of all stakeholders, including government agencies, the private sector and civil society. The main objectives are the promotion of DRR, provision of coordination, analysis and recommendations in priority areas, development and implementation of strategic programmes and measures. It is governed by the Secretariat of the National Platform.

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101   https://gdi-sk.maps.arcgis.com/apps/opsdashboard/index.html#/760f8c68653147a29b54d49aca4d94e3
102   http://ky.mes.kg/
103   http://npdrr.kg/

COVID-19 PANDEMIC CRISIS CONTEXT IN THE KYRGYZ REPUBLIC

Background

In the Kyrgyz Republic, the first cases were reported on 18 March 2020 and the first fatality was reported on 03 April 2020. As of 07 December 2020, the Kyrgyz Republic registered 75,395 cases with 1,297 fatalities.[104] Initial responses to prevent the exponential widespread was through the implementation of restrictive measures – on 22 March 2020 a 30 days state of emergency was declared, extended until 11 May 2020. "However, the emergency regime, which was introduced before the state of emergency, will continue to operate throughout the republic."[105] In Kyrgyzstan 24 hospitals situated in all seven oblasts have been designated for the observation of suspected cases. Confirmed COVID-19 cases are treated in two designated hospitals: the Republican Clinical Infection Disease hospital in Bishkek and the Osh Oblast hospital. Currently, a total of 14 state and 9 private laboratories are involved in the COVID-19 response. In 7 months, Kyrgyzstan has received medicines and medical equipment worth approx. 173 M USD.[106]

COVID-19 pandemic crisis emergency management structure

Country-level response to the COVID-19 pandemic crisis was coordinated by the **Republican Task Force** established in January 2020 by the Government of the Kyrgyz Republic. It consists of all ministries and State Agencies and its meetings are regular. The **Ministry of Emergency Situations** is in charge of coordination of prevention, mitigation, response, liquidation and recovery from all emergencies. It has a general emergency preparedness and response plan for outbreaks of infectious diseases. Its Crisis Management Centre provides necessary support to the pandemic crisis response through the established Operational Task Force. The **Ministry of Health** is in charge of the health system and response to infectious disease outbreaks and particularly for pandemic influenza diseases as per the adopted plan. It has its own *COVID-19 Task Force*, including a 24/7 secretariat and as other institutions, advises the Republican Task Force three times per day. The Task Force receives information 3 times per day from all health care facilities and laboratories of 7 oblasts and the national virology laboratory, and laboratories of Osh city and Bishkek city. They are reporting about the number of patients, the number and health status of suspected COVID-19 cases in hospitals, the number and health status of people under examination and home observation, and the number and results of laboratory tests performed. All 22 points of entry also report 3 times per day about the number of people passing borders and the number and health status of people under observation. In general, activities of the health sector regarding infectious diseases, in case of an impending threat of their further spread, are funded through the *Governmental Epidemiological Fund of the Ministry of Health*. In the case of a public health emergency, additional financial support by the Government is provided.[107]

COVID-19 pandemic crisis response – normative framework

The main legislation for the response to COVID-19 in Kyrgyzstan is the Government Order No. 30 of 29 January 2020, the Order No. 52 of the Minister of Health of 29 January 2020 on preventing the spread of COVID-19, and the protocol No.1 of 29 January 2020, based on the meeting of the Republican Task Force on Preventing the Introduction and Spread of the Coronavirus on the Territory of Kyrgyzstan. Order No. 320 has been issued on May 15 2020 on the Establishment of a Coronavirus Scientific Advisory Council to provide advisory, scientific, analytical and methodological assistance to prevent the further spread of COVID-19 and to improve the quality of health care delivery.[108] Concerning the planning documentation, there was a pandemic response plan which was not activated and the intersectoral interagency contingency plan for COVID-19 was adopted on 20 March 2020 aiming to support the Government and the Ministry of Health in a timely, effective, efficient and well-coordinated response.

104   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
105   https://tinyurl.com/y526pjfg
106   https://tinyurl.com/yywyuevb
107   https://tinyurl.com/y6j2l3gl
108   https://tinyurl.com/y6j2l3gl

KEY FEATURES OF THE PANDEMIC CRISIS RESPONSE:

> ***Always prepared for timely, effective and efficient response –*** The Ministry of Emergency Situations performs a crucial role in support of the timely, effective and efficient response to the pandemic. It is the key institution that has adequate knowledge and available resources for successful response even though its focus is not on the pandemic hazard itself. During this response, MES implemented a variety of actions and implemented measures while some of them are beyond its essential mandate:

COVID-19 Situation for 07.12.2020
(STOP COVID-19 on Telegram)

a) Establishment of 253 observation points across the country;
b) Disinfection of public areas and facilities;
c) Provision of protective equipment and materials;
d) Provision of humanitarian assistance[109];
e) Delivery of supplies for the citizens in isolation and quarantine and the most vulnerable e.g as of 01.12.2020 the aid is provided to 40,416 people in observation points.;
e) Organized and facilitated the air and land transportation of Kyrgyz Republic nationals from abroad to the country e.g. 90 transports for transfer of 15,747 citizens;
f) Support to control of the perimeter of 253 quarantine and isolation zones and provision of control check-up points;
g) Support to the Republican Headquarter and headquarters at the oblast, city and district city levels;
h) Support to extension of the COVID-19 related public health infrastructure;
i) Support to the repatriation of 2,500 citizens of neighbouring countries (Kazakhstan, Tajikistan, and Uzbekistan) during transit through the Kyrgyz Republic;
j) Establishment of daily/nightly stationary points for the provision of immediate consultations to the citizens in Bishkek and other cities. In total 943 stationary points were established throughout the country, i.e. Bishkek – 16, Osh - 6, Chui oblast – 245, Batken oblast – 43, Issyk-Kul oblast - 179, Talas oblast – 108, Naryn oblast – 159, Jalal-Abad oblast – 86 and Osh oblast – 101.
k) Support to provision of psychological support to the emergency responders.
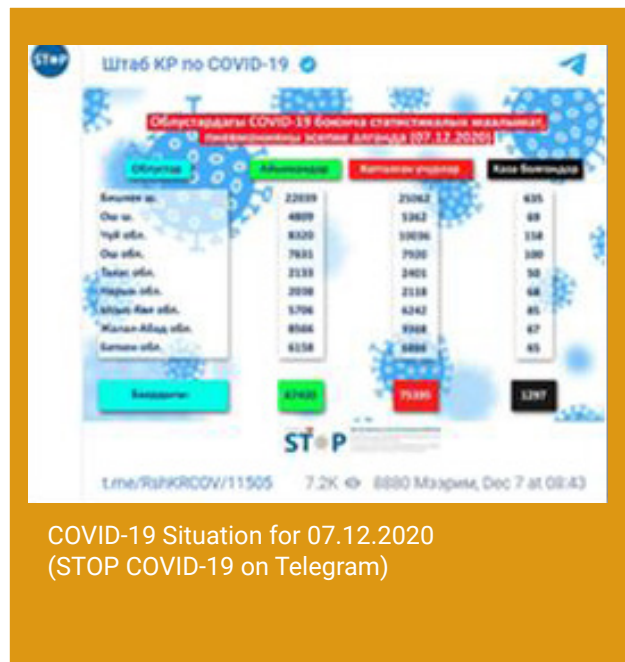

Figure 47 – Disinfection of public spaces and facilities performed by the Ministry of Emergency Situations (Photo: Courtesy of MES)

> ***New normal is the current reality for emergency management*** – The Ministry of Emergency Situations quickly adapted to the "new normal" through implementation of new internal procedures and tools, as well as through

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109   https://covid.kg/ru

improvisation and adaptation of their actions and measures taken during the response phase. For example, shifting to remote working, use of virtual platforms and tools for meetings, trainings, communication, implementation of internal protocols for protection and self-protection. Also, MES through its Crisis Management Centre provided technical support to the Republican Task Force and other bodies for enhanced communication, coordination, cooperation and commanding.

➢ *Broad front established for coordinated response* – The Secretariat of the National DRR Platform worked together with an NGOs Alliance of six organizations based on the adopted action plan aiming to develop recommendations that were shared with the entities from the emergency management system and the citizens.

➢ *Timely call can save a life* - There are hotline numbers for any concerns regarding the COVID-19 pandemic. Seven centres operates these numbers providing remote, timely and qualified medical consultation on prevention of COVID-19, early detection, contact tracing and providing up-to-date information to the population.

➢ *Real-time information matters* – The Republican Task Force very successfully runs two interactive ICT platforms for the Telegram channel with information about the COVID-19 pandemic. The former one is aimed at timely information of the citizens on the status of the pandemic, as well as provides an opportunity for consultation with medical doctors after submitting an online application. The latter one is a web page that provides several set of information: COVID-19 status, availability for hospitalization, humanitarian aid section, volunteers section, news section, recommendations by medical doctors, as well as world statistics. Nevertheless, this platform has an innovative section on openness and transparency of financial aid and allocated funds for the COVID-19 pandemic response which ensure transparency and accountability of pandemic related spending, as well as sustainability of operation and increased public trust by the citizens.
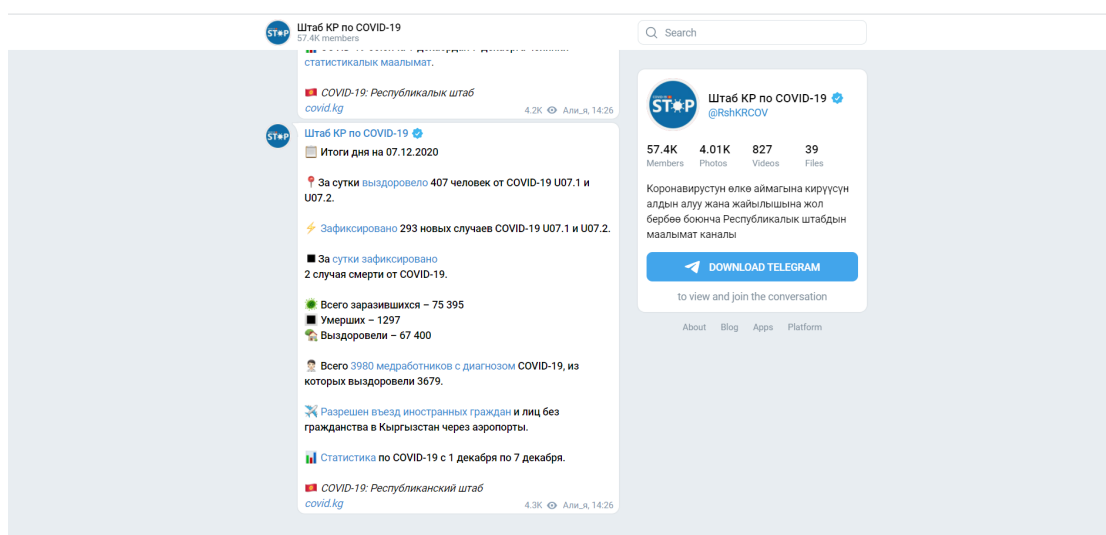
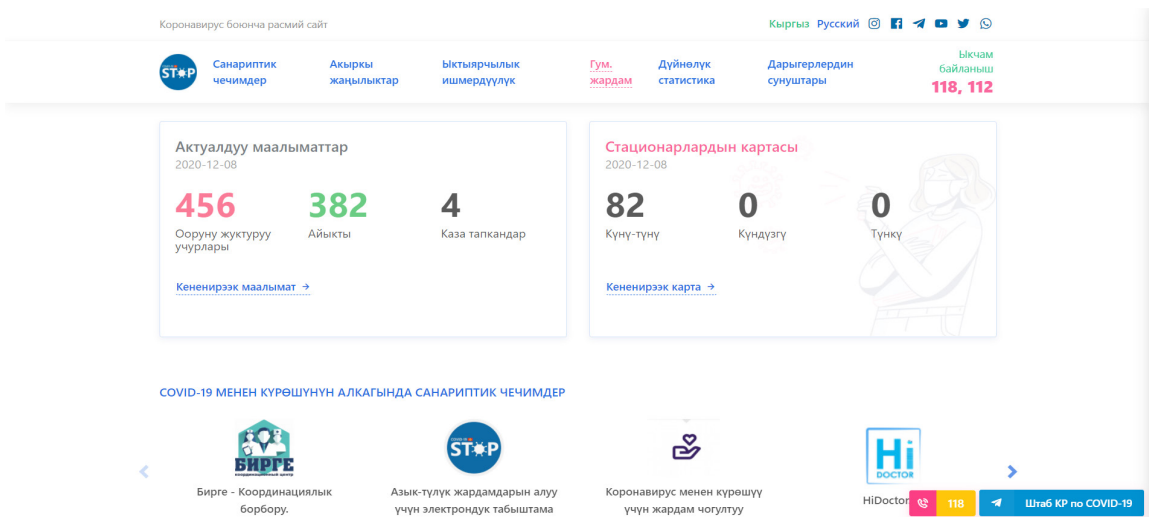

Figure 48 – Telegram channel of the Republican Task Force[110]

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110   https://t.me/s/RshKRCOV

Figure 49 – Republican Headquarters for COVID-19 website[111]
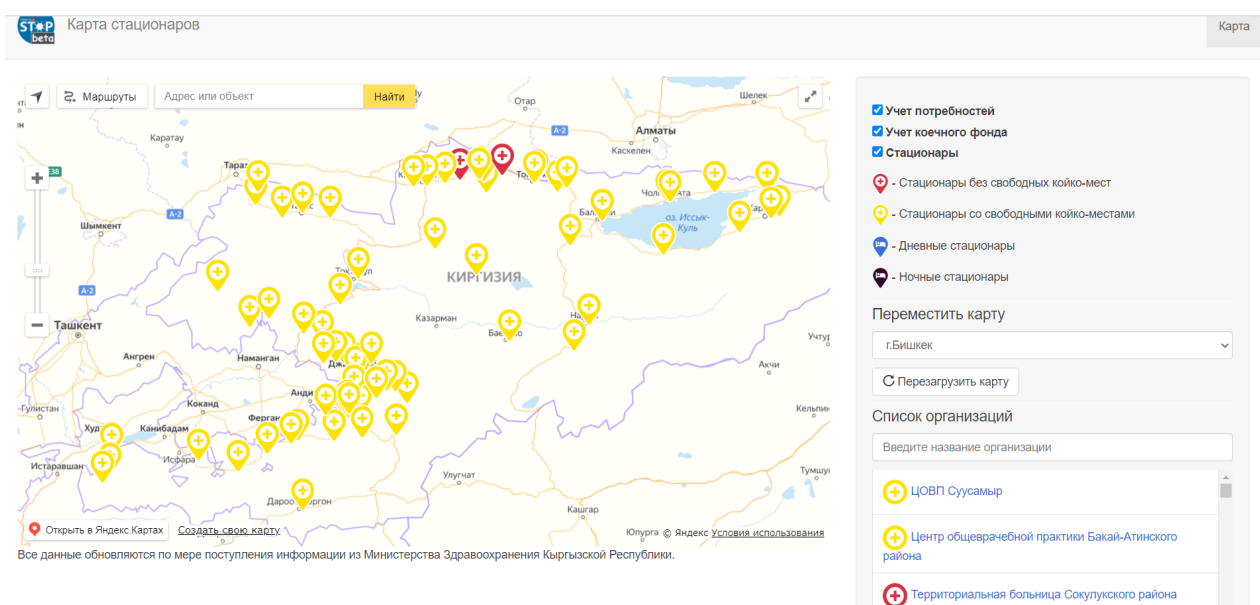
Figure 50 – Republican Headquarters for COVID-19 website – availability of free beds in the health facilities on the territory of the Kyrgyz Republic[112]

CHALLENGES:

- Establishment and maintenance of proper technical coordination between the ad-hoc response structures and existing emergency management structures.
- Coordination of the response is centralized with main competences on the national level.
- Due to the scale of the pandemic and specifics of the crisis, certain bodies have not been activated e.g. Inter-sectoral Committee of Civil Protection and Scientific and Technical Council of the Civil Protection and the United Comprehensive Monitoring and Projection of Emergencies System was not launched and it could not perform its functions, especially projections and disaster risk assessments in terms of biological and social contexts.
- Availability of human, material-technical and financial resources.
- Lack of methodology and tools to evaluate the scale of the pandemic and its impact.
- Insufficient data sources for preparation of pandemic risk/biohazards assessments, as well as update of the existing multi-hazard, multi-risk assessments.

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111   https://covid.kg/
112   https://map.covid.kg/

- Insufficient inclusion of the disaster medicine in the pandemic crisis response.
- Insufficient researches on the pandemic risk/biohazards can be foundations for the assessment and planning process.

EMERGING LESSONS-LEARNED

➢ **Understanding what went well and what were the gaps** - Evaluation of the COVID-19 pandemic response and the functional analysis of the normative and institutional framework contributes to understanding the strengths and weakest points of the system response and contributes to the enhancement of the individual organizations and the overall system.

➢ **First responders vs. first preventers** – In order, the local authorities to fulfil the role of the first responders' additional competences and resources should be provided. These investments should lead to their transformation to first preventers, actively investing in prevention and mitigation, before crisis and disasters happen.

➢ **Re-distribution of resources and health facilities** – During this part of the pandemic crisis, most of the cases are in the urban areas, where the concentration of the population is highest. Since the Kyrgyz Republic has 63.6% of the rural population, during the follow-up response to the pandemic it is necessary to re-distribute the resources and strengthen the health infrastructure on a regional on local level enabling better access to health.

➢ **Expertise and potential exist,** but it is needed to further invest in technology and multi-risk, multi-hazard and multi-sector assessment and operational planning, as well as in broadening the knowledge of the emergency responders on the pandemic risk/biohazards.

➢ **Updated risk assessment and operational planning are pillars of resilience-building –** Alongside the research work, the existing risk assessments need to be non-linear, bridging the past disasters with new threats while updated integrating the pandemic risk/biohazards providing foundations for extending the existing Emergency Situations plan with inclusion of other key ministries and entities, as well as the development of tailored response plan with an action framework.

6.5 MOLDOVA (SUB-REGION: EASTERN EUROPE)

Country profile:
- **Population:** 3.556 Million
- **Surface Area:** 32,560 km2
- **GDP (2018):** 11.44 Billion USD
- **GDP p.c (2018):** 3,095 USD
- **HDI (2019):** 0.750 (90 out of 189)
- **INFORM 2020 Index:** 3 (119)
- **GINI INDEX (Income Equality Coefficient, 2017):** 25.90

DISASTER PROFILE:

Top Hazards:	Top 5 Disasters						
	Disaster type	Date	Fatalities	Injured	Affected	Damages USD	
Floods	**Drought**	2007	/	/	210,934	406 M	
Droughts	Flood	07.2008	3	/	4,000	120 M	
Storms	Storm	11.2000	/	/	2,600,000	31.6 M	
Landslides	Flood	08.2005	/	/	6,500	7.8 M	
Earthquakes	Flood	07.2010	1	/	12,000	/	

Moldova - Frequency of disasters (2000 - 2020)
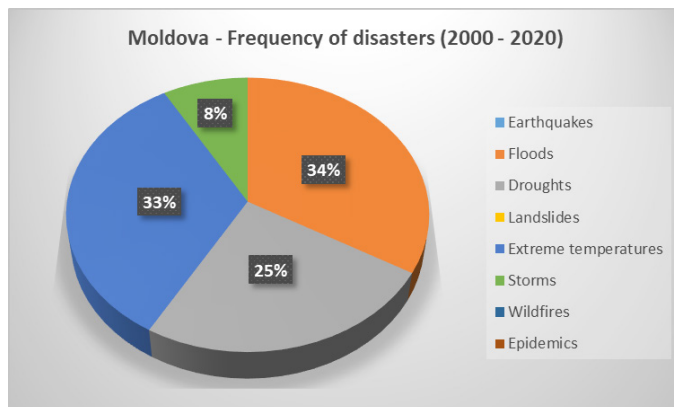
General Inspectorate for Emergency Situations[113]

Main competencies:
- Protection of people and property in emergencies;
- Conducting rescue operations and other urgent actions in emergencies and liquidation of their consequences;
- Organizing continuous training of the civil protection forces and the population for preparedness and conduct of operations in case of emergencies, etc.

National Disaster Risk Reduction Platform: not established.

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113   http://dse.md/

COVID-19 PANDEMIC CRISIS CONTEXT IN MOLDOVA

Background

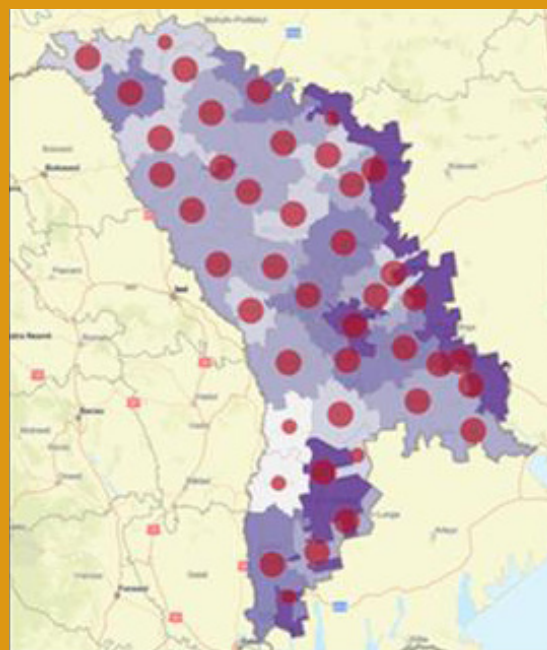In Moldova, the first case was reported on 07 March 2020 and the first fatality was reported on 18 March 2020 this year. As of 22 December 2020 , Moldova registered 138,213 cases with 2,825 fatalities.[114] Initial responses to prevent the exponential widespread was through the implementation of restrictive measures like in other countries. A state of emergency was declared on 17 March 2020 for 60 days i.e. until 15 May 2020 and the response was led by the Commission on Emergency Situation. In response to the pandemic crisis and maintaining open most of the businesses, a National Public Health Emergency was declared for the initial period from 16 May until 30 June 2020 and consequently extended until 30 September 2020 and the response was led by the National Extraordinary Public Health Commission. Afterwards, the system of "traffic lights" was introduced meaning that (red zones) are regions that will declare a public health emergency within their territory (high impact and includes a high risk of transmission with severe impairment of public health and requires strict control, surveillance and response measures); (orange zones) are where the burden of disease is moderate, the spread is

Map – COVID-19 status in Moldova
as of 22.12.2020
Source: https://tinyurl.com/vrgx3hx

mitigated through small clusters or single outbreaks; (yellow zones) are where the burden of disease is low, sporadic cases; (green zones) are where cases/clusters or outbreaks are rare. From 13 October 2020, 35 of the 38 territorial states in Moldova were red zones and therefore declared a State of Public Emergency. Only 3 states are yellow zones, none are green zones. On 30 November 2020, a nationwide state of emergency was again declared[115] for the period until 15 January 2021.

COVID-19 pandemic crisis emergency management structure & normative framework

Concerning public health emergencies, preparedness and response is a shared responsibility between civil protection and public health, with the two leading authorities of these sectors being the most prominent ones, the General Inspectorate for Emergency Situations and the Ministry of Health. The Commission for Emergency Situations of the Government of the Republic of Moldova is responsible for implementing preventive measures, verifying emergency preparedness and managing emergencies. Nevertheless, in the case of COVID-19, the National Extraordinary Public Health Commission (NEPHC) is responsible for an integrated approach, applying prevention and management measures, multisectoral mobilization and coordination of the pandemic crisis response. The latter one is headed by the Prime Minister and includes representatives from all ministries and departments. It is empowered to adopt decisions on the declaration/cancellation of a public health emergency at the national level, coordination of the activities of the central public administration authorities, legal entities and persons to prevent, mitigate, respond to and eliminate the consequences of public health emergencies. With COVID-19, the NEPHC approved and declared yellow, orange and red alerts – a code red alert was declared on 13 March 2020. The National Agency for Public Health is the implementing body of the NEPHC.[116]

Local public administration create territorial emergency commissions for public health and approve the regulations on the activities of the territorial emergency commission on public health. Competent public health authorities organize preparedness measures for emergencies in public health, which include (but are not limited to) assessment of the

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114   https://tinyurl.com/vrgx3hx
115   https://tinyurl.com/y6byyc9s
116   https://tinyurl.com/y6byyc9s

dangers that may cause urgent situations in public health, and forecasting their consequences; planning of measures to prevent, reduce, respond and eliminate the consequences of emergencies in public health; implementation of constant surveillance using epidemiological and laboratory research for the timely detection and identification of factors that can cause urgent situations in public health; timely identification, localization, isolation and elimination of foci of urgent situations in public health with the establishment, if necessary, of restrictive measures; planning, organizing and carrying out preventive measures to protect the population (vaccination, preventive treatment, disinfection, etc.); the provision of medical assistance to the population affected in emergencies in public health; creation, training and maintenance in constant readiness of response teams in cases of emergencies in public health; creation and maintenance of reserves of medical and sanitary materials, and training and informing the population about the dangers, ways of prevention and rules of behavior in urgent situations in public health.

The intersectoral Influenza Pandemic Response Plan was developed and approved in 2009. The new draft of the plan was developed by the National Agency for Public Health in 2019 but not was endorsed by the government. The Health Sector Response Plan as well as the district emergency preparedness and response plan were also in place. After the COVID-19 declaration on 31 January 2020, the *National Emergency Preparedness and Response Plan*[117] was developed and endorsed by the National Committee for Public Health Emergency[118].

KEY FEATURES

> ➢ ***Military support of the civilian emergency structures –*** Moldovan national army was involved from the first days of the pandemic in providing significant contribution to the country's response efforts. Both, the army personnel helped the police patrols in securing the measures in public spaces, as well as contributed to the medical response with secondment of military health personnel. The National Army provided resources of 1,600 soldiers and 160 patrol cars at any time of the response phases.

> ➢ ***MOLDEXPO*** - Moldexpo is a well-known exhibition space with a multifunctional complex located on 24 ha and with internal space of 5,000 m2 and external space of 10,000 m2. Nevertheless, from the beginning of the pandemic crisis, it was established as a COVID-19 centre and triage centre for citizens suspected of infection. Consequently, with the increased number of patients, it was transformed into a COVID-19 health facility which provided hospitalization of 340 patients. It is an example of how the external infrastructure facility can be relatively fast and successfully transformed into a public health one, providing necessary accommodation of citizens in needs, as a result of multi-sector work and coordination.

Figure 51 – MOLDEXPO COVID-19 Centre[119]

> ➢ ***Adjustment of the operational planning framework for better response –*** Unlike in other countries, in Moldova, once the COVID-19 disease was declared as a pandemic, the updated National Emergency Preparedness and Response Plan was adopted in January 2020. It is the main document for the coordination of the national and local response.

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117   https://msmps.gov.md/wp-content/uploads/2020/09/Plan-r%C4%83spuns-COVID-19.pdf
118   https://tinyurl.com/y6byyc9s
119   https://tinyurl.com/y52ykq77

➢ ***Timely call can save a life -*** At the National Agency for Public Health, there is a Green Line (022 721 010 080012300) for COVID-19 Q&A or psychological support and a single national emergency call service 112, to request an ambulance.[120]

➢ ***Real-time information matters –*** Regular information sharing regarding the COVID-19 pandemic statistics and information was done using different web sites. Official one was the site of the Ministry of Health, labour and social protection[121] providing essential information for the citizens about the trend and availability of online resource, whether the *GIS MOLDOVA COVID-19 site[122]* presents a visualization of the pandemic statistics using several attributes and layers.

➢ ***COVID-19 pandemic response in the Transnistria region –*** Given the actual situation in the Transnistria region of Moldova where the so-called Republic of Pridnestrovye was declared, overall response to the COVID-19 pandemic crisis was not implemented by the Moldovan authorities. On the contrary, the health authorities of the so-called republic are implementing the operational measures in response to the pandemics. Nevertheless, there is a significant lack of health personnel, facilities, medicines and protective equipment, resulting in a high number of cases and widespread pandemics. Additionally, they limited the entrance of foreign and Moldovan citizens and this measure resulted in loss of income generation of citizens working on the other side of the river, access to health services since not all specialists are available in Tiraspol and restricted family support by relatives and friends.

CHALLENGES:

- Insufficient data collection and information sharing.
- Data interruption as the number should be linked with analysis of influencing factors that can give the idea for activities and that was not the case.
- Availability of human, material-technical, and financial resources.
- Lack of cross-sectoral capacity for public health emergencies, including at the local level.
- 71.6% of the hospitals do not have an epidemiologist.[123]
- Inefficient risk communication leading to the spreading of false or inaccurate information about the virus, its effects and the actions that the general public, or the authorities are implementing.
- Awareness of the population was not tackled in a systemic way resulting in periods when the citizens have not believed in coronavirus.
- Lack of preparedness of the public services to work remotely and online in most sectors.[124]

EMERGING LESSONS-LEARNED

➢ *Timely coordination and assistance with donors and international organizations –* Timely, effective and efficient coordination and communication with donors results in timely provision and supply of necessary protective equipment and materials, especially during the initial phases of the response. Accordingly, the national authorities through the established mechanisms of communications succeeded in obtaining the necessary pandemic relief. One of the pre-conditions for successful coordination and cooperation is to have all structures and modality of their cooperation tested before the emergency

➢ *"New normal" contributed to strengthen the capacities of the responders* – NDMA succeeded In its business continuity using the e-communication tools and solutions and imposed continuous preparedness modality of the engaged personnel.

➢ *Pandemic crisis response provided resourceful solutions –* Active engagement of volunteers was one of the best practices of the Moldovan response to the pandemic crisis enabling significantly to boost the response capacities. However, it is necessary to continuously and systematically work with the volunteers to provide them with the necessary knowledge and experience.

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120   https://tinyurl.com/yyavzkg4
121   https://msmps.gov.md/
122   https://tinyurl.com/yf5omut5
123   https://reliefweb.int/sites/reliefweb.int/files/resources/Moldova%20Covid-19_FINAL.pdf
124   https://tinyurl.com/yxaxq75k

## 6.6 NORTH MACEDONIA (SUB-REGION: WESTERN BALKAN & TURKEY)

COUNTRY PROFILE:
- **Population:** 2.01 Million
- **Surface Area:** 25,713 km2
- **GDP (2018):** 12.67 Billion USD
- **GDP p.c (2018):** 6,084 USD
- **HDI (2019):** 0.774(82/189)
- **INFORM 2020 Index:** 2.5 (136)
- **GINI INDEX (INCOME EQUALITY COEFFICIENT, 2015):** 35.60

DISASTER PROFILE:

Top Hazards:	Top 5 Disasters					
	Disaster type	Date	Fatalities	Injured	Affected	Damages USD
Flood	*Flood*	**03.08.2015**	**7**	/	**5,030**	**87 M**
Wildfires	Flood	06.08.2016	22	/	33,582	50 M
Earthquakes	Flood	02.2015	1	/	100,000	50 M
Extreme weather events	Wildfire	07.2007	1	/	1,000,000	25 M
Epidemics	Earthquake	11.09.2016	/	/	100	10 M
Landslides	Note: One event of epidemic registered in 11.2002 with 400 affected.					
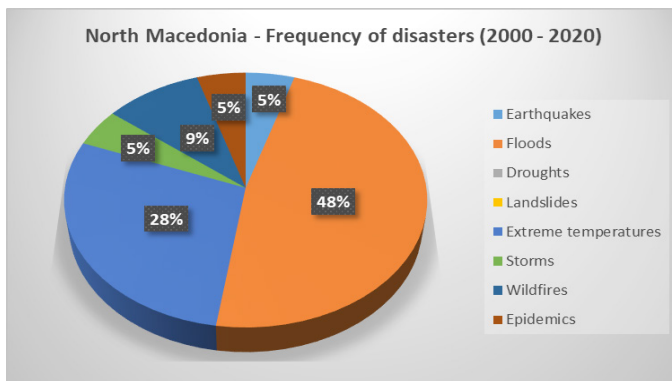
SPECIFICS OF THE DISASTER RISK MANAGEMENT SYSTEM IN NORTH MACEDONIA

Overall set-up of the disaster risk management system in North Macedonia is specific given the fact that two entities are forming the backbone of this system and they can be labelled as the NDMAs: the Crisis Management Centre and the Protection and Rescue Directorate. The former one is engaged on the coordination level, while the latter one on the operational level.

NATIONAL DISASTER MANAGEMENT AUTHORITY: Crisis Management Centre[125]

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125   http://cuk.gov.mk/mk/?option=com_content&task=view&id=3086&Itemid=130

Main competencies:
- Ensuring continuity in the inter-ministerial and international cooperation, consultations, and coordination in crisis management;
- Preparation and updating of a single assessment of the risks and dangers for resolving the crisis situation;
- Proposing measures and activities for resolving the crisis situation and performs other activities determined by law.

NATIONAL DISASTER MANAGEMENT AUTHORITY: Protection and Rescue Directorate[126]

Main competencies:
- Coordination of protection and rescue activities;
- Prevention and mitigation of the impacts of natural disasters and other emergencies.
- Preparation of the protection and rescue system, conducting threats assessments, and proposing protection and rescue measures.
- Use of protection and rescue and rapid response teams in dealing with natural and other disasters.

NATIONAL DISASTER RISK REDUCTION PLATFORM: **21.04.2009 (established)**

As per the fourth revised version of the National DRR Platform from 2019, it is a consultative forum contributing to the prevention of the consequences of disasters through prevention, early warning, response, recovery.

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[126]   https://www.dzs.gov.mk/

COVID-19 PANDEMIC CRISIS CONTEXT IN NORTH MACEDONIA

Background

In North Macedonia, the first case was reported on 26 February 2020 and the first fatality was on 22 March 2020. As of 09 December 2020, North Macedonia registered 69,542 cases with 1,977 fatalities[127]. Initial responses to prevent the exponential widespread was through the implementation of restrictive measures, in a combined approach based on the existing crisis management framework. Initially, a 30-day crisis was declared on 13 March 2020 for the territories of the municipalities of Debar and Centar Zhupa. Since the number of infected cases had an increasing trend and given the existing resources for response, for the first time in the history of the country, an emergency situation was declared on 18 March 2020 and lasted until 22 June 2020. During this period various restrictive measures were implemented i.e. quarantine, lockdown, restrictions of movement, the opening of businesses, etc. with certain restrictions being still in force e.g. operation of business services. As a response to the high numbers of the COVID-19 cases during the so-called "second wave" from 20 November, the Government declared a crisis on the territory of the whole country

Map – COVID-19 status in North Macedonia as of 22.12.2020
Source: https://tinyurl.com/vrgx3hx

for 30 days, but to be additionally extended for six months. The main priority of the current COVID19 pandemic response at this phase is to maintain the capacity of the health system to cope with increasing numbers of cases needing intensive medical care, as well as to protect all health care workers. During the initial phase of the response, the Clinic for Infectious Diseases and Febrile Conditions was the main point for hospitalization. Consequently, the number of health facilities for the treatment of COVID-19 patients increased alongside the exponential growth of cases, and 16 hospitals in the country, including two private ones and modular units, are accepting this category of patients. Currently, as per the Strategic preparedness and Response Plan and the COVID-19 Contingency Plan, the target level is to have capacities for 2,000 patients.[128]
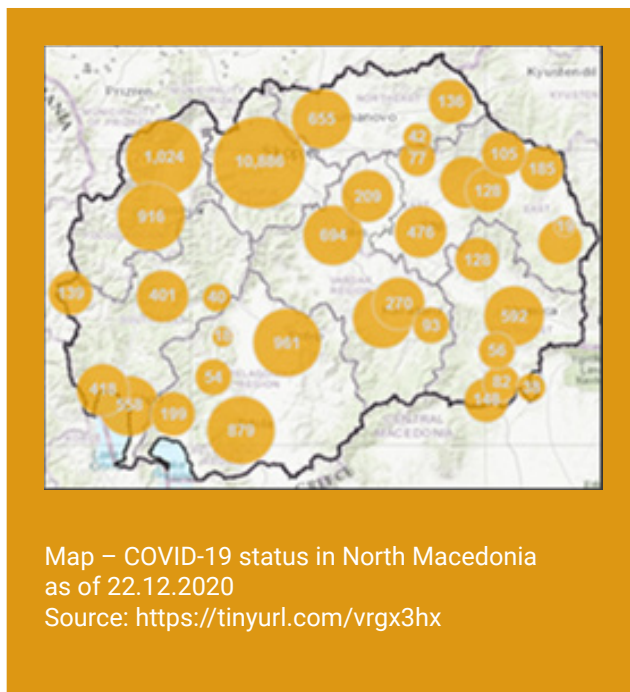
COVID-19 pandemic crisis emergency management structure

National response to the COVID-19 pandemic crisis is characterized by the declaration of a crisis situation and emergency situations. Accordingly, during the period of crisis situation declared (13.03.2020 – 12.04.2020 and from 20.11.2020), the governmental structure of the crisis management system is responsible for coordination of the response i.e. the **Steering Committee** and the **Assessment Group**. The former is responsible for coordination and management of the crisis management system and is consisted of key ministries, institutions and the Army, whether the latter one implements constant assessment of the risks and dangers for the security of the Republic and proposes measures and activities for their prevention, early warning and coping with the crisis situation. The **Crisis Management Centre** provides all necessary administrative, coordination, cooperation and coordination support and through its **Main Headquarter** which is the operational-experts body coordinates the operational aspects of the response to the disasters i.e. COVID-19. Nevertheless, during the initial period of the pandemic crisis response and until the 19.11.2020, the ad-hoc **Main Crisis Coordination Headquarters** governed by the Technical Prime Minister and members of the government and directors of CMC and PRD was managing the response to the pandemic crisis having to a large extent similar competencies with the Steering Committee. On a local levels, all 80 municipalities and the City of Skopje activated their municipal crisis headquarters, as well as the regional headquarters for crisis management. On an institutional level, the **Ministry of Health** is responsible for the management of the health sector and the health aspects of the response to the pandemic crisis. Within its structure, the response is coordinated through the *Commission on Infectious Diseases* as a main technical body and the *Operational Crisis Committee* which

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127   https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61
128   https://tinyurl.com/yxprwbg9

is acting as a COVID-19 Task Force and by professional support by the **Institute for Public Health**. This institute is issuing daily reports, weekly and monthly summaries on the COVID-19 pandemic situation and it is responsible for coordination and testing for COVID-19. Local-level response is supported by the ten regional centres for public health and 21 local ones.[129]

COVID-19 pandemic crisis response normative framework

The main legislation acts consisting of the essential normative framework for the pandemic crisis response are the Law on Crisis Management (2005) and the Law on Protection and Rescue (2004), alongside the laws and related by-laws from the health sector: Law on Health Protection (2016), Law on Public Health (2016) and the Law on Protection of the Population from Infectious Diseases (2018) as the most prominent in this situation. Prevention and control activities for infectious diseases in North Macedonia, including those with international risk, are based on the: National Action Plan of the health sector for preparedness and response in emergencies, crisis and disasters (2017), Operational plan and guidelines Risk Management in case of pandemic influenza in the Republic of Macedonia (2013), and Specific Standard Operation Procedures/Algorithms developed for responding to a potential Covid-19. These plans and procedures were activated upon the request of the Commission for Infectious Diseases as the technical advisory body to the Minister of Health, after the announcement of the first positive COVID-19 case in the country. Furthermore, the National Mental Health Plan for the response to the COVID-19 pandemic was prepared. A plan for hospital preparedness was developed early on, as were guidelines for case management and the designation of regional centres for admitting patients. Health training sessions were also provided on appropriate patient management and protocols.[130] On the other side, the DRM agencies have assessment documents and operational plans that include the epidemic risk. The Crisis Management Centre prepared the National Risk and Hazard Assessments and municipal one for 80 municipalities and the City of Skopje, adopted by their municipal councils, whether the Protection and Rescue Directorate prepared the National Assessment and National Plan for Protection and Rescue, alongside with the municipal ones.

KEY FEATURES

> ➢ **Crisis situation coordination –** In addition to the support of the governing bodies of the crisis management system and support and administrative support to the Steering Committee and the Assessment Group, the *Crisis Management Centre* ensures the coordination to be implemented on a vertical line, from the national to the local level, through the regional offices for crisis management in 35 municipalities and the City of Skopje, as well as through the Main Headquarter and the regional headquarters for crisis management. Within the scope of its international cooperation, it is the contact point of the NATO Euro-Atlantic Disaster Response Coordination Centre through which essential supplies were provided supporting the national COVID-19 response e.g. ventilators, protective equipment and supplies, etc. On the other side, the Crisis Management Centre in this response successfully coordination of the implementation of the planning documents under its competence i.e. National Risk and Hazard Assessment[131] and in the Standard Operating Procedures for Communication, Coordination and Cooperation among the crisis management System entities in a declared crisis situation.[132]

> ➢ **Protection and rescue in times of COVID-19 –** The Protection and Rescue Directorate contributed to the COVID-19 pandemic response within the scope of its competencies on the national and local level as an operational support of the response efforts. For example, supported the disinfection of public spaces, established disinfection points at the entry points during the Debar – Centar Zhupa quarantine, preventive epidemiological measure in the crisis area of Debar and Centar Zhupa, coordinated the work of the regional departments and supported the work of the municipal headquarters for protection and rescue, developed the Protocol for procedures and actions by undertaking protective measures for COVID-19 response by the protection and rescue forces and rapid response teams. Concerning the international cooperation and support, the directorate is a member of the Civil Protection Mechanism of the European Union and the contact point for the Emergency Response Coordination Centre (ERCC) and continuously supported by the mechanism and the member states is provided in delivering protection materials and equipment.

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129   https://tinyurl.com/y6a8pc3o
130   https://tinyurl.com/y5aysayy
131   http://procena.cuk.gov.mk/Login.aspx?ReturnUrl=%2f
132   http://cuk.gov.mk/files/Standardni%20operativni%20proceduri%20B5%20eng.pdf

Figure 52 – Disinfection point at the entrance to the Municipality of Debar during the crisis in the municipalities of Debar and Centar Zhupa
(Photo credit: Protection and Rescue Directorate)[133]

➤ ***Municipalities at the forefront of the COVID-19 response –*** Competencies for crisis management and health protection are centralized, whether the protection and rescue competencies are shared between the national and local authorities. Nevertheless, the municipalities responded timely and effectively within the scope of their existing capacities and resources. For example, municipal crisis headquarters were established for better operationalization of the local level response, participated in the regional headquarters for crisis management, provided necessary resources for local-level activities e.g. disinfection of public spaces and facilities, provision of protective equipment and materials, support to vulnerable categories of citizens, information dissemination and continuous communication with the citizens, provision of other services, provision of facilities for testing, support to infrastructure development of the temporary health facilities, adoption of COVID-19 response action plans, etc.

Figure 53 – Photos of local-level response in Prilep: disinfection of the Hospital by the Public Utility[134] and the Volunteers Unit for disinfection of residential buildings [135]

(Photo credit: Municipality of Prilep)

133   https://tinyurl.com/y45kalj9
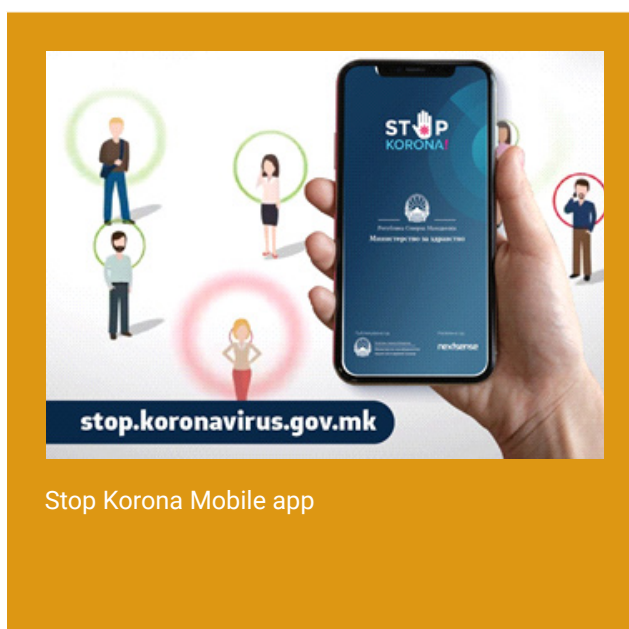134   https://tinyurl.com/y6oobfy7
135   https://www.prilep.gov.mk/triesetina-volonteri-gi-dezinficziraa-site-stanbenite-zgradi-vo-prilep/

➢ ***Active role of Red Cross of the Republic of North Macedonia[136]*** - The Red Cross through its national headquarter and the municipal organizations actively provided support to the pandemic crisis response within the scope of its competencies and supporting the national/local institutions, especially on the community level and in support to the marginalized groups. As per the data from the Operational Center, during the period March – November 2020 its teams provided food, medicines and essential supplies for 7,710 persons, distributed 55,000 family packages with food or hygiene sets and 8,000 packages with essential supplies for babies, as well as provided packages for homeless persons (approx. 8,000) and 26,896 hot meals for other categories of vulnerable citizens. Alongside these activities, its teams provided support to national authorities at the border crossings with measurement of body temperature of passengers, the establishment of mobile triage centres, and immediate support to the migrants and refugees in the two transit centres on the southern and the northern border. During the initial response, it has opened its 24/7 Emergency Operational Center which support the internal coordination and distribution of aid, monitors the situation in the real-time, cooperates and coordinates with the national and local institutions and the Red Cross Headquarter, as well as prepare assessments, analysis and operational plans. Also, it has developed a Contingency Plan for epidemics on the territory of the country and a Response Plan.

➢ ***Comprehensive understanding of the COVID-19 impact on the communities' resilience –*** With the support of UNDP and in cooperation of the regional offices of the Crisis Management Centers and local administration in five municipalities across the region, analysis on the crisis management response to COVID-19 on local level, alongside the financial and impact of provision of main municipal competencies. This is the first report of this type that provides valuable input for the resilient recovery of the municipalities and communities. Furthermore, a website for Assessment of the socio-economic impact of COVID-19[137] to the country and the municipality is launched as an interactive tool for better understanding of the impact and creation of policies and measures for recovery.

➢ ***Timely call can save a life –*** There are hotline numbers for any concerns regarding the COVID-19 pandemic crisis, which include hotline telephone numbers for any concerns regarding COVID-19 (0800 002 03), emergency hotlines for suspected and symptomatic cases or have been in contact with a confirmed case of the Institute of Public Health and centres for public health in the cities. Besides, since the initial phase of the response, there are hotline numbers for the provision of targeted psychological support for different categories of citizens as per their needs i.e. adults, pregnant women, children, adolescents, and their parents, as well as children with different abilities.[138]

➢ ***ICT solutions and tools for better prevention and response –*** *StopKorona!* is a mobile application designed to help stop the spread of coronavirus and protect users. The application uses a procedure to detect the distance between other people's mobile devices/applications, using Bluetooth technology. The main purpose of the application is to provide a quick response to the health authorities for persons who have been in close contact with the infected person in the past 14 days. On the other side, the Crisis Management Center adapted its NICS GIS Platform for regular information of the general public and the citizens on the COVID-19 status providing a breakdown of cases, as well as activities and contacts of the Red Cross organizations. The private company GDi Skopje established the first GIS Dashboard on the COVID-19 pandemic.

Stop Korona Mobile app

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136   https://ckrm.org.mk/en/home/
137   https://www.impact-covid19.mk/
138   https://www.facebook.com/UKpsihijatrija/
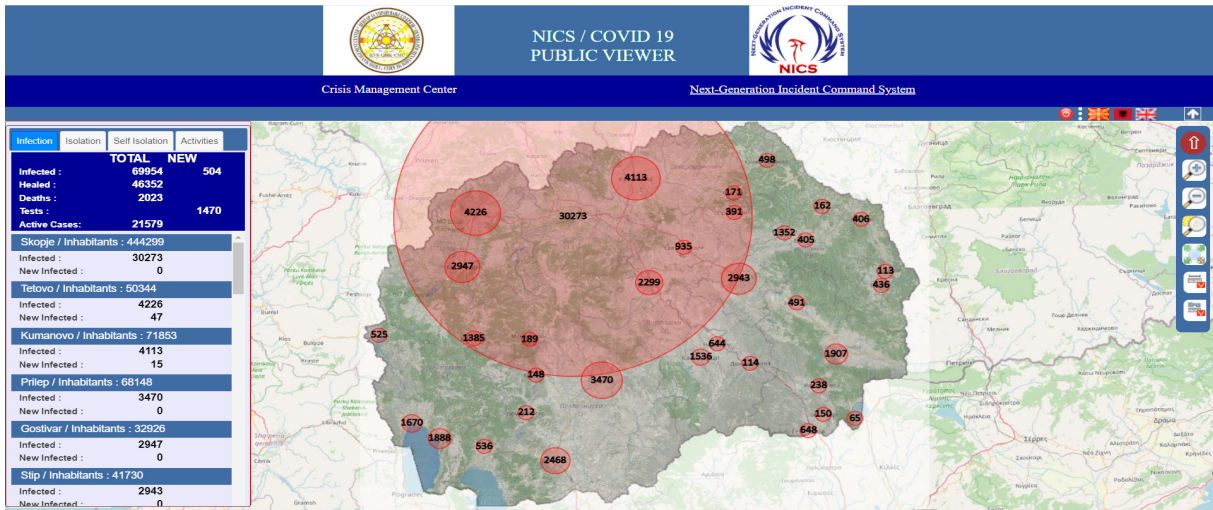
Figure 54 – NICS/COVID-19 Public Viewer (09.12.2020)[139]
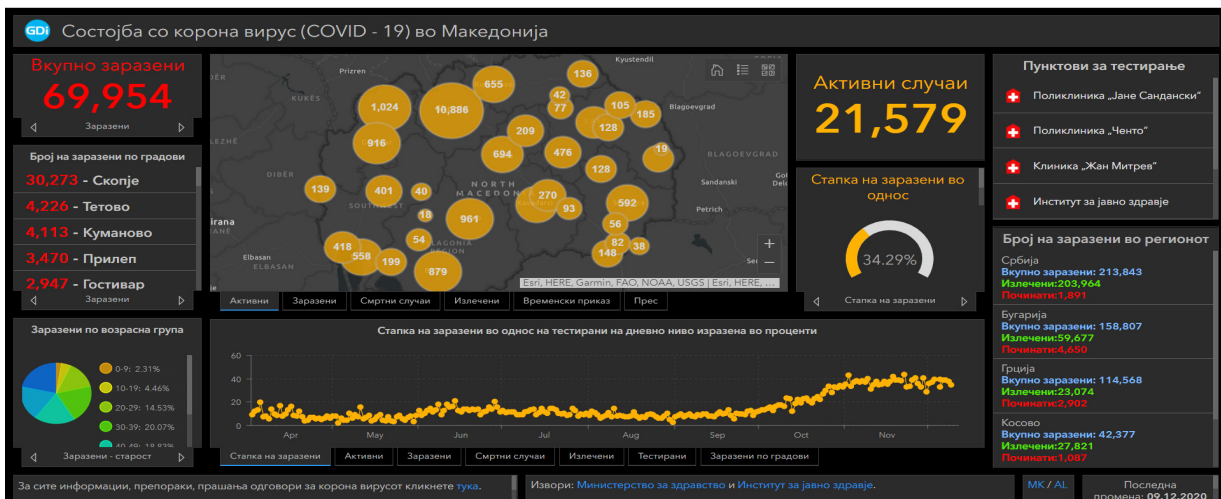
Figure 55 – NICS/COVID-19 Public Viewer[140]

CHALLENGES:

- Ad-hoc crisis coordination bodies can duplicate or overlap with the competencies of the existing risk management institutions and can contribute to the potential dominance of politics over expertise.
- Gaps in the normative regulation on the operational headquarters.
- Limited competencies of the municipalities in crisis management and health protection.
- Insufficient financial resources.
- Lack of existing national resilient recovery framework.

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139   http://nicspublic.cuk.gov.mk/index.php/pocetna?lang=en
140   http://gdi.mk/corona/

EMERGING LESSONS-LEARNED

➢ ***Updated normative framework is one of the pillars of resilience –*** Most important normative acts regulating the disaster risk management in the country is pre-Sendai, so given the existing global resilience framework and the recent experiences and lessons learnt from this pandemic crisis, it is recommended to embark on a normative reform of the system to "modernize" the normative acts. This can be done within the existing plans of the Government for the transformation of the DRM system.

➢ ***Ad-hoc crisis coordination bodies – Yes or No? –*** In many cases in the past, ad-hoc coordination bodies within the Government structure were established alongside the existing state institutions. Concerning this practice, it is necessary to assess the needs for their existence and their functionality in terms of enhancement of the response and early recovery.

➢ ***Resilient recovery from the COVID-19 pandemic is essential for sustainable development of the communities*** – As mentioned, the resilient recovery framework is absent after disasters or crisis, both on a national or local level. Given the magnitude of this crisis and the longer period of full recovery, it is needed to establish a recovery framework, especially on a local level. The newly adopted COVID-19 Recovery Needs Assessment is a potential modus operandi to further proceed in this matter. Proper and timely recovery needs assessment is an opportunity for the municipalities to transform and further develop after crisis and disasters.

➢ ***Green recovery could be a modus operandi for mitigating future pandemic risk/biohazards –*** The occurrence of this type of pandemics results also due to the environmental disbalance in the natural habitats of the animals, as well as increased environmental degradation. Therefore "green recovery" from the impact of the pandemic is highly elaborated as a modus operandi for resilience. In terms of the DRM, one of the solutions is implementing Nature-based-Solutions[141] for the prevention and mitigation of future disasters, whether in the terms of the climate change it can lead to slowing climate change[142].

➢ ***Decentralization of risk reduction services –*** Given the fact that competencies in these areas (crisis management/health protection) are mainly centralized or shared (protection and rescue), it is necessary to consider decentralization of some of the central competencies, and in that way to enable municipalities with the full mechanisms and resources for prevention, response and resilient recovery. Only in this way could the municipalities become effective and efficient *first responders/first preventers*. Alongside the decentralization of services, another two aspects should be taken into consideration – the increased use of inter-municipal cooperation for risk reduction, well as the provision of stable funding of the risk reduction policies and activities.

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141   https://www.iucn.org/theme/nature-based-solutions
142   https://news.un.org/en/story/2020/12/1079602

7. CONCLUSIONS, RECOMMENDATIONS FOR FOLLOW UP AND POTENTIAL DEVELOPMENT PATHWAYS

7.1 Conclusions

As an emerging systemic risk and "*a crisis like no other*", the COVID-19 pandemic is affecting the countries and territories around the globe in an unprecedented way. As "the pandemic crisis of our lifetime", it is causing record loss of lives and severe human suffering with more than 2.1 million deaths and 100 million people affected (as of 02 February 2021), leaving long-term consequences and impacting the societies and economies at their core, heavily impacting the communities exacerbating the existing and creating new vulnerabilities. The countries and territories of the Europe and Central Asia region have not been spared: resilience of their societies and communities are being seriously affected resulting in decreased income generation, increased unemployment and poverty rates, reduction in access to services, increased food insecurity, worsened provision of risk reduction services, etc. Nonetheless, they are responding to the widespread pandemic crisis utilizing different approaches while spending their finite resources and exposing limitations in the current NDMAs set-up. Accordingly, this Assessment Study, commissioned by UNDP and UNDRR provides an overview and findings of the comprehensive assessment analysis of the role and effectiveness of the NDMAs across the ECIS region in the COVID-19 response through the regional and national lenses, while providing recommendations aiming to re-frame the NDMAs approaches to future pandemics and complex disasters.

This assessment underlines the extent to which NDMAs, while key entities within the disaster risk management systems in the countries and territories have only played a limited role during the response to this pandemic crisis. NDMAs proved nevertheless critical in providing crucial coordination, communication and support services to the national and local response structures and mechanisms. Some of the main reasons for this can be identified in the existing legislative and institutional frameworks, where health emergencies are predominantly linked to the ministries of health and adjacent health emergency structures; as well as the insufficient mainstreaming of disaster risk reduction in public health and vice versa. This insufficient integration of public health aspects, which was confirmed during the response to the COVID-19 pandemic crisis, impacts the overall resilience of national and local risk management systems.

NDMAs are especially active in the provision of various services for facilitating the pandemic crisis response efforts through the provision of their essential risk management services as well as the implementation of new ones required by the "new normal". In this sense, NDMAs in the ECIS region showed a great level of transformability and quality e.g. improvisation, flexibility and adaptability to the existing pandemic crisis. Within their responsibilities for supporting the pandemic response, NDMAs delivered a set of activities aimed at supporting the citizens and the institutions while ensuring their regular functions. Many of these actions are beyond the essential competencies, but the NDMAs were implementing them successfully proving that in the absence of previous experience, precise response plans and recommendations for action, ongoing improvisation and creativity are important factors for successful emergency management during the response to the pandemic crisis.

The COVID-19 pandemic as an emergent systemic risk needs a systemic response where the NDMAs from the region are partners and in many cases leading entities, since they have the required expertise and knowledge, past disasters experience, available resources. The prolonged continuation of this crisis without knowing the ending scale and magnitude of its impact, as well as the potential of future pandemics/biohazards and other complex disasters, which scope is too big to be handled by any institution alone, emphasize the need to "*re-frame*" the disaster risk management while ensuring convergence of disaster risk governance and health, addressing emergent and systemic risk and threats from pandemics and biohazards, and accordingly updating the "scope of work" of NDMAs.

The pandemic crisis has a significant impact on the national DRM systems in the ECIS region pressuring their finite resources and chronically stressing the coping capabilities of the NDMAs. As a complex crisis, with many uncertainties i.e. severity, length, impact, it means that the *NDMAs should further adapt to the situation and to absorb the external shocks while transforming themselves to continue operations as per the "new normal".* One thing is essential, the starting point on this transformational journey is to adapt the strategic and operational planning documents and processes to the "new normal", with better integration and prioritization of the pandemic risk/ biohazards and public health in general, followed by capacity development, resource allocation and provision of fiscal stimulus. Some of the NDMAs will continue the development journey to better understanding the "noises from the future" using foresight or other future-oriented methodologies for planning to high-consequences, low-

probability events, whether the majority of them will continue to operate within the existing or updated frameworks, with pandemics included. Transitioning of the disaster risk governance to the new reality and new uncertainties may drive the decisions and actions for mitigating the long-term effects of the pandemics – this may call for a paradigm shift of contemporary disaster risk governance to be better prepared for future systemic risk. *NDMAs together with other institutions involved in the pandemic crisis response in the ECIS countries and territories do not have experience in this type of complex disasters and therefore they should assess and evaluate their response aimed for better preparedness and response for future complex disasters and crisis.* Good examples and best practices can be learned from the countries and territories that have previously experienced serious pandemics e.g. Hong Kong Special Administrative Region of China, Singapore, South Korea, Thailand.

Ongoing pandemic crisis revealed a lack of effective global and regional health risk governance cooperation, with the main emphasis placed on the cooperation regarding the return of nationals, travel restrictions, cross-border controls or emergent supply of protective equipment and materials. NDMAs need to more actively cooperate on fighting this and future pandemic crises through timely information sharing, cross-border cooperation, as well as development and standardization of SOPs and other protocols. Regional initiatives provided overall coordination support in information and knowledge sharing and can play a significant role in future sub-regional and cross-border endeavour.

The COVID-19 Recovery Needs Assessment (CRNA) for assessment of the economic losses and human and social impacts on the most vulnerable citizens and the formulation of a recovery strategy are needed for the resilient recovery phase. Given the existing experience and lessons learnt from the past disasters, implementation of Post-disaster Needs Assessments and Resilient Recovery Frameworks, as well as the capacities for provision of coordination and support services, the NDMAs needs to be positioned as a key partner in the post-COVID-19 recovery process.

Like the other complex disasters, the COVID-19 pandemic crisis requires the engagement of various institutions and entities in a multi-sector way to ensure timely and efficient response and resilient recovery. In that sense, the National Platforms for disaster risk reduction can play a prominent role as a forum for advancing the disaster risk management systems. In the ECIS region, they were not engaged in most of the countries and territories in which they are established, but there are positive examples from Armenia and the Kyrgyz Republic where they contributed to the implementation of small-scale actions and public awareness and information dissemination activities. On the other side, there are many evidences of active engagement of the national Red Cross/Red Crescent societies, civil society organizations, citizens-led initiatives and volunteers, which provided a crucial contribution no one to be left behind during the pandemic crisis response.

ICT innovative tools are the foundation for timely, efficient, effective and inclusive emergency management throughout the phases of the disaster cycle. There is evidence of successful use of the ICT technologies and innovative solutions for resilience in the ECIS region including this pandemic crisis response. Nevertheless, there is an impression that the existing solutions do not reach everyone in the society, especially the citizens with disabilities. Designing innovative solutions, especially for information, early warning and alerting, needs to be implemented in an inclusive and participative manner, integrating the needs of the beneficiaries.

Complex disasters including the pandemic crisis such as the COVID-19, emphasize the importance of breaking the silos of the traditional disaster risk management, allowing for better mainstreaming of the biological hazards and health emergencies. Prioritization of the strategic and operational actions is *a modus operandi* for the NDMAs development and broadening of their scope of competences. Accordingly, they should be managing the continuity of the existing response, followed by resilient recovering while emerging stronger, and finally, they should be better prepared for understanding the potential futures and to enable transformational changes and action to move from a static to a dynamic model of actions i.e. to foresight the futures and insight the strategies and actions. This should lead to a development of the so-called *Next Generation (NextGen) NDMAs framework*, where they should be better organized and prepared for anticipation, prevention and reaction to new and complex risks and threats, with additional knowledge and expertise gained expanded competencies and availability of specific resources.

The COVID-19 pandemic is not a typical crisis and therefore the response and the post-crisis recovery needs to be untypical, evaluating the past, understanding the presence and envisaging the future. Its lessons learned indeed demonstrated that countries and territories that had in place disaster risk management strategies, multi-hazard, multi-risk and multi-sector assessments, which cover health emergencies and improvised while responding, found themselves better prepared to react to pandemic risk/biohazards.

This assessment review study of the role of NDMAs in COVID 19 crisis response and the impact of COVID 19 on

their work and operation through the regional, sub-regional and national lenses was implemented as part of the broad agenda for understanding the disaster risk governance in the ECIS region during the pandemic crisis times. Nevertheless, it reflects only the limited period since the beginning of the COVID-19 pandemic, until the end of 2020. Given the extended duration of the pandemic crisis and the prolonged impact on the societal and community resilience, as well as the continuous engagement of the NDMAs, follow-up researches are beneficial that will anticipate consequent coordination, cooperation and communication, resilient recovery actions of the post-COVID-19 disaster management, practical difficulties in the prolonged complex crisis management and lessons-learnt, as well as the subsequent integration of the disaster risk reduction and the public health and health emergencies areas.

7.2 Recommendations for follow up

Based on the findings of this assessment study and the lessons learnt from countries and territories aimed at mitigating the prolonged impacts of the COVID-19 crisis or any future pandemic crisis, this report lays out a set of recommendations:

7.2.1. General recommendations

Key recommendation #1: Strengthen the disaster risk governance in the ECIS region through integration of pandemic risk/biohazards in the strategic and operational planning frameworks. - Strengthening of the normative and institutional frameworks for the new normal, with better integration and prioritization of the pandemic risk/biohazards, as well as the public health in general, shall result in reduced impacts on the societies and communities. In this sense, the national DRM strategies, laws, operational and response plans are key documents for the establishment of a framework for resilience. Integration of health aspects and pandemic risk is essential and should be done following the functional assessment of the system. Concerning the understanding of the national contexts, mainstreaming modalities and identification of roles and responsibilities for the pandemic risk/biohazards it is recommended to run a functional analysis and review of the system based on the existing global resilience framework, existing best practices and lessons learnt from the response and accordingly proceed with the enhancement of the normative framework. Consequently, recommendations and follow-up actions should be formulated and implemented.

Key recommendation #2: Review and update of the existing national DRR strategies or preparation of the national DRR strategies in the countries and territories where they are not existing – This recommendation is in line with the Sendai Framework for DRR *Target E: Number of countries with national and local DRR strategies by 2020* as well as with the efforts to build resilient societies and communities. Updated or new strategic documents shall not only reflect the better integration of the pandemic risk/biohazards but also shall adequately reflect the systematic nature of the risk, better address the needs of the public health systems and better prepare the national risk management systems for the complex disasters.

Key recommendations #3: NDMAs shall lead the process of adoption of the multi-hazard, multi-risk and multi-sector risk and hazard assessments and disaster response plans, on behalf of the national and local governments. – NDMAs posses not only sufficient resources for preparation of the integrated risk and hazard assessments and related response plans but also have the overall knowledge of the dynamics and specifics of the system leading to better prevention, mitigation, preparedness, response and recovery to natural and human-made disasters.

Key recommendations #4: Scenario planning and training exercises are vital for testing the capabilities and readiness of the national systems for better preparedness and response to pandemics and needs to be fully integrated into NDMAs work. - Consequently, the NDMAs in the ECIS region need to review the mainstreaming of pandemic risk/biohazards in the developed scenarios and conducted training exercises, as well as to developed new ones including appropriate evaluation and lessons-learnt codification mechanisms for operational enhancement and resilient transformation of the NDMAs.

Key recommendations #5: Given the previous engagement with the PDNA and the Resilience Recovery Framework and the existing expertise within the NDMAs, the countries and territories from ECIS should consider applying the CRNA methodology for assessments of the recovery needs and formulation of recovery frameworks. - In this context, NDMAs need to be a key partner in the recovery process, given the existing experience and lessons learnt from the past disasters and the capabilities for the provision of coordination and supportive services.

Key recommendations #6: Decentralization and/or transfer of competencies from central to local levels should be considered for improved disaster risk governance and greater involvement of the municipalities in the risk management activities. – In line with the national settings and DRM frameworks and based on the appropriate policies, this approach shall enable local contextualization of the resilience of the communities. Accordingly, the municipalities shall have enhanced mechanisms and resources for prevention, response and resilient recovery from natural and human-made disasters. Only in this way, the municipalities could become effective and efficient *first responders/first preventers* at the forefront of the resilience.

7.2.2. Recommendations related to the COVID-19 pandemic crisis response

Key recommendations #7: "Understanding what went well and what were the gaps during the pandemic crisis response" for enhanced follow-up response and better preparedness and response for future complex disasters and crisis. – This type of exercise is essential for understanding the effects of the response, functioning of the ad-hoc coordination bodies, gaps or bottlenecks, overlaps and duplication of competencies, identified obstacles, strengths/weaknesses, best practices etc. of the existing response. Based on the findings and appropriate addressing in the relevant documents and plans, immediate actions can be implemented resulting in dynamic improvement of the disaster response governance, either through the improvement of the coordination and cooperation mechanisms or engagement of additional resources and implementation of adequate measures and workable solutions. Given the magnitude of the crisis, it shall lay down the foundations for NDMAs transformation for better preparedness and response to complex disasters.

Key recommendation #8: Proactive approach and strengthening of the disasters-humanitarian coordination, cooperation and communication during the pandemic crisis response fully utilizing the capacities and resources of the NDMAs. – National response mechanisms should be improved to manage this pandemic crisis and broader emergencies, on vertical and horizontal levels and NDMAs should have a proactive and leading role not only utilizing their capacities and resources but also applying their comprehensive expertise and experience in multi-sector disaster coordination. NDMAs should leverage their presence in the disaster management system since they are well-positioned to lead prevention, mitigation, response and recovery efforts that cross the sectoral lines.

Key recommendations #9: Given the complexity and the impact of the COVID-19 pandemic crisis, it is recommended to SOPSs and other protocols to be regularly reviewed to reflect the existing response experience, lessons-learnt and to enable better operational preparedness for the future pandemic crisis.

Key recommendation #10: Development of contingency planning and ensuring the NDMAs business continuity. – Complexity, magnitude and prolonged duration of the COVID-19 crisis requires transformational change in the NDMAs work and operations i.e. remote-working modality, different shift patterns, digitalization of services, etc. Besides, they needs to develop adequate contingency planning and solutions for ensuring their business continuity while facing additional challenges e.g. lack of staff, new protocols and procedures, new working environments, etc.

Key recommendation #11: To support the mitigation and response efforts to pandemic risk/biohazards with the use of ICT innovative solutions, especially for information, early warning and alerting, implemented in an inclusive and participative manner, integrating the needs of all beneficiaries. – According to the findings of the survey, ICT innovative solutions have not been utilized systematically and have not reached everyone in the communities. On the other side, there is a great potential for digital growth, especially in the segment of the data analysis for better assessment, decision-making and coordination, digitalization of services, as well as citizens science and crowdsourcing. Therefore, the NDMAs needs to integrate innovative solutions based on reliable data, timely information and aimed at the needs of all citizens.

Key recommendations #12: Pandemics do not recognize borders, therefore to utilize the existing sub-regional mechanisms and to further strengthen the cross-border and regional cooperation. - NDMAs should intensively cooperate on fighting this pandemic crisis through timely information sharing, cross-border cooperation, as well as development and standardization of SOPs and other protocols. The example from the Central Asia sub-region can be potentially replicated and scaled-up in other parts of the ECIS region.

Key recommendations #13: Ensure gender-equal and inclusive response to and recovery from the pandemic crisis. - NDMAs on national and local levels needs to integrate the gender perspective in every aspect of the consultation, coordination, and decision-making leading to appropriate measures and policies. Existing risk

and hazard assessments and evaluations of population exposure and vulnerability to natural and human-made disasters, alongside the institutional frameworks for gender equality are a solid basis for gender mainstreaming in the pandemic crisis response at the national and local levels.

Key recommendations #14: Leverage the power of partnerships for pandemic crisis response and recovery while leaving no one behind. – The COVID-19 pandemic crisis goes beyond an ordinary health crisis and as a complex one shall impact the resilience of the societies and communities for a prolonged time. Accordingly, NDMAs shall leverage the partnerships beyond the traditional DRM system aiming at achieving comprehensive inter-sector response and initiating green and resilient recovery.

7.2.3 Recommendations related to the future pandemic risk/biohazards

Key recommendations #15: Create enabling policy and normative environment for resilience ensuring a better understanding of the systematic risk, greater mainstreaming of health aspects and pandemic risk/biohazards, as well as the potential of the high-consequence, low probability events. – The COVID-19 pandemic crisis and its complexity brought into focus the needs to review the existing and adopt new normative frameworks for resilience ensuring a multi-hazard, multi-risk and multi-sector approach through the understanding of the systematic risk, greater mainstreaming of health aspects and pandemic risk/biohazards, as well as the potential of the high-consequence, low probability events. Accordingly, NDMAs need to adequately reflect this in the existing normative and institutional frameworks initiating their review and modification.

Key recommendations #16: NDMAs in their response to the COVID-19 or the future pandemic risks needs to further build their capacities and expertise through professional development and specialized training of staff as articulated in the Sendai Framework. - Existing response showed that there is a lack of specialized knowledge of the NDMAs staff on the pandemic risk/biohazards. Accordingly, alongside the normative and institutional transformation, it is required to strengthen the technical knowledge and expertise of the personnel, as well as to ensure the development of their skills through specialised and targeted trainings.

Key recommendation #17: Integrate the research & development in partnership with academia and the private sector for designing innovative solutions for prevention and response of pandemics/biohazards.- In the times of complex pandemics, frequent biohazards' events, as well as unknown futures, it is necessary NDMAs to broadly integrate the research & development activities in partnership with academia and the private sector for designing of responding to innovative solutions and tools. The National DRR platforms in the countries can have a significant role in this term, coordinating the joint efforts, sharing the latest information and achievements, as well as prioritizing the measures and actions.

Key recommendations #18: Provide stable financing of NDMAs for risk reduction and resilience activities including for complex emergencies, such as the combination of COVID and disaster from natural hazards.

7.3 Potential NDMAs development pathways

As a complex crisis, it is causing significant cascading effects across the societies and communities, and the uncertainty as to what lies ahead and what can happen pushes the governments to make strategic decisions. Therefore, taking actions and making decisions now are critical inputs for the absorption of the pandemic's impact and transformation of the risk management systems ensuring resilience for all. In that sense, NDMAs should be the early actors in times of crisis and uncertainty, ensuring an effective and efficient pandemic crisis response, as well as laying down the foundations for preparation for a complex and uncertain future. This can be achieved by building scenarios and creation development pathways ensuring sustainability and resilience of their actions. Following the assessment review framework and the needs for the transformational change of the NDMAs as part of the efforts for re-framing the overall disaster risk management, three development pathways for the NDMAs in the ECIS region were identified:

- **Status quo scenario** – NDMAs continue to operate within the existing normative and institutional arrangements adapted to the pandemic crisis response.
- **Linear scenario –** Essential improvement of the NDMAs normative and operational frameworks and integration of more competencies resulting from the experiences and lessons learnt from the pandemic crisis.

- **Dynamic scenario –** Establishment of new normative and operational frameworks and comprehensive transformation of NDMAs and their working operations.

SCENARIO	STATUS QUO SCENARIO	LINEAR SCENARIO	DYNAMIC SCENARIO
MODEL	*Business as usual*	*Emerging stronger*	*Thriving in uncertainty – NextGen NDMAs*
OPTIONS	To continue to operate within the existing frameworks	Enhancement of the normative and operational framework	Establishment of new normative and operational frameworks
TIME FRAMEWORK	Continuous	12 - 24 months	24 - 48 months
FORECAST	Most likely to happen	Somewhat likely to happen	Least likely to happen
BUDGET	💲	💲💲	💲💲💲
COUNTRIES/ TERRITORIES	Most of them	Some of them	Few of them

Figure 56 – Potential scenarios for NDMAs development pathways

> *STATUS QUO SCENARIO "Business as usual"*

The STATUS QUO SCENARIO is based on the assumption that the DRM system will stay the same and the NDMAs shall continue to operate within the existing normative and institutional frameworks adapted to the pandemic crisis response. Enhancements can be done in the aspects of improvement of internal procedures, internal capacities of the institutions, as well as the communication, coordination and cooperation modalities. Available human, material and technical resources shall continue to be utilized as per the existing procedures.

> **Pros:**
- NDMAs has successfully dealt with previous crises and disasters and have essential resources.
- Even though, that the NDMAs are not leading the pandemic crisis response, they are significantly contributing to the response with available knowledge, expertise and resources.
- This scenario shall ensure a satisfactory response to the COVID-19 pandemic since there is almost one year of continuous response by the NDMAs. During the response to the pandemic, the system gradually adapted and lessons learnt were collected. Additionally, given the previous experience in disaster response, they are familiar and knowledgeable about the necessary response measures and actions.
- Many simulations and training drills on various hazards contributed to the successful level of preparedness of main NDMAs resources.
- The existing normative framework defines the essential competencies and responsibilities of the NDMAs.
- The response capacities for the COVID-19 pandemic can be assessed as essential.

> **Cons:**
- NDMAs are used to the business-as-usual modality and might be reluctant to transform.
- There is a lack of a strategic approach to new and untypical risks and threats.
- Health aspects and emergencies are not fully integrated into the DRR framework and vice versa.
- There is insufficient experience and knowledge about complex disasters.
- The existence of ad-hoc coordination bodies can lead to duplication and overlapping of competencies, weaker coordination and cooperation, as well as increased political interference in the decision-making process.
- NDMAs have limited responsibilities and competencies in health emergencies and crisis.
- Lack of business continuity planning and resilience recovery framework.

This scenario is relatively simple to implement and is the least disruptive to the existing structures. It retains a

strong focus on continuous delivery of services as per the existing *modus operandi*. Given the existing political and economic situation, as well as the challenges and uncertainties resulting from the COVID-19 pandemics, this scenario is most likely to fulfil. Considering the timeframe for implementation of this scenario, there is no limitation since it shall be most probably implemented until the end of the pandemic crisis.

> ➤ *LINEAR SCENARIO "Emerging stronger"*

The **LINEAR SCENARIO** is based on the assumption that enhancement of the normative and operational framework happen allowing the NDMAs to emerge stronger from this pandemic crisis. The primary focus of this scenario is to enhance the essential frameworks through the incorporation of the systemic risk approach, integration of the health aspects and the health emergencies in the existing DRR framework, targeted capacity building of the professional staff for pandemic risk/biohazards, better preparedness for the complex disasters, stipulation of new competencies, as well as enhanced coordination and collaboration on vertical and horizontal levels. This approach should lead to gradual transformation and improvement of the NDMAs. This scenario shall be implemented through the essential legal intervention in the respective normative acts and the operational frameworks, strengthening of the NDMAs capacities, provision of additional resources for response, better operational planning, as well as mainstreaming the resilient recovery framework.

> ➤ **Pros:**
- Adequate integration of the public health aspects and the health emergencies in the disaster risk reduction framework and vice versa.
- Strengthening of the NDMAs capacities for prevention, early warning, response and recovery of complex disasters
- Systemic risk approach as a guiding principle.
- Better assessment and operational planning for health emergencies.
- Better equipped and trained resources that are ready and prepared for timely, efficient and effective response.
- Resilient recovery framework established.
- Business continuity planning of delivery of NDMAs services.
- Streamlined financing of the resilience activities.
- Designing policies and measures with the inclusion of the vulnerable categories of citizens.
- Improvement of the operational and strategic coordination amongst the national and local level entities through the adoption of additional protocols and execution of training drills.
- Strengthening of the local level capacities for health protection, including health emergencies and crisis.

> ➤ **Cons:**
- Time framework needed for implementation of the scenario.
- Given the COVID-19 pandemic, this enhancement of the system can take longer and request additional resources.
- Some of the stakeholders can be defiant to the normative and operational improvements.
- Coordination of the prevention and response activities cannot be transferred to the NDMAs due to political reasons.
- Some of the NDMAs staff can be reluctant to the broadening of the competencies.
- Bigger investment needed during the initial period.

This scenario is more difficult to implement and can be disruptive to the existing normative framework and institutional structures. Given the existing political and economic situation, as well as the challenges and uncertainties resulting from the COVID-19 pandemics, this scenario is somewhat likely to happen. Considering the timeframe for implementation of this scenario, the minimum period for its implementation is twelve to twenty-four months.

> ➤ *DYNAMIC SCENARIO "Thriving into uncertainty – NextGen NDMAs"*

The **DYNAMIC SCENARIO** is based on the assumption that an improvement of the disaster risk management systems in the countries and territories is required for the thriving into uncertainty through the establishment of new normative and operational frameworks and comprehensive transformation of the NDMAs. Concerning the magnitude of the existing pandemic crisis, initial lessons-learnt, potential intensive frequency of complex disaster and appearance of the high-consequences, low-probability events in the future, this scenario is the most coveted one. It consists of comprehensive transformation and enhancement of the NDMAs and their working operations, fully

prepared for prevention, response and recovery from complex disasters, with established foresight for development capacities. It leads to the development of the **NextGen NDMAs** framework.

➢ **Pros:**
- NDMAs should establish capacities and adequate knowledge for prevention, response and recovery from complex disasters.
- Non-linear assessments are utilized for analyzing the past, understanding the present and predicting the future.
- NDMAs should develop strategic foresight capacities capable of applying foresight methodologies and tools for
- NDMAs should have a leading role in the coordination of the mitigation and response activities.
- Increased competencies on the local level authorities that shall have complete accountability during prevention, response and recovery of crises and disasters.
- Optimization of the command, control and coordination structures.
- Transparent and sufficient provision of financial resources for the risk management system on the national and local levels.
- Utilization of the "green recovery" approach.

➢ **Pros:**
- Time framework needed for implementation of the scenario.
- Given the COVID-19 pandemic, this enhancement of the system can take longer and request additional resources.
- Most of the stakeholders can be defiant to the transformative improvements.
- Reluctance to apply forward-looking foresight methodologies and tools.
- Accountability and equity can be strong on the national level, but they can be weak on the local level.

This scenario is most difficult to implement and can be disruptive to the existing NDMAs institutional structures and professionals. Given the existing political and economic situation, as well as the challenges and uncertainties resulting from the COVID-19 pandemics, this scenario is least likely to fulfil. Considering the timeframe for implementation of this scenario, the minimum period is two to four years given the complex normative and institutional transformation.

ANNEX I - ASSESSMENT REVIEW FRAMEWORK

General approach and methodology

    ➤ ***Approach*** - The assessment is summative and takes a mix of qualitative and quantitative approach to answer the assessment review questions contained in the assignment's terms of reference.

    ➤ ***Methodological framework*** - The methodological framework is ideally balanced between the research framework and objectives to be achieved with the inclusion of methods and tools that support this. Based on the characteristic of the assignment, the following research methods were applied:

- Content Analysis - during the initial phase, when contents of all submitted documents, reports, information and publications were reviewed and analyzed.
- Comparative Analysis - during the desk review phase external practices and solutions and their relation to the objective of the assignment were reviewed.
- Mixed Quantitative/Qualitative Research Design – during the data collection part with the use of an on-line questionnaire for participants and semi-structured interviews with key informants.
- Qualitative Research Design – during the capturing of the good practices and case studies.

Data collection, analysis and synthesis of information

    ➤ ***Tools*** – The assessment process deployed several tools i.e. sampling, desk review, questionnaire, semi-structured interviews. They were structured to elicit information and to provide a feedback mechanism for key respondents in the assessment review providing inputs for the assessment report as well as providing rationales for conceptualization and design of forward-looking recommendations. These tools have the following sections: position of the NDMAs (e.g. DRM system, hazard profile, normative framework, risk and hazard assessment, ICT tools, operational planning, etc.); evidence on the NDMAs role in the COVID-19 response i.e. role to the pandemic crisis response/impact/communication, coordination, cooperation/resources/best practices & lessons learnt, and future pandemic crisis/biohazard framework.

    ➤ ***Sample selection -*** Following the ToRs requirements, countries and territories from the ECIS region were eligible to take part in the on-line survey. ***Key respondents*** were from the UNDP COs (DRM focal points, programme staff), representatives from the NDMAs and the National Platform for DRR (where exists), and other entities. Accordingly, the targeted audience reached 38 respondents from 17 countries and territories (only Albania has not participated in the on-line survey). The final list of key respondents is included as an Annex III and in total 17 out of 18 countries and territories participated with 38 key respondents. A breakdown list of key respondents is presented as an Annex IV. Furthermore, for better understanding and gaining in-depth information on the overall context of the roles, competencies and effectiveness of the NDMAs and lessons-learnt codification, semi-structured interviews were held with ***key informants*** from the UNDP IRH team, UNDRR team for Europe and Central Asia and regional organizations (CESDRR, DPPI), as well as *selected key informants from the five countries in focus from the four subregions* (COs/NDMAs/ National DRR Platforms/Others).

    ➤ ***Data collection, analysis and synthesis of information -*** For the implementation of the on-line data collection and analysis and interviews with key informants, mixed quantitative/qualitative research tools were developed and structured to enable data collection and to facilitate the process of assessment and conceptualization of the way forward. The *on-line survey* was launched during the period 18.10 – 23.11.2020 and the data collection was done through the Google form (link was shared with COs and key informants) using a Questionnaire (Annex III). Following the initial analysis of the respondents' feedback, five countries from the four sub-regions were selected as the ***countries in focus*** based on the following criteria: response rate, variety of responders, quality of the content provided, information and data that can be additionally obtained. So, the selection was as the following: Western Balkans and Turkey (Bosnia and Herzegovina and North Macedonia), Eastern Europe(Moldova), South Caucasus (Armenia) and from the sub-region of Central Asia, the Kyrgyz Republic was selected. Consequently, the *semi-structured interviews* were conducted during the period 01.12.2020 – 15.12.2020 with the above-mentioned key informants.

The survey allowed quantitative and qualitative data collection, while interviews were based on the perceptions of key informants and only qualitative analysis was done. The *Triangulation Method* was used to verify the information collected from the desk review of documents, on-line survey, interviews with key informants and validation during discussions with participating teams. The objective is in a structured manner to validate the information and data through verification from multiple data sources. Furthermore, the *SWOT analysis* helped to identify strengths, weaknesses, opportunities, and threats related to the NDMAs role in the pandemic crisis response.

Figure 57 – Method of Triangulation

Ethical considerations and limitations

The Consultant safeguarded the rights and confidentiality of information providers, respondents and stakeholders through measures to ensure compliance with legal and other relevant codes governing the collection of data and reporting on data. He also ensured the security of collected information before and after the assignment and protocols to ensure confidentiality of sources of information where that was expected. The information knowledge and data gathered in the assessment process must also be solely used for the assessment and not for other uses with the express authorization of UNDP. Furthermore, the Consultant established professional and productive cooperation with key respondents, respecting all required principles. Accordingly, he briefed them on the objectives of the assignment, the way the survey should be implemented, the importance of their participation, their rights arising from this relationship, and the possibility of agreeing or disagreeing to participate in the survey. In this way, through honest and open access, the implementation of the assessment was enabled. **Limitations of the assignment** related to the following aspects: time framework for the implementation of the survey, so-called "delivery period" of UNDP COs (closing of the financial year), the second peak of COVID-19 pandemic across the region with high numbers of cases, longitudinal effects (time availability of the respondents for the survey), the fatigue of the respondents to participate in surveys and interviews, since during the pandemic, many on-line surveys have been implemented, access to DRM documents and limited access to assessments and plans, as well as potential data privacy issues.

ANNEX II – NDMAS IN ECIS REGION

#	Countries and territories	Sub-region	NDMA
1	**Albania**	WB & TR	**General Directorate of Civil Emergency** Ministry of Interior
2	**Bosnia and Herzegovina**	WB & TR	**Ministry of Security** Protection and Rescue Sector
3	**Kosovo***	WB & TR	**Emergency Management Agency** Ministry of Internal Affairs
4	**Montenegro**	WB & TR	**Emergency Management Directorate** Ministry of Interior
5	**North Macedonia**	WB & TR	**Crisis Management Centre** **Protection and Rescue Directorate**
6	**Serbia**	WB & TR	**Sector for Emergency Management** Ministry of Interior
7	**Turkey**	WB & TR	**Disaster and Emergency Management Authority (AFAD)** Ministry of Interior
8	**Armenia**	SC	**Ministry of Emergency Situations of the Republic of Armenia**
9	**Azerbaijan**	SC	**Ministry of Emergency Situations of the Republic of Azerbaijan**
10	**Georgia**	SC	**Emergency Management Agency** Ministry of Internal Affairs
11	**Belarus**	EE	**Ministry of Emergency Situations**
12	**Moldova**	EE	**General Inspectorate for Emergency Situations**
13	**Ukraine**	EE	**State Emergency Service**
14	**Kazakhstan**	Central Asia	**Ministry of Emergency Situations of Kazakhstan**
15	**Kyrgyz Republic**	Central Asia	**Ministry of Emergency Situations of the Kyrgyz Republic**
16	**Tajikistan**	Central Asia	**Committee of Emergency Situations and Civil Defense of Tajikistan**
17	**Turkmenistan**	Central Asia	**Ministry of Emergency Situations**
18	**Uzbekistan**	Central Asia	**Ministry of Emergency Situations**

ANNEX III – ONLINE SURVEY KEY RESPONDENTS

#	Countries and territories	Sub-region	Institution
1	**Albania**	WB & TR	n/a
2	**Bosnia and Herzegovina**	WB & TR	UNDP Bosnia and Herzegovina Ministry of Security

* All references to Kosovo shall be understood to be in the context of the Security Council Resolution 1244 (1999).

			Emergency Management Agency
3	**Kosovo***	WB & TR	National Institute of Public Health of Kosovo
			Main Center for Family Medicine
4	**Montenegro**	WB & TR	Ministry of Interior - Directorate for Emergency Situation
			Protection and Rescue Directorate
5	**North Macedonia**	WB & TR	Crisis Management Centre
			Red Cross
6	**Serbia**	WB & TR	UNDP Serbia
7	**Turkey**	WB & TR	Ministry of Interior, Disaster and Emergency Management Authority (AFAD)
			UNDP Armenia
8	**Armenia**	SC	Ministry of Emergency Situations
			Ministry of Health
			National DRR Platform/ARNAP Foundation
9	**Azerbaijan**	SC	UNDP Azerbaijan
10	**Georgia**	SC	National Crisis Management Center, Office of the National Security Council
11	**Belarus**	EE	Ministry of Emergency Situations
12	**Moldova**	EE	General Inspectorate for Emergency Situations
			NGO Eco Contact
13	**Ukraine**	EE	UNDP Ukraine
14	**Kazakhstan**	Central Asia	Center for Emergency Situations and DRR
			UNDP
			UNDP in the Kyrgyz Republic
15	**Kyrgyz Republic**	Central Asia	Ministry of Emergency Situations
			National Platform of the Kyrgyz Republic for Disaster Risk Reduction
			Center for Emergency Situations and DRR
16	**Tajikistan**	Central Asia	UNDP Tajikistan
17	**Turkmenistan**	Central Asia	UNDP Turkmenistan
18	**Uzbekistan**	Central Asia	UNDP Uzbekistan

ANNEX IV - ECIS COVID-19 ASSESSMENT – SURVEY BREAKDOWN LIST

#	Countries and territories	Sub-region	Survey Yes/No	UNDP	NDMA	National DRR Platform	Others	Total
1	Albania	WB & TR	No					n/a
2	Bosnia and Herzegovina	WB & TR	Yes	1	2		1	4
3	Kosovo*	WB & TR	Yes		3		2	5
4	Montenegro	WB & TR	Yes		2			2
5	North Macedonia	WB & TR	Yes		4		1	5
6	Serbia	WB & TR	Yes	1				1
7	Turkey	WB & TR	Yes	n/a	1			1
8	Armenia	SC	Yes	2	1	1	1	5
9	Azerbaijan	SC	Yes	1				1
10	Georgia	SC	Yes		1			1
11	Belarus	EE	Yes		1			1
12	Moldova	EE	Yes		1		1	2
13	Ukraine	EE	Yes		1			1
14	Kazakhstan	Central Asia	Yes	1			1	2
15	Kyrgyz Republic	Central Asia	Yes	1	1	1	1	4
16	Tajikistan	Central Asia	Yes	1				1
17	Turkmenistan	Central Asia	Yes	1				1
18	Uzbekistan	Central Asia	Yes	1				1
ECIS total:			38	10	18	2	8	

ANNEX V – ONLINE SURVEY BACKGROUND INFORMATION

The first part of the online survey contains a group of questions related to general information on the key respondents, such as name, gender, age, professional background/sector, institutional background, work experience in disaster/climate/health risk reduction (in years), and country and territory. These questions should provide an overview of the capacity of the key respondent involved in the research to ensure the relevance of the information provided.

➢ *Gender and age groups*

One of the pillars on which the assessment was established was the gender representation i.e. equal representation of men and women in the survey. Accordingly, the online survey has a good gender balance since out of 38 key respondents, 15 were female and 23 were male. This representation ratio shows a high percentage of women experts in the participating organizations with relevant knowledge on the subjects of the survey. Furthermore, it ensures that the gender dimensions shall be adequately taken into consideration during the analysis, assessment review and the recommendations

* All references to Kosovo shall be understood to be in the context of the Security Council Resolution 1244 (1999).
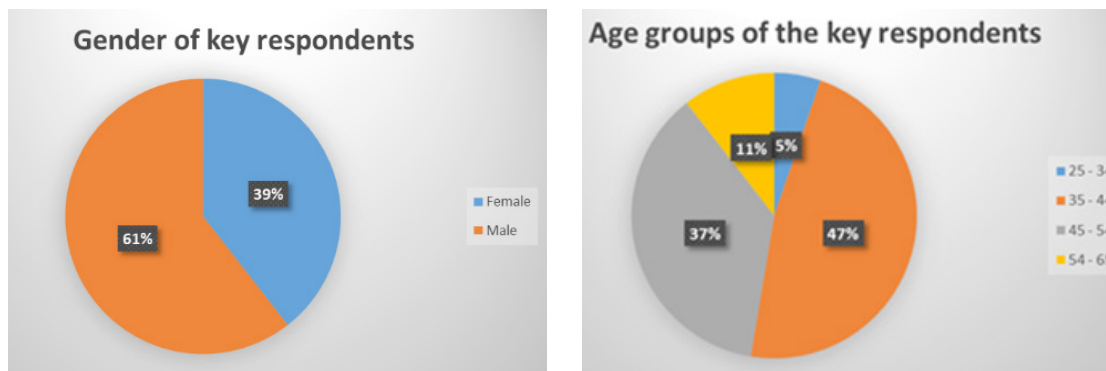
Figure 58 – Key respondents gender background and age groups

Four different age groups of the key respondents, ranging from 25 to 64 years of age were identified. Most of the respondents are between 35 – 44 years (18 respondents), followed by 45 – 54 (14 respondents). If the results of the survey are summarized it can be seen that 95% of the respondents are within the 35 – 64 years of age, most active working years. If a correlation is made with the data on the years of experience in the related sectors and the age groups to which the respondents belong, it can be seen that their answers are highly relevant for the survey and the needs related to the research subject.

> ➢ *Professional and institutional background of the key respondents*

The background of most of the key respondents is NDMA (50%), followed by UNDP (25%), Ministry of Health and International organizations (5.3% each) and one respondent from the areas of government affairs, civil society, academia and others i.e. Red Cross, DRM organization and the security sector or 2.6% each. This distribution of the key respondents according to their professional background provides a good basis for obtaining appropriate information on the subject of the research.
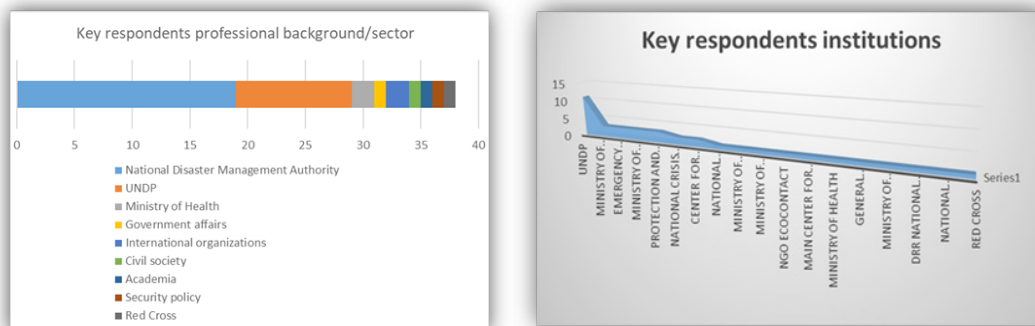

Figure 59 – Professional and institutional background of the key respondents

Most of the key respondents are from the NDMAs, but because of the different institutional frameworks and the names of the NDMAs, there are several entities mentioned as NDMAs i.e. Ministry of Security (3), Emergency Management Authority (3), Ministry of Emergency Situations (3), Protection and Rescue Directorate (3), National Crisis Management Centre (2) Ministry of Interior (1), Ministry of Interior – Directorate for Emergency Situations (1), Ministry of Interior – Disaster and Emergency Management Authority (1) and the General Inspectorate for Emergency Situations (1). Otherwise, UNDP is most represented as an institution with 11 key respondents, whether the other entities have one respondent each.

> *Years of experience in disaster/climate /health risk reduction*

Most of the key respondents (42%) are in the 10 – 15 years of experience category, followed by 5 – 10 years (21%), less than 5 years and from 20 to 25 years (13% each). In the category 15 – 20 years of experience, there were 7% of the key respondents and there was only one respondent with more than 25 years of experience in the subject areas. Almost 66% of the key respondents are with relevant experience of ten years and more. Consequently, the presented data regarding the years of experience indicate that the key respondents have solid work experience and valuable expertise in the subject areas and therefore it is expected that their answers to the questionnaire are highly relevant for the analysis.
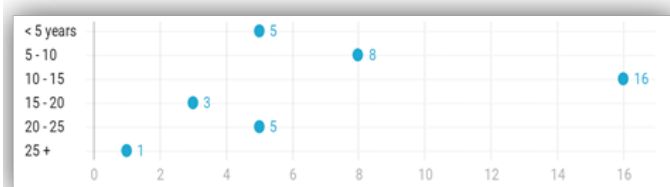

Figure 60 – Years of experience of the key respondents in disaster/health/climate risk reduction

> *Key respondents countries and territories*

Within the framework of this survey in total 38 key respondents participated from 17 out of 18 countries and territories in the ECIS region. Only the key respondents from Albania have not participated in the survey. Nevertheless, there is a wide territorial and sub-regional distribution of respondents which feedback provide an essential basis for the analysis and assessment review.
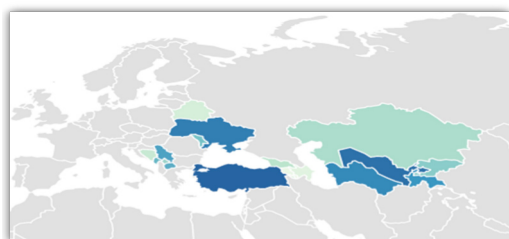
WB & TR	SC	EE	CA
BIH KS* ME MK SRB TR	AM AZ GE	BY MD UA	KZ, KG TJ TK UZ

Figure 61 – Map and table of key respondents countries and territories in the online survey as per the sub-region

ANNEX VI – ASSESSMENT TOOLS

II.1: QUESTIONS FOR KEY RESPONDENTS (ON-LINE SURVEY)

Dear Participant,

Thank you for your participation in the on-line survey on the assessment of the role of National Disaster Management Agencies (NDMAs) in COVID-19 crisis response and impact on NDMAs operation. The purpose of this Questionnaire is to contribute to the assessment of the role and effectiveness of NDMAs in COVID-19 pandemic crisis response across the Europe and Central Asia region, as well as to provide input for the development of sub-regional recommendations. This online survey is part of the project initiative "Assessment of the role of NDMAs in COVID-19 crisis response and impact of COVID-19 on NDMAs operation in the region of Europe and Central Asia" led by UNDP in partnership with UNDRR.

For that reason, we kindly request you to answer this questionnaire.

Instruction: The Questionnaire consists of several types of questions: use of score for indication of the agreement or disagreement, checkboxes, multiple choices, Yes/No and open-ended questions.

In the case of scoring questions, use the following score code to indicate the extent to which you agree or disagree with each of the statements below:
Strongly disagree: 1 ; Disagree: 2 ; Neutral : 3 ; Agree : 4 ; and Strongly agree: 5
Please complete these questions by marking "X" in the right figure to reflect your views as shown in the example: Example: 1 2 3 4 X
In the case of checkbox questions, you may choose multiple answers as appropriate.
If you have any additional comment, please write down on the space at the end of each item.

I. BACKGROUND INFORMATION
- General Information:
  - ➢ Gender:
  - ➢ Age:
  - ➢ Professional background/sector:
  - ➢ Years of experience in disaster/climate/health risk reduction:
- Institution:

II. POSITION OF THE NDMA

1. What kind of DRM strategic and operational documents are adopted in your country/territory? (Checkboxes)
- ☐ National DRM Strategy
- ☐ National Risk and Hazard Assessment
- ☐ National Disaster Management Plan
- ☐ Others:

If the answer is Other, pls state the relevant ones: _____

2. Which organization or agency in your country/territory would take the overall responsibility for coordinating the pandemic risk/biohazards? (Checkboxes)
- ☐ National Disaster Management Agency
- ☐ Ministry of Health
- ☐ Others:

If the answer is Other, pls state the relevant ones: _____

3. Are the pandemic risks/biohazards part of the strategic and/or operational framework in my country/territory? (Checkboxes)
- ☐ National DRM Strategy
- ☐ National Risk and Hazard Assessment
- ☐ Local Risk and Hazard Assessments
- ☐ National/Local Disaster Management Plans
- ☐ Sectoral Plans
- ☐ Others

If the answer is Others, pls state relevant documents: _____

4. Are the roles and responsibilities of the entities involved in dealing with the pandemic clearly defined in the existing framework?
- ☐ Yes
- ☐ No

5. Is the pandemic risk considered for the assessment of disaster risk management capability at the national level?
- ☐ Yes
- ☐ No

6. Have the necessary standard operating procedures for response to the pandemic been adopted?
- ☐ Yes
- ☐ No

7. Are the pandemic risks/biohazards part of the scenario development and conduct of trainings? (Checkboxes)
- ☐ Scenario development
- ☐ Tabletop exercise (TTX)
- ☐ Field training exercise (FTX)

8. Is the NDMA engaging in cross-border cooperation in the prevention and preparedness of pandemic risk?
- ☐ Yes
- ☐ No

III. COVID-19 PANDEMIC CRISIS AND NDMAs RESPONSE

9. The COVID-19 response in my country/territory was timely and efficiently organized.
Strongly disagree: 1; Disagree: 2; Neutral: 3; Agree: 4; and Strongly agree: 5.
Comment: _____

10. How was organized the response to the COVID-19 pandemic in your country/territory? (Multiple choice)
- ☐ Through the existing disaster management structure
- ☐ Through the health emergencies structure
- ☐ Through the ad-hoc pandemic crisis structure
- ☐ Other:

If the answer is Other, pls state the modality: _____
_____

11. Which are the key entities of the institutional structure for the COVID-19 pandemic response?
(Checkboxes)
- ☐ NDMA
- ☐ Ministry of Health
- ☐ Key line ministries
- ☐ Agencies
- ☐ Municipalities
- ☐ CSOs
- ☐ Academia

12. How was the NDMA involved in this process?
(Multiple choice)
- ☐ As part of its regular competencies
- ☐ As part of the health emergencies structure
- ☐ As part of the ad-hoc pandemic crisis structure
- ☐ Other:

If the answer is Other, pls state the modality: _____
_____

13. NDMA was efficiently participating in the response efforts.
Strongly disagree: 1; Disagree: 2; Neutral: 3; Agree: 4; and Strongly agree: 5.
Comment: _____

14. How are NDMA working with other ministries and stakeholders to curb the spread of the pandemic?
(Please elaborate)

_____

15. Is there a national preparedness, mitigation and response strategy or Preparedness and Response Plan which serve to coordinate and guide actions related to the current COVDI-19 crisis?
- ☐ Yes
- ☐ No

If the answer is Yes, pls elaborate: _____

16. Can you identify certain obstacles during the NDMA response to the pandemic and how can it be improved?
- ☐ Yes
- ☐ No

If Yes, pls elaborate: _____

17. What are the strengths in the NDMA response to COVID-19 pandemic? What are the weak points in this response? (Please elaborate)
_____

18. What is the most important action/measure that was implemented by the NDMA? (Please elaborate)
_____

19. What is the impact of the COVID-19 pandemic to the work and operations of the NDMA? (Pls elaborate)
_____

20.a: Pls mention three negative changes as a result of the pandemic:
1)
2)
3)

20.b: Pls mention three positive changes which made a positive impact on the NDMAs operations and work.
1)
2)
3)

21. What the NDMA has not done in the response to the COVID-19 pandemic and can be done in future?
(Pls elaborate) _____

22. Is the National DRR Platform or any other DRM entity activated during the response providing any kind of support/advice?
- ☐ Yes
- ☐ No

If Yes, pls state: _____

23. Can you emphasize any measure or activity as a best practice in response to the pandemic?
(Pls elaborate) _____

24. Can you emphasize any lesson learned from the response to the pandemic so far? (Pls elaborate) _____
_____

25. Is any ICT innovative solution or GIS tool used as a supporting tool in the NDMAs response to the COVID-19 pandemic crisis?

☐ Yes
☐ No

If Yes, pls state: _____

III. NDMA AND THE FUTURE PANDEMIC CRISIS/ BIOHAZARD FRAMEWORK

26. What do you think is necessary to be done to the NDMA to be better prepared for and reduce the risk of the next pandemic crisis/biohazard? (Pls elaborate) __
_____

27. As lessons learned, is it planned to update the strategic and operational frameworks with the pandemic/biohazard risks?

☐ Yes
☐ No

If Yes, pls state: _____

28. What measures to reduce the risk of future pandemic risk have been identified from this crisis?
(pls elaborate) _____

29. Please indicate the top three priorities for the establishment of pandemic inclusive and forward-looking NDMAs:
1)
2)
3)

30. If you have further comments, please add them below.
_____

II.2 QUESTIONS FOR SEMI STRUCTURAL INTERVIEWS

Background information
• General Information: gender, age, professional background/sector, years of experience in disaster/ climate/health risk reduction.
• Institution.

Questions

➢ What would you change about the NDMAs response to the COVID-19 pandemic?

➢ How were the actions resulting from the response translated and implemented at the lower administrative levels?

➢ What type of desired results were achieved?

➢ What was the most important thing learned during the COVID-19 pandemic response?

➢ Can you elaborate in more detail the best practices from the COVID-19 pandemic response?

➢ What have we learnt and what should we do about the future of the NDMAs in times of uncertainty?

➢ In your opinion, what recommendations are necessary for a resilient recovery in the short and medium-terms?

➢ What is necessary to fully integrate the pandemic risk/biohazards in the strategic priorities and policies of the NDMAs?

➢ What do you think about the mainstreaming of foresight tools ?

II.1: ВОПРОСЫ ДЛЯ КЛЮЧЕВЫХ РЕСПОНДЕНТОВ (ОНЛАЙНОВОЕ ОБСЛЕДОВАНИЕ)

Уважаемый участник,
Благодарим Вас за участие в интерактивном опросе по оценке роли Национальных органов по борьбе со стихийными бедствиями (НОБСБ) в реагировании COVID-19 кризис и влиянии на их работу. Цель настоящего вопросника заключается в содействии оценке роли и эффективности НОБСБ в реагировании на пандемический кризис COVID-19 в регионе Европы и Центральной Азии, а также в представлении материалов для разработки субрегиональных рекомендаций. Это онлайновое обследование является частью проектной инициативы «Оценка роли НОБСБ в реагировании на пандемический кризис COVID-19 и воздействия COVID-19 на функционирование НОБСБ в регионе Европы и Центральной Азии», осуществляемой ПРООН в партнерстве с „Управлением Организации Объединенных Наций по снижению риска бедствий".
Поэтому просим Вас ответить на эту анкету.

Инструкция: Анкета состоит из нескольких типов вопросов: использование оценки для указания соглашения или разногласий, флажки, множественный выбор, да/нет и открытые вопросы.

В случае вопросов оценки используйте следующий код оценки, чтобы указать, в какой степени вы согласны или не согласны с каждым из приведенных ниже утверждений:
Категорически не согласны: 1; Не согласен: 2; Нейтральный: 3; Согласен: 4; и решительно согласны: 5
Заполните эти вопросы, пометив «Х» напротив соответствующей опции, чтобы отразить ваши взгляды, как показано в примере: Пример: 1 2 3 4 Х
В случае вопросов с флажками можно выбрать несколько ответов.
Если у вас есть какие-либо дополнительные комментарии, пожалуйста, оставьте их после вопроса.

I. СПРАВОЧНАЯ ИНФОРМАЦИЯ
• **Общая информация: пол, возраст, профессиональная подготовка/сектор, опыт в области уменьшения опасности бедствий/изменения климата/здоровья.**
• **Учреждение.**

II. ПОЛОЖЕНИЕ НОБСБ

1. Какие стратегические и оперативные документы УРСБ принимаются в вашей стране/территории? (Флажки)
☐ **Национальная стратегия управления рисками стихийных бедствий**
☐ **Оценка национальных рисков и опасностей**
☐ **Национальный план ликвидации последствий стихийных бедствий**
☐ **Другие**
Если ответ «Другие», укажите соответствующие: _____

2. Какая организация или учреждение в вашей стране/территории и возьмет на себя общую ответственность за координацию пандемического риска/биологических рисков? (Флажки)
☐ Национальное агентство по борьбе со стихийными бедствиями
☐ Министерство здравоохранения
☐ Другие
Если ответ «Другие», укажите соответствующие: _____

3. Являются ли пандемические риски/ биологические опасности частью стратегических и/или оперативных рамок в моей стране/ территории? (Флажки**)**
☐ Национальная стратегия управления рисками стихийных бедствий
☐ Национальная оценка рисков и опасностей
☐ Местные оценки рисков и опасностей
☐ Национальные / местные планы управления стихийными бедствиями
☐ Секторальные планы
☐ Другие:
Если ответ «Другие», укажите соответствующие документы: _____

4. Четко ли определены в существующих рамках роли и обязанности организаций, участвующих в борьбе с пандемией?
☐ Да
☐ Нет

5. Учитывается ли пандемический риск при оценке потенциала управления рисками бедствий на национальном уровне?
☐ Да
☐ Нет

6. Были ли приняты необходимые стандартные оперативные процедуры для реагирования на пандемию?
☐ Да
☐ Нет

7. Являются ли пандемические риски/ биологические риски частью разработки сценария и проведения тренингов? (Флажки)
- ☐ Разработка сценария
- ☐ Настольное упражнение (TTX)
- ☐ Полевые учения (FTX)

8. Участвует ли НОБСБ в трансграничном сотрудничестве в деле предотвращения пандемического риска и обеспечения готовности к нему?
- ☐ Да
- ☐ Нет

III. COVID-19 ПАНДЕМИЧЕСКИЙ КРИЗИС И МЕРЫ РЕАГИРОВАНИЕ НОБСБ

9. Реакция COVID-19 в моей стране/ территории была своевременной и эффективной.

Категорически не согласны: 1; Не согласен: 2; Нейтральный: 3; Согласен: 4; и решительно согласны: 5
Комментарий: _____

10. Как была организована реакция на пандемию COVID-19 в вашей стране/ территории? (Множественный выбор)
- ☐ С помощью существующей структуры по предупреждению и ликвидации чрезвычайных ситуаций
- ☐ Через структуру чрезвычайных ситуаций в области здравоохранения
- ☐ С помощью специальной структуры по борьбе с пандемическим кризисом
- ☐ Другой:

  Если ответ «Другой», укажите способ: _____

11. Какие ключевые элементы институциональной структуры реагирования на пандемию COVID-19 (Флажки)
- ☐ НОБСБ
- ☐ Министерство здравоохранения
- ☐ Ключевые отраслевые министерства
- ☐ Агентства
- ☐ Муниципалитеты
- ☐ Организации гражданского общества
- ☐ Научные круги

12. Каким образом НОБСБ участвовала в этом процессе? (Множественный выбор)
- ☐ В рамках своих регулярных компетенций
- ☐ В рамках структуры чрезвычайных ситуаций в области здравоохранения
- ☐ В рамках специальной структуры по борьбе с пандемическим кризисом
- ☐ Другой:

Если ответ «Другой», укажите способ: _____

13. НОБСБ эффективно участвует в усилиях по реагированию.
Категорически не согласны: 1; Не согласен: 2; Нейтральный: 3; Согласен: 4; и решительно согласны: 5
Комментарий: _____

14. Как НОБСБ сотрудничает с другими министерствами и заинтересованными сторонами в целях сдерживания распространения пандемии? (Пожалуйста, уточните) _____

15. Существует ли национальная стратегия обеспечения готовности, смягчения последствий и реагирования или план обеспечения готовности и реагирования, которые служат для координации и руководства действиями, связанными с нынешним COVID-19 кризисом?
- ☐ Да
- ☐ Нет

Если ответ - Да, просьба уточнить: _____

16. Можете ли вы определить препятствия в процессе реагирования НОБСБ в ответ на пандемию и как ее можно улучшить?
- ☐ Да
- ☐ Нет

Если ответ - Да, просьба уточнить: _____

17. Каковы сильные стороны реагирования НОБСБ на пандемию COVID-19? Каковы его слабые стороны? (Пожалуйста, уточните)
_____

18. Что является наиболее важным действием/ мерой, которая была реализована НОБСБ? (Пожалуйста, уточните)
_____

19. Какое влияние пандемия COVID-19 оказывает на работу и операции НОБСБ? (Пожалуйста, уточните) _____

20.a: Пожалуйста, укажите три негативных изменения в результате пандемии:
1)
2)
3)

20.б: Пожалуйста, укажите три положительных изменения, которые оказали положительное влияние на операции и работу НОБСБ.
1)
2)
3)

21. Что НОБСБ не сделал в ответ на пандемию COVID-19 и может быть сделано в будущем? (Пожалуйста, уточните) _____

22. Активируется ли Национальная платформа СРБ или любой другой объект УСРБ во время ответа, предоставляя какую-либо поддержку/советы?

☐ Да
☐ Нет

Если ответ - Да, просьба уточнить: _____

23. Можете ли вы подчеркнуть какую-либо меру или деятельность в качестве наилучшей практики в ответ на пандемию? (Пожалуйста, уточните)

_____

24. Можете ли вы выделить какой-либо урок, извлеченный на данный момент из ответных мер на пандемию? (Пожалуйста, уточните)

_____

25. Используется ли какое-либо инновационное решение в области ИКТ или инструмент ГИС в качестве вспомогательного инструмента в рамках мер реагирования НОБСБ в связи с пандемическим кризисом?

☐ Да
☐ Нет

Если ответ - Да, просьба уточнить: _____

III. НОБСБ И БУДУЩИЕ ПАНДЕМИЧЕСКИЕ КРИЗИСЫ/РАМКИ БИОЛОГИЧЕСКИХ РИСКОВ

26. Как вы думаете, что необходимо сделать для НОБСБ, чтобы лучше подготовиться к следующему пандемическому кризису/биологической опасности и снизить риск его возникновения? (Пожалуйста, уточните)

_____

27. Планируется ли в качестве извлеченных уроков обновить стратегические и оперативные рамки с учетом рисков пандемии/биологических рисков?

☐ Да
☐ Нет

Если ответ - Да, просьба уточнить: _____

28. Какие меры по снижению риска пандемии в будущем были определены в ходе этого кризиса? (Пожалуйста, уточните)

_____

29. Просьба указать три главных приоритета создания всеобъемлющих и перспективных НОБСБ для борьбы с пандемией:

1)
2)
3)

30. Если у вас есть дополнительные комментарии, пожалуйста, добавьте ниже.

_____

II.2 ВОПРОСЫ ДЛЯ ПОЛУСТРУКТУРИРОВАННЫХ ИНТЕРВЬЮ

Справочная информация

• **Общая информация**: пол, возраст, профессиональная подготовка/сектор, опыт в области уменьшения опасности бедствий/изменения климата/здоровья.

• **Учреждение**.

Вопросы

➢ **Что бы вы изменили в отношении реакции НОБСБ на пандемию** COVID-19?

➢ **Каким образом меры, принятые в ответ, были переведены и осуществлены на более низких административных уровнях?**

➢ **Какие желаемые результаты были достигнуты?**

➢ **Что было самым важным, чему научились в ходе ответных мер на пандемию** COVID-19?

➢ **Можете ли вы более подробно рассказать о передовой практике реагирования на пандемию в** COVID-19?

➢ **Что мы узнали и что нам делать с будущим НОБСБ во времена неопределенности?**

➢ **По вашему мнению, какие рекомендации необходимы для устойчивого восстановления в краткосрочной и среднесрочной перспективе?**

➢ **Что необходимо для полной интеграции пандемического риска/биологических рисков в стратегические приоритеты и политику НОБСБ?**

➢ **Что Вы думаете об актуализации инструментов и методологий прогнозирования в работе НОБСБ для нелинейной оценки и понимания будущего?**

ANNEX VII - BIBLIOGRAPHY

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