

DISASTER RISK REDUCTION: IMPLEMENTATION MODULE IN THE REPUBLIC OF NORTH MACEDONIA

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Abstract: An all-embracing approach is necessary to decrease the vulnerability of our societies through coordinated activities and to lead the way to establishing an effective system for coping with the risks of disasters. The need for an all-embracing approach has been recognized in the Republic of North Macedonia as well, a country where crises have not been a rare phenomenon throughout the years. The area where this country is located doubtlessly makes it a geographical, economic and geopolitical unique centre. In such circumstances, complemented with the great progress of technological-technical development, the Republic of North Macedonia has decided to join the countries which have agreed to a common approach in the realization of common interest – disaster risk reduction.

Disaster risk reduction is a concept, which has been defined by UNISDR. It aims at reducing the consequences caused by natural accidents (earthquakes, floods, etc.) by applying the method of preventive action. The all-embracing approach is applied for the identification of the risk-factors which cause crises and systematic efforts are made for their neutralization. Hence, the Government of the Republic of North Macedonia officialised the National Platform for Disaster Risk Reduction in 2009. A number of subjects act on its basis – participants that are united for a common national and international interest – disaster risk reduction. The idea is to establish a mechanism which will enable effective coordination of intellectual knowledge and accessible resources through a systematic approach, as well as securitization of disaster risks and their integration in the political-security agenda on a national level.

Keywords: National Platform, Risks, Floods, Crisis Management, Protection and Rescue.

Introduction

The only thing that we can be sure about before talking about disasters is that the unpleasant conditions that humanity faces go hand in hand with them in all forms of human civilization. The authors of this paper agree that vulnerability of communities is a phenomenon present in all periods of human development, even before it was identified as a category in the concept of disaster risk reduction.

The challenge for this small Balkan country identified by the authors of this paper is the frequent unpreparedness and increased need of professionalism for the response, management and recovery capacities in the Republic of North Macedonia.

In accordance with the Hyogo Framework for Action¹, the recommendation of the International Strategy of the United Nations for Disasters Reduction (UNISDR), the European Forum for Disaster Risk Reduction and the Global Platform for Disaster Risk Reduction, the concept for disaster risk reduction was officially implemented in the Republic of North Macedonia in 2009.

¹The Republic of North Macedonia joined the Hyogo Framework for Action with the signing in January 2005.

The implementation of the National Platform for Risk Reduction (hereinafter – NP for DRR)¹ was preceded by an appropriate preparation² of the institutional capacities in the field of disaster risk reduction³.

We have been witnesses to some “action”, an increased number of bureaucratic procedures and mixed competencies, such as the insufficient operative “recognition” in the implementation up to this period (from 2009 when it was made official up to 2019). It is a matter of question whether the Macedonian nation “has felt” the benefits of the access to the creation of a “prepared system” for crisis management which can efficiently manage all disaster types and conduct normal transition from providing an appropriate response to an efficient implementation in the recovery phase.

Therefore, in this paper, we shall review the specifications of the functionality of the crisis management system and address specifically the floods as a special category to which Republic of North Macedonia is most vulnerable. Through an analysis of the Skopje Floods in 2016⁴, we will identify the areas in which the crisis management should operate more flexibly and in a localized manner, with the ultimate goal of facilitating the adoption of the Sendai Framework priorities⁵.

1. The Crisis Management System and the Impact of the National Platform for Disaster Risk Reduction of the Republic of North Macedonia

In order to build a system that will make the society more effective in its efforts to be resistant to threats and recover from the effects of the threats, the Crisis Management System was implemented in the Republic of North Macedonia pursuant to the Law on Crisis Management in May, 2005, and since then it was slightly modified in 2011, 2014, 2015 and 2016.

1.1. The Crisis Management System in the Republic of North Macedonia and its establishment

The Crisis Management System in the Republic of North Macedonia has been formed in the interest of efficient prevention and management of crises that may be caused by a natural or human factor on the territory of the Republic. Clearly, the basic goal of the crisis management system in the Republic of North Macedonia is the need to provide a constant level of consultations and communication among all

¹The National Platform for Disaster Risk Reduction is a nationally owned and led forum or committee, which includes more participants. This national mechanism serves as a representation model of the Disaster Risk Reduction concept at different levels and it enables coordination, analysis and advice on priority areas for action. See more on: <http://www.macefdr.gov.mk>

²The preparation included defining the official structures, UNISDR notification, as well as establishing links among the institutions that are to be involved in the implementation of the operative part of the platform.

³ The national legislative basis in the field of security and defense, which serves as the foundation for the NP for DRR in the Republic of North Macedonia comprises: National Security Strategy in the Republic of North Macedonia, Crisis Management Law (Official Gazette of the R.M. N. 29/05), Law on Protection and Rescue (Official Gazette of the R.M. N. 36/04 and 114/09); National Security and Defence Concept (2003).

⁴a period of “maturity” when it comes to NP for DRR

⁵The Sendai Framework implies that in the period of 2015-2030 practical directions for support of its implementation should be developed, participation in common action should be ensured, as well as action on the part of all concerned parties and strengthening of the report on the disaster risk reduction.

relevant subjects, making high level decisions, maximal coordination, immediate reaction, effective and appropriate use of the available capacities and resources in case of a crisis or a crisis situation¹ in the country.

A Government body for coordination and management of the crisis management system is the *Steering Committee* that consists of the Minister of Internal Affairs, the Minister of Defence, the Minister of Health, the Minister of Transport and Communications, the Minister of Foreign Affairs and the Head of the *Assessment Group*. The Steering Committee is a strategic body that suggests measures for managing crisis situations. In general, this body considers the proposal of the Government to proclaim a certain threat on the territory of the Republic of North Macedonia or its part, while the Assessment Group is in charge of constant monitoring and assessment of the risks and dangers on the territory of the Republic and proposing preventive measures and early warning.

The Crisis Management Centre has been established within the crisis management system, as an independent body/agency (in the capacity of a legal entity). The Centre is in charge of the organization and coordination of the stakeholders involved in the crisis management situation, as well as of their complete administrative and technical support during disaster management.

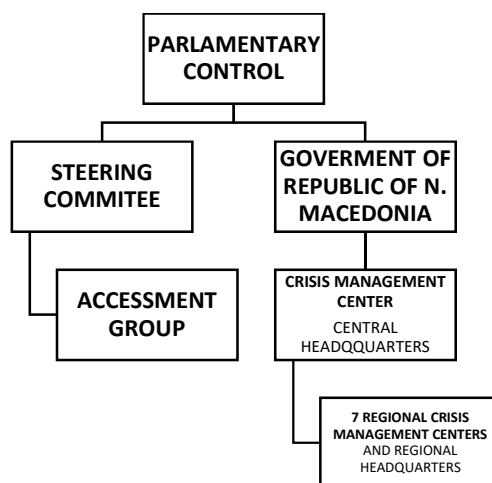


Figure 1: Crisis Management System Staff in the Republic of North Macedonia according to the positive legislature in the field of crisis management

The Crisis Management Center comprises a Central Headquarters, as an operative and professional body that manages the prevention and crisis managing activities. The Crisis Management Center has also got eight Regional Centers that help in the effective coordination in case of risks and facilitate the communication, information exchange and monitoring both during the crisis and its development.

The brief overview (*Figure 1*) presents the current module of the Crisis Management System whose task is to consistently perform the task of national interest – managing potential risks

¹“Crisis situation” defined in the Law on Crisis Management (2005) is a condition caused by risks and dangers that can endanger the goods, health and lives of the people. Prevention and dealing with the operative level requires larger amount of resources.

that may threaten the lives and health of the people who live on the territory of the Republic of North Macedonia.

1.2. Impacts after the Implementation of the National Platform for Disaster Risk Reduction

The NP for DRR in the Republic of North Macedonia aims at uniting all relevant factors that can contribute to the common interests of society. In the Introduction of this paper, we explained how the international and national basis is established, whereas in this section we will present the functioning of the NP for DRR in the Republic of North Macedonia. The *National Coordinator* connects all levels for implementation of the NP for DRR.

For a balanced and all-inclusive multi-sector access, the focus of the current model is based upon and divided into four components:

I. Political Component of the NP for DRR

It is the political and strategic management of the whole mechanism for implementing the NP through the Steering Committee in an expanded composition, which provides political support¹ to the NP for DRR. In addition, the Ministries of relevant sectors take part in the work of this body, as well as the Advisor for National Security to the President of the Republic of North Macedonia, the heads of the Crisis Management Center and the Protection and Rescue Directorate and the President of the Association of the Units of Local Self-Government

II. Administrative Component of the NP for DRR

Additionally, with the implementation of the NP for DRR in the Republic of North Macedonia, two new bodies have been formed: *State Secretaries Council*² and *Inspection Authorities Council*³. Based on the category of potential risks, with NP for DRR *seven specialized platforms* have been formed, governed by the relevant Minister that covers the area closest to the area of the potential risk. The identified categories are as follows: risks in the domain of infrastructure (the Minister of Transport and Communications); risks in the domain of agriculture, forestry and water management (the Minister of Agriculture, Forestry and Water Economy); risks related to the environment (the Minister of Environment and Physical Planning); risks in the domain of cultural heritage (the Minister of Culture); health risks (the Minister of Health); HazMat risks (the Minister of Internal Affairs); production risks (the Minister of Economy).

A special part of the implementation of the NP for DRR in the Republic of North Macedonia which is intended to cover a large part of the aspects that are difficult to reach by the governmental institutions, are the thematic working groups. Hence, for example, *working groups* have been formed within the NP for DRR for the following areas: protection and rescue

¹Political support is provided by appointing one Minister to head the Steering Committee on behalf of the Government of the Republic of North Macedonia.

²Overcoming the "bureaucratic" problems of administrative and professional nature. Working groups have been formed and they will be operative in the areas they cover and will report to the Council.

³The task of the Council for inspection monitoring is to intensify the cooperation and follow the issues regarding manning and material and technical equipment.

of children in case of natural disasters; protection and rescue of children with physical handicap in case of natural disasters; protection and rescue of persons with physical handicap in case of natural disasters; protection and rescue of old people in case of natural disasters; safety at the working place and access to the devices for protection and rescue in case of disasters; working groups for climate changes and adaptations; working groups for prevention of cyber-attacks; working groups for safety and accessibility to hospitals; working groups for forestation; working groups for early warning and similar working groups in twenty-three areas related to disaster and risks reduction.

III. Professional/Expert Component of the NP for DRR

The professional/expert component of the NP for DRR comprises the academic and scientific population with their laboratories and other scientific centers. The basic goal of the integration of the expert component is a functional contribution to the academic institutions and their laboratories in support of the prevention and the level of professionalism that they can offer. It includes their calculations based on forensic data¹ and IT and telecommunication sector data, which can be further significant for the prevention of disaster risks.

IV. Operative Component

¹They can be in the field of medicine, technology, and environment. The scientific population can be of key importance in the assessment of the probability in the occurrence of a future event with the collected data that it disposes of. The identification and understanding of the reasons and processes are of major importance for “further” assessment of the risks. With an appropriate implementation of previous events in similar situations, the scientific population creates scenarios for assessment of any future events. The following universities have offered their institutions for work: Faculty of Pharmacy, Faculty of Natural Science and Mathematics, Faculty of Forestry, Faculty of Mechanical Engineering, and many others, i.e. 174 national institutions, research centers and laboratories so that the Republic of North Macedonia has become a unique example in the field of disaster risk reduction.

Table 1: Competences of the institutions in a crisis situation caused by floods at the operative level

<i>SUBJECT</i>	<i>OPERATIVE COMPETENCES IN CASE OF FLOODS ON THE TERRITORY OF THE REPUBLIC OF NORTH MACEDONIA</i>
Protection and Rescue Directorate	Strategic and operative acting, preparation and training of the forces, protection and rescue of endangered population and all other interventions in coordination with the other state agencies.
Crisis Management Center	Alarming the population and coordination of the agencies as well as appropriate notifications with respect to the situation.
National Hydro-Meteorological Service of the Republic of North Macedonia	Defines the level of danger of floods by monitoring the weather conditions in all phases of the flood.
Ministry of Agriculture, Forestry and Water Economy	Evaluates the watercourses, jetties and channels and proposes hydro-technical measures for protection of the places of outflow.
Ministry of Internal Affairs	Controls the movement, traffic regulation, identification of victims, helping in transport activities, evacuation.
Ministry of Foreign Affairs	Coordinates the activities for obtaining international help and undertakes the required procedures for lost foreign citizens.
Ministry of Transport and Communications	It is involved in the correction of damaged thoroughfares and the vital traffic infrastructure; it participates in transport activities and defining alternative roads during floods.
Army of the Republic of North Macedonia	Takes part in many activities for protection and rescue of the endangered in the floods operatively and strategically with its forces.
Ministry of Health	Medical treatment of endangered persons, water and products supply for survival, exceptional drinking water controls, establishing reception/shelter centers.

The operative Component (*Table 1*) consists of the agencies and sectors that face the emergency situations in the field.

In the Republic of North Macedonia, these are frequently referred to as the “emergency services” and they include relevant agencies for civil protection, the police, the firefighting services, and the first medical aid. These, in a declared crisis situation, operate in accordance with the “Standard Operative Procedures for Communication and Coordination”.¹

The Protection and Rescue Directorate is the main entity and the holder of the civil protection system as the main operational authority in the crisis management system, which acts to protect

¹The *standard operative procedures* are initially meant for use on the part of the members of the Central Headquarters for crisis management which is an operative and professional body in the crisis management system, and acts for crisis situation prevention and management, and also for the relevant stakeholders of operative and professional decisions for crisis management, as well as for temporary tasks in the crisis management center.

and save people, the environment, material goods, natural resources and the cultural heritage from natural disasters and other accidents in peace, state of emergency and state of war. The role of the Directorate is crucial in the operative component of the crisis management system in the Republic of North Macedonia. In cooperation with the competent bodies of the state administration, it prepares a *Threat Assessment* of disasters at the state level and ensures timely engagement and efficient use of the protection and rescue forces¹. It is engaged within the crisis management system in the aspects of preventing, detecting, and eliminating the consequences of natural disasters and other accidents and also provides training and technical equipment to the protection and rescue forces.

In addition to the regulation on the operative level, *the Government of the Republic of North Macedonia adopted “A National Protection and Rescue Strategy” in January 2014* for verification of the protection and rescue measures and strengthening the parliamentary support due to the specificities of this issue on a national level.²

Along with the implementation of NP for DRR, efforts were made for modernization of this segment and the project *Incident Command System* was initiated, which is an American solution when it comes to the operational part of crisis management. The idea is a unified command system with flexible organization where agencies and people shall easily accustom to the decision-making process and situation change. It is used for short-term and long-term terrain operations and for a wide variety of natural and man-made accidents at all levels, from national, to local. (Lazarevski, 2009). The implementation of the system in the Republic of North Macedonia is still at an early phase of its implementation.

2. Applicative Implementation of the Platform in the Disaster Risk Reduction in the Republic of North Macedonia through an analysis of the floods in the northern part of Skopje in 2016

2.1. Republic of North Macedonia – vulnerability to floods

Clearly, the NP for DRR needs to implement the results in practice, rather than on paper only, and therefore in the following part we shall present its performance before and after the analyzed floods in 2016 in Skopje.

Extreme weather and climate events, interacting with exposed and vulnerable human and natural systems, can lead to disasters. That is not a rare phenomenon in the Republic of North Macedonia at all. The extreme climate phenomena, coupled by the human factor, may cause floods. Floods are a result of topographic, orthographic, geo-morphological and climate conditions followed by imbalanced regimes of natural watercourses. The last of these factors was one of the key factors for the occurrence of one of the events that left a significant mark and serious consequences on the population and goods in the Republic of North Macedonia.

¹The protection and rescue forces in the Republic of North Macedonia are formed as: rapid response teams, units and headquarters for protection and rescue of the population and material goods from natural disasters and other accidents. Republican and local protection and rescue forces are established in the Republic of North Macedonia.

²All the activities are discussed in the Strategy – planning, preparation and implementation of protection and rescue measures from natural disasters and other accidents, in accordance with the principles, norms and procedures that exist in the planning, programming and budgeting system.

The Skopje region has been identified as one of the most vulnerable when it comes to heavy rains as a climate phenomenon, along with the Polog and Kumanovo regions.

2.2. Analysis of the Reasons – 6th August

During the night of 6th August 2016, a period when the implementation of NP for DRR in the country was in a “mature” phase and when the options for adaptation to the Sendai Framework were discussed, a surprising weather phenomenon occurred in the Republic of North Macedonia, taking 22 victims.

It was a flood that happened on 6th August 2016. The flood was caused by heavy rains, which are one of the extreme climate conditions when it comes to disasters caused by natural factors.

A maximum amount of rain poured within period of half an hour with a quantity of 1 mm per minute. According to the hydrometeorology experts, this is a real rarity. The reasons are in the regional meteorological conditions, brisk rush of wet air masses from the west with a development of a powerful cumulonimbus and the condition of the weather in the previous days.¹

Due to the direction of movement of the clouds towards “Skopska Crna Gora”² (as a high-medium barrier with 1651 m), the greatest quantity of rain fell right on the southern downhill of this mountain, i.e. the north part of the Skopje valley. Observing the Southern downhill of the mountain “Skopska Crna Gora”, we can notice that it is steep and bare, with small watercourses, which leads to quick outflow of the water towards the city of Skopje. We come across small parts of forests and low vegetation, which is also one of the factors that led to the disaster. The dense forest on the southern parts of Skopska Crna Gora would have kept large quantities of water that was later fatal and overflowed other places. It would not have stopped the flood completely, but it would have significantly lowered the flood. In the part of the Skopje Region³, below the downhill of Skopska Crna Gora, there are a few channels that are supposed to collect the water, and through the channel, which starts from the Chento settlement, to enable its outflow from Vodno towards Vardar. With such an extreme water level these channels are powerless and some of them were full of garbage thrown by the local population. The filled riverbeds are also a problem, for which the human factor is responsible. The channels themselves have anomalies, either from a technical aspect or in relation to their sustainability, but they would certainly reduce the losses if they function regularly. The problems that the ring road showed are perceived as a great disadvantage to the whole project and a revision is necessary to define where and what mistakes were made in order to correct the water pathway. (CroJOB, 2016)

¹If we further observe the reasons, according to the information by the National Hydro-Meteorological Service of the Republic of North Macedonia (NHMS), for the period of 4 hours 93 liters of rain/m² fell.

²Mountain close to the northwestern part of the city

³The Skopje Valley or Skopsko Pole is one of the largest valleys in Macedonia. It is the second valley along the Vardar path. The Skopje Valley is formed by the mountains Zheden, Ivanje (Matka) and Suva Gora on the west and Skopska Crna Gora on the north.

2.2.1. Chronological report on the operational crisis management

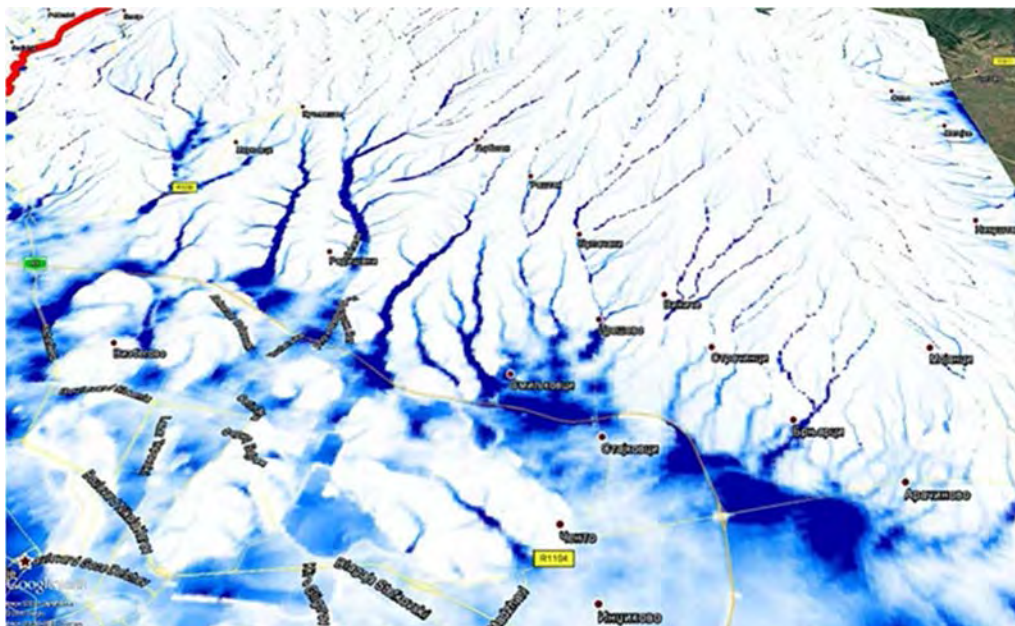


Figure 2: Model of risky watercourses on the southern slopes of Skopska Crna Gora that are "responsible" for the floods, source: Institute for Geography, Republic of North Macedonia

The Government of the Republic of North Macedonia on 7th August 2016 declared the existence of a *crisis situation* due to the increased amount of rains and floods on one part of the territory of the Republic of North Macedonia, especially in the Skopje region. From the information that we received from the “Public Relations and Protocol Department” within the Crisis Management Center, we were briefed about the situation in the field and the beginning of the crisis. There were titles and reportages on TV and the social media about the heavy rains in Skopje, beginning around 6 pm.¹ The initial reports that were presented to the public were those about flooded streets, basements, houses and buildings – in the municipalities Kisela Voda, Aerodrom, and Gazi Baba. People called the number 195², where material loss of different types was reported, including flooded streets, fallen trees, stuck automobiles, electricity loss in the Skopje region and so on. It was critical in the villages Gorno Lisiche, Dolno Lisiche, Stajkovci, Singelikh, Usje. The initial reports of the Crisis Management Center advised that all required information should be transmitted to the relevant authorities and the whole situation

¹Newsletter by the Crisis Management Center from September 2016. Also, information for the condition on the terrain. More on: <https://www.youtube.com/watch?v=Fccz0c2kgPs>

²The dialing number of the Crisis Management Center for emergency situations. In NP for DRR, too, as one of the main points to be proposed was the implementation of the Unique European number for emergencies, i.e. the e-112 system along with the parallel existence of the current numbers of emergencies 192, 193, 194, and 195. Taking into consideration the current entirety of the crisis management system, the implementation of the integrated system for emergency calls will have a special contribution to the specifications of the crisis management.

would be thoroughly monitored.¹ The night before the very culmination of the disaster there was a coordinative meeting of the Steering Committee and the Government proclaimed a *crisis situation*, and there were a few meetings on the crisis situation at the CMC Central Headquarters, which were led by Suzana Saliu, the then head of CMC. During these coordinative meetings, decisions were made, i.e. conclusions which were to be implemented in the affected regions, so that the situation could be normalized eventually and the legal obligations arising from the Law on Crisis Management and the Law on Protection and Rescue to be implemented as well as the proposed measures. Conclusions (which were also regarded obligatory for the relevant authorities to act in the situation) were made on the first meeting of the CMC Central Headquarters².

As a result of the declared crisis situation, the engagement of the Army of the Republic of North Macedonia and the Ministry of Internal Affairs was enabled through specialized units for floods management. After the engagement on the part of the highest command of the Armed Forces – President Gjorgje Ivanov, a *Tactic Operative Center* was established where volunteers joined in the activities, as well as activists from the Red Cross and the Ministry of Internal Affairs.

Within the Crisis Management System, six meetings were held at the Crisis Management Central Headquarters where representatives of the relevant institutions involved in the crisis management were present. The Head of the Crisis Management Center led all the meetings and other activities. Conclusions were made based on the taken measures, and the actions were actively monitored and all institutions submitted reports on the exploited devices and human resources, at least on a daily level. It is worth mentioning the engagement of the educational institutions, non-governmental organizations and self-initiated donations by public and private institutions from different parts of the Republic of North Macedonia, as well as the international collaboration at a bilateral level which played a key role in donating assistance during the recovery of the region, i.e. rehabilitation and reconstruction soon after the end of the crisis situation.

2.2.2. Analysis of the flaws in the crisis management system: Was nature the only “culprit“ for the disaster?

The responsible entities for crisis management in the Republic of North Macedonia, again, ignored prevention. It is clear that all competent institutions, from strategic to operational level, are involved in the preventive role of the crisis management system. In the Republic of North

¹From a interview with Tihomir Karanfilov, employed in the Public Relations Department in the Crisis Management Center.

² Points which were marked as necessary:

The Protection and Rescue Directorate and the Army of the Republic of North Macedonia should check the opportunity to engage additional mechanization to clean the banks of the Pena river and to fix the road to the villages Shipkovica, Brodec, Bozovce and Veshala;The Ministry of Labor and Social Policy in the Public Institution – Institute for care and shelter Ranka Mianovikj to enable temporary accommodation for the people affected by the flood;The Red Cross is in charge of coordinating the reception and share of food donations, water and hygiene materials for the citizens affected by the flood; the Food and Veterinary Agency in collaboration with the Protection and Rescue Directorate to take measures for dead animals to be eliminated as soon as possible;The Council of The City of Skopje and the Municipality Gazi Baba are recommended to supply the volunteers with special marking (badge) and not only safety equipment when engaging them.

Macedonia, this means preparation of the *Threat Assessment on the Risk and Hazards at Local Level*, for the purpose of effective prevention and early warning.

The Crisis Management Center, as the main coordinating entity, also, according to the Law on Crisis Management, prepares an *Assessment of the risks and hazards* that can endanger the security of the Republic of North of Macedonia. The only Assessment of the threats and risks that can endanger the security of the Republic is not made by the Crisis Management Center, although the Law on Crisis Management explicitly requires this measure.

All of the municipalities and the City of Skopje, within their competences determined by the Law on Protection and Rescue, have an obligation, for the purpose of efficient prevention and early warning in a crisis situation, to determine the needs and to plan the resources by developing a *Threat Assessment on the risks and dangers* in a crisis situation on the territory of the municipalities and the City of Skopje. In the particular analyzed case and to date, inefficiency is a “feature“ of the administration in the City of Skopje and the municipalities of Skopje. Namely, *the last Assessment on the level of the City of Skopje was made in 2008, on 3 September*. Not only this Assessment is outdated, but also it does not correspond to the actual situation in order to facilitate the coping with a natural disaster of such magnitude.

Early prevention in such situations plays a key role in reducing and neutralizing the consequences. In this part, it is inevitable to note that the *National Hydro-Meteorological Service* (NHMS) has evidently lost the race with world trends of technology and its prognostic models failed. This, at least in the concrete situation, directly or indirectly affected the end result (22 casualties and enormous material damage), blurring the role of NHMS as an actor that issues the "announcement" for such disasters, so that the Crisis Management Center can further *alarm, coordinate and communicate* with all stakeholders in the region in a timely and organized manner. Finally, the result would have been better readiness and timeliness in the reaction. This would lead to greater awareness of the public, i.e. "early warning" in this context.

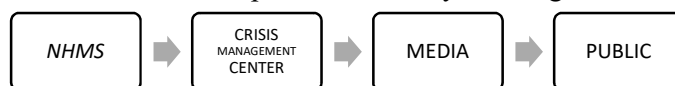


Figure 3: Relations required for basic early warning system

Another point is the education and readiness of the population. The reports that we received from the Crisis Management Center, indicated the time when the distribution of the educational materials for protection and rescue from floods was carried out and the time when these materials were distributed to the population. The procedure is part of the measures for training the population what to do in such a situation, in addition to other measures. The paradox was the timing itself, during the flood.

Analyzing the Law on Crisis Management and the Law on Protection and Rescue, the legal complementarity of the Crisis Management Center and the Protection and Rescue Directorate, coupled by a certain duplication of the governance structure by the NP for DRR bodies, is one of the main obstacles that inhibit integrated action and create an additional unnecessary time

frame in which often the consequences can be fatal as we can see in the elaborated case in this paper.¹

3. Conclusions and Recommendations

It is a general fact there are no single solutions for effective implementation of a complex concept where such important values will be united for all citizens of a certain country. The Republic of North Macedonia, with the implementation of the given model, clearly and unambiguously decided to be part of the countries that would share the common cause – partnership in building a more secure world.

The goal of presenting the Macedonian approach to this question and the system through which the concept of disaster risk reduction is implemented, as well as the analysis of the floods in the Skopje region, was to present the aspects and benefits of the Platform in practice. The National Platform is present in the political, administrative, operative, and expert/professional component, which we described, at more levels with many control mechanisms.

There are certain areas, which not only we, as authors, but also you will agree, create opportunities for action in the future on state level.

First, it is clearly evident that there is an unnecessary “overlap” in the legal competencies of the Government agencies, and the entities created and implemented with the NP for DRR. Furthermore, there are obviously no defined competencies and tasks for the National Coordinator of the NP for DRR.

Second, in the Republic of North Macedonia, the security documents that form the basis for the implementation of the disaster risk reduction have not been updated since: 2005 - Law on Crisis Management; 2004 - (Law on Protection and Rescue), 2003 - National Security Strategy in the Republic of North Macedonia. In addition, there is a need to update the legislation and to consider the possibility of an integrated crisis management system in which the two central authorities, the Crisis Management Center and the Protection and Rescue Directorate would be merged into one state agency by creating a new legislative solution, in which the administrative part (reporting, risk assessment and alarm, early warning) would be managed by the Crisis Management Center, while the operational part would be managed by the Directorate for Protection and Rescue.

Third, for the purpose of real applicative and practical implementation of the NP for DRR, there is an evident need for implementation of a special measure for the work of the inspection subjects in the field of land management, especially in the regions that are vulnerable to the disasters, regulating the illegal cutting of forests, as well as regulation, cleaning and regular control over the conductivity of the drainage channels.

¹Financial costs also do not justify the results obtained from the "field": the Protection and Rescue Directorate has an annual budget of 4.1 million and employs about 285 people. In the Crisis Management Center, however, there are about 320 employees and it spends 2.5 million euros of state money annually.

Fourth, in parallel with the previous measure, in order to fill in the "vacuum" time and and strengthen the implementation of the concept that was elaborated in this paper at the local and operative level, we believe that the necessary part of the NP for DRR should be the promotion of self-protection and increased awareness among the citizens. Namely, self-protection would be integrated in the educational process progressively, from the youngest age. Through training and educational materials and transfer of the traditional techniques for response in case of emergencies, with instructions concisely conveyed with relatively small financial resources, much would be done for a better response when it comes to extreme climate events, like the analyzed case of floods in Skopje.

And as the last but not least recommendation, in the NP for DRR, one of the main points of the proposal was the implementation of the Single European Emergency Call Number. The e-112 system with parallel existence (for a limited time, while the citizens and agencies are adapting to the new system) to the current emergency numbers 192, 193, 194 and 195. When the adaptation phase ends, there will be only the 112 number in function. The introduction of an integrated emergency call system will give a particular contribution to the coping with the emergency situations. In the elaborated case, the Republic of North Macedonia has been paying the price for prolonging the implementation of the system since 2011. E-112 will enable an integrated and functional communication of the existing entities in crisis management and significantly greater availability of citizens who may find themselves in a situation in which they need an immediate response from the competent entities. The system should be structured in three regional centers connected into one system: Regional centers in the cities of Skopje (north), Shtip (centrally) and in the southern part, near the city of Prilep, supported by data from an integrated Geographic Information System (GIS) for the state of the available resources and managing the preventive, operative and recovery measures.

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