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Project: "CBC partnership Tsenovo-Hotarele-Greaca against nature risks",
Grant agreement № 83520/ 20.07.2018, e-MS code: ROBG-417

COMMON STRATEGY ON BETTER CO-ORDINATION AND EFFICIENT REACTIONS OF A JOINT CROSS-BORDER PARTNERSHIP BETWEEN TSENOVO MUNICIPALITY, HOTARELE COMMUNE AND GREACA COMMUNE AGAINST NATURE RISKS

INSTITUTE FOR PROGRAMMES AND PROJECTS MANAGEMENT

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2020

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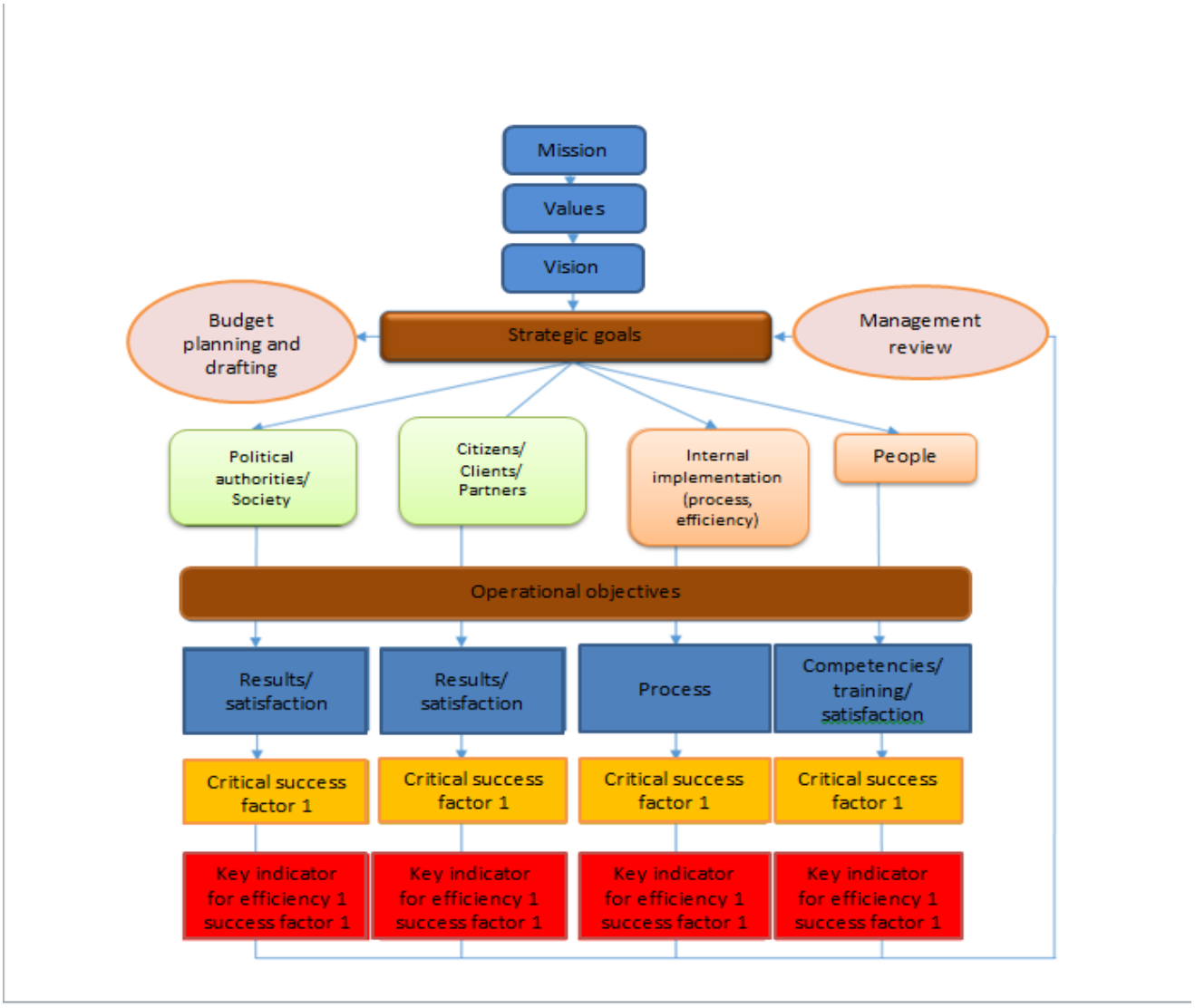
1. INTRODUCTION

The Common Strategy for Better Coordination and Effective Response of a Joint Cross-Border Partnership /*the Strategy*/ between project partners defines the mission, key values, vision, objectives, priorities and tasks for more effective disaster risk management and population protection, the material and cultural values on the territory of the cross-border municipality of Tsenovo and the communes of Hotarele and Greaca. It is a founding document for the joint and coordinated prevention, management and management of disasters and accidents and outlines guidelines for the establishment of an effective, resource-based and technically secured ***Constant Readiness System***, for disaster prevention and response.

Structurally, it can generally be represented in the following scheme:



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MISSION: To improve sustainability, quality of life and the level of security by working in the interest of all citizens of Tsenovo municipality, the communes of Hotarele and Greaca, by improving the organisation, interaction and coordination of local authorities for the management of natural disaster risk.

KEY VALUES:

The strategy is based on ***the following key VALUES***: positive thinking, perspective, awareness, culture, equality, responsibility, cooperation, continuity and political will.

Positive thinking

In today's society, there is a negative attitude towards disasters. It perceives disasters as an active process whose challenges can be expected but not sufficiently managed. This point of view puts into the foreground the implementation of the compensatory approach in efforts to reduce disaster risk, reducing it primarily to disaster preparedness and/or alleviation of existing vulnerability of the population, business, cultural heritage and the environment. Compensatory policy is able to reduce the existing but not the future long-term risk that needs to be changed.

Positive thinking in this respect is one of the key approaches to enhancing the expertise and management of responsible institutions, which should adopt a strategic, forward-looking approach based on modern principles of good risk management for natural and man-made disasters.

Perspective

Perspective policy builds the foundation for strategic disaster management in order to successfully manage and overcome the medium-term disaster risk. The forward-looking approach overcomes the disadvantages of a purely planning approach that relies only on existing trends and possible forecasts, while allowing for uncertainty and multi-variance calculations to be made in organising management. For this reason, forward-looking policy must be integrated into sustainable development planning, incl. during natural and man-made disasters. In this context, approved programmes and projects for development at the municipal level should be reviewed for their potential for disaster risk reduction.

Awareness

The basis for disaster risk reduction is the collection and dissemination of information on good practices in relation to the successful development of full-fledged policies in this area. The awareness of the responsible institutions guarantees the easy use of good practices in the planning of preventive measures, and the awareness of the population facilitates the application and implementation of the planned measures and activities.

The first step to addressing the gaps in available disaster risk information is to conduct a risk assessment, including the type of loss and damage from potential disasters. The next step is to increase the experience by studying good practices in this regard, which directly contribute to both reducing the risk of disasters and enhancing the responsible attitude of management institutions and society to disasters.

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Culture

Policies to overcome the challenges posed by disasters to society need to be transformed into a grassroots public culture in order to gain maximum reach, consistency and multiplier effect for the whole public sphere management system.

Increased disaster risk culture influences decision-making processes, regulatory development, and the organisation and allocation of resources to reduce disaster and disaster risk. A high social culture guarantees that policies are implemented effectively and efficiently.

Equality

A very important principle in the field of disaster risk reduction is the ***equality of citizens***. Some disadvantaged citizens and social groups with lower social status have limited access to relevant organisational and material resources, which is a prerequisite for increased vulnerability of these social groups in disasters. For this reason, it is necessary to create a level playing field in disaster risk areas for all social groups, including disaster protection and response.

Responsibility

Reducing the risk of disasters is a high degree of moral and social responsibility at all levels of government and of the citizens themselves. Responsible managers, both directly and indirectly, must believe in and seek the realisation of a humane cause in disaster management. The serious social responsibility they take with their participation in disaster risk management requires a strict public definition of responsibilities and a clear personalisation of their performance by each responsible officer and citizen.

Cooperation

Modern countries are not alone in facing the challenges of different disasters. The reduction of their risk is aided by the joint action of the parties within the UN, through a common regulatory framework. Therefore, regulatory harmonization is a guiding line for the overall behaviour of the bodies managing this process. The European level legal framework for disaster risk management, as well as the International Disaster Reduction Strategy (ISDR) established in 2000 by the UN General Assembly, including the Southeast Europe Disaster Risk Reduction Strategy after 2009 are leading documents in Member States' disaster risk management.

EU and UN cooperation on integrated disaster management is one of the main pillars of these strategic documents.

Cooperation is the basis for improving the organisation of synergies, coordination, coordination of joint actions and results in disaster risk management at the international level

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between the competent authorities concerned, ***which is valid to an even greater extent for municipalities in cross-border regions***.

Continuity

The established Municipal Council for Disaster Risk Reduction in the formulation of the municipal disaster risk policy fulfils the functions of a disaster risk reduction platform that is in harmony with both the Disaster Risk Reduction Strategy and the Adopted National Disaster Risk Reduction Strategy 2018-2030 and National Disaster Protection Programme 2014 - 2018.

Political will

The complexity of public order and governance today requires a clear political will to impose an integrated approach to disaster risk management. Political will is one of the main prerequisites for integrating disaster risk management into planning the development of each public life sector, which is particularly valid at the municipal level in cross-border regions.

VISION: On the basis of the increasing cooperation between the local executive authorities and their administrations, in the Municipality of Tsenovo and the communes of Hotarele and Greaca, we shall create a ***Constant Readiness System*** from a modern communication information environment and infrastructure, modern special machinery and equipment, technologies and joint operational procedures for the purpose of better organising synergies and coordination in the management of natural hazards in their territory, enhancing safety and quality of life citizens' life and the sustainable development of society.

In order to achieve the expectations from the implementation of the Strategy, it is necessary to realise the following ***strategic goals***:

1. Achieving cross-border resilience in public relations in disasters.

2. Capacity building for joint disaster risk management on the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca.

3. Achieving coherence in implementing sustainable development policies, adapting to climate change and reducing disaster risk.

4. Achieving sustainability of the organisation, coordination and interaction of the managing authorities, forces and resources in relation to disasters in the cross-border region.

Measures to achieve the goals of the Strategy:

1. Creating prerequisites for the preparation and updating of flood risk assessment, other natural disasters, threat maps and risk maps for the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca.

2. Increasing the capacity of local authorities and their administrations to prepare and implement, quality programmes and plans for disaster risk reduction, and emergency plans */disaster protection plans/*.

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3. Identification and implementation of measures for increasing the resilience of critical infrastructure sites in the disaster area of the municipality of Tsenovo and the communes of Hotarele and Greaca.

4. Implement joint disaster risk reduction measures in accordance with disaster risk reduction programmes /plans/.

5. Enhancing the capacity of responsible local authorities and their subordinate management, forces and rapid response resources to organize and carry out effective preventive action and to respond to disasters in accordance with disaster plans.

6. Creating conditions and guidelines for the preparation of a joint plan for the organisation of interaction and coordination between partners in the management of natural disaster risk.

7. Defining the need and prerequisites for the establishment of an effective, resourced and technically secured **Constant Readiness System** for the purposes of disaster prevention and response.

8. Exchange of positive experiences and good practices between project partners to reduce and prevent the adverse effects of climate change, increased risk of floods and other natural disasters on human health and safety, property and resources, as well as the environment, which together with the European and world experience, they are comprehensively applying and interpreting throughout their territory.

9. Increasing the capacity of administrations to prepare quality, coherent municipal programmes for the prevention and reduction of the risk of floods and other natural disasters, through the exchange of good practices and experience.

10. Increasing the preparation of the territorial bodies of the executive power and the disaster response forces for the implementation of disaster risk reduction plans, mutual assistance disaster plans and joint cross-border partnership between the Municipality of Tsenovo, the Hotarele commune and the Greaca commune.

11. Survey /review/ on-site /*in the municipalities, communes and mayoralties*/ for the existing ones, proposing the conditions and technical solutions for the construction of new, common communication, and information technical means, systems, and procedures, for improving the communication, the information environment for sustainable interaction between local authorities and their administrations involved in disaster risk management, rapid response services and voluntary units.

12. Establishment of local and/or integration of existing early warning and alert systems (EWAS), as part of the National Systems of the two countries, for reliable early warning and alerting of the population, for the dangers registered by meteorological, hydrological monitoring stations, seismological, chemical, biological, radiological, nuclear, environmental sites, institutions and organisations.

A main priority of the Strategy is to carry out the analysis and assessment of the risks of natural disasters, their mapping, preliminary planning for better interaction, coordination and

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response in the conditions of joint cross-border partnership between the Municipality of Tsenovo, the commune of Hotarele and the commune of Greaca.

The structure and content of the strategy are in harmony with the attainment of the ***goal and tasks*** of sustainable prevention, protection and reduction of the harmful effects of floods and other natural disasters, while being subject to the following ***basic principles and approaches***:

(a) Wherever possible, human intervention in natural processes should be altered, offset and avoided in the future. At local cross-border level, it is necessary to support and promote the harmonization of water management and land-use practices, as well as nature conservation, in order to improve flood protection within the integrated river basin management.

(b) Planning should cover the entire river basin area for the coordinated development, management and conservation of water, land and related resources. This approach is based on ***multilateral and international cooperation***, incl. and cross-sector planning across the basin.

(c) Given the evolution of climate, the approach to natural disasters must undergo a change in its model – from ***protection actions*** towards ***risk-management actions and co-existence with floods***.

(d) The use of flood terraces for human needs must be consistent with the existing risk. Tools and measures should be developed to reduce the risk of flood damage.

(e) Harm reduction and non-structural measures are more effective and sustainable solutions in the long term. They should be encouraged in addressing water issues, and in particular in reducing the vulnerability of human health and property.

(f) In any case, structural measures (*protection facilities*) will continue to be an important element and should focus on the protection of human health, property and resources as a matter of priority. The requirements for nature protection and landscape management must also be taken into account in the light of the circumstances of the three "Danube municipalities".

(g) The bulk of the population and resources are located in small urban areas, so protection facilities should be directed to those areas. In settlements, floods are not always a consequence of river overflows. Often the reason is heavy rains, combined with lack or poor quality and insufficient sewage capacity. Special attention must be paid to drainage systems.

(h) Anyone who may be affected by the flood should take, if possible, their own precautionary measures. Therefore, reliable early warning and alert systems with forecasting capabilities and the timely dissemination /*exchange*/ of this information by the competent authorities are necessary.

(i) The principle of solidarity is fundamental - protection actions in one part of the basin /territory/ should not impair the conditions in another. The right strategy involves three steps: retention, storage, and drainage (*first of all, every effort must be made to retain rainfall on site, store excess amounts and gradually discharge them into the watercourse*). Flood protection is also based on the precautionary principle.

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(j) Protective measures should be taken in floodplain areas to reduce the adverse effects of floods on aquatic and terrestrial ecosystems, such as pollution of water and soil.

The implementation of these ***principles and approaches*** requires joint work at all levels of government and coordination of sectoral policies /measures/, concerning environmental protection, spatial planning, subdivision, transport and development of urban areas. **Cross-border basins require joint action by riparian states to harmonize national policies and strategies and develop coherent action plans.**

The prerequisites for correct ***actions are***:

(a) ***Knowledge of potential threats***. Prevention should NOT be limited to floods. It should also include other, more rare, natural phenomena that also endanger human life and safety.

(b) ***Reliable information*** on taking the necessary precautions.

(c) Above all ***interdisciplinary cooperation on the risk management phases is needed***: *assessment, planning of measures and their implementation.*

(d) The answer to the question "***what level of flood protection /natural disasters/*** can we accept" implies that we have research into what can happen, i.e. ***the risk is properly assessed***.

2. OVERVIEW OF THE RISK MANAGEMENT PROCESS

2.1. Definitions

Clarifying the nature and content of the concepts of ***strategy and strategic leadership*** is always essential and relevant, as they are an important part of the ever-evolving theory of social governance, incl. and disaster management**.**

Now the Strategy SHOULD be understood as: *constructing a desirable future for local organisations in the form of a set of functional (operational) capabilities required to achieve and maintain a competitive advantage, superiority and, ultimately, "dominance" over natural and man-made risks.*

The present Strategy is developed on the basis of a well-designed set of knowledge, traditions and advanced experience gained from the implementation of many *successful good practices* that have led to the creation of high quality products for monitoring and managing the risk of natural and man-made disasters.

The Theory of Social Governance and Social Organisations places considerable emphasis on ***strategy*** and strategic leadership. At the same time, attempts to introduce common definitions remain unsuccessful. These attempts are necessary and will continue in the future, but so far many different definitions of ***strategy and strategic leadership*** are being used and there are new proposals. Sometimes this leads to confusion and misunderstanding, which makes it necessary to clarify briefly the difference between traditional definitions and the result of their evolution.

The concept of ***strategy*** is well known and widely used (*not always correctly*) in the modern world of public organisations.

Frequently asked questions are:

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- Is the word ***strategy*** used in the right context?
- What is its content?
- How is a successful strategy formed and implemented?

Despite the obvious meaning of the strategy, opinions about its nature are surprisingly contradictory. The fact is, however, that behind every successful endeavour (*initiative*) lies a good ***strategy***.

The traditional definition associates strategy with military affairs, while the modern vision presents it as a ***decision-making and long-term planning process*** in a hierarchically structured system of goals and tasks, and in this case ***for better coordination and efficient response*** to a joint cross-border partnership between Tsenovo Municipality, Hotarele commune and Greaca commune in case of natural disasters.

2.2. Roles and responsibilities

The operational procedures for the joint work of the Tsenovo Municipality, the Hotarele and the Greaca communes during joint operations in the event of natural disasters in their territory - the roles, responsibilities, management and coordination mechanisms, modes and means of communication are as follows:

2.2.1. Conducting operations during EARTHQUAKE

2.2.1.1. Aim

a) Establishment of a system of rules for organising and coordinating joint actions of the rapid response force and voluntary units in earthquake relief operations on the territory of the Municipality of Tsenovo, Republic of Bulgaria and the communes of Hotarele and Greaca, Republic of Romania.

b) Determining the ways and methods of intervention in the cross-border area of the Republic of Bulgaria and the Republic of Romania for search and rescue, ensuring the protection of the life and health of the population, the protection of the environment and the property in the event of an earthquake.

2.2.1.2 Applicability

Earthquake relief operations are carried out on request for assistance following severe earthquakes with human casualties, injuries and property damage. They are conducted for the purpose of search and rescue of victims under the rubble, as well as emergency restoration works.

2.2.1.3. Specific activities

The earthquake relief operations carried out by the voluntary formations of the Municipality of Tsenovo and the communes of Hotarele and Greaca are in the following order:

a) Prior to the implementation of Emergency Disaster Recovery Activities in the event of an earthquake, information is gathered to determine the following:

- routes to get to the affected zone, the condition of roads and road facilities;
- the extent and nature of the destruction;
- demolished buildings that are not subject to reinforcement;

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- places for construction of side and highways;
- sections with activated landslides and collapses;
- the places and sites where immediate emergency restoration work is to begin;
- the degree of destruction of the elements of the networks and facilities of the technical infrastructure and the secondary damage caused by them;
- the ability to use different types of communication tools;
- the possibility of using mechanized means;
- places convenient for deployment of control points;
- fire outbreaks;
- the presence of contamination by radioactive sources, hazardous chemicals and agents of biological contamination;
- the presence of concentrations of explosive and flammable gases in the air above the permissible values;
- the state of the hydraulic equipment - dams, dams, tailings ponds, etc.;
- the state of the railway network, airports and ports;
- places convenient for deployment of temporary points for focusing and sorting casualties;
- suitable locations for field hospitals;
- suitable storage facilities for the dead;
- suitable space for helicopter pads;
- suitable places for tent camps, distributing food, water, medicines, etc.;
- suitable places for deployment of checkpoints from and to the affected zone.

b) At the beginning of the Emergency Disaster Recovery on the basis of the intelligence data the situation is assessed, the tasks of the teams are assigned, the procedure for carrying out the emergency disaster recovery is determined and the safety of working conditions is monitored. In carrying out the activities, the following shall be taken:

- the electricity distribution company shall be notified for switching off the power supply in the area;
- operators are informed of the interruption of water supply and product pipelines for liquid or gaseous substances;
- urgent remedial work is carried out in demolished buildings and facilities;
- access is provided for mechanized tools and equipment are accessible to the affected areas;
- search for and removal of victims under the rubble, provision of air for buried people, illumination of the area for carrying out rescue operations;
- firefighting operations are carried out;
- emergency drainage of endangered sections is carried out;
- evacuation of the population and animals, dispersion of cultural and material values;
- tent camps are organised for the affected population;
- ruins are cleared.

2.2.1.4. Description of the procedure

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No.	Activity	Responsible parties	Implementation time
1	Receiving notification of an emergency situation on the territory of the partner country.	Mayor of municipality	Up to 30 minutes after the notification
2	Preliminary announcement of the forces and resources provided for in the joint intervention plan.	Mayor of municipality	Upon receipt of the announcement
3	Requesting additional information.	Mayor of municipality	When needed
4	Requesting assistance.	The country on whose territory an earthquake occurred	When needed
5	Analysis and evaluation of the capabilities (forces and resources) to assist in the operational situation on the territory of the municipality. Acknowledgment of assistance, accompanied by details of the teams that can be sent.	Mayor of municipality	Up to 120 minutes from the start of an intervention announcement
6	Logistic preparation of the mission.	Mayor of municipality	After sending the assistance confirmation
7	Notifying the competent authorities regarding the crossing of the state border for intervention actions (missions) in the partner country in accordance with the procedure for crossing the state border in emergency situations.	Mayor of the municipality/DG Fire Safety and Population Protection	After sending the assistance confirmation
8	Movement of forces and resources and crossing the state border	Commander of DF/ Head of intervention team	Up to 180 minutes from the announcement

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No.	Activity	Responsible parties	Implementation time
9	Contacting the contact person.	Commander of DF/ Mayor of municipality	Upon arrival in the host country
10	Accepting the mission and informing of the readiness to complete it.	Head of intervention team	Upon arrival at the intervention site/ Operations base
11	Providing the support teams with the necessary technical resources to ensure compatibility with the host country's equipment and facilities.	Head of operations	Upon arrival at the intervention site/ Operations base
12	Provision of means of communication in emergencies.	Head of operations	Upon arrival at the intervention site/ Operations base
13	Implementation of mission tasks in accordance with the host country's organisational rules.	Head of intervention team	Mission duration
14	Requesting additional forces and resources for assistance.	Head of intervention team	When needed
15	Completion of intervention activities and preparation of a report.	Head of intervention team	Upon completion of the mission
16	Movement of forces and resources to base for operations.	Head of intervention team	Upon completion of the mission/order from the head of operations
17	Provision of a reserve of forces and means to replace existing ones in the event of prolonged intervention.	Head of intervention team	When needed

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No.	Activity	Responsible parties	Implementation time
18	Submitting a report on the mission to the head on site through the contact person.	Contact person/Head of intervention team	Upon completion of the mission or periodically (at extended missions)
19	Submitting reports on the mission to the Mayor of the municipality and the National operational centre.	Contact person/Head of intervention team	Upon completion of the mission or periodically (at extended missions)
20	Restoration of operational readiness of forces and resources.	Head of intervention team	Upon completion of the mission
21	Providing information on the readiness of teams to undertake new intervention.	Head of intervention team	immediately
22	Completion of the mission upon decision of the host country or upon receipt of an order to terminate the mission.	Head of intervention team	At the decision of the host country or receiving an order to terminate the mission

2.2.1.5. Forces and resources of intervention /indicative configuration/

No.	Type of specialised machinery and equipment	Quantity	Personnel
1	Transport vehicle - minibus	1	6
2	Transport vehicle – pickup truck	1	4
3	Rescue boats with wheel carrier – with 4 seats	2	
4	Motor pumps and their equipment /suction pumps, hoses and nozzles/	8	
5	Life jackets	20	
6	Neoprene special clothing for working in shallow water	20	

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7	Motor chainsaws	6	
8	Generator 10 kW	2	
9	Fishing overalls	20	

In addition, a detailed inventory (inventory list) is attached - an empty form that is completed before departure and is provided at the border of the contact person.

Depending on the circumstances at the time of initiation of the procedure:

2.2.1.6. The parties:

a) all assistance and intervention activities in the event of an emergency are organized and implemented in accordance with this procedure;

b) the updating of this procedure is subject to a change in the regulatory framework, the operational situation or at the proposal of the party concerned;

c) during the intervention, all teams are required to comply with local legislation;

d) during the operational activities, the intervention team interacts with other local structures in compliance with the orders of the Head of operations.

2.2.1.7. Head of the intervention team:

a) is responsible for the safety of the intervention teams during their movement;

b) is responsible for the safety of personnel during the intervention;

c) is responsible for the timely submission of up-to-date information during the intervention;

d) is responsible for complying with its own specific organisational and regulatory requirements when performing the mission;

e) maintains a permanent contact with the Head of operations (to whom he is subordinate) through the liaison officer during the performance of the activities related to the intervention;

f) the head of the intervention team also assumes the obligations of the liaison person, unless otherwise specified.

2.2.1.8. Contact person:

a) provides the host country with information on the analysis and assessment of assistance capabilities and resources;

b) submits the intervention reports to the Head of operations;

c) ensures a constant exchange of information between the Head of operations and the Head of the intervention team;

d) sends periodic reports to the National operational centre.

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2.2.2. Conducting operations during FLOODS

2.2.2.1. Aim

a) establishment of a system of rules for organising and coordinating the joint actions of Voluntary formations in flood relief operations on the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca;

b) determining ways and means of intervention in the cross-border area of the Republic of Romania and the Republic of Bulgaria, in order to ensure the protection of the life and health of the population, the protection of the environment and property in the event of floods.

2.2.2.2. Applicability

Joint flood operations are performed upon request for assistance during the following main phases:

- immediate danger of flooding;
- flood;
- after flood.

2.2.2.3. Specific activities conducted in the event of an imminent flood hazard

a) organisation of monitoring at the water level and the condition of hydraulic structures, dams and tailings ponds, with information on likely floodplains being collected and exchanged between the two structures;

b) an emergency lowering of the water level;

c) tamping, cutting, etc .;

d) removal of water currents;

e) emergency reinforcement, upgrading of existing ones; and construction of temporary dikes by:

- use of modular elements;
- ordering bags of aggregate materials;
- accumulation of aggregate materials.

e) setting up camps for temporary accommodation of the endangered population.

2.2.2.4. Activities during a flood:

a) exploration of the flooded areas and places where there might be endangered people, animals and cultural property, determination of water parameters - height of water column, temperature and speed of movement;

b) getting out people and animals and removing movable cultural property from the flooded areas;

c) collecting information on the state of the technical infrastructure in the flood area;

d) determining the locations suitable for the construction of temporary camps, points and deployment sites for field hospitals and helicopter sites;

e) in case of presence of hazardous substances in the flooded area, which may cause damage or cause environmental pollution, inspection of the storage sites and, if possible, implementation of measures to limit/prevent damage or pollution;

f) pumping.

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2.2.2.5. Activities after a flood

Following the withdrawal of the waters within their normal boundaries, activities to eliminate the consequences of the flood are carried out through:

a) search for missing people.
b) taking out dead people and animals.
c) drainage of buildings, endangered facilities, etc.
d) assisting the clearing of the affected roads, including the removal of small quantities of landslides in sections with activated landslides and landslides with specialized equipment.
e) where necessary, the removal of dead persons and animals is carried out using alpine methods, diving equipment and equipment, high-pass and/or floating equipment.
f) in the removal of dead animals, flooded food or other items which would prove to be potential sources of biological contamination or cause of epidemic or epizootic and during disinfecting activities personal protective equipment must be used as directed by the competent authorities.

2.2.2.6. Description of the procedure:

Forces and resources of intervention */indicative configuration/*

No.	Type of specialised machinery and equipment	Quantity	Personnel
1	Transport vehicle - minibus	1	6
2	Transport vehicle – pickup truck	1	4
3	Rescue boats with wheel carrier – with 4 seats	2	
4	Motor pumps and their equipment /suction pumps, hoses and nozzles/	8	
5	Life jackets	20	
6	Neoprene special clothing for working in shallow water	20	
7	Motor chainsaws	6	
8	Generator 10 kW	2	
9	Fishing overalls	20	

In addition, a detailed inventory (inventory list) is attached - an empty form that is completed before departure and at the border is given to the contact person.

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Depending on the circumstances at the time of initiation of the procedure, the forces and resources provided may be different from those indicated in the tables.

2.2.2.7. Responsibilities:

A) The parties:

a) all assistance and intervention activities in the event of an emergency are organised and implemented in accordance with this procedure;

b) the updating of this procedure is subject to a change in the regulatory framework, the operational situation or at the proposal of the party concerned;

c) during the intervention, all teams are required to comply with local legislation;

d) during the operational activities, the intervention team also interacts with other local structures in compliance with the orders of the Head of operations.

B) Head of the intervention team:

a) is responsible for the safety of the intervention teams during their movement;

b) is responsible for the safety of personnel during the intervention;

c) is responsible for the timely submission of up-to-date information during the intervention;

d) is responsible for complying with its own specific organisational and regulatory requirements when performing the mission;

e) maintains a permanent contact with the Head of operations (to whom he is subordinate) through the Contact person during the performance of the activities related to the intervention;

f) the head of the intervention team shall also assume the responsibilities of the Contact person, unless otherwise specified.

C) Contact person:

a) provides the host country with information on the analysis and assessment of the capabilities (*forces and resources*) to assist and the data on them;

b) the intervention reports to the Head of operations;

c) ensures a continuous exchange of information between the Head of operations and the Head of the intervention team;

d) sends periodic reports to the National operational centre.

2.2.3. Conducting operations during large and complex FOREST FIRES

2.2.3.1. Aim

a) establishment of a system of rules for the organisation and coordination of joint actions in large and complex forest fires, arising from prolonged droughts and high temperatures and causing disaster situations on the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca;

b) determining ways and means of intervention in the cross-border zone of the Republic of Romania and the Republic of Bulgaria in the event of large and complex forest fires affecting large forest areas, endangered settlements, people, animals and infrastructure.

2.2.3.2. Applicability

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The operations for the elimination of forest fires, carried out by the voluntary formations of the Municipality of Tsenovo and the communes of Hotarele and Greaca are in ***the following order:***

a) information operations and monitoring the fire spread by visiting the fire site;
b) evacuation operations for endangered people, animals and property;
c) operations for extinguishing forest fires.

2.2.3.3. Specific activities

In case of prolonged extinguishing of a large forest fire, shift work is ensured according to the atmospheric conditions, the specificity of the work and the available forces, the duration of the change being determined by the site manager.

When changing the rescue teams, the transfer and reception of the area is organized without interruption of work by both management and on-site teams.

To organise the operation, the Head of operations:

a) gathers information by using persons who know the area well;
b) organises the evacuation of endangered people and animals;
c) arranges for the provision of first aid on the spot to the victims and transport them to medical establishments;
d) determines the type, rate of spread and size of the fire, the relief of the area, the expected development of the fire during the extinguishing period and the possibility of its spread to settlements, clearings, plantations, etc .;
e) studies the places where the rate of spread of combustion can be increased (*areas with coniferous, dried grass, coniferous forest, temporary timber depots, etc.*);
f) investigates sites which contribute to the stopping of combustion without human intervention and sites for the organisation of protective lines (*roads, clearings, streams, meadows, valleys, exposed places, etc.*);
g) studies the ways and approaches to the movement of mechanized fire extinguishers;
h) investigates natural water sources that can be used in fire fighting;
i) determines the locations for the construction of support lines to limit fire development;
j) orders gathering of information and monitoring the fire spread by visiting the fire site, use of a topographic map, drone, helicopter, aircraft, etc .;
k) focuses and deploys the main forces depending on the situation;
l) orders the extinguishing of a land fire with non-mechanized hand tools (*backpack fire extinguishers, shovels, fire beaters, paddles, etc.*), piling up aggregate materials (soil), burning the vegetation around the protective strip and creating fence belts by plowing;
m) order the restriction of a peak fire by making a strip perpendicular to the fire spread and by igniting a counter fire, identifying a support strip (*natural and/or artificial barriers*) and preparing groups with technical means for performing the ignition;
n) in the presence of forces and resources, arranges for simultaneous extinguishing of the entire perimeter of the fire or of the most dangerous sections;
o) organises the creation of clearings;
p) organises the division of the area covered by the fire into sections and the consistent elimination of combustion therein;

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q) organises the elimination of deep combustion by sequential movement along the sections and the front of the fire;

r) organises extinguishing at the front of the fire with the consistent elimination of fire on the flanks and in depth;

s) orders the concentration of the necessary forces and resources at the site of the fire, using fire extinguishing groups for state forestry and voluntary units;

t) distributes the work into groups by determining the reserve of forces and resources;

u) monitors the measures for the protection and safe operation of firefighters;

v) arranges for the food, medical assistance, replacement and rest of firefighters;

w) provides night stations for monitoring risk areas and extinguishing operations as necessary to rescue people or protect buildings at risk of fire;

x) arranges fire monitoring after its elimination and, if necessary, provides on-call duty for personnel and equipment.

2.2.3.4. Description of the procedure:

No.	Activity	Responsible parties	Implementation time
1	Receiving notification of an emergency situation on the territory of the partner country.	Mayor of municipality	Up to 30 minutes after the notification
2	Preliminary announcement of the forces and resources provided for in the joint intervention plan.	Mayor of municipality	При получаване на оповестяването
3	Requesting additional information.	Mayor of municipality	When needed
4	Requesing assistance	The country on whose territory an earthquake occurred	When needed
5	Analysis and evaluation of the capabilities (forces and resources) to assist in the operational situation on the territory of the municipality. Acknowledgment of assistance, accompanied by details of the teams that can be sent..	Mayor of municipality	Up to 120 minutes from the start of an intervention announcement
6	Logistic preparation of the mission.	Mayor of municipality	After sending the assistance confirmation

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No.	Activity	Responsible parties	Implementation time
7	Notifying the competent authorities regarding the crossing of the state border for intervention actions (missions) in the partner country in accordance with the procedure for crossing the state border in emergency situations.	Mayor of municipality/ DG Fire Safety and Population Protection	After sending the assistance confirmation
8	Movement of forces and resources and crossing the state border	Commander of DF/ Head of intervention team/	Up to 180 minutes from the announcement
9	Contacting the contact person.	Commander of DF/ Mayor of municipality	Upon arrival in the host country
10	Accepting the mission and informing of the readiness to complete it.	Head of intervention team	Upon arrival at the intervention site/ Operations base
11	Providing the support teams with the necessary technical resources to ensure compatibility with the host country's equipment and facilities.	Head of operations	Upon arrival at the intervention site/ Operations base
12	Provision of means of communication in emergencies.	Head of operations	Upon arrival at the intervention site/ Operations base
13	Implementation of mission tasks in accordance with the host country's organisational rules.	Head of intervention team	Mission duration
14	Requesting additional forces and resources for assistance.	Head of intervention team	When needed
15	Completion of intervention activities and preparation of a report.	Head of intervention team	Upon completion of the mission

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No.	Activity	Responsible parties	Implementation time
16	Movement of forces and resources to base for operations.	Head of intervention team	Upon completion of the mission / order from the head of operations
17	Provision of a reserve of forces and means to replace existing ones in the event of prolonged intervention.	Head of intervention team	When needed
18	Submitting a report on the mission to the head on site through the contact person.	Contact person/Head of intervention team	Upon completion of the mission or periodically (at extended missions)
19	Submitting reports on the mission to the Mayor of the municipality and the National operational centre.	Contact person/Head of intervention team	Upon completion of the mission or periodically (at extended missions)
20	Restoration of operational readiness of forces and resources.	Head of intervention team	Upon completion of the mission
21	Providing information on the readiness of teams to undertake new intervention.	Head of intervention team	Immediately
22	Completion of the mission upon decision of the host country or upon receipt of an order to terminate the mission.	Head of intervention team	At the decision of the host country or receiving an order to terminate the mission

2.2.3.5. Forces and resources of intervention /indicative configuration/:

No.	Type of specialised machinery and equipment	Quantity	Personnel
1	Transport vehicle - minibus	1	6
2	Transport vehicle – pickup truck	1	4
3	Motor pumps and their equipment/suction pumps, hoses	6	

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	and nozzles/		
4	Fire beaters	20	
5	Motor chainsaws	6	
6	Fire extinguisher backpack.	20	

In addition, a detailed inventory (inventory list) is attached - an empty form that is completed before departure and is provided at the border of the contact person.

Depending on the circumstances at the time of initiation of the procedure, the forces and resources provided may be different from those indicated in the tables.

2.2.3.6. Responsibilities:

A) The parties:

a) all assistance and intervention activities in the event of an emergency are organized and implemented in accordance with this procedure;

b) the updating of this procedure is subject to a change in the regulatory framework, the operational situation or at the proposal of the party concerned;

c) during the intervention, all teams are required to comply with local legislation;

d) during the operational activities, the intervention team also interacts with other local structures in compliance with the orders of the Head of operations.

B) Head of intervention team:

a) is responsible for the safety of the intervention teams during their movement;

b) is responsible for the safety of personnel during the intervention;

c) is responsible for the timely submission of up-to-date information during the intervention;

d) is responsible for complying with its own specific organisational and regulatory requirements when performing the mission;

e) maintains a permanent contact with the Head of operations (*to whom he is subordinate*) through the Contact person during the performance of the activities related to the intervention;

f) the Head of the intervention team also assumes the obligations of the Contact person, unless otherwise specified.

B) Contact person:

a) provide the host country with information on the analysis and assessment of the capabilities (forces and resources) to assist and the data on them;

b) submits the intervention reports to the Head of operations;

c) ensures a constant exchange of information between the Head of operations and the Head of the intervention team;

d) sends periodic reports to the National operational centre.

2.2.4. Final provisions

a) the procedure will be made available to the project partners with established and functioning voluntary entities that can intervene in the cross-border area;

b) the procedure may be updated independently of the review;

c) this procedure may be used together with other procedures.

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2.2.5. General safety measures:

- use only drinking water;
- if the team is exposed to criminal activity, immediately report to the Police to ensure appropriate presence in the area of work;
- If you are out of the camp, contact your supervisor for any problems;
- make sure you are always in touch with the rest of the team;
- inform the police of any suspicion you notice;
- ensure full monitoring of access to the work area;
- do not allow visitors to enter the intervention area before identifying them;
- all visitors should be accompanied in the intervention area;
- plan an evacuation route and make sure it is not obstructed;
- provide adequate job protection, physical resources and an emergency call capability. Consider also the advice of specialists;
- do not carry large sums of money in you;
- if you are leaving base camp, make sure that someone knows where you are, how long you will be absent, and the approximate return time;
- do not travel alone outside the camp;
- take command of your mission;
- make sure you have the number of the Head of intervention, if you have a problem - contact him;
- keep your official documents in a safe place;
- the passport, driver's license and other important documents must be kept in your pocket (copies of the documents also);
- all members of the team carry their personal documents and all other important documents;
- in the event of detention, request permission to call the Head of mission/Deputy Head of mission;
- always be prepared for fast moving;
- the "emergency" bag must always be prepared in the room/tent;
- the technical equipment in the base bearing must be ready at all times;
- collection points must be known by each team member;
- personal mobile phones must be available 24 hours a day and be with you;
- in the event of overnight relocation or evacuation, the team leader calls the members on the telephone line;
- if you need medical treatment, go to the nearest hospital.

2.2.6. Sources of information:

- Directorate General "Fire Safety and Population Protection";
- Register of Voluntary Formations for Disaster Protection on the Territory of the Republic of Bulgaria and Number of Volunteers by Municipalities as of 31.01.2019;
- National Statistical Institute (NSI);

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- "Danube Region" Basin Directorate;
- International Association of Fire and Rescue Services (CTIF);
- Regional Directorate of Fire Safety and Population Protection - Ruse;
- Disaster Risk Reduction Strategy 2018-2030;
- Strategy for the development of voluntary units for protection against disasters, fires and other emergencies in the Republic of Bulgaria for the period 2012-2020.

3. RISK MANAGEMENT PROCESS FOR BETTER CO-ORDINATION AND EFFICIENT REACTIONS OF A JOINT CROSS-BORDER PARTNERSHIP BETWEEN TSENOVO MUNICIPALITY, HOTARELE COMMUNE AND GREACA COMMUNE:

3.1. Identification of possible risks, detailed description, classification

3.1.1.General provisions

Contemporary society is constantly confronted with a great variety of risks: natural risks, occupational risks, health risks, environmental hazards and negative consequences for future generations, etc. whose impact is continuous.

One of the many definitions given to a risk indicates that it is a ***threat, an opportunity to cause an event that will cause damage***, characterized, on the one hand, by the ***gravity of the consequences*** that result from it, and on the other, by the ***probability about its occurrence***.

It is difficult to determine the degree of a threat, since the same risk can cause significantly different effects, depending on the conditions under which it occurs.

Risk analysis offers the answer to the question ***"What can happen in a particular context?"***. Risk can be assessed as a function of the likelihood of harm and the likely consequences, understood as a measure of the magnitude of the natural "threat". Therefore, risk analysis is a stronghold in the decision-making process when it comes to taking specific measures that should lead to risk reduction and mitigation (risk management). The concept of risk consists of three elements. They relate to risk analysis, risk assessment and risk management.

- ***Risk analysis*** is a systematic approach for characterizing and, if possible, quantifying risk, in terms of the likelihood of its occurrence and the magnitude of its consequences.
- ***Risk assessment*** is a later step in deciding the significance of acceptable risks, which is done by administrative factors on the basis of a comparison of the benefits and disadvantages associated with a possible event.
- ***Risk management*** refers to the implementation of measures and methods to achieve the proposed level of safety and security in the context of adaptation to environmental changes.

Therefore, the basis of the management of natural risk management - this covers all areas from prevention to damage management and consists in the preparation of a risk analysis that is as clear, comprehensive and detailed as possible in relation to the management of natural risks such as ***floods***, ***snow overload***, ***fires***.

Floods, for example, are the result of the interaction between extreme hydrological events and environmental, social and economic processes. The amounts of excess water that are

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characteristic of natural wetlands contribute in a unique way to the support of the environment and economic activities, but unfortunately the focus is usually on their destructive nature.

For this reason, an integrated approach to flood management can play an important role in sustainable development.

Snow overload is the accumulation of large amounts of snow, usually due to the effects of wind on roads, fields and mountain slopes, as a result of heavy snowfall or blizzards.

Fires refer to the process of self-combustion, which takes place without control over a vast space, which leads to the loss of human life and/or material damage and which requires organised intervention to interrupt the combustion process.

For this reason, an integrated risk management approach can play an important role in the sustainable development of local communities.

Risks can be reduced through practical combinations of measures consistent with the magnitude of the disaster and the degree of exposure and vulnerability of the territorial community.

There is a need for a clear understanding of the existing and potential risks of floods/snowfall/fires in order to establish preventative measures to reduce them in relation to the emergency management approach.

Local residents/volunteers can be mobilised for preventative measures and build community response capacity if the risks they would face are fully assessed.

The purpose of the specialised study in the field of emergency management in the Bulgarian-Romanian cross-border region (BRCBR) is to enable the authorities and other decision-makers to make the best possible choice regarding:

- risk assessment and prevention;
- the location and size of the emergency response units;
- the creation of a concept, the development of contingency plans, the development of contingency plans;
- allocation of necessary resources (*forces and resources of intervention*).

The tasks of specialised research are:

- creating a single framework for actions to prevent and manage the risks arising from emergencies;
- location and size of emergency response units;
- creating a concept, developing plans for intervention and cooperation in emergencies;
- allocation of the necessary resources (forces and means of intervention);
- psychological assistance to people/families in the community.

There are no universal solutions that facilitate the involvement of all decision-makers and civil society when it comes to decision-making on emergency management.

It is crucial to adopt practices appropriate to the circumstances in a given socio-economic context.

Most of the time we don't think about the floods, the snow overloads, the fires before they occur, because these are events with serious and undesirable consequences. Today, we live in a world where well-being, safety and even our lives are sometimes threatened or put to the

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test by such events that we cannot always foresee and which, despite the evolution of science and technology, we can only partially control.

The common thing between these events and what we know for sure is that no matter when or where they occur, they affect, at different times and with different duration, the emotional balance of everyone involved.

Fear, anger, shame, powerlessness, pain, deep concern, horror are just some of the possible emotions that people who have experienced such events feel and often they cannot cope with these feelings.

In order for recovery from such a traumatic event to occur under the best of conditions, the psychological assistance that people receive must be scientifically substantiated, that is, one that relies on methods that have proven valid and effective in the course of action to effective support for victims or survivors of disasters.

3.1.2. Legal and institutional framework for cooperation in emergency situations in cross-border region Giurgiu-Ruse

The cooperation between the two countries was formalized in 2000 with a memorandum signed by the local public administrations in Giurgiu and Ruse, and on April 23, 2001 in Giurgiu the Convention on the Establishment of the Euroregion Ruse - Giurgiu was signed.

Cooperation activities in the field of emergency situations between Romania and Bulgaria are currently being implemented under the Agreement between the Government of Romania and the Government of Bulgaria on cooperation in the field of civil protection in peacetime, signed in Bucharest on January 18, 1996 and ratified by Act No 11/1998. At the time of the conclusion of the respective agreement, the two Civil Protection structures were within the framework of the Ministries of National Defence of the two countries.

Bearing in mind the need to create an appropriate new legal framework in line with the new geopolitical realities and with the new international and European requirements in force (*the status of the two Member States of the European Union and the North Atlantic Treaty Organisation*), as well as the current requirements regarding on cooperation and mutual assistance in emergencies, in accordance with the principles of gradual and proportionality, a number of ex-ante consultations have been launched at expert level.

3.1.2.1. Appropriate institutional actors;

A) REPUBLIC OF ROMANIA:

- The Government of Romania;
- The Ministry of National Defence;
- The Ministry of the Interior - through the Emergency Inspectorate of Giurgiu County;
- The General Inspectorate for Emergency Situations;
- The Ministry of Environment and Waters - MMGA;
- National administration "Apele Române"- ANAR;
- National Institute of Hydrology and Water Management - INHGA;
- National Meteorological Administration - ANM;
- County councils, local municipal councils, cities and villages and local councils;
- The technical support group within the county committee;

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- The Operational Centre of the Regional Emergency Inspectorate;
- Giurgiu County Prefecture;
- The Regional Emergency Inspectorate - Giurgiu County;
- The Emergency Inspectorate in Giurgiu County - through the "Cross-border Intervention Coordination and Management Centre, Giurgiu – Ruse";
- Water Management System - Giurgiu County.

B) REPUBLIC OF BULGARIA:

- The Government of Bulgaria;
- Ministry of the Interior - Directorate General "Fire Safety and Population Protection";
- Regional Directorates of the Ministry of Interior;
- Bulgarian Red Cross;
- Emergency medical centres;
- Non-profit organisations;
- Volunteer formations.

3.1.2.2. History and evolution of registered natural hazards in the areas of Tsenovo, Bulgaria – Hotarele – Greaca, Romania

A) FLOODS:

TSENOVO Municipality:

According to the Sendai Framework for Disaster Risk Reduction 2015-2030, the period for which there are records of past disasters reported by the municipality includes: the Declaration of Disaster announced by Mayor Order No. RD-11-268 of July 5, 2005, for floods in the high waters of the Yantra River; the Declaration of Disaster for heavy snowfall and snow removal with the order of the mayor № RD-11-004 of 03.01.2008, as well as the order of the Mayor № 18 of 17.01.2016, the Plan of Tsenovo Municipality for protection against natural disasters is applied against heavy snowfall.

Voluntary training reports show that the municipality is affected by extreme weather conditions: heat, drought, leading to field and forest fires. On the territory of the Municipality of Tsenovo there is an enterprise with high risk potential – "Depot for storage of mineral fertilizers" in the village of Dolna Studena "Borealis L.A.T Bulgaria EOOD".

History and evolution of registered natural risks:

A) *The most common natural disasters in the municipality are FLOODS.*

Most often ***floods*** are caused by the flow of running water or the formation of streams, as a result of prolonged and heavy rainfall, rapid melting of snow layers, blockage of water flows from ice blocks, or the creation of dams due to the formation of sediments and clogging the river bottoms in the area of large and small bridges and drains or the destruction of the protective dikes built along the Danube River.

This phenomenon is due to the overflow of the rivers covering the usually dry surface due to the increase in water flow due to heavy rains or the sudden melting of snow or the release of large water flow from the accumulating lakes, which, by their effect or duration, degrade the goods or prevent normal activity, causing harm or loss of human life.

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Precipitation represents a high degree of irregularity both in terms of quantity and duration. For example, in summer, with prolonged periods of drought, torrential rains and even hail occur in some restricted areas, with water reaching 141 l/sq.m in 24 hours.

TSENOVO Municipality

Territorial administrative unit	*Affected sites*
7/5/2005	
TSENOVO Municipality - Dolna Studena	the bridge over the Yantra River is destroyed
7/1/2017	
TSENOVO Municipality - Karamanovo	flooded 5,000 acres of agricultural land, telecomplex, pig farm and biocompost plant
7/14/2017	
TSENOVO Municipality	Tsenovo village - from "Vasil Levski" Street to the first intersection of "Yantra" Street, from 57 "Tsar Osvoboditel" Street and to the entire "Etar" Street; No.1,4,6,8 "Plika" Street .

Due to ***heavy rainfall*** registered in Giurgiu County during the period ***2005-2018***, the damage situation is presented as follows:

HOTARELE Commune

Territorial administrative unit	*Affected sites*
April - October 8, 2005:	
HOTARELE Commune	- 44 houses destroyed, - 232 damaged houses, - 10 destroyed outbuildings of houses, - 1 socio-economic site (church), - 900 hectares of agricultural land, - 1500 wells, - 3 hydraulic structures.
April 01 - 17, 2006:	
HOTARELE Commune	- more than 14 severe floods with significant material damage;
June 29 - July 30, 2013:	
HOTARELE Commune	- 2 flooded dwellings together with outbuildings
March 28, 2018:	
HOTARELE Commune	- flood – "Bukovina" Street, over 9 outbuildings of houses

GREACA Commune

Territorial administrative unit	*Affected sites*
April - October 8, 2005:	
GREACA Commune	- 1 damaged house;
April 01 - 17, 2006:	

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GREACA Commune	- 203 hectares of wheat; - 40 hectares of barley; - 80 hectares of rapeseed.
June 29 – July 07, 2013:	
GREACA Commune	- 9 damaged outbuildings; - 478 hectares of arable land; - 388 hectares of cultivated island; - 747,87 hectares of agricultural area.
July 30, 2013:	
GREACA Commune	- 69,29 hectares of arable agricultural area; - 8,95 hectares of vines.

B) SNOWFALL/SNOW OVERLOAD, FOREST FIRES:

Winters, under the influence of eastern continental and arctic cold air masses, are cold, with very cold days, with average monthly temperatures between + 0,30 ° C and -3,20 ° C, and those of average monthly lows between -11.50 ° C and -16.40 ° C. Precipitation falls in the form of snow, covering the soil with a different layer, such as thickness and stability, and the prevailing east wind has considerable intensity and duration, with a strong snow layer.

Heavy **snowfall/snow overload** create problems for rural residents. Most of the homes are covered with snow.

During the period ***February 2010–February 2016*****,** heavy snow and wind, sometimes in excess of 80 km/h at times, led to snow accumulation, which for some time blocked national, county and municipal roads in the county, as well as communication and rail roads in many terrains.

The heavy snowfall in ***January 2012*****,** the night between 25 and 26 January 2014, led to the blocking of most roads in the county, including part of DN 5.

Due to the strong wind, several power poles or high voltage wires were cut off, with 114 areas left without electricity, 648 medium voltage grids affected and villages isolated.

Wind speed records different values over time and even across territories. The highest values reported are from northeast and east winds; the highest average monthly values were recorded in March, April and May, the lowest in July and September, and the average number of days with strong wind (11-16 m/s) was about 70, compared to with those with a "very strong" wind (over 16 m/s) that were 5-10.

In the Greaca **Commune**, two villages were isolated, in need of assistance, as communication channels were blocked and there was no electricity (Puțu Greci and Zboiu).

The county communication roads Hotarele - Bucharest, Hotarele - Oltenitsa, Hotarele - Giurgiu, Giurgiu - Grecia, Greca - Oltenitsa were also blocked.

- ***heavy snowfall and winds***

Territorial administrative unit	***Affected sites***
1/3/2008	
TSENOVO Municipality	the impassable municipal road network

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1/17/2016	
TSENOVO Municipality	the impassable municipal road network

The centralisation of synthesis reports, developed between 2010-2018 by the Technical Support Group for emergency management caused by floods, dangerous meteorological phenomena, accidents of hydraulic structures and accidental contamination to the Giurgiu County Emergency Committee as follows:

- ***heavy snowfall and blizzards***

Territorial administrative unit	*Affected sites*
February 2010:	
GREACA Commune	The county communication roads Hotarele - Bucharest, Hotarele - Oltenitsa, Hotarele - Giurgiu, Giurgiu - Greek, Greek - Oltenitsa are blocked;
	Two isolated villages (Puțu Greci and Zboiu).
January - February 2012:	
GREACA Commune	Two isolated villages (Puțu Greci and Zboiu).
	Blocked county and municipal roads, impractical streets, lack of food, etc.
January 26, 2014:	
	Blocked county and municipal roads, impassable streets.
January - February 2012:	
HOTARELE Commune	Blocked county and municipal roads, impassable streets, lack of food, etc.
	- 4 damaged houses.
January 26, 2014:	
HOTARELE Commune	Blocked county and municipal roads, impassable streets.

- ***rainfall and hail***:

Territorial administrative unit	*Affected sites*
February 2010:	
GREACA Commune	353.32 hectares of agricultural land (vines, raspberries, strawberries, wheat, corn, barley, sunflower, peas).
	524.35 hectares of arable crops.
January - February 2012:	
HOTARELE Commune	4 damaged houses;
	394,31 hectares of agricultural land (wheat, barley, corn, tomatoes, lettuce, pumpkin, cabbage, spinach, oats, barley, alfalfa, pepper, cauliflower).
January 2015:	

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HOTARELE Commune	2 damaged houses
June 15 – August 15, 2015:	
HOTARELE Commune	589,08 hectares of arable land;
GREACA Commune	174,63 hectares of arable land;
June 17 – August 10, 2016:	
HOTARELE Commune	947,78 hectares of arable land (400,88 hectares of sunflower seeds, 408,67 hectares of maize, 5,96 hectares of lucerne, 132,27 hectares of soybeans);
GREACA Commune	- 473,85 hectares of arable land (37,33 hectares of sunflower seeds, 153,14 hectares of maize, 1,86 hectares of alfalfa, 267,43 hectares of soybeans, 11,93 hectares of vines, 2,16 hectares of vegetables).

B) FOREST FIRES:

Meteorological conditions are a major factor in forest fires.

At high temperatures due to significant long-term water shortages, meteorological factors can become a primary cause of forest fires, especially in the event of extreme weather events (eg lightning). However, the majority of forest fires are a source of human triggering against a favourable climate context.

The quantification of the impact of meteorological factors on the risk of forest fires can be performed at two levels of analysis: one on a large time scale and spatial scale, respectively detailed analysis specific to each individual event.

The forest zone belonging to the Giurgiu Forest Directorate is governed by four forest zones, namely Giurgiu, Comana, Bolintin Vale and Giampatsi.

The forests within the Giurgiu Forest Area are composed of white acacia trees, 33% percent willow and poplar trees, 77% percent trees, shrubs and diverse vegetation.

The forested areas cover 7971 hectares, especially along the Danube River, in the proportion of 75%, with the remaining percentages represented by Lungu Island, Mocanu, Cama-Dinu and the forests in the area of Vlașinu and Plopșoru. These forest areas are governed by the 5 districts to which 5 forest cantons are subject.

The forests in this area are not crossed by major access roads or power lines. In bad weather, usually in the fall and winter, access roads to these forest areas are difficult to access or obstructed.

The forest fund is located in easily accessible areas, within which access roads are constructed that are accessible at all times of the year.

Of the total area occupied by forests, 40% are forests of resinous trees, 39% beech, 12% oak, 6% different hardwoods, 3% different coniferous trees. The average forest density is 0.6. The average altitude of the forest fund is 150 m.

The areas most difficult to access for fire extinguishing techniques are those on the hill, Golasei Forest – Bucșani, where, due to the difficulty of the intervention technique, which weighs more than 20 tonnes and is mostly used physically , this can be very time consuming.

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The vulnerability to wildfire fires increases in the spring, before the onset of vegetation and in the fall, after the drying of the vegetation, in periods of drought and in periods of increased tourist flow.

Electric charges, a major source of forest fires, are common throughout the Giurgiu County forest fund.

In order to reduce the risk of massive fires, the forest is divided into sections, and there are 5 m wide protective strips between the plots that are constantly maintained.

Statistically we can say that over the last 5 years the weather phenomena have been observed in the communes of Hotarele and Greaca, which have caused great material damage and hindered the social life of the residents, most often reflected in:

- **FLOODS:**
  - *T.A.U. Hotarele:*
  - more than **14** severe floods with significant material damage;
  - *T.A.U. Greaca:*
  - a series of floods affecting large areas of crops;

- **HEAVY SNOWFALL:**
  - *T.A.U. Greaca:*
  - more than **13** heavy snowfalls that isolate villages (Puțu Greci and Zboiu) and block communication roads;
  - *T.A.U. Hotarele:*
  - a series of heavy snowfalls, blocked communication roads and property damage;

- **FIRES:**
  - *T.A.U. Greaca:*
  - more than 50 fires, with the most common being dry burning of vegetation, stubble, houses and outbuildings;
  - *T.A.U. Hotarele:*
  - more than 11 fires of dry vegetation, houses, outbuildings, etc.;

3.1.2.3. Examples of good practices promoted before, during and after the occurrence of natural hazard at the level of Tsenovo Municipality and Greaca and Hotarele communes

An essential part of the emergency risk intervention is the risk assessment process, risk management decision making and risk communication, under limited time conditions, lack of data and/or insufficient knowledge.

The process of operational application of the concept of risk analysis in emergency situations is not yet fully developed.

However, some countries have well-defined procedures for assessing, managing and reporting risks in the context of emergencies, and these are procedures from which best practices can be drawn.

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Before an emergency arises, it is useful to have criteria for determining what is considered extraordinary, as well as a strategy for collecting the information needed to determine whether or not the incident meets those criteria.

Emergencies can develop from minor problems or look like unforeseen events. In exceptional cases, risk management options may be limited and decisions must be taken quickly.

Identifying the available risk management options and choosing the right answer are not easy at times when time is limited and information is incomplete.

Good practice examples highlight the manner in which mayors fulfil their role and the powers described by law and in acts for providing decentralized public services at the level of administrative-territorial units.

At the level of the local municipalities of Hotarele and Greaca, mayors pay special attention, even prioritizing emergency management, promoting good practices in managing natural risks, namely:

IN CASES OF FLOODS, SNOW OVERLOAD, FIRES:

a) organisational problems:

By ***order of the Mayor***:

- the composition of the Local emergency committee, technical support groups and the permanent technical secretariat are updated;
- the flow of information as well as the powers of the structures that manage information in the field of emergency situations is established;
- a community-specific emergency database is being created, both electronically and on paper, which is accessible to City Hall employees with responsibilities in the field.

b) problems with understanding:

- a handbook for the Local emergency committee is being developed that will provide the legal basis for the powers to collect, process, store, manipulate, classify and transmit emergency data and information;
- a procedure for notification of the staff as a whole and another procedure for notification and alerting to the mayoralty staff are being developed, which is carried out through the emergency department and the mayoral staff;
- a document card is prepared for use by the mayor, containing an outline of the actions and models of regulations that he is to issue in the event of emergencies and/or crisis situations;
- in accordance with the legal provisions, a Plan for prevention, protection and intervention in civil protection situations has been developed - applicable to staff working in the mayoralty, which integrates all operational plans for emergency and emergency intervention at the mayor's level;
- copies of other operational plans are kept in the emergency department.

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c) conducted activities:

- periodic (semi-annual) updating of the action plans according to changes in the internal environment in emergency situations;
- involving all City Hall employees in the process of developing, reviewing and updating action plans in accordance with changes in the internal emergency situation by requesting ideas, proposals, organizing workshops, debates;
- dissemination of actions and values, in accordance with changes occurring in the internal environment during emergencies, as well as the promotion of beneficiaries by: publishing on the website of the mayoralty, preparing advertising documents, press releases, etc .;
- launching a permanent practice to monitor the implementation of contingency plans to meet deadlines - establishing responsible persons for monitoring each proposed activity, taking corrective action where necessary;
- organising informal meetings outside the specific organisational framework to work with decentralized public service managers in order to strengthen the link between them and the mayor's staff;
- promoting volunteering at the local level; although volunteers do not carry out increased responsibility activities, they contribute significantly to the release of time-consuming tasks that can also be repeated and sometimes volunteers come up with new ideas/solutions to combat problems, their "outside" opinions great importance in analysing topics that affect the community when it comes to emergency management.

d) taking measures for eliminating the consequences of natural disasters:

In order to cope with the effects of natural disasters, the mayor shall undertake the following initiatives with impact on the population affected:

- propose the development of an "Emergency Management Manual" at the mayor's level;
- draw attention to the opening of a joint and several account;
- request support from some companies to sponsor local authorities to provide drinking water, bread, essential food and building materials for the reconstruction/repair of houses affected by emergencies;
- request support from the Prefecture and the District Council in providing the necessary resources for emergency response (floods, snow overload, fires);
- ensure the involvement of central authorities in carrying out work activities to repair the infrastructure affected by the floods, providing the necessary resources;
- request from the central authorities to provide the necessary means for disinfection in flood-affected areas.

d) formation of alarm teams /emergency response teams/:

- checking the alarms /means of alerting/ and ensuring their functioning;
- constant monitoring of the likelihood of floods and snow accumulation by the City Hall staff prepared for this task, as well as by members of local emergency committees;

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- organising the evacuation of the population, animals and goods, taking into account contingency plans;
- exchange of information with decision-makers at the county level and with neighbouring local communities;
- constantly informing citizens directly through local cable television about the potential risks and rules of conduct in such situations;
- drawing up lists of people in need of emergency evacuation assistance;
- creating various tools, such as data collection forms/templates, reports and decision trees, as well as clear and concise reference materials to use in emergencies, which can limit the number of decisions that risk managers make you will have to take the time pressure. This allows for the team to focus on the emergency in question and be able to make decisions about important issues that arise during the event. The use of decision trees and/or models can also be useful when applying established criteria to determine whether an event can be considered extraordinary and to ensure that critical processes are not ignored if activation is required. the immediate response plan.

e) recording the results of risk analysis activities:

It is important that the results of these initial stages, as well as the whole process of emergency risk analysis, be recorded.

The registration system should also include archiving emails, building a database and using a geographic information system for event/risk spatial analysis.

These records can be useful in assessing post-event emergencies and are essential in identifying gaps and needs for improvement.

f) activation of emergency response:

Once an emergency is identified, the authority/mayoralty will no longer function as usual. As a rule, standard procedures used for a small risk management problem include all components of the risk analysis. In emergencies, the risk analysis process usually follows the same order, but may be more dynamic and intensive and risk management measures may be taken before the risk assessment is completed.

Once the event has been identified as an emergency ***the emergency response/disaster response plan*** must be activated and an intervention coordination and management team established.

The plan defines the roles and responsibilities of the persons involved in emergency management in sufficient detail so that the people involved clearly understand their roles and thus avoid confusion and overlap.

The group for coordination and management of the intervention /response should include a communications expert from the very beginning of the process so that the group can develop risk communication materials, depending on the situation.

In addition, the risk manager should:

- identify the objectives of the intervention in the event of a relevant emergency and the data to be collected;

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- assess what other important factors should be taken into account;
- take into account the need to include other agents/specialists in the coordination and intervention group;
- determine which parties need to be notified (e.g. emergency services, decision makers, prefecture, county council, other agencies, private sector operators concerned, etc.);
- take into account the involvement of tree defects in the design of initial measures and the results obtained;
- organise a quick overview of context and history during an emergency so that they can be used in later messages.

g) emergency risk reporting:

- communicating emergencies is often very different from communicating in ordinary circumstances;
- communication must be made frequently during an emergency, as in these cases stakeholders are urgently seeking up-to-date information/reports;
- often, such communication notices need to be developed in a very short period of time and involve consultation with more authorities than in normal situations;
- risk communication during an emergency should be coordinated by one person or entity to ensure consistency of communication and avoid confusion;
- when the urgency is not fully understood, the notified alerts may need to be changed quickly as additional information is constantly being received or risk management measures are changing rapidly.

Risk communication is sometimes expected to occur under intense pressure and with close scrutiny by the media.

In these circumstances, it is important to ensure that the relevant messages reach the target audience.

In an emergency, effective communication is important and requires prior preparation in order to enable timely, open and accurate exchange of information between all parties involved and all partners.

This aspect provides a common understanding of the details of the emergency and maintains confidence in the way teams work in these cases.

Therefore, during an incident, the emergency response team should also include members who have adequate knowledge of effective risk communication methods so that they can advise the intervention team if necessary and act as speakers and as advocates in relation to communication to the public.

3.1.3. Presentation of the territorial administrative units of Giurgiu County T.A.U. Hotarele and T.A.U. Greaca, Ruse Region and TSENOVO Municipality in Bulgaria

3.1.3.1. Presentation of Giurgiu County:

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Giurgiu County is located in the southern part of Romania, on the lower Danube. The location along the Danube, along the 72 km, enables the county to maintain river connections with the river states and also with the Black Sea. The county seat is Giurgiu, 64 km from the state capital, on the route Bucharest-Sofia-Athens or Bucharest-Istanbul. The first documentary evidence of Giurgiu town dates back to the fourteenth century and Giurgiu Municipality has hosted several technical premieres: the first railway line in Romania (*Bucharest-Giurgiu*), the first telegraph line and the bridge over the Danube.

Giurgiu is an important border crossing point for the movement of goods and people. Giurgiu is one of the most important Romanian ports on the Danube. In the northern part of the county there are oil fields in operation, and sand and gravel are extracted from the Danube waters and the rivers that flow through the county.

Part of the Romanian plain, the county's territory is made up of forests and arable land. Giurgiu County includes one municipality, two cities, 51 communes and 167 villages. Giurgiu County's population represents 1.3% of Romania's population. Giurgiu County's economy is characterized by activities with a significant share in agriculture, industry and commerce. Within the county industry are represented: the food and beverage industry, the extraction of oil and natural gas, the textile industry and the manufacture of textile products.

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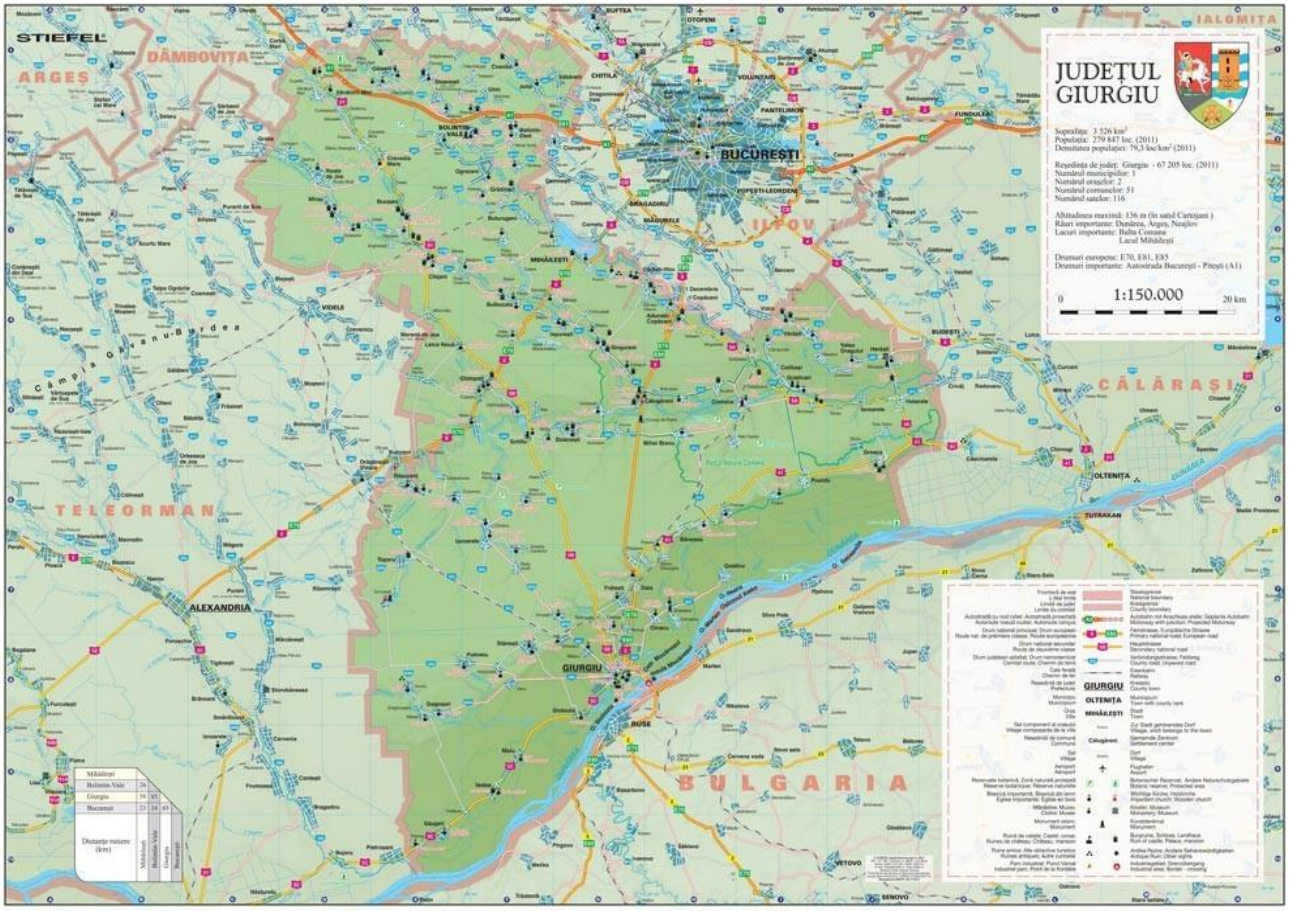

There are two industrial parks in the county - Giurgiu-North Technology and Industrial Park and Bolintin-Deal Industrial Park, but the county economy does not yet offer all the conditions for attracting a large number of investments, yet opening the county to major road, rail and sea routes is a key argument for developing this potential.

Giurgiu port and the Free Zone can provide easy and varied economic transit of goods passing through the trade corridor south of Romania. Most of the enterprises are active in the fields of trade, light industry, construction, transport.

Giurgiu County is still a predominantly agricultural county, with almost 50% of the population employed in the sector. As more than half of the population continues to work in agriculture, measures are being put in place to make agriculture more efficient.

Road transport is the primary link with the municipality of Bucharest and the rest of the country, has a highway and national roads, which largely offer acceptable road conditions.

Giurgiu port can become an option for transporting goods from the Constanta port along the possible Constanta - Giurgiu - Bucharest route. This outlet of the Danube River is an important geostrategic point for Romania, as it exerts one of the main links of Western Europe

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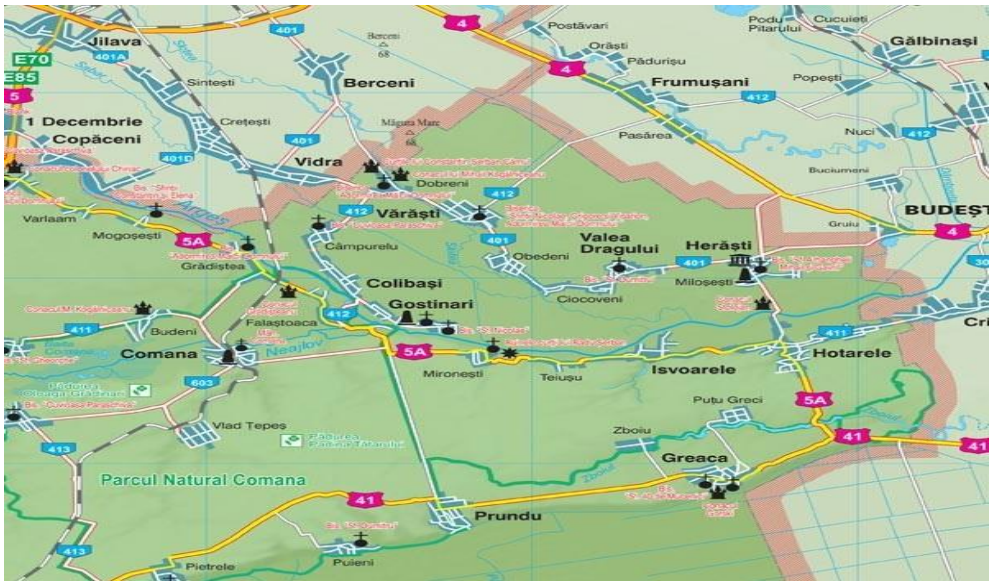
with the Middle East and this aspect reveals the great potential for development of Giurgiu County.

Giurgiu County benefits from the many tourist attractions on its territory. With regard to the number of tourists arriving, the district registers a low number, but this is offset by the fact that most of them are foreign. An important tourist resource is the presence of a large number of berths for motor boats.

Between Giurgiu and Ruse lies one of the two bridges over the Danube between Romania and Bulgaria, a bridge that was built between 1952 and 1954 and was symbolically called the "Friendship Bridge".

3.1.3.2. Presentation of HOTARELE Commune



Description/map of the territorial administrative units of Hotarele and Greaca:

The commune is located in the southeastern part of the county, located on the right bank of the Argeș River, on the border with Călărași County. It intersects with the national road DN5A, which links Greaca to Adunații-Copăceni (*where it ends in DN5*). At Hotarele, the DJ401 roundabout branches off from this road, leading north to Herăști, Valea Dragului, Vărăști, hen further to Ilfov County to Vidra and Berceni (*where it is crossed by the Bucharest ring road*) and to Bucharest. Also at Hotarele, the DN5A begins in conjunction with the DJ411 County Road, the eastbound route to Calarasi County to Radovanu and Chirnogi (*where it ends at DN41*), and to the west after the common section with DN5A ending at Comana, in Călugăreni (*where it intersects with DN5*), Singureni, Iepurești, where it intersects with DN6), Bulbucata and Clejani (*where it ends in DN61*).

According to the 2011 census, the population of the commune Hotarele reached 3,939 inhabitants, which is less than the previous census since 2002, when 4497 residents were registered. Most of the residents are Romanians (91.37%), with a Roma minority (4.16%). The ethnicity of 4.47% of the population is unknown. From the point of view of the professed

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religion, most of the inhabitants are Orthodox Christians (95.43%). The religion of 4.47% of the population is unknown.

At the end of the 19th century, the commune was part of the Oltenița network of Ilfov county and was formed by the villages of Hotarele and Zboiu, with 3 720 inhabitants living in 508 houses and 8 dugouts. There were two churches and two mixed schools in the commune. The Socec Yearbook of 1925 includes it in the network of Budești of the same county and states that the population in the village of Hotarești and the Scărișoara neighbourhood is 4098.

In 1950, the commune was transferred to the Oltenița district in the Bucharest region. In 1968, the commune returned to Ilfov county, rebuilding itself, joined by the villages of the communes of Izvoarele and Herăști, which were abolished. In 1981, a regional administrative reorganisation led to the transfer of the commune to Giurgiu County. The Herăști and Izvoarele communes were separated again in 2004, leaving the commune only with the village of Hotarele.

3.1.3.3. Presentation of Greaca Commune

The commune is located in the southeastern part of the county, on the left bank of the Danube River, on the border with the County of Calarasi and on the border with the Ruse and Silistra regions of Bulgaria. It crosses the national road DN41, which connects Giurgiu with Oltenița. Near Greaca, this road branches off to the national road DN5A, which leads northeast to Adunații-Copăceni (*where it ends in DN5*).

According to the 2011 census, the population of the commune of Greaca reached 2 543 inhabitants, which is less than the previous census since 2002, when 2 843 inhabitants were registered. Most of the residents are Romanians (98.03%). The ethnicity of 1.53% of the population is unknown. In terms of professed religion, most residents are Orthodox (96.97%). The religion of 1.53% of the population is unknown.

At the end of the 19th century, the commune was part of the Oltenița network of Ilfov county and was formed only by the village of residence, with 1,653 residents living in 273 houses and 5 dugouts. The commune had a church and a mixed school, with 43 students (7 of whom were girls). The Socec Yearbook of 1925 registers it in the same network, with the indicated number of inhabitants in the villages of Greaca, Puțu Greci and Zboiu being 2353 inhabitants.

In 1950, the commune was transferred to the Oltenitsa district in the Bucharest region. In 1968, the commune returned to Ilfov County, which was rebuilt. In 1981, a regional administrative reorganisation led to the transfer of the commune to Giurgiu County.

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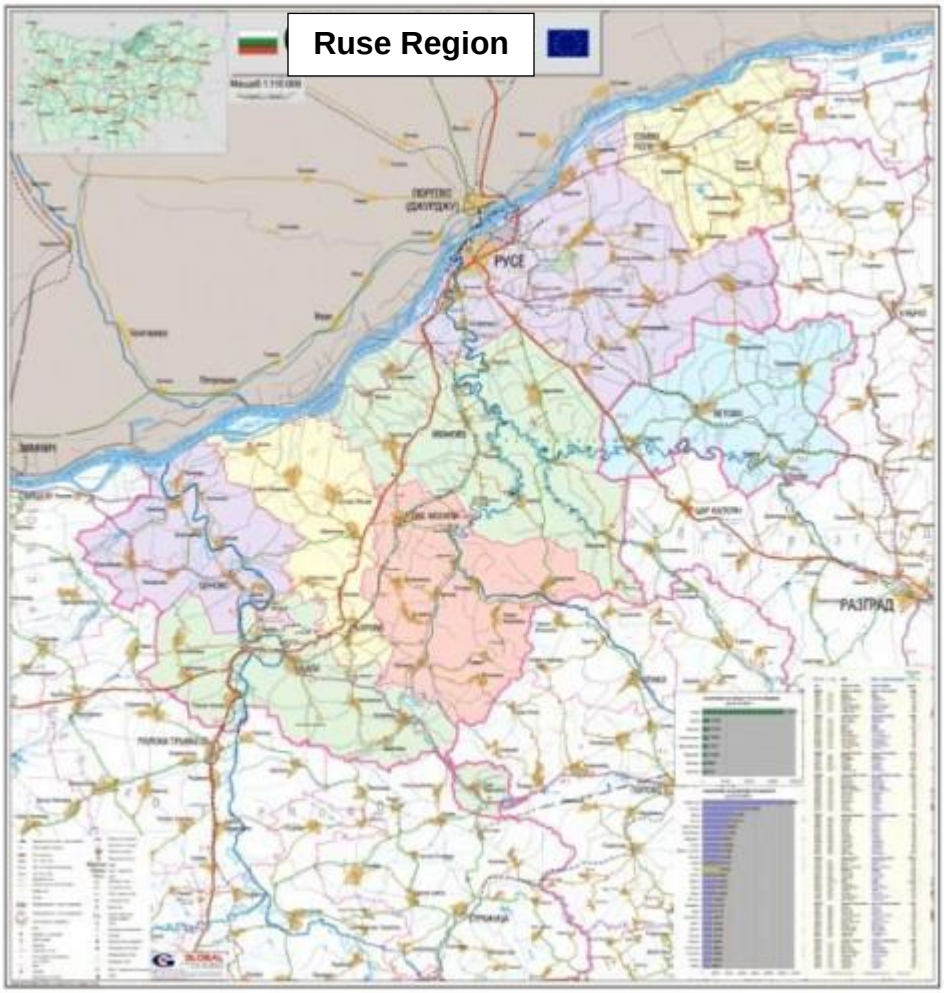
3.1.3.4. Presentation of Ruse Region and TSENOVO Municipality



The cities of Giurgiu and Ruse have established themselves in time, as the most important connecting point in the Danube sector on the Romanian-Bulgarian border. The importance of this bipolar urban core and its excellent location within the Romanian-Bulgarian cross-border axes derive, on the one hand, from the size and importance of the two cities in the national urban systems and, on the other, from their connection via the first bridge over the Danube, built in the Romanian-Bulgarian cross-border sector (*1954*). This explains the fact that before 1989, trade flows between the Balkan countries and the rest of the continent passed almost entirely through the Giurgiu - Ruse link (Batvarov, 1998).

This potential is determined by the location of the two cities along the axis of the connection between Bucharest and the Balkan Peninsula, a component of the traffic corridor connecting European countries of Asia Minor and the Middle East, which, from a Romanian point of view, gives them primary importance for Romanian-Bulgarian cross border cooperation. In this geopolitical, international and regional context, the creation of the Giurgiu-Ruse Euroregion was initiated at the level of the two cities.

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Euroregion Danubius – RUSE Region

1. Romanian border sector, 2. Bulgarian border sector, 3. Polarizing cores, 4. Administrative border, 5. Euroregion border, 6. State border.

Ruse Region *(Occupies an area of* ***2 803*** *km² and has a population of* ***235 252*** *people according to express data from the 2011 census)* located on the right bank of the Danube.

Ruse is the fifth largest city (***167 585*** *residents*) it is located in the northeast part of the country, on the right bank of the Danube, opposite the Romanian town of Giurgiu, about 75 km (*47 miles*) south of Bucharest, the capital of Romania, 200 km (124 miles) from the Bulgarian Black Sea coast and 300 km (*186 miles*) from the capital Sofia. It is the most important Bulgarian

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river port, serving an important part of the country's international trade and one of its main industrial centres. Here is built one of the first industrial parks in Bulgaria, dominated by shipbuilding, chemical industries (paints and oils for engines), textiles and food.

The city of Ruse is famous for its Baroque and Neo-rococo architecture of the 19th and 20th centuries, which attracts many tourists. It is often called Little Vienna. The "Friendship Bridge", Ruse-Giurgiu was until June 14, 2013, the only one in the common Bulgarian-Romanian section of the Danube River that crossed the river here.

The city of Ruse is located on the right bank of the Danube, which is the high bank, with two underwater terraces and three river terraces from 15 to 22 m (49,21-72,18 ft), 30 to 66 m (98,43-216, 54 ft) and 54 to 65 m (177.17 - 213.25 ft). The average altitude is 45.5 m (149.28 ft) of AMSL. The urban area is an ellipse of approximately 11 km in length, which is located along the river. The town also extends to Matey island, connected to the west by land with the mouth of the river Rusenski Lom, up to the Srabcheto hill to the east. In the 20th century, the western outskirts of the city were significantly altered by the relocation of the mouth of the river Rusenski Lom to the west, as well as by the relocation of the bank along with its channel to the north. The Sarabair hill is located south of the city and is 159 meters (521.65 ft) high. The television tower in Ruse was built on the remains of Leventtabia, an Ottoman stone fortress.

Ruse Region has a continental climate (Köppen Dfb climate classification) with very hot summers and relatively cold winters.

Winter temperatures often fall below 0 ° C (32 ° F), sometimes even down to -20 ° C (−4 ° F). In summer, the average temperature is 25 ° C (77 ° F). Temperatures often reach 35 to 40 ° C (95 to 104 ° F) in mid-summer downtown and remain at 18 to 20 ° C (64 to 68 ° F) overnight. In spring and fall, daytime temperatures vary between 17 and 22 ° C (63-72 ° F), and rainfall during this period is higher than in summer, with more frequent but milder periods of rain. The highest recorded temperature was 44.0 ° C and the lowest was -22.8 ° C.

After becoming part of contemporary Bulgaria on February 20, 1878, Ruse became one of the main cultural and economic centres of the country. The intensive construction changes the architectural aspect of the city in typical for Central Europe. Ruse is known for many important things for the Bulgarian economy, including: *the construction of the "Ruse-Giurgiu" Bridge in 1954 and rapid industrialisation give a new impetus to the development of the city. Ruse again becomes an important economic, transport, cultural and educational centre. The chemical and light industries are expanding, a large port is being built, and the city is becoming a university centre.*

TSENOVO Municipality is located in the northeastern part of Bulgaria, **part of Ruse Region**. It is located along the lower reaches of the Yantra River, in the central Danube plain, 32 km from Svishtov and 45 km from the regional city of Ruse.

The modern village was founded in the late 16th and early 17th centuries as the farm of the administrator of the Gulhane Park in Istanbul's Topkapi Imperial Palace, called Kara Ali. The settlement is gradually increasing as many people settle around the inn. The village was first named Chaushan and Chaushkyui. After the Liberation of Bulgaria, the name was Bulgarianised by adding the suffix -evo, turning it into Chaushevo. On August 14, 1934, it was renamed Tsenovo in honour of the influential Svishtov merchant Dimitar Apostolov Tsenov, who donated

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40 million BGN for the construction of the Svishtov University of Economics.

TSENOVO Municipality is located along the lower reaches of the Yantra River, in the Danube hilly plain. This is the northwestern border of the Ruse region. To the north it borders the Danube River, to the west with Svishtov Municipality, to the south with Polski Trambesh and Byala Municipality, and to the east with Borovo Municipality. It is located at the highest level of the Yantra River and the mouth of the Danube River. The altitude at the church in the village of Tsenovo is ***30*** m.

The municipality has ***9*** settlements with a total population of *5923* inhabitants (*2011*) and covers an area of 249.7 km. sq. m.

The present seat dates from the late 16th and early 17th century. In 1934, the village of Tsenovo passed to the municipality of Byala. The village becomes the centre of a municipality with two constituent villages - Dolna Studena and Beltsov. In 1960, after the closure of the surroundings, the village of Tsenovo registered in the Ruse region. According to the new administrative division, from 1979 on 25 March, Tsenovo became the centre of the settlement system (now the municipality). The municipality consists of nine settlements Tsenovo, Dolna Studena, Beltsov, Karamanovo, Novgrad, Krivina, Piperkovo, Dzhulunitsa and Belyanovo, covering a total area of 249.7 km. sq. m.

3.1.4. Potential risks at the level of territorial administrative units of Hotarele, Greaca, Giurgiu County in the Republic of Romania and Ruse Region and Tsenovo Municipality in the Republic of Bulgaria

3.1.4.1. Potential risks in HOTARELE Commune

A) FLOODS

Floods remain one of the most common and most devastating natural hazards in the world. While existing forecast and warning systems can make a significant contribution to reducing losses, the potential to further prevent losses that can be avoided through improvements to the system through technological advancements remains significant.

Flood modeling can help identify their cause and identify potential areas that could be flooded. This allows for the planning of flood damage reduction through early warning of settlements downstream, especially in flood affected areas. At the same time, modeling can be used to evaluate different flood mitigation measures to determine which alternatives will be economically and environmentally viable given the prevailing conditions.

The Hotarele commune is located in the southeastern part of the county, within a large geographical unit called the Romanian Plain, where more rivers - Argeș, Neajlovul, Sabarul - gather together in a wide and low valley, which is outlined south of Danube River, located in the Giurgiu County, stretching between (43^0 41`40`` and 44$^0$32`35``) north latitude and (25^{0}26`10``and 26$^0$25`40``) east longitude.

The hydrographic network of the South Muntenia region consists of streams and lakes located in the territories managed by the ABA (River Administration) Argeș-Vedea and ABA Buzău – Ialomița.

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The territory of Giurgiu County registers a high density of the hydrographic network in natural and artificial mode. According to its genesis and general characteristics, county waters fall into three broad categories: ***rivers, lakes and groundwater***.

The most common disaster in the county is ***flood***. This phenomenon is due to the overflow of rivers covering the usually dry surface, due to the increase in water flow due to heavy rains or the sharp melting of snow or the discharge of large streams from the accumulating lakes, which in their effect or duration degrades goods or impedes normal activity, causing damage or loss of life.

Rainfall over the years (1941, 1955, 1970, 1975, 1999, 2000, 2002, 2004, 2005, 2006, 2010, 2014) has caused floods in large areas affecting agricultural land, housing, roads.

The Argeș River collects most of the flowing water in the county, having an average runoff slope of 0.99% (0.99 m/km) over all 113 km that pass through the county territory. The flows register quite different values from one period to another, the maximum annual flows register 1 910 m3/s at Malu Spart and almost 3 000 m3 / s at the outlet of the county territory. Dams and upstream regulation activities, by creating retention basins with hydropower function, significantly limit flooding.

The Argeș River basin is characterized by a long valley with many meanders, and downstream of the Mikhailesti dam, the drainage part is arranged in a trapezoidal shape, 60 m wide, for the usual flows of 250 m/s.

Under the hydrological regime, the Argeș River presents a modified flow regime due to the complex hydro-technical conditions, dams and cumulative lakes located along the upper section, as well as its downstream regulation through the Mihailesti reservoir. It is important for the territory of Giurgiu County to regulate the flows along the Argeș River so that the average daily flow does not fall below 20-25 m3/s, the flow needed to supply raw water to the "Crivina RGA" outlet for water supply of the capital.

The main tributaries of the Argeș River on the territory of Giurgiu County are: *Neajlovul with Câlnișteа, Dâmbovnicul, Neajlov*.

Rainfall is highly uneven in both quantity and duration. For example, in summer, during prolonged periods of drought, heavy rainfall and even hail fall on some restricted areas, with water reaching 141 l/m2. for 24 hours.

Torrential rainfall – in the summer there are frequent rainfall and heavy rainfall at the local level, causing flooding with great destruction, but also landslides on the slopes.

The resulting flooding brings significant amounts of sediment (sand, ballast, river stones) that lead to the clogging of important riverbed sections and frequent decolourisation, regularization and rectification of the riverbeds to prevent flooding.

Hydrometeorological characteristics show that rainfall reaches a maximum in May, June, July, August and September, which leads to exceeding the limit quotas. 80% of the reported material damage comes from the flooding of individual households due to heavy rainfall.

Lakes – represented by natural or artificial lakes of quite different sizes - are closely connected to the hydrographic network. According to their genesis, they fall into three main types: *oxbow, valley and anthropogenic lakes, the first two being natural*.

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Oxbow lakes, commonly referred to as swamps, are formed in the lower parts of the lower plains as well as in springs emanating from groundwater. The largest and at the same time the most typical oxbow lake is *Balta Comana*. Located in the Neajlovul Valley, 7 km from the infusion site in Argeș, the Balta Comana has a surface of 700 hectares, a length of 7 km and a maximum width of 2.5 km and is fed by the waters of Neajlovul and its springs. By their location, in the contact between the meadow and the Burlaz plain, in an area with large and massive deciduous forests and rich hunting grounds, they have valuable tourist potential.

The so-called ***valley lakes***, located at the bottom of river beds, with reduced surfaces and depths and shapes, usually elongated along the valley, are fed by the respective rivers, rainfall and groundwater springs.

Anthropogenic lakes are accumulations of water, known as lakes, of many different sizes, made by blocking valleys with temporary or low flow valleys in order to regulate and maintain the volume of water needed for agriculture and fisheries. In the valleys of Zboiu, Parapanca, Izmar, Porumbeni, Milkovac, Glavacioc, Balera, etc. there are 86 such reservoirs (dams) managed by "SC Piscicola SA Giurgiu" the respective local mayoralties.

Water flow	***Name of accumulation***	***Place***	***Note***
Zboiu	Moray I, II, III, IV, V, VI	Hotarele	
	Barrage	Izvoarele	
	Zboiu	Greaca	
	Puțu Greci	Puțu Greci	

Areas affected by the natural hazards specified in Act 575, causes of damage, caused by natural hazards - **floods:**

No.	**Territorial administrative unit**	**Type of floods**		**Navigable rivers/rivers**
		On water currents	**On streams**	
1	Hotarele	No	Yes	Argeș, Sabar and the water basins

Statistics for the last ***5 years confirm*** that the ***Commune Hotarele*** has faced more than ***14 severe floods*** caused mainly by the water flows of the ***Argeș River***.

Recent years' statistics show that exceeding quotas and levels, significant torrential rainfall and ***landslides on the slopes*** have caused the following negative effects in this territorial administrative area:

No.	**Causes of damage**	**Place**	**Affected sites**	
			Material damage	**Amount *(thousand lei)***
1	Rainfall and overflow of rivers in the area	Hotarele Commune	Number of houses, out of which:	
			destroyed = 44	1898,50
			injured = 232	1679,80
			number of outbuildings = 10	3,900
			number of socio-economic sites = 1	40,000

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			number of bridges = 11	110,00
			hectare of agricultural land = 440	557,035
			number of fountains = 1500	12100,00
			number of hydraulic equipment =3	25500,00
			kmDN =0,7	10000,00
			kmDJ+DC = 7,5	210,00

Hydrometeorological characteristics show that the year 2005 was rich in rainfall, around 1000 l/m2, with peaks in May, June, July, August and September, which led to the exceeding of the protective quotas of most rivers crossing Giurgiu County. The recorded material damage, in the proportion of 80%, came from the floods of individual households due to heavy rainfall caused in Giurgiu County, in the absence of a properly sized and well maintained rainwater collection and management system.

3.1.4.2. Potential risks in Greaca Commune (Zboiu village, Puțu Greci village);

A) FIRES:

Fire is a natural phenomenon that is generally controlled by man.

From the very beginning of human existence until now, fire has been a serious threat to man. In trying to preserve and recreate it according to his own will, man has evolved, thus marking a stage in the development of humanity. When a person could not explain a physical phenomenon, he copied it to the deities and honoured it as a divine gift.

Striving to protect his life and property, man became aware of the phenomenon called fire, in an attempt to find its subsequent evolution in time and space, in case of manifestation.

Fire is a term borrowed from Latin in the sixteenth century, derived from *"incendium"*, which means "fire" - this word being derived from the term "incendere" which means "to ignite." The term refers to forced combustion that escapes human control over time and space.

Standards regarding terminology in this area distinguish between the concepts of fire (the phenomenon of combustion) and fire (a destructive burning):

- ***fire (the phenomenon of combustion)*** is a self-organised combustion with is self-organised burning with beneficial effects, limited in time and space (controlled burning);
- ***fire (a destructive burning)*** is a self-sustaining, unorganised combustion, with deleterious effects and whose distribution in time and space is unlimited if one does not intervene (uncontrolled burning).

Fire (a destructive burning), *with legal connotation, is the out-of-control burning caused by a specific cause (will or not) that causes loss of life and / or tangible property and requires, to be interrupted, fire-fighting actions.*

Fire is a complex phenomenon based on its occurrence and evolution on combustion processes *(including, where appropriate, flame formation)*, heat transfer and gas with the surrounding environment, as well as transformations in building materials.

Fires are natural or artificial, leading to loss of life and life, as well as property damage.

The main characteristics of a fire are:

- an affected surface of the ground;
- the amount of heat generated;

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- the manner in which the fire is spread (firestorms, massive or isolated fires, etc.).

The cause of the fire (*(open fire, heated or overheated bodies, sparks from combustible or welding materials, electrical sparks and long or short circuits, lightning, mechanical sparks, explosion, self-ignition, chemical reactions)*); release of toxic gases and vapours.

The main effects of fire are manifested through:

- loss of human and animal life;
- damage or destruction of oil complexes (refineries, storage centres, wells, pumping installations, pipelines, etc.);
- the destruction of forestry, cereals and vineyards;
- damage and destruction of buildings of any kind;
- evacuation of the population and material and cultural values;
- damage to electrical and telecommunication networks.

In ***Giurgiu County, statistics for the last 5 years*** confirm that more than **392** fires and fire events occur annually.

During the last 5 years, 50 fires and fires have occurred in the commune of Greaca.

Most often, fires occur in the commune of Greaca at:

- forested areas, dry vegetation, in areas under cultivated grassland, during the life of the crops or after harvest;
- civilian households and their outbuildings;

B) SNOW OVERLOAD:

Winters, under the influence of eastern continental and arctic cold air masses, have very cold days, with average monthly temperatures between + 0,30C and -3,20C, and average monthly lows between -11,50C and –16,40C. Rainfall falls in the form of snow, covering the soil with a different layer, such as thickness and stability, and the prevailing east wind has considerable intensity and duration, shaking the snow layer strongly.

Snow overloads – snow accumulations on the road surface as a result of heavy snow or blizzards that lead to large amounts of snow, where the position of the road against the wind and the cross-section profile favour the formation of snow thicknesses of more than 0,3 meters in continuous or intermittent sectors.

Rainfall is largely heterogeneous in both quantity and duration.

Snowfall is characteristic of the colder periods of the year. As a rule, about 50 days of snow cover (land covered) are recorded, with the first snowfall usually falling in late November - early December and the last in the second half of March.

In February 2012 heavy snowfall of 30-60 cm thick fell, and in some places, due to the strong wind, which exceeded 80-90 km/h, accumulations exceeding 2-3 meters were formed. The occurrence of these phenomena led to deaths in the population, causing material damage and creating panic among the population.

Snowfall is the result of heavy snowfall and blizzards that can last from several hours to several days. They make it particularly difficult to move on all modes of transport (air, road, rail), agricultural activities, supply of raw materials, electricity and gas, as well as telecommunications, etc.

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To remove large amounts of snow from access roads and the normal resumption of activities, a large number of specialized mechanical equipment and personnel are required.

As a rule, snow accumulations are of a special nature with regard to protective measures, in the sense that these types of disasters, with rare exceptions, are formed over a longer period and there is scope for some measures to be taken so that most of their effects are reduced.

In the case of heavy snow and blizzards, some of the national roads passing through counties, county or municipal roads may be affected or blocked by these phenomena.

Commune Greaca has experienced more than ***13 times*** in the last 5 years massive snowfall blocking the county roads.

STATISTICS

Potential risks at the level of territorial administrative units Hotarele, Greaca, Giurgiu County, Romania and Ruse Region and Tsenovo Municipality in Bulgaria, in the last 5 years

Territorial administrative unit	Identified potential risk
2013 - 2018:	
TSENOVO Municipality - Dolna Studena	Floods, precipitation and hail - (annual frequency)
TSENOVO Municipality – Karamanovo	Snowfall, snow overloads and blizzards - annual frequency
TSENOVO Municipality	Field and forest fires - annual frequency
HOTARELE Commune	Floods, precipitation and hail - over 14 floods; (rainfall and hail, annual frequency)
	Field fires, dry vegetation, households - (over 11 fires);
	Snowfall, snow overloads and blizzards - (annual frequency);
GREACA Commune	Floods, rainfall and hail - (annual frequency);
	Forests, field and dry plant fires, households and outbuildings (over 50 fires);
	Snowfall, snow overloads and blizzards (over 13 heavy snowfalls);

3.2. Management of potential risks

3.2.1. Specific actions and measures required both at risk prevention and during the intervention itself in the event of the risk of: FLOODS, SNOW OVERLOAD, FIRES

A) FLOODS:

It is evident that most of the municipalities are at risk of flooding, with agricultural lands and even urban areas being heavily affected.

The amount of rainfall varies from 300 to 600 mm and they are quite irregular.

In the northern zone, the water currents are wider, with mostly smooth banks, and the bottom of the rivers is mostly made of sand, with gentle slopes.

In order to prevent the risk of floods caused by water overflows when the rivers arrive, regulatory activities have been carried out in certain areas around certain water flows in ***Giurgiu County***, with the aim of strengthening the shoreline and redeveloping the river bed and the elimination of flood risk in the areas concerned.

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Despite all the measures taken in the Giurgiu County, there is still a danger that some localities will be affected, both by floods of floods and water drains on slopes or landslides during heavy rainfall..

The Hydrometeorological Information Flow, which provides alert and signalling for purposes and terrains, is carried out by the ***SGA*** Giurgiu, based on measurements taken at hydrometeorological stations and rainfall in the core network.

Flood risk management means the implementation of policies, procedures and practices aimed at identifying risks, analysing and evaluating them, combating, monitoring and reassessing risks, to minimize them so that human communities and all citizens able to live, work and satisfy their needs and aspirations in a sustainable physical and social environment.

The risk of floods is characterized by their nature and likelihood of occurrence, the degree of exposure of the receivers (*number of population and commodities*), the susceptibility to flooding of the receivers and their size, which in turn lead to actions on these characteristics in order to prevent floods.

The main problem in flood risk management is the threat accepted by the population and decision makers who know that there is no complete protection against floods (*zero risk*) and that there is no consensus on the extent of acceptable risk.

Acceptable risk must therefore be the result of a balance between the risk and the benefits attributed to an activity aimed at reducing the risk of flooding or government regulation.

Reducing the damage and loss of life caused by a flood does not depend solely on the response to the floods. Activities sometimes addressed separately under the name *"emergency management"*.

The reduction of the effects of floods is the result of the combination of pre-occurrence measures and actions, the management during the flood, and the actions taken thereafter (*reconstruction and lessons learned from the occurrence of this disaster*). As a result, the worldwide concept of flood management is being used globally, which includes both flood risk management and flood management.

In order to coordinate the efforts of the government, the competent authorities, agencies and the public, in order to obtain the effect of the readiness to cope with the flood phenomenon, flood management must be integrated.

Types of risks generating emergencies:

- floods due to the natural increase of water in the water basins, due to rising water flows or obstructions caused by icing, floats, sediments and avalanches, as well as landslides;
- floods caused by accidents or damage to hydraulic structures;
- dangerous meteorological phenomena: heavy rainfall, heavy snow, storms and blizzards, accumulation of ice, frost, ice, early or late icing, hail and drought (*hydrological*);
- accidental pollution of surface and groundwater and marine pollution in the coastal zone, hereinafter referred to as "accidental pollution".

Floods can produce the following effects:

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- **economic:** relevant destruction or damage to: industrial purposes, roads and railways, terrain, oil, water or gas pipelines, electrical and telecommunication lines, bridges and bridges, and the zoo-technical sector;
- **socially negative:** loss of lives, evacuation of the population, danger of epidemics, interruption of the educational process, destruction of cultural goods, panic, reduction of the degree of development of the affected areas and reduction of the income of the population;
- **ecologically negative:** environmental degradation, pollution of surface and groundwater, soil pollution, excess humidity, degradation of slopes, destruction of flora and fauna.

In addition to the direct effects described above, a number of indirect effects may also occur:

- interruption of production processes;
- delay in delivery of products;
- flood protection costs;
- costs of normalizing life after floods.

Directly or indirectly the following is at risk:

- the population as well as its movable and immovable property;
- social goals;
- production facilities (companies, industrial platforms, power plants, agro-technical farms, fishing facilities, etc.);
- dams and other hydraulic works that represent sources of downstream risk in the event of accidents;
- road, rail and sea communication channels, electricity supply networks, gas, water and sewage sources and systems, treatment plants, telecommunication networks and others;
- the natural environment (aquatic ecosystems, forests, agricultural land, urban areas, etc.).

Flood protection is never absolute and things can go in an undesirable direction.

We have to take into account the fact that nature is unpredictable.

The question that usually arises is what level of security is possible and at what cost, and what part of the residual risk must be accepted by the public.

There are several basic principles and ***approaches for sustainable flood prevention***, the implementation of which requires cooperation at all levels of management and coordination of sectoral policies for environmental protection, urban development, agriculture, transport and urban development.

Specific PREVENTIVE measures to be divided according to the different phases of the flood, as follows:

Before the flood:

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1. The use of flood-prone valleys by humans must be adapted to the existing hazard.
2. Outlined tools and measures, such as risk analysis and maps, should be developed to reduce the risk of flood damage.
3. The risk maps that map the potential risk may include, for example, the estimated frequency of floods; the location of chemical installations and other sources of danger, of dwellings, public buildings and the transport system at risk.
4. Most of the population lives in urban areas and efforts to avoid the problem of floods should focus on those areas.
5. The discharge of rivers from the river beds does not always cause flooding in urban areas. This can also be caused by the high intensity of rainfall in the cities, combined with the presence of an inadequate sewage system.
6. Particular attention should be paid to the current storm sewer system, especially the capacity of urban sewage systems.

Experience has also shown that local flood protection measures can have adverse impacts both downstream and upstream.

7. For this reason, a single approach is needed to cover the entire river basin.
8. Such a unified approach is based on multilateral cooperation, including interdisciplinary planning for the whole water collection area.
9. Where appropriate, joint exercises should be organized to respond in the event of a flood or destruction of dams.
10. The authorities should ensure that information and safety plans for flood prevention are transparent and easily accessible to the public.
11. Information should be disseminated early and actively, not only on request, and should be accompanied by the procedures provided for population participation.

In flood zones, preventive measures must be taken to reduce the potential adverse effects of floods on aquatic and terrestrial ecosystems, such as water and soil pollution.

12. Solidarity is essential so that water management problems are not transferred from one region to another.

During the flood:

1. Flood alerts, information and forecasts must be transmitted in real time between the affected areas or riparian countries in accordance with a pre-established procedure.
2. Relevant information must also be made available to the public through the media, the Internet or other appropriate methods. These publications should also contain information about what the population should do.
3. The population should be encouraged to take their own measures to prevent flooding and to be informed of the course of action during such an event.
4. Everyone who may be affected by such an event should, as far as possible, take their own precautionary measures.

After the flood:

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1. Comprehensive contingency plans at national and local levels for flood response must be updated as necessary if necessary. In the near future, the authorities should also have the capacity to respond to such events in relation to the relevant contingency plan.

2. Another effect of floods on human health is the possible disruption of "normal" health and social services.

3. Social and health services staff are likely to be overly involved in responding to the immediate and lasting impact of a disaster, a distraction from the care activities they typically carry out.

4. Interdisciplinary cooperation at all stages of risk management is once again needed.

Flood prevention or mitigation - the elimination of destructive actions can be ensured by:

- ***carrying out certain activities designed*** to limit and slow down the flow of water coming from the slopes, from the smaller tributaries of the water basins or the streams resulting from heavy rainfall or the melting of snow by:
  - *afforestation or reforestation activities on slopes;*
  - *creation of types of coverings that favour infiltration and reduce water flow on the slopes;*
  - *construction of containment dams at the bottom of the valleys.*
- ***changing the lower reaches of rivers by:***
  - *construction of ditches and canals;*
  - *creating temporary basins in some parts of the valley to keep spilled water in them.*
- zoning of floodplains to identify sites in which any construction will be prohibited, establishment of restricted areas where only certain types of structures will be permitted, and warning areas located outside flood levels;
- implementation of design measures that allow buildings and other civil or industrial structures to withstand the increase of the water level and the speed of its movement.

All necessary measures are also urgently needed to ensure that large quantities of water flow to permanent and temporary water basins in the area, in the area of bridges and bridges, in order to create and maintain ditches and sewers, and removal of timber, i.e. sawdust and household waste from river banks.

To guarantee the stability and integrity of dams, dams and other protective works against the destructive effects of water, the following is FORBIDDEN:

- the extraction of soil or other material from dams, dams or similar defence facilities, as well as from their protected areas;
- the planting of trees of any kind on dams, dams and other defensive works;
- grazing on dams and dams around banks or in the area of small rivers and their protected areas where hydraulic works are carried out;
- carrying out ballasting or excavation activities in the river bed in the area of bridges and bridges, at least 1 km upstream and at least 2 km downstream of the bridge or in the area of watercourses, which have along them the infrastructure under control of public

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institutions/national associations/national companies/commercial companies/autonomous regions in the fields of transport, construction and tourism, less than the amount stipulated in the applicable regulatory acts, in relation to the protected zone, in the zones of water power plants, capture zones with seepage along the shore, crossing the pipelines and other activities of this kind;

- the movement of vehicles on the crown of dams and dams that are not designed for this purpose;
- the destruction of the forest fund for the protection of dykes and accumulating lakes;
- blockage of the drains/blockage of the bottom for drainage of the dam walls.

Conditions for floods:

- ***Hydrometeorological reasons:***
  - *Continuous rainfall;*
  - *High intensity rainfall;*
  - *Sudden melting of snow in spring;*
  - *Two phenomena occur simultaneously.*
- ***Breakdowns:***
  - *Problem with accumulation dikes;*
  - *Ice blockage;*
  - *Artificial obstacles in the riverbeds.*
- ***Factors affecting expiration time:***
  - *High levels of groundwater or earth saturation due to rainfall;*
  - *Frozen soil;*
  - *The conditions of the slope of the hydrographic basin and the degree of vegetation coverage.*
  - *Cool weather (low evaporation).*
- ***Floods occurring in the country are as follows:***
  - *During the months of January - April, winter floods are characteristic (melting snow in spring, rain, frozen soil, rare vegetation, evaporation factor, water coming after the snow melts);*
  - *The months of May - June are characterized by the summer floods, the springtime of the rivers (snow melting in the mountains, heavy rainfall in the summer months, the spread of flood waves is very complex, the most common characteristic data are the following*:
    - ✓ Water height (cm); hydrometric lath;
    - ✓ Water flow (m3/s);
    - ✓ Water velocity (m/s);
    - ✓ Water level drop (cm/km).

The flood wave is a wave of its own, the speed of its propagation depends on the slopes and the water flow. Normally, the upward flow equalizes, but the water flow increases significantly.

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Priority PREVENTIVE MEASURES:

- Updating the flood risk maps;
- Creating an IT platform for monitoring, coordination and intervention in emergencies;
- Establishment of a system of warning the population in any created situation, which will be provided by:
  - the maintenance of any alarm device in a constantly functioning state;
  - the use of several types of alarm devices based on different operational sources of energy (electricity, compressed air, steam, fuels, etc.);
  - general means: compressed air whistles, bells, horns, etc .;
  - ensuring the continuity of the connections necessary for the operation of the alarm means;
  - recovery of the affected funds and systems in a short period of time;
  - reasonable use of alarm forces and resources in sectors and areas of intervention;
  - providing a high level of training to staff working with alarms.
- Provision of emergency intervention funds by type of risk (FLOODS, FIRE, SNOW OVERLOAD);
- Creation of teams for the provision OF CRISIS INTERVENTION AND PSYCHOLOGICAL FIRST AID.

Although the field of ***mental health*** has been emerging and developing ***since the early 19th century***, techniques for intervention in the psychological crisis relating to emergencies, disasters or catastrophes did not seem to have attracted the attention of mental health professionals until the early 1990s.

This period coincides with the emphasis on the role of critical incidents/events with traumatic potential for generating immediate stress reactions in a healthy population exposed to extreme life situations, as an expression of protective mechanisms with variable duration and intensity that can sometimes develop in symptoms of psychiatric disorders, depending on certain existing risk factors or inadequate management of stress reactions.

The development of this area is due to a number of factors, such as the recognition of the effects of such situations on mental health, but also the increase in the incidence of terrorist acts at the global level and, on the other, the emergence and expansion of networks. from organisations specialising in victim support related to the International Red Cross.

It must be remembered that the initial development of each area is an imperfect process. It is therefore expected that by continuing efforts to consolidate the field practically, significant strategic and tactical changes will naturally occur over time.

A very telling example in this regard is the development of psychological analysis (*a psychological issue*), which until a few years ago was the centre of gravity of immediate intervention in a crisis.

At present, according to major scientifically recognized sources on the use of psychological intervention packages, psychological analysis is an invalid technique that not only does not help suffering people, but may even cause negative effects due to its interference with the natural mechanisms of recovery from a traumatic event.

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By definition, a psychological crisis is a situation triggered by a critical incident/event with a traumatic potential, in which the mechanisms of dealing with the person have failed, with the individual experiencing a significant level of emotional distress, mental deterioration and inability to function properly.

Most people have the ability to control their emotions and overcome the difficult situations they face. However, there is a threshold for accepting negative life situations beyond which any human being may fall into a psychological crisis of varying duration and intensity, depending on individual psychological characteristics.

Crisis intervention has begun to break away from psychotherapy and an increasing number of authors are considering crisis intervention as ***a type of psychological first aid*** for the people affected to help them overcome the temporary period of disability in coping with stressful circumstances. In this way, crisis intervention becomes the first line of response in emergencies, which gives it its main features, namely response time and range over a limited time.

Therefore, setting appropriate ***targets for psychological crisis intervention resulting from the occurrence of events with potential traumatic emergencies****, disasters or catastrophes should be based on a realistic formulation of what crisis intervention means.*

B) FIRES:

Recent years' statistics show that at the national level, the number of fires in forested areas and in households has increased. Many of these events could be avoided if appropriate measures are taken on time. The phenomenon is mainly due to non-compliance with the rules and measures for fire prevention and extinguishing.

The term "fire" is in accordance with Art. 1 para. (2) point (c) of Law No 307/2006 has the following meaning: "self-sustaining combustion which takes place without control over time and space, which causes loss of human life and/or material damage and which creates the need for organized intervention; interrupt the burning process."

Fire is a complex combustion process with an indefinite evolution, including other physical and chemical phenomena (heat transfer, flame formation, gas exchange with the environment, structural transformations produced in building materials and elements of sustainability, etc.).

Thermal, chemical, electromagnetic or biological agents resulting from a fire act on structures, installations and consumers and can cause many adverse effects *(deformation, resistance reduction, instability, collapse, burns, intoxication, trauma, panic, etc.)*.

Fire is a complex, devastating phenomenon that can sometimes become a disaster, bringing misery and suffering to people. Each fire has a technical cause or occurs most often as a result of human negligence. The negligence manifested by people due to inattention or sometimes ignorance contributes significantly to the outbreak of fires.

The classification of the fires according to the causes that caused them can be done according to the mandatory elements mentioned.

Depending on the ignition sources ***the following categories can be distinguished:***

1. Flame ignition sources:

- *outdoor fires;*

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- *flame (matches, candles);*
- *flames from thermal appliances.*

2. Thermal sources of ignition:

- *incandescent items (cigarettes, metal castings, light bulbs and spotlights, ash, slag from heating devices, welding filaments, etc.);*
- *heat from thermal appliances (domestic, industrial);*
- *the thermal effect of the electric current;*
- *defective and unclean chimneys (cracks, sparks, etc.).*

3. Electrical ignition sources:

- *electric arcs and sparks;*
- *short circuit (equipment, cables, etc.);*
- *static electricity.*

4. Sources of spontaneous ignition:

- *spontaneous ignition of a chemical nature (including exothermic chemical reactions);*
- *spontaneous ignition of physicochemical character;*
- *spontaneous ignition of a biological nature.*

5. Mechanical ignition sources:

- *mechanical spark;*
- *friction.*

6. Natural sources of ignition:

- *solar heat;*
- *lightning.*

7. Ignition sources due to explosives and combustible materials.

8. Indirect sources of ignition (fire from radiation, flames from explosive mixtures, etc.).

"*Arson*" fires caused by intentional or criminal acts are a separate category because of their specific characteristics, although the ignition sources used by the arson rule are in the previous categories.

FOREST FIRES:

Meteorological conditions are a major factor in ***forest fires***. In the case of high temperatures due to significant long-term water shortages, meteorological factors can become a primary cause of forest fires, especially in extreme weather events (*e.g. lightning*).

However, ***the human factor*** is behind the majority of forest fires, especially with the favourable climatic context.

Depending on the vegetation characteristics and climatic conditions, the location of the hearth and according to the burning elements (mainly wind force and direction), the following types of forest fires are distinguished:

- on soil or dried leaves;

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- in the tree crown;
- underground;
- combined (on the layer of dried leaves and crown);
- fallen trees.

Soil fires and dry leaves fires, also called "runner fires" - are characterized by burning the living and dead forest layer on the soil surface: moss, live grass, dried and fallen leaves, pine needles, wood residues, and and others.

Tree crown fires – are characterized by the burning of the tree crown (*pine needles, twigs*) located on their stem. Burning speed is between 8 and 25 km / h.

Underground fire – also called earth fire, because it causes the burning of materials just below the surface of the soil, such as: peat, coal and shallow tree roots. This fire spreads slowly, progressing by only 10-20 m/h.

Combined fire (*the layer of dried leaves and crown*) – is more common in resinous forests where no measures have been taken to clean vegetation, branches and other tree debris found in the lower parts of trees. This kind of fire is born of a flame in the litter and spreads to the crowns of the trees.

Fallen trees fire – Occurs in parts of the forest where trees have been uprooted due to heavy storms or landslides, or in areas where they are being exploited, and places where the tree felling operation is not immediately followed by clearing and removal operations of the wood from the area.

Usually these fires produce large amounts of heat and their spread rate is very high.

These types of fires are more difficult to extinguish because the wind is stronger and the fuel is drier.

Forest fires are one of the major disturbances affecting carbon capture in European forests and in many cases lead to loss of life. In fact, it is generally accepted that the frequency of forest fires in Europe is mainly due to anthropic nature, with year after year the risk of fires increasingly being linked to meteorological and climatic conditions. Reducing summer rainfall in southern Europe and increasing the frequency of droughts are likely to increase the risk of forest fires, which will ultimately lead to a strong impact on natural resources and the stability of ecosystems with direct and indirect consequences for economic losses. Active management and fire and forestry practices can counteract the impact of climate change to some extent.

Characteristics of soil fires or dried leaves fires:

In the case of this type of fires, it is destroyed by burning a layer of dried leaves, pruned and stacked timber, cut down trees to shape and reduce the crown of the non-harvested trees at their bottom.

The spread of fire is determined by the following factors:

- the dryness of the layer of dried leaves located on the soil;
- the amount of flammable material present on the soil surface;
- the presence of constant air currents specific to the area;
- the location of the fire pit (when they occur in areas with disturbed terrain, fires that erupt at the foot of the slope will spread more rapidly to the top of the hill than eruptions on its ridge).

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The fires of the layer of dried leaves develop unevenly, spreading at the roots, in different directions due to changes in the direction of air currents and the state of humidity of the materials encountered.

The fires of the layer of dried leaves are recognized from afar because of the traces of white-gray smoke.

During the burning, temperatures of 800-1200 ° C develop depending on the nature of the wood, the degree of humidity and the amount of material it burns.

Large quantities of oxygen are consumed in the combustion zone, which in turn leads to the phenomenon of absorption of large quantities of air from the fire zone and the formation of whirlpools that rise to the height of sparks, jokes or pieces of wood that are ignited and which they carry great distances, and their fall to earth gives rise to new fires of fire.

Fires of the layer of dried leaves can easily be transformed into fires in the tree crown if the burning layer of vegetation reaches the tree crown - especially in softwood forests.

Characteristics of fires in the tree crown:

These fires occur mainly in softwood forests, their development being greatly favoured by the resin contained in the branches and tree trunks, as well as turpentine and essential oils in the composition of the leaves.

The fires in the tree crown of resinous trees are also intensely spread by burning cones that burst and spread from the air streams, igniting the crowns of trees over considerable distances. In many cases, fire is transmitted to the ground through the burning material that falls on the floor.

Depending on the degree of combustion and its intensity, the fires in the tree crown are classified as follows:

- slow fire rate: burning rate up to 8 km/h;
- rapid fires: burning rate 8-25 km/h;
- fierce fires burning more than 25 km/h.

Characteristics of underground fires:

These fires are mostly found in the centuries-old forests, on the soil, which over the years has been covered with a thick blanket of dry leaves, twigs, tree debris that have decayed and formed a decayed layer and peat.

Underground fires destroy tree roots and, under favourable conditions, can spread to waste.

Underground fires have an indication of an external manifestation, in particular smoke exiting through various cracks, places where oxygen is supplied to the atmosphere, have an improper contour, depending on the slots existing in the dead layer and the obstacles they encounter along the way.

***Characteristics of combined fires** (on the layer of dried leaves and crown):*

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Such fires result from the spreading of sparks from tree crowns in areas where shrubs and grasses are a favourable environment for their transmission.

In many cases, the fire is transformed from the litter to the tree crown due to the heat transfer through convection and radiation and causes the volatile products contained in the resins to be distilled, thus becoming a suitable medium for the spread of flames at height by ignition of the volatile gases released.

This process takes place continuously in large fires of firewood, which instantly ignite the crowns and form a wave of fire.

Characteristics of fallen tree fires:

These fires develop rapidly due to the presence of pine needles, the dry bark of trees and the large amount of timber on forest soil.

The speed of propagation depends on the amount of timber, its nature, the degree of humidity and meteorological conditions, as well as on the topographic characteristics of the earth.

Fires of DRY VEGETATION /IN THE FIELD/:

Intensive agricultural activity is being carried out on both sides of the Danube River in the eligible area, which mainly focuses on the large crops (cereals and maize). When these crops reach maturity, they are a real danger before, during and after the harvest.

Most often, the reasons are subjective due to the negligence, ignorance or intentions of the people.

These fires of dry vegetation, regardless of the cause that caused them, spread quickly and can affect large areas of land. If the weather is favourable (*medium or high wind*), the spread of the dry vegetation fire can occur over long distances from where it started. The rapid spread is also favoured by the emergence and development of such fires in isolated areas where water sources are located over long distances.

The forest has always been a friend of Romanians and Bulgarians: a haven for freedom fighters, a source of inspiration for poets, a place for tourists to relax.

Unfortunately, in Romania, about 350 hectares /*about as much as in Bulgaria*/ forests are lost annually as a result of the fires, and the damage is even greater if we take into account the short-term consequences of each of them (*change in landscape, extinction of fauna or flora, sometimes belonging to rare species*) or in the long term (*reconstruction of biotypes*).

The healing of forest "wounds" occurs through afforestation, but the original forest environment is very difficult to recover and takes many years.

Among the most common causes of fire are natural and human activity factors.

The influence of natural factors, weather conditions and vegetation characteristics contribute to the spread of fires. Droughts and high winds favour the outbreaks. Wind accelerates the drying of soil and vegetation and increases the risk of spreading fires over long distances.

The heat dries the vegetation by evaporation and during the warmest periods causes the volatile essences that underlie the spread of fires to be released.

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Also, lightning is often the source of fires, especially in mountain ranges and during the hottest periods of the year.

Human Factors Impact: People are behind the arson of most forest fires.

Human-caused fires are due to non-compliance with forest fire prevention rules during activities:

• free time (*smoking, children play with fire, picnic*);

• agriculture and forestry or as a result of deliberate action.

The causes of forest fires are classified according to the common European methodology: natural, accident, negligence, deliberate and resumption.

Electric shocks, volcanic phenomena and spontaneous gas emissions are considered natural causes.

Accidents can be caused by power lines, railways, vehicles, industrial machinery, firearms, self-ignition of waste or fuel deposits, self-ignition caused by "magnifying glass", friction energy, thermal reaction of chemicals, etc.

The reasons for negligence are represented by the improper use of open flames to burn ("*clean up*") dry debris from agricultural land or pastures, deposits of household waste, fires, fireworks, cigarettes, fire or hot ash as a result of recreational activities or other human activities (domestic work, beekeeping, smoking or smoke disinfection).

Deliberate causes include the voluntary intent to destroy a forest zone through acts of vandalism, extremism, revenge, fraud or irresponsibility (pyromania, persons under the legal age, etc.).

*IN CONCLUSION, **the following things need to be remembered*** for the spread of forest fires:

- fire develops in the direction of the wind, sometimes by sparks, with the speed of progress varying depending on several factors;
- on sloping ground and in light winds the fire spreads slowly in the form of a circular arc;
- on rough terrain and in high winds, the fire progressively develops by taking the form of the letter "V";
- if the terrain is slightly uneven, the wind is weak and the vegetation is dry and even, the spread of fire is slow, even and progresses along a linear front.

Fire statistics show that an average of 14% of fires that occur annually are in forested forests, dry vegetation or in households.

The consequences of these fires are the loss of human lives, the victims who remain with disabilities for life, significant losses of material goods, sometimes the agony of people for life.

For the monitoring of forest fires and their negative effects, decision makers have the following basic responsibilities in fire prevention and fire fighting activities:

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- establish, by written provisions, the responsibilities and organisation of fire protection in the area of activity of the inspectorate or forestry area they direct, update the provisions when changes occur, and inform employees, users and anyone interested;
- ensure the identification and assessment of fire risks within the scope of the inspectorate or forest management area they conduct and justify to the competent authorities fire protection measures that are consistent with the nature and level of the risks;
- obtain the statutory opinions and permissions for fire prevention and firefighting;
- to draw up and keep up-to-date the list of dangerous substances classified by law used in their activity in any form, with references to: physicochemical properties, identification codes, risks they pose to health and the environment, means for protection, recommended first aid methods, extinguishing agents, neutralizing or decontamination;
- develop fire safety instructions and define tasks for employees for each activity;
- to make sure that both employees and outsiders who carry out activities within the inspectorate, respectively in the forest area, who manage, receive, know and follow the necessary instructions on fire-fighting measures;
- create a number of persons with responsibilities for the implementation, control and supervision of fire protection measures;
- provide the appropriate technical facilities and personnel necessary for intervention in the event of a fire, as well as the conditions for their preparation, in accordance with the nature of the fire risks, the profile of the activity and the size of the inspectorate or forest management;
- ensure that intervention plans and conditions are in place at all times;
- provide the contracts, understandings, commitments, conventions and plans required for liaison in the event of a fire, for action by their own resources and resources, in conjunction with the Emergency Inspectorate and the volunteer community emergency services that may be called upon. assistance; to allow their access within the scope of the territorial inspections of forestry and hunting or in the forest area within the Romsilva National Forest Register, which they direct, for the purpose of recognition, training or preparation for participation in exercises and organized applications for tactical intervention;
- to provide and provide for free to the forces called for technical assistance, personal protective equipment, fire-extinguishing chemicals specific to the risks arising from the existence and operation of territorial inspections in the forestry and hunting regime or in the forest area within the National Forest Register - Romsilva to administer as well as medicines and first aid needed antidote;
- provide the necessary means to carry out fire protection measures and ensure, on request, the payment of expenses incurred by other natural or legal persons who have participated in the extinguishing of fires in the area of activity of the inspectorate, respectively in the forest area, which lead;
- establish and transmit to economic operators within the scope of the inspectorate, respectively the direction of forestry, which they govern, as well as to interested third parties, the rules and measures for fire protection specific to them related to the risks

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envisaged for use, processing and transportation, storage and preservation of relevant products;

- organise, direct and control forest fire protection activities and all jobs within the radius of activity of the bypass they perform, as well as supplement and update the organisation of fire protection activities in the event of a change in the situation bypass;
- organise and provide training for all subordinate staff in knowing and complying with fire prevention and firefighting rules and practical fire practices and systematically review how this training is conducted, ensuring the purchase of materials and resources necessary to carry out the training. fire prevention instructional activities;
- organise systematic controls for compliance with fire prevention and fire fighting regulations and organize equipment with technical fire prevention and extinguishing equipment within the radius of the circuit they are conducting, ensuring the operational elimination of dangerous conditions that could cause fire and fire. other irregularities in the fire protection activity;
- organise and provide training for all subordinate staff in knowing and complying with fire prevention and firefighting rules and practical fire practices and systematically review how this training is conducted, ensuring the purchase of materials and resources necessary to carry out the training. fire prevention instructional activities;
- organise systematic controls for compliance with fire prevention and fire fighting regulations and organize equipment with technical fire prevention and extinguishing equipment within the radius of the circuit they are conducting, ensuring the operational elimination of dangerous conditions that could cause fire and fire. other irregularities in the fire protection activity;
- provide, as required by law, the furnishing of all workplaces with installations, machinery, apparatus, protective equipment and chemicals necessary for the prevention and extinguishing of fires, as well as with other fire protection systems and devices; ensure that these facilities are constantly operational and that maintenance, major repairs, inspections and repairs are carried out in a timely manner, monitoring all fire protection and fire extinguishing devices within the deviation radius they carry out;
- timely fulfil their obligations and measures from the fire protection plan, the organisation of the forest interventions, as well as other tasks for the prevention and extinguishing of fires, established by the management of the territorial inspection of forest and hunting regime, respectively in the direction of forestry;
- ensure the perseverance of the forestry headquarters, especially during critical periods, for trained personnel on the necessary measures to be taken in the event of a fire and report to the management of the territorial inspectorate of forestry and hunting, respectively of the forest area , the events that are happening;
- to prepare and constantly update the Forest Mobilization-Alarm Plan;
- equip them with forest bypass maps necessary for action in the event of fire fighting in the forest and for control and preventive patrol actions, within the framework of the fire protection plan;

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- to continuously monitor the condition of their own and other owners' buildings located in the perimeter or in the immediate vicinity of the forestry fund for their maintenance and compliance with fire prevention and fire-fighting measures, periodically analysing the fulfilment of their obligations;
- prepare, together with the persons responsible for the management, control and detection of violations of the law in the field of fire protection and fire fighting, the fire protection plan, to control and ensure the observance and implementation of the provisions and tasks stipulated in this plan;
- establish and monitor fire prevention and fire-fighting measures to be observed and implemented by employees of economic operators, fruit-growers, beekeepers, shepherds and other persons who carry out seasonal activities near forest areas or in forest areas fund;
- provide training to persons engaged in activities in and near the forest (timber exploitation, afforestation, sanitation, shepherding, hunting, gathering fruits, mushrooms, etc.) to comply with specific fire protection rules;
- to provide cantons and forest areas with the means of first intervention and their maintenance in use;
- place warning signs and banners on the rules for forest fire prevention and extinguishing;
- to plan and mark marking rest areas and vehicle parking spaces in areas often visited by tourists;
- to plan, organise and carry out surveillance and patrol activities performed by forest personnel along the most visited routes that cross the forests, especially during periods of drought and heavy public inflow;
- maintain the proper state of use of the main forest roads for access by intervention vehicles;
- ensure that the water sources for the fire extinguishers are maintained by building dams and ramps in accessible locations;
- ban the burning of vegetable residues, smoking and open flames less than 100 m from the forest belt (except in specially arranged places), as well as accidentally throwing lit cigarettes and matches;
- prohibit the access of private vehicles on forest roads and the placement of tents and barbecues in places other than those designated for this purpose.

Vulnerability to forest fires increases in the spring, before the onset of vegetation and in the autumn, after the drying of the vegetation, in periods of drought and in periods of increased flow of tourists.

Fires are MAINLY due to:

- irresponsible use of open fire;
- accidental throwing of cigarette residue;
- children's play with fire;
- burning of operational residues;

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- burning of herbaceous and shrubby vegetation as a result of clearing of terrain;
- electrical discharges are common throughout the forest area;
- the self-ignition of the organic blanket on earth;
- the sun's rays passing through random pieces of glass (the magnifying glass effect);
- deliberate arson;
- sparks from machinery and equipment used in the forest.

Specific problems arise in firefighting operations, especially in the organisation of interventions in hard-to-reach areas where important human and material forces are required, their concentration and transportation are carried out with great difficulty and for a long time, given the limited access of vehicles, machinery and personnel involved, which in many cases moves on foot to the site of intervention.

Due to the low practicality of the roads crossing the forested areas, the water supply, depending on the location of the forest fires, is extremely small, since the fighting technique can only be located on ramps specially designed for water supply.

In the event of a fire, links between forest areas/farms, public emergency services (firefighters) from targets and terrain and professional firefighter units are provided through radio stations - fixed, mobile and portable reception to units belonging to the Forest Inspectorates and mobile network.

The management of emergencies caused by forest fires, the development of necessary activities and the organisation of management, coordination and cooperation are ***ensured through:***

- permanent Operations Centres established at the Directorate of Forests, under the direct authority of the Director-General;
- the technical assistance team for the management of emergencies caused by mass fires, led by the representative of the Regional Emergency Inspectorate.

The management of forest fires is carried out according to the owner of the forest in which the fire started, the Directorate of Forests (for forests owned by owners other than the state) and the National Forest Administration - AG MAFF and Romsilva (for forests in state property of the state).

In areas affected by forest fires, evacuation of the population, animals or endangered goods will be carried out as necessary. Evacuation of the population, animals or endangered goods will take place when forest fires extend to areas, farms, etc. bordering the forest fund.

The evacuation will be carried out by professional emergency/response services, jointly with local executive authorities - mayors of municipalities, their administrations and territorial units of ministries and agencies.

For forest fire fighting interventions, commanders/commanding officers are required to use methods and procedures specific to the nature and manner of fire occurrence, thus:

- ***field strips fires*** by forcibly encircling the affected surface, concentrating the main flocks in the direction of its breeding. Depending on the main areas of development,

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units will be organized that will operate from the front, from the side and possibly from the rear.

The fire of the headlands will be extinguished by a broom fight, knit pallets, shovels, and soil or sand will be thrown on the advancing fire, will be acted upon by water sprinklers and water sprays, and a few meters from the fire will be organized intervention, to form a barrier to mineralize the soil and create a counter-fire.

Contra-fire is the most effective method of limiting the spread of fire by reducing the glow force of the incoming fire, and the "dam" made by removing the combustible material stops the main fire from progressing.

- ***the fire of the tree crown*** will be extinguished through procedures undertaken in connection with its speed of development. Its limitation is achieved by creating safety belts behind which forest surveillance will be provided to avoid the transmission of fire through sparks. The protective straps will be irrigated with the available means.

If it is not possible to create safety belts, the use of explosives by specialized units is recommended.

The fire of the tree crown involves the use of stronger and greater powers and means as it becomes a large-scale fire.

Extinguishing a fire on a tree crown is based on intervention by special methods:

- demolish trees at a distance of 2-4 tree heights, with their crowns parallel to the direction of fire spread, in a line transverse to the direction of the fire progressing at such a distance that the fire does not surprise workers in full effect;
- the trees, once they have been demolished, are removed with horses and tractors to stay out of the fire zone while also clearing the dry area;
- ploughs with horses or tractors cut a strip 2-3 m wide in the middle formed by removing the trees and attempting to apply a counter-fire;
- teams of workers, with the help of pallets and shovels, monitor and stop the spread of leaves and covers, lit and carried by air currents, thus destroying any extension of fire.

- ***In the event of dry leaves fire*** insulation ditches are dug around the burnt surface (*where possible, the ditches are filled with water or the walls are sprayed with chemicals*). Once the fire is located, excavations will be conducted to find and remove the hidden fires;
- ***The fire in the area of fallen trees*** will be extinguished by creating protective and insulating belts, covering with soil or watering the burning trees.

Extinguishing Fires in cases of LACK OF WATER, HIGH WINDS, IN WINTER OR AT NIGHT:

Carrying out extinguishing operations ***in the absence of water*** is provided through:

- organisation of recognition for the discovery of water sources;

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- rational use of water, handling of small nozzles or faucets and stopping the discharge of water during manoeuvers or changing the situation;
- increasing the pressure in the water supply pipes by running additional pumps and stopping the water in certain sectors of the local area network;
- use of snow to extinguish fires in winter;
- water supply from tanks, automatic tanks, fire trains or irrigation systems;
- transportation of water in the burning area by the population with bags, barrels and buckets;
- limiting the spread of combustion by demolishing structures or removing combustible objects and elements;
- concentration of high capacity extinguishers, organisation of the most rational water supply system from local sources, use of ejector and submersible pumps in the case of high depth sources;
- use of light foam, extinguishing powders and chemically improved water.

Fire extinguishers where water is supplied through the transport of automatic tank pumps will use nozzles and low pressure pipes to ensure continuity of discharge.

In the absence of water, firefighting efforts will focus on saving people and valuable material goods.

Night-time firefighting is affected by diminished target lighting capabilities, difficulties encountered during unit implementation, unit management, and maintaining collaboration/interaction and coordination.

In order to accomplish the ***night firefighting*** mission, the commander/chief of intervention is required to:

- know the goals and locations in the area of responsibility or in the area of intervention;
- carry out continuous on-site intelligence with the target specialists;
- organise the illumination of the target, using the equipment of the units and forces with which they cooperate, by providing, in the main, the illumination of escape routes for people and material goods as well as for the intervention device;
- give tasks that do not require complex maneuvers;
- organise the change of personnel from intervention devices and take measures to ensure its security and prevent accidents;
- require the target's specialists to restore the operation of electrical lighting installations in areas close to the fire.

The rehabilitation of forest areas affected by fires will be the task of the forestry districts (*public or private*) that have managed the affected forest area.

This rehabilitation will be done in particular by afforestation with species of the main natural forest species only after the removal of the burnt logs and the application of modifications.

During TRAVEL it is necessary to observe the rules SPECIFIC TO THE RECREATION AREAS, namely:

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- smoking and burning open flames will be carried out in specially designated areas for which there is no vegetation;
- the hearth should be cleaned of grass, twigs, leaves, etc .;
- it is advisable to dig a small pit where the fire will be made and stones covered with furrows will be placed around it (stones can sometimes explode at high temperatures);
- the wood prepared for the fire must be located some distance from the fire;
- the fire should be as far away from the tent as possible;
- if you want to keep the joke for cooking, cover it with grooves;
- if you have to keep the fire on at night, change it to keep it, but never leave it unattended;
- extinguishing a fire is the first thing you need to do before you leave;
- measures will be taken to extinguish incinerators with water or with dust;
- do not spread the joke when you want to extinguish the fire;
- even if it is raining, make sure the fire is extinguished before you leave;
- also check around the fire for any heat!
- observe the minimum safe distances that can be ignited - 50 meters of combustible materials or buildings and 100 meters of forest ponds and feed depots;
- take care of the children and control them so that they do not cause fires around them. Do not allow them to play with matches or a source of fire;
- obey the rules of smoking and do not accidentally throw away cigarettes and matches without matches;
- keep the forest clean. Do not leave paper, food waste, bottles or vials as these can also contribute to forest fires.

FOREST AND ORGANISATIONAL MEASURES, which protect the forest from the destruction of the fire:

- creation of insulation strips on the edge of forests at 5-10 m, as well as on roads passing through the forest;
- setting security indicators in tourist areas;
- placing tents and parking cars only in places arranged and marked for this purpose;
- the proper arrangement of the smoking area, respectively the observance of smoking bans when it is not allowed;
- the fires will be lit at least 100 m from the forest pond;
- the fires will only be lit in places away from vegetation and in no case under extreme drought or in windy weather;
- the fires are not left unattended as even a slight gust of wind can change the direction of the fire, directing flames to vegetation or carrying sparks over long distances in the forest;
- food preparation is carried out only in specially arranged places;
- children are constantly monitored;
- the extinguishing of fire and fire before leaving the forest is done with water or soil;

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- forest fires are prohibited in case of prolonged drought.

What to do in case of a forest fire?

- ***If there is a fire:***
  - *Don't panic!*
  - *Get away from the fire!*
  - *Call the **Emergency number 112**.*
- ***If the smoke is thick and you have respiratory problems:***
  - *Cover your nose and mouth with a clean handkerchief!*
- ***If your clothes are on fire:***
  - *Don't panic!*
  - *Get away from the fire!*
  - *Protect your face!*
  - *Roll on the ground until the fire goes out!*
- ***If your friend's clothes are on fire:***
  - *Cover him/her with a blanket!*
  - *Tell him/her to roll on the ground until the fire goes out!*
- ***A fire announcement must include:***
  - *the location of the fire;*
  - *the type of fire (on the layer of dried leaves, tree crown, etc.);*
  - *the approximate area covered by the flames;*
  - *the nature (type) of the forest;*
  - *development conditions (direction).*

Persons who see/monitor the outbreak of fire should call the **Single European Emergency Number - *112*.**

ADVICE AND RECOMMENDATIONS FOR CITIZENS' HOUSEHOLDS:

Fires in citizens' households can be prevented ***if fire prevention rules and measures are complied with.***

In case of OPEN FIRE:

- Every fire, whether inside or outside the home, must be controlled.
- It is forbidden to use matches, candles, oil lamps in fire-hazardous premises (feed stores, stables, warehouses, other outbuildings, bridges, bridges, etc.) and explosives (near gas cylinders, natural gas installations, where petroleum products are stored), as well as when performing agricultural work - (in cereal fields, meadows, etc.) in and near forests.

In case of ELECTRICAL INSTALLATIONS:

- Electrical appliances, electrical cables, electrical outlets and circuit breakers are common sources of fire.

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- In the case of a short circuit, the use of a fuse with a greater thickness/diameter than the standard / correct one is ***forbidden*** when replacing the fuse: by using a thicker fuse, chains, nails, coins, in case of an overload of the mains or short. connection, it can no longer melt, causing the power cord or socket to become hot, causing fire.

CHIMNEY:

- Chimneys must be inspected, cleaned and repaired periodically by specialized and authorized personnel.

Do not allow CHILDREN'S PLAY WITH FIRE:

- Keep matches, lighters, and other sources of fire away from children.
- Eliminate children's curiosity for fire by patiently explaining the danger it poses to their lives.

HEATING:

- It is forbidden to use heating installations with improvisations or malfunctions and to leave them unattended.
- Observe the protective distances between the stove and the combustible materials.

LPG BOTTLES (ARAGAZ)

- The use of a liquefied gas cylinder without pressure regulators (*appliances*) with damaged seals or with cracked or expanded rubber hoses at the ends is prohibited.
- It is forbidden to transfer gas from the bottle into any other containers or use improvised bottles.

IN ATTIC ROOMS:

- It is forbidden to use improvised aspirators in the attics of buildings by removing chimneys from the chimney or removing the chimney masonry outside the roof and leaving the chimney door open.

For ASPIRATORS:

- It is forbidden to use improvised aspirators or to place them in warehouses, lawns, garages, under sheds or in the vicinity of combustible materials: aspirators made of brickwork and non-combustible materials will be located independently of other structures in the household.

C) SNOW OVERLOAD:

Snow overload – snow drifts on the road platform as a result of heavy snow or blizzards leading to heavy snowfall, whereby the position of the road against wind and transverse profile

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favours the formation of snow thicknesses above 0.3 meters in continuous or intermittent sectors.

Winters, under the influence of eastern continental and arctic cold air masses, are cold, with very cold days, with values of average monthly temperatures between + 0,30C and -3,20C, and those of average monthly lows between -11,50C and -16.40C. Rainfall falls in the form of snow, covering the soil with different layers such as thickness and stability, and the prevailing wind has considerable intensity and duration, greatly spreading the snow layer.

The colder periods of the year are characterized by snowfall. Overall, the average snow cover (*covered land*) lasts about 50 days, with the first snowfall falling most often in late November-early December, and the last - in the second half of March (*in Giurgiu and Ruse the average date of the first snowfall is December 2, last snowfall March 18, first snowfall December 19, last snowfall February 28*).

Snow overload, is usually of a special nature with regard to protection measures, in the sense that these types of disasters occur over a longer period of time and there is scope for some measures to be taken so that most of their effects are reduced.

Snow overload occurs as a result of heavy snowfall and blizzards that can last from several hours to several days. They impede the functioning of transport and telecommunications, the activities of agricultural purposes, the supply of raw materials, electricity and gas to local residents, and economic objectives.

The workload for the normal resumption of economic and social activities requires a large number of specialised mechanical means and a large number of people.

The following critical snowpack thresholds are established in the cross-border area.

- 25 cm new snow layer over the old layer.

Snow lasts about 30 days each year in the cross-border region. Frequent snowfall occurs in the form of a continuous layer of snow mainly in December and January and lasts until February-March.

The interventions shall be carried out in accordance with the procedures set out in the specialized instructions of road snowblowers, on the basis of the county/district snowplow plan, which is drawn up annually.

The intervention forces are represented at the district/county level on the basis of contracts/conventions for intervention on national, regional / county and municipal roads concluded in this regard.

The alerting of the forces is the responsibility of the Operations Centres, referring to the meteorological warnings from the relevant national meteorological institutions.

At the commune/municipality level, the intervention is carried out by the forces and means provided for in their plans for the winter peak period, which are activated upon receipt of meteorological warnings sent by the Operations Centre.

Upon receipt of the meteorological warnings, all participating structures shall introduce the permanent service to the operations centres, monitor the development of meteorological phenomena, proceed to the implementation of their own intervention plans and periodically report on the progress of the measures in the Operations Centre and the upper echelons.

The effects of snowfall and heavy snowfall can be:

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- endangering the life or health of people;
- blocking economic activity;
- interruptions in the supply of electricity, heat, gas and drinking water;
- isolation of some areas and inability to supply food and medicines to the public and animals;
- blocking the evacuation of sick and pregnant women in hospital wards;
- deterioration of some structures due to the weight of the snow layer;
- deterioration of pedestrian traffic;
- damage to power grids, telephones, cables, breaking or collapsing trees due to the weight of snow and avalanches that can block certain roads or railways.

Risk assessment of heavy snowfall and associated hazards, as well as the issuance of alerts/messages will be made in accordance with the "Meteorological Coding Procedure, Alerts and Alerts Issued in the Event of Hazardous Meteorological Events at National or Regional level".

Weather warnings and strong/heavy snowfall reports will be accompanied by a colour code set as follows:

- ***green code*** - used for areas where heavy snowfall is not expected;
- ***yellow code*** - associated with weather warnings - if heavy snow is specific to a particular period or region and will be temporarily dangerous for certain activities;
- ***orange code*** - associated with the weather warning - applies to heavy snowfall and heavy snowfall, predicted as dangerous, with high intensity;
- ***red code*** - associated with weather warning - applies to heavy or heavy snowfall, predicted as dangerous, high intensity and catastrophic.

SPECIFIC MEASURES during snowfall:

- identification of the signs of the operating structures involved in the activities for prevention and restoration of the normal state in case of heavy snowfall and related risks in the district / county, the municipality;
- organising, in conjunction with the structures providing disaster relief activities, depending on the type of risk, the way they work to ensure that the tasks assigned to the fields of action are fulfiled;
- training of staff and persons involved in risk management in accordance with definitions given by fields of action and types of risk;
- providing optimal capacity for action and intervention to manage emergencies caused by heavy snowfall, as well as those posed by the associated risks;
- determining how structures involved in managing the type of heavy snowfall and associated hazards related to the prevention, preparation, response, post-event investigation and evaluation/recovery/rehabilitation, followed mainly by:
  - protecting the population and maintaining their confidence in the ability to intervene and manage emergencies;
  - saving and protecting human life;

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- protect property and the environment as far as possible;
- ensuring continuity of transport activities *(school, supply, utilities, road, etc.)*.

- identifying homeless people and providing transport, shelter, food and water, as well as medical assistance when needed;
- identification and evacuation of persons in need of emergency medical care (patients with cardiovascular disease, dialysis patients, pregnant women) to provide emergency medical care and their transportation to provide medical care at health units in the district of domicile;
- study and evaluation of the effects of mass snowfall on municipal and county roads and establish measures for their clearing through the means of operators contracted for services in cooperation with other forces (*structures of MAI, MApN, MT*).

IMPORTANT ADVICE AND RECOMMENDATIONS:

Before traveling, ask for weather and road conditions.
If you are out of the house, when traveling, in vehicles, etc. you need to stay calm and take frostbite action:

If you are in a vehicle:

- Drive carefully and use only major roads.
- If road and weather conditions deteriorate, stop and shelter (house, boarding house, hotel, etc.).
- If your car is not in motion or is jammed:
  - do not leave the area because there is a risk of frostbite;
  - stay in the vehicle and use the internal ventilation system;
  - use the engine as little as possible to save fuel;
  - make sure that the snow does not block the exhaust system to avoid the risk of carbon dioxide poisoning;
  - switch on indoor and position light only;
  - move arms and legs, arms and feet;
  - avoid napping;
  - Check that anyone nearby is injured or in difficulty and help.

In ANY EMERGENCY SITUATION CALL: 112.

3.2.2. A coherent and consistent framework for risk management of FLOODS, FIRES AND SNOW OVERLOAD

The management of emergencies caused by ***floods, fires and snow overload,*** is an ***activity of national interest,*** taking into account the frequency of occurrence and the magnitude of the effects of these types of risk.

The principles of emergency management are:

- forecasting and prevention;
- prioritizing the protection and saving of human lives;
- respect for human rights and fundamental freedoms;

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- taking responsibility for emergency management by the state administration bodies;
- transparency of emergency management activities so that they do not lead to a deterioration of the effects produced;
- continuity and graduality of emergency management activities, from the level of local public administration bodies to the level of central public administration bodies, depending on their size and intensity;
- promptness, active cooperation and hierarchical subordination of the components of the National System.

Emergency management is achieved through:

- prevention and preparation measures for interventions;
- urgent operational measures to intervene in the aftermath of a dangerous event with serious consequences;
- additional intervention measures for recovery and rehabilitation.

Management of emergency situations, caused by floods, fires, snow overload, ***means identification and monitoring***, ***notification of stakeholders***, ***population warning***, ***evacuation***, ***if necessary***, ***assessment***, ***limitation***, ***elimination or counteraction of risk factors***.

Measures to limit, eliminate or counteract the impact of the types of risk constitute an ***obligation for central and local public administration authorities with competence in this field*** and for all legal and natural persons, with the exception of persons with disabilities, the elderly, children and other categories in disadvantaged situation.

The protection of the population, material goods and cultural property is achieved through a range of activities including: notification, warning, pre-alarm and alarm, shelter, evacuation and other specific technical and organisational measures.

Notification shall be made by the Giurgiu County Regional Emergency Inspectorate on the basis of information received from the public or from structures monitoring the sources of risk.

The warning of the population is realized by the local public administration bodies through the specific warning means on the basis of the notification received from the authorized structures.

Advance alarms are implemented by sending alert messages/alerts to the authorities regarding the likelihood of disasters.

The alarming of the population is realised by the local public administration bodies with specific means on the basis of the notification received from the authorized structures.

Specific ***warning and alarm means*** are installed at locations designated by the county (municipal) emergency and occupational emergency services.

Alert and alarm messages are sent with priority and free of charge through all telecommunication systems, radio and television stations and networks, including satellite and cable, operating in the territory of Romania, at the express request of the mayors/heads of emergency structures.

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The use of means of alert in the event of disasters shall only be carried out with the approval of the mayor of the settlement, the leader of the public institution or the economic agent involved, as appropriate, or their powers.

The system of notification, warning and alarm in localities, public institutions and economic operators is periodically checked through training and exercises.

During emergency management, ***three stages*** can be distinguished, which differ from each other in the degree of danger presented. They are triggered when critical thresholds (*warning criteria*) specific to the analysed phenomenon (*floods, dangerous meteorological and hydrological phenomena, hydraulic structures' behaviour over time*) are reached and which are specified in special instructions.

A) ***The attention situation*** has the importance of a special situation and does not necessarily represent a danger.

The consequences of entering the attention situation are:

- ***stepping up observations and measurements made to track the phenomenon and predict its development;***
- ***inspection of defensive structures and monitoring to ensure the conditions for drainage of water masses;***
- ***informing about the possibility of accidental contamination.***

B) ***Alarming/alerting*** is characterised by the evolution of phenomena in the direction in which they can lead to a certain danger (***e.g.****: further increase in water flow levels, increase of infiltrated flows through hydraulic structures to retain materials from their body, increase rainfall intensity or wind speed, confirmed accidental pollution that requires intervention and others).*

Alarm triggering leads to the operational situation of HQs/Emergency Committees. The activities carried out are both activities designed to control the phenomenon and preparatory activities for the accidental triggering of the dangerous situation.

C) ***The situation of danger*** – it is triggered when the danger becomes unavoidable and exceptional measures are needed to limit the effect of the floods (*evacuation of the population, animals, certain material goods, special measures for the operation of hydraulic structures with a defensive role against floods)* , restrictions on traffic on some roads, bridges and bridges as well as on waterways), as well as combating accidental pollution with a serious impact on the ecosystem (*change of parameters water quality, destruction of fauna and ichthyofauna, environment and others, or exceeding the area of competence*).

The transition from one state to another can be made according to the evolution/evolution of the phenomena.

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The typical scale/magnitude of flood protection is:

- the dimensions of the warning zone, established at hydrometric stations and rainfall, located above the stream of endangered targets, as the case may be, for rainfall, levels or flows;
- local levels of protection set close to targets, in the form of water levels or flow rates.

Warning stations shall form part of the national hydrology and meteorology network and shall be located at a sufficient distance from the warned target to be able to take the necessary measures predefined by defence plans.

The characteristic scale/magnitude of protection determined in the event of a flood is:

A) For **zones C *dams*** of water currents:

- level of protection ***phase I*** – when the water level reaches the foot of the outer slope of the dam one third of its length;
- level of protection ***phase II*** – when the water level reaches half the height between phase I and protection phase III;
- level of protection ***phase III*** – when the water level reaches 0.5-1.5 m below the level of the known maximum water levels or below the maximum for which the respective reservoir is dimensioned or when the critical point is exceeded.

B) For **zones WITHOUT dams** of water currents:

- ***alert*** level - the level at which flood danger is possible after a relatively short period of time during which defence or evacuation actions can be organized;
- ***flood*** level - the level at which the first objective flood begins;
- ***hazard*** level - the level at which special measures are required to evacuate people and goods, restrictions on the use of bridges, bridges and roads arise, as well as special measures for the operation of hydraulic structures.

The risk factors that ***exacerbate*** or even ***generate floods*** in river basins have a wide variety, the most important of which are:

- the deterioration and destruction of drainage systems over large areas of land, which, especially during periods of hydrologic growth, determine the collection of water over time, which compromises the harvest;
- disproportionate or clogged sewerage network, lack of drainage systems for inland and rainwater or lack of maintenance and failure to perform decommissioning activities, technical errors in design and implementation;
- bridges and bridges, pedestrian bridges, not dimensioned in capacity, shallow foundations, completed without designs, without approval of the water management authority;
- the presence of abundant vegetation in the lower shore sections in the immediate vicinity of bridges and bridges, which significantly reduces the transit capacity of maximum water flow. In addition to this situation, there are cases where the bridges are properly sized,

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but the flows crossing the river are exceeded due to the occurrence of high intensity local rainfall;

- degradation of river beds of local rivers and streams due to their lack of maintenance (*blockage, heavy vegetation, landfill sites*), ballast effects and specific morphological phenomena occurring in rivers, especially in areas affected by rapid floods and slopes ;
- blockage of small river slopes, creating islands, blocking bridges and bridges by incorporating timber and other obstructions into the riverbed, causing flooding of lands with frequent rainfall;
- non-compliance with the work on coastal consolidation, lower thresholds and, in general, the failure to perform flood maintenance and repair activities with the role of flood defence;
- debt reduction through embankment, regulation coupled with the inability to implement some of the flood mitigation lakes provided for in the water management frameworks;
- the existence of some old protective activities/works of about 30-35 years (*cumulative lakes*), some of which present real mining hazards with the most serious effects on downstream targets;
- housing, shelters/animal shelters and other uses in the main riverbed in the past and without a water management agreement at present;
- disposal of waste, process waste and other in water, which clogs river beds/lakes and blocks sections of bridges.

3.2.3. Planning and prevention for better risk management in the cross-border region

3.2.3.1. Technical capacity for intervention in risk situations at local community level;

A) TSENOVO Municipality – Republic of Bulgaria:

1. Specialised resuscitation team No. 1:

Response time: 20 min;

Team members:

- 1 doctor;
- 1 paramedic;
- 1 driver

Vehicle: 1 ambulance

Other equipment and special technical devices: command breathing apparatus

Description/Capabilities: emergency resuscitation and transportation to a specialist hospital; resuscitation equipment; oxygen supply, defibrillation and emergency medical care.

2. Specialised resuscitation team No. 2:

Response time: 20 min;

Team members:

- 1 paramedic;
- 1 driver.

Vehicle: 1 ambulance

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Other equipment and special technical devices: command breathing apparatus
Description/Capabilities: emergency resuscitation and transport to a specialised hospital; resuscitation equipment; oxygen supply, defibrillation and emergency medical care.

3 Team of the District Police Office in Byala Municipality:
Response time: 40 min;
Team capacity: 2 employees
Vehicle: 1 automobile "Dacia"; - 2 automobiles "Opel"
Other equipment and special technical devices: personal protective equipment; riot control agents; media (megaphone, speakers); police tape
Description/Capabilities: Ensuring public order and secession of disaster areas and areas, assistance in the search for and rescue of victims and, where necessary, transportation to a specialised hospital.

4. Team of District Service Fire Safety and Population Protection - Byala:
Response time: 35 min;
Team capacity: 3 employees
Vehicle: 2 fire trucks
2 semi-class trucks
Other equipment and special technical devices: 1 number of six-person lifeboat in case of floods; 3 electric generators; 8 drainage pumps.
Description/Capabilities: providing safety and protection against fires, disasters and emergencies.

5. Teams of the Regional Council of Bulgarian Red Cross – Ruse (4 Teams No.1- 4)
Response time: *1 hour*;
Team capacity: 3-5 volunteers x 4 teams = 20 volunteers
Vehicle: 1 automobile "Citroen Jumper"
1 minibus "Volkswagen transporter"
1 freight trailer

Other equipment and special technical devices: 2 six-person lifeboats in case of floods; 3 electric generators; 8 drainage pumps; own VHF and HF radio communications network; sleeping equipment for 100 people.
Description/Capabilities: *transportation of volunteers and specialized equipment and support to victims of accommodation, nutrition, psychological support, etc.*

6. Volunteer team of Tsenovo municipality
Response time: 30 min;
Team capacity: 10 volunteers
Vehicle: 1 an emergency rescue vehicle; 1 special UAZ-469 vehicle.

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Other equipment and special technical devices: 1 aquifer 1200 liters; 1 portable kitchen; 2 drainage pumps; deposit with fire extinguishing equipment; emergency deposit with materials in case of flood.

Description/Capabilities: *transportation of volunteers and specialized equipment; providing logistical support to the affected population; food and accommodation; supply of drinking water, etc.*

The sources for financing under the National, Regional and Municipal Disaster Protection Plans are the republican budget and the municipal budgets according to art. 61 item 1 and item 2 of the Disaster Protection Act, the Structural Funds of the European Union and other international organisations.

Where the financing is at the expense of the republican budget, the financial resources for the implementation of the disaster protection plans shall be provided within the approved funds for the respective ministries and agencies and budgetary relations of the municipalities with the republican budget approved by the State Budget Act of the Republic of Bulgaria for the relevant year. Additional financial resources for disaster relief can be provided from the reserve for the prevention, control and overcoming of the consequences of disasters, in accordance with the State Budget Act of the Republic of Bulgaria for the respective year. The reserve is absorbed by decisions of the Interdepartmental Commission for Reconstruction and Assistance to the Council of Ministers. The funds are provided from the central budget and are spent on the budgets of the ministries, departments and municipalities by adjusting the budgetary relations between the central budget and the respective primary authorizing officers.

Sources of funding for improving the intervention capacity of Tsenovo Municipality:

- own funds;
- financial resources under European programmes;
- financial assistance from the European Union Solidarity Fund;
- funds from the interdepartmental committee for rehabilitation and assistance to the Council of Ministers allocated for preventive actions.

B) HOTARELE Commune – Republic of Romania:

1. Volunteer Emergency Service:

Response time: 7 min;
Team members: 4 volunteers; 1 automobile driver;
Vehicle: 1 automobile Dacia Logan;
Description/Capabilities: Patrol/transport of people.

2. Logistics and intervention crews:

Response time: 7 min;
Team members: 2 excavator bulldozer drivers;
Other equipment: 1 excavator bulldozer;
Description/Capabilities: Transportation of ballast and cleaning of holes.

3. Police patrol team:

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Response time: 7 min;
Team members: 2 police officers;
Vehicle: 1 automobile "Dacia Logan";
Description/Capabilities: Patrol.

***C)* GREACA Commune – Republic of Romania:**
1. Emergency Volunteer Team (Fire prevention and suppression team):
Response time: *5 min;*
Team members: 4 volunteers; 1 automobile driver;
Vehicle: 1 minibus, 18 seats;
Description/Capabilities: Provision of fire prevention and fire fighting measures.

2. Emergency volunteer team (TEAM No. 1):
Response time: 5 min;
Team members: 4 volunteers; 1 automobile driver;
Vehicle: 1 minibus, 18 seats;
Description/Capabilities: extinguishing fires.

3. Emergency volunteer team (TEAM No. 2):
Response time: 5 min;
Team members: 3 volunteers; 1 automobile driver;
Vehicle: 1 automobile "Dacia Logan";
Description/Capabilities: search for persons in case of fire.

4. Emergency volunteer team (TEAM No. 3):
Response time: 5 min;
Team members: 3 volunteers; - 1 automobile driver;
Vehicle: 1 automobile "Dacia Logan";
Description/Capabilities: release and rescue of "trapped" people

5. Emergency volunteer team (TEAM No. 4):
Response time: 5 min;
Team members: 3 volunteers; 1 automobile driver;
Vehicle: 1 automobile "Dacia Logan";
Description/Capabilities: logistics provision.

6. Intervention team, specialised in snowfall:
Response time: 5 min;
Team members: 3 excavator bulldozer drivers;
Other equipment: 2 trench bulldozer; - 1 tractor with a blade;
Description/Capabilities: clearing snow roads, ice.

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7. Team, specialised in the sanitary field:
Response time: 4 min;
Team members: 1 medical assistant; 1 automobile driver;
Vehicle: 1 automobile "Dacia Logan";
Description/Capabilities: providing first aid in emergencies.

8. Giurgiu Emergency Professional Services Team, (FIRE SERVICE), Greaca working point, (One crew on duty, 24/7/365, permanent)
Response time: 3 min;
Team capacity: 3 firefighters;
Vehicle: 1 specialised firefighting vehicle;
Description/Capabilities: fire fighting.

9. Police patrol team:
Response time: 3 min;
Team capacity: 2 police agents;
Vehicle: 1 automobile Dacia Logan;
Description/Capabilities: patrol.

Funding sources for improving the intervention capacity for the Hotarele and Greaca Communes:

A) Hotarele Commune:

- own funds from the local budget;
- funds from the state budget;
- financial resources under European programmes;
- financial assistance from the European Union Solidarity Fund;
- other funds (donations, sponsorships, etc.).

B) Greaca Commune:

- own funds from the local budget;
- funds from the state budget;
- financial resources under European programmes;
- financial assistance from the European Union Solidarity Fund;
- other funds (donations, sponsorships, etc.).

3.2.3.2. Integrated tools and techniques for the analysis of natural hazards registered in the cross-border region

The events that have taken place in recent years in Europe and in our country help us understand the importance of risks and the ability to identify them, or at least bring them closer to the causes of their occurrence.

To a much lesser extent, we are all at risk in our personal or professional lives.

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The impact of natural hazards continues to increase every year and, if one wants to counteract the negative effects, the first step is to create effective identification mechanisms, tools and analysis techniques.

Natural risk analysis is the basis for conducting impact studies and risk assessment, as well as for land use planning and emergency planning.

To understand this problem, it is extremely appropriate to define the concepts of hazards and risks.

Sometimes risk is considered synonymous with *"danger"*, but risk has a number of additional consequences.

Danger is defined as a "potential threat to people and their property" and risk is a probability of danger.

Hazards, risks and disasters operate on a variable scale. With regard to the severity of the hazard, the following classification was made:

- dangers that have a direct effect on people: death, illness, stress, damage;
- dangers with direct impact on goods: economic losses, destruction of various goods;
- direct environmental hazards: losses on flora and fauna, pollution.

Risk identification and risk assessment are based on studies that analyse chronological data on the occurrence of a particular event and its consequences.

Once an emergency has been identified, it is possible to adopt response strategies that include assessment and response in several stages.

The four stages are:

1. ***pre-disaster planning:*** this covers a large number of activities, such as a series of topographic analyses of soil resilience, evacuation plans, etc .;

2. ***preparation:*** immediate alert to the population when a disaster is expected, a series of specific emergency alert programmes for the population with maximum efficiency so that people can be mobilized according to the evacuation plan;

3. ***response:*** this stage is located immediately before and after the occurrence of the relevant event, including the response of the various warnings to the population and rapid evacuation activities;

4. ***recovery and reconstruction:*** a long-term activity that seeks to return to normal after severe devastation, taking into account the fact that devastating consequences of disaster may occur in areas that are clearly well prepared for disaster management.

These projects work through local arrangements that include a high degree of community acceptance and support, such as so-called improved human activities, and those based on some adaptation of people to the conditions imposed by the occurrence of an emergency.

Reducing people's vulnerability to an emergency involves creating changes in people's attitudes and behaviours to disasters. In this context, disaster aid has a component represented by the response of people in the event of a disaster.

The change of event is limited in response because of the insignificant degree of control that man can exercise over the destructive forces of nature. Most geographical hazards are beyond the ability of humans to control them.

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The change of event – presupposes the protection of relatively small areas by implementing specific structural measures projects.

Changing vulnerability – It includes measures to alert the population.

Vulnerability modification consists of:

- population preparation;
- prevention programmes;
- evacuation plans;
- providing emergency medical care and food;
- built shelters for the evacuees, etc.

Whatever formal arrangements are made in the case of emergency plans, understanding and cooperation between people is a vital element. International support to government agencies and non-governmental organisations, charitable programmes also play an important role.

Prevention and warning systems

Prediction is based on statistical theory and uses historical data from past events to estimate the future probability of recurrence in similar events.

Prognosis depends on the detection and evaluation of a single event, which develops through a sequence of environmental processes that are well understood. The forecast is based on scientifically observable facts and tends to be short-lived.

Warning is a message that informs and alerts the public of an extreme event and outlines the steps that must be taken to minimize the loss.

All warning systems consist of three interdependent functional modules:

1. ***Assessment*** – it includes several subcategories, starting with the first observation of environmental change, which can pose a threat until the nature and magnitude of the disaster is assessed, and finally the optimal solutions are decided in this case - the priority of this module is to increase the accuracy of prevention and increase the period between the time of issuing the alert and the actual time of occurrence of the event.

2. ***Dissemination*** is presented by the transmission of a warning message by the experts, foreseeing the occurrence of an extreme event to the inhabitants of the area suspected of being affected - a mediating environment involving different communication methods shall be included.

3. ***Response:*** the two previous steps are intended to activate this module. The reaction subsystems are influenced by the direct production of the relevant event and feedback mechanisms to improve the alert systems; the nature of the response is influenced by the type of warning message and by the determinants.

The motivation for developing a disaster management system and public dissemination of information has dual support:

1 – Assisting public administration decision-makers with decision-makers in emergencies through a complex emergency system that allows informed decisions to be made based on

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principles stemming from the history of natural disasters occurring in the area/administrative territory;

2 – Existence of a system for public dissemination of information to the population and an early warning system for the authorities in the event of natural disasters *(floods, snowfall, large fires, prolonged drought, landslides, severe air, water and soil pollution and other natural disasters*).

An important contribution to the implementation of this complex system is the *integration of the subsystems* with the recording of the component modules and the interaction between them.

In this regard, we must also pay attention to the development of an incentive and control system for assessing the risk of fires, natural disasters *(floods, snowfall, blizzards, etc.)* ***and their consequences:***

- developing an early warning system for natural disasters;
- development of a system in Internet technologies aimed at managing information on the development of destructive factors;
- development of an expert risk management system;
- development of pilot systems for the management and public dissemination of information on population safety.

The risk management process includes three phases:

1. risk identification;
2. risk analysis;
3. risk reaction/response.

RISK ASSESSMENT TECHNIQUES:

- ***Creation and implementation of risk control measures*** *within public entities.*
- ***Monitor the implementation of the measures*** *set out in the risk response plans.*
- ***Reviewing the risk*** *(constantly or when the situation requires it) and periodically reporting its situation.*

For the effective implementation of the risk management process at the public entity level, ***it is necessary to have:***

- risk management team;
- risk managers in the public unit (risk managers);
- systematic risk management procedure;
- response plans and procedures for fire fighting;
- flood response plans and procedures;
- response plans and procedures for intervention in snow accumulation;
- cooperation plans for risks identified at the joint level.
- flow chart of decision-making information;
- emergency evacuation sites/spaces and their equipment;
- planning exercises/applications in accordance with specific technical provisions;

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- prefect monthly information and analysis reports;
- protocols for cooperation with similar institutions in countries with common borders in case of emergency;
- the situation of resources, a table of stocks of existing defence assets and materials, ways to cover the shortage of local availability through the assistance of the Emergency Committee, which is hierarchically higher, etc .;
- rules of conduct in case of emergency.

The functional risk management tool is the "RISK REGISTER"

DOCUMENTS USED IN RISK MANAGEMENT:

- **RISK NOTIFICATION FORM** – to be completed for each newly identified risk.
- **RISKS REGISTER**, drawn up at the administrative community level - to be completed when the risk arises.
- **PLAN FOR IMPLEMENTATION OF RISK MANAGEMENT MEASURES**– includes measures taken to manage significant/strategic risks.
- **RISK FOLLOW-UP SHEET**– made for each risk recorded in the approved action plan.

Expected results:

- reducing the number of people and goods involved in emergencies;
- promoting and implementing new technologies that guarantee the reduction of the impact of emergencies;
- strengthening the emergency preparedness capacity of the population, authorities, as well as private institutions and operators, especially those managing critical infrastructure;
- enhancing the activity of preventive communication and information;
- enhancing the training of people with responsibilities in emergency management;
- reinforcing the role of the institution responsible for training staff for volunteering and private emergency services, as well as for the institution supporting the sector of competence and the provision of voluntary and private services;
- assuming the responsibilities for signalling the population by modernising and optimising the alert and alert system;
- increasing the capacity for integrated medical emergencies, fires and civil protection;
- enhancing cooperation at national and international level.

3.2.3.3. Plans for prevention and joint intervention in risk situations

HOTARELE Commune:

- Joint intervention plan in the areas of competence of the Directorate-General for Emergency Situations Romania and the Directorate-General for Fire Safety and Population Protection (No.1004/OP/129/19.03.2013).

Greaca Commune:

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- Joint intervention plan in the areas of competence of the Directorate-General for Emergency Situations Romania and the Directorate-General for Fire Safety and Population Protection (No.1004/OP/129/19.03.2013).

Tsenovo Municipality:

- Joint intervention plan in the areas of competence of the Directorate-General for Emergency Situations Romania and the Directorate-General for Fire Safety and Population Protection (No.1004/OP/129/19.03.2013).

3.2.3.4. Information decisions between the neighbouring municipalities/communes of Bulgaria and Romania on the common hazards, forecasting and development of scenarios regarding joint intervention: FLOODS, FIRES, SNOW OVERLOAD

- Obtaining meteorological warnings and information from the Emergency Inspectorate "VLASCA" of Giurgiu County (I.S.U.J. "VLASCA") and the Directorate General for Fire Safety and Population Protection - Ministry of the Interior.
- Analysis of the potential evolutions and effects of the projected phenomena in the territory of Ruse and Giurgiu districts.
- Mutual information of partners from Bulgaria (Romania), through the Giurgiu County Regional/District Coordination and Management Centre for Intervention (C.J.C.C.I.), on the content of warnings, information and possible consequences for it.
- Monitoring the evolution of phenomena in time and space by I.S.U.J. VLASCA and the Ministry of the Interior - General Directorate for Fire Safety and Population Protection from Bulgaria.
- Monitoring the occurrence of states or events generating emergencies and sharing information through C.J.C.C.I.
- Jointly informing, through C.J.C.C.I., of the evolution of floods on major waterways that cross the territory of the two countries.
- Joint informing, through C.J.C.C.I., of the development of environmental factors on the territory of Giurgiu County and the Ministry of the Interior - Directorate General "Fire Safety and Population Protection" of the Republic of Bulgaria.
- Submission of mutual requests between the Giurgiu County Emergency Committee (C.J.S.U. Giurgiu) and the Ministry of the Interior - Directorate General for Fire Safety and Population Protection from Bulgaria.
- In respect of the mission to monitor, prevent or limit and remedy emergencies.
- Participation of representatives of the Ministry of the Interior - Directorate-General for Fire Safety and Population Protection from Bulgaria in "Exercises and Applications for Emergency Training or Simulation" organised on the territory of Giurgiu County.
- Participation of representatives of the Giurgiu County Regional Centre for the Coordination and Management of Intervention (C.J.C.C.I.) in "Exercises for Emergency Preparedness or Simulation" organised on the territory of Bulgaria.

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3.2.4. Duties and responsibilities of partners in the field of emergency management.

3.2.4.1. Institutions and bodies involved in the risk management of: FLOODS, FIRES, SNOW OVERLOAD in Giurgiu County and in the Republic of Romania, and their role in Emergency Management

The government implements the following main tasks:

a) approves specific regulations in accordance with their area of competence;
b) analyses periodically and whenever the situation requires protection and emergency response;
c) approves the national insurance plan with human, material and financial resources for emergency management;
d) proposes, under the law, the President of Romania to establish and end the state of emergency in the affected areas;
e) concludes international agreements in the field of civil protection;
f) adopt decisions for the provision of emergency assistance and compensation to the natural and legal persons concerned;
g) approves the planning and applications for international civil protection;
h) seeks international support, if necessary;
i) approves the granting of assistance following requests by States affected by disasters.

Ministries, local/autonomous public administration bodies and other specialized bodies of the central public administration perform the following main tasks:

a) establish powers that belong to their own structures;
b) develop contingency plans and programmes in their area of competence;
c) provide the necessary resources for the intervention;
d) build operational capacity for intervention, where appropriate, made available to local public authorities;
e) initiate research programmes or topics in the field;
f) establish a database specific to their own area of emergency activity;
g) ensure the participation of representatives, experts and specialists in the activities of the National Emergency Committee;
h) make available to the Ministry of Administration and Interior qualified staff to set up teams of evaluation experts or staff required for intervention, as appropriate;
i) make available to the National Emergency Committee the data and information necessary for the elaboration of the national civil protection strategy, the plans and programmes for emergency protection and intervention, as well as the Inspectorate General for Emergency Situations for the establishment of their own data;
k) ensure the management of the types of specific risks and the performance of support functions through structures specific to the areas of competence under the law. The organisation and functioning of these structures is determined by a government decision.

Ministry of National Defence – MApN:

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Plans and implements protection and intervention measures in accordance with the organisation of their own specific plans and joint plans with other ministries.

Ministry of the Interior - MAI** provides the following **through the District Emergency Inspectorates:

a) the transmission of forecasts, warnings and information on the occurrence of floods, dangerous meteorological phenomena and accidental pollution to potentially affected areas and important socio-economic objectives obtained from the Operations Centres of the water management systems;
b) monitoring and coordinating the implementation of alert/alarm systems for the population in the territories and periodically checking their functioning, as well as explaining and pasting signals used in emergency situations in visible locations;
c) development of programmes for the preparation of the population, protection and intervention in the event of floods, dangerous meteorological phenomena, accidents in hydraulic structures and accidental pollution, conducting exercises and training of the population and economic operators in the risk zones and checking the applicability the measures in the defence plans;
d) periodic training of local public administration (prefects, sub-prefects, county council chairs, mayors) on the tasks assigned to them in managing emergencies arising from specific risks;
e) operational intervention to eliminate the effects of floods, hydraulic equipment accidents and emergency pollution, with the technical assistance of water management professionals;
f) the preparation of operational reports on the impact of specific risk factors and the measures taken, through constant cooperation with the operational centres of the water management systems, which they submit to the General Emergency Inspectorate and the Operational Centre of the Ministry of Environment and Water, through the care of the technical support team;
g) the transmission from the Operations Centre to the Water Management System of information on the effects of dangerous meteorological phenomena (heavy snowfall, precipitation, hail, effects of drought, etc.) upon request;
h) participation in the supply of drinking water to the population from the affected areas), development and submission to the Government for approval of the draft national civil protection strategy;
j) the development and approval of drafts for specific regulations;
k) coordinating evacuation activities in accordance with the plans drawn up;
l) organising and conducting the activity of clearing the territory of unexploded ordnance during military conflicts;
m) the periodic analysis, together with the central public administration bodies, of the stages of implementation of the necessary measures to be taken in civil protection situations;
n) the development of methodological rules for drawing up internal and external contingency plans for economic operators;
o) the organisation and conduct of specialized exercises and applications;

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p) coordinating actions to limit and eliminate the effects of emergencies;
q) its cooperation with international specialized bodies.

Police stations assist in the transmission, in rural areas, of forecasts, warnings and information on hazardous weather events during periods when mayoralties and post offices are not permanently accessible;

The Chief Emergency Inspectorate is the civil protection regulatory authority.

Ministry of Environment and Water - MMGA:

a) develops a national strategy for the protection against floods, dangerous meteorological phenomena, accidents of hydraulic structures and accidental pollution;
b) makes proposals annually from the state budget for the financial resources necessary to cover the expenses for the creation and renewal of the stocks of defence materials and means, for the protection against floods, dangerous meteorological phenomena, accidents of hydraulic structures and accidental pollution in the area water management, as well as carrying out new works in the role of flood defence and disaster relief work;
c) coordinates and monitor the progress made in the single concept of hydrotechnical works with a security role;
d) coordinates at national level the activity of defence against floods, dangerous meteorological phenomena, accidents of hydraulic installations and decontamination and combating emergency pollution, follow the method of information and hydrological and meteorological forecasts of the factors concerned;
e) initiates the development or amendment of normative acts in the field of flood defence, dangerous meteorological phenomena, accidents of hydraulic equipment and accidental pollution, as well as regulations for their implementation. Controls how the legal provisions and regulations in this field are complied with;
f) cooperates with international organisations, on the basis of the conventions to which the Romanian State is a party, with regard to flood protection, dangerous meteorological phenomena, accidents of hydraulic structures and accidental pollution;
g) inspects, on an annual basis, the technical and functional condition of the hydraulic installations with the role of protection against flooding, independently of the owner, together with the units responsible for those facilities, identifying the measures and activities necessary to increase their level of safety during operation;
h) checks the establishment of stocks of materials and means of operational protection against floods by the owners of the building and local committees, as well as the way in which the funds from the state budget were used for replenishment and renewal of the stocks drawn up in the territorial units of the National the Romanian Waters Administration;
i) verifies the implementation of the repair and maintenance activities of the hydraulic structures with a role in flood protection, maintenance of water flows to ensure their drainage capacity, bridges, bridges and other works that may affect leakage, whereas there are mandatory measures for the units that have these objectives in the administration;

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k) ensures the working conditions of the Committee of Ministers and the Operational Centre with permanent activity in emergency situations;
l) co-ordinates with the Ministry of Transport, Construction and Tourism and the Ministry of Administration and Home Affairs the implementation of Decision 2850/2000/EEC at national level;
n) ensures the functioning of the "national focal point/contact point" in the regional activity of the Black Sea basin against pollution;
o) receives through the Operations Centre all operational reports related to marine pollution and participates in the actions of the Operational Command for Sea Cleaning.

National administration „Apele Române" - ANAR:

a) applies the provisions of the strategy and technically coordinate, through territorial units, flood protection activities, hazardous meteorological phenomena, accidents of hydraulic equipment and pollution control, for the purposes and activities of protecting water flows;
b) draws up plans for protection against floods and colds, for preventing and combating accidental pollution and for limiting and using water during river basin deficiency periods;
c) ensures, through water management systems, the development of county plans for flood protection, hazardous weather events, accidents of hydraulic structures and accidental contamination;
d) provides technical assistance, through the Water Management Systems, in the preparation of municipal, urban and municipal plans for protection against floods, icing and accidental pollution;
e) draws up plans for the warning and alerting of settlements, downstream rivers and lakes for the accumulation of water quantities in the event of dam management incidents;
f) ensures that flood protection work is maintained by the administration;
g) ensures the installation and proper functioning of the equipment (hydrometric and precipitation sensors) in the river basins and hydrotechnical works in the administration;
h) provides the necessary data for the preparation of studies to restore high waves of incoming rivers and centralize the elements relating to the behaviour during the water flows of hydraulic works in the administration;
i) ensures the creation and renewal of stocks of protective materials and equipment in accordance with the Framework Regulation for the provision of materials and equipment for protection against floods, frosts and incidental pollution, from the state budget and from own sources, and their storage in good conditions, for the purposes and work of the administration;
k) proposes new protective activities/works, as well as structural and functional optimisation of existing ones, as a result of the conclusions obtained after the passage of water flows;
l) proposes to the Committee of Ministers, together with the district committees, measures for targeted land drainage established in advance in the protection plans or the introduction of special measures in the functioning of the water evacuation systems;
m) provides for the management of technical support groups to manage the specific types of risk created within the county committees;

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n) organizes, together with the owners, on an annual basis, inspections of the drainage sections of bridges and bridges, of the activities for the protection and strengthening of the banks and river beds, of the areas for the accumulation of water quantities, the establishment of measures and mandatory works for the owners in order to provide the capacity to cross streams from incoming rivers;
o) ensures the associated operation of the hydrographic basin, the reservoirs for flood mitigation, and ensure that, regardless of the owner, the operating regulations of the reservoirs and reservoirs contain provisions on how to operate them before, during and after the passage of high water , as well as in the case of accidents of hydraulic structures and hydrological drought;
p) takes, during water flows, mandatory operational measures related to the use of lakes and dams, irrespective of their holders, of drainage systems, so as to maximize efficiency in operations through pool-related operation flood protection;
q) ensures, through the Operational Centres of the Water Management Systems, the dissemination of information, forecasts and warnings received from the Water Directorates, the hydrotechnical objectives of the administration and the operational centres of the County Emergency Inspectorates;
c) participates, through the Operational Centres of Water Management Systems, in alerting local committees of hazardous hydrometeorological phenomena, accidents in hydraulic structures and emergency pollution, and in preparing the population for flood protection through periodic stimulation exercises;
s) participates, in accordance with the provisions of international conventions, in organizing the protection of the Danube and other rivers forming or crossing the state border of Romania, to that end they shall also cooperate with the units managing ports and waterways, and with the neighbouring county committees;
t) ensures the production of information, forecasts and warnings on floods, icing, drought and accidental pollution of river basins;
u) takes continuous measures to improve the accuracy of hydrological forecasts and their dissemination in the operational centres of water management systems and units operating hydrotechnical activities and compare the data obtained from the network with those coming from these units;
x) identifies, evaluate, verify and clarify issues related to marine pollution and organize operational intervention;
w) ensures the transmission of information to the Committee of Ministers and the Emergency Operations Centre;
x) ensures the safe functioning of the national network for its own hydrological measurements;
m) provides, through its laboratories for physico-chemical, biological and bacteriological analyses, the determination of the nature of the pollutant and the evolution of the polluting wave.

National Institute of Hydrology and Water Management - INHGA:

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a) ensures the production of information, forecasts and warnings regarding floods, glaciation and hydrological drought and their transmission to the Operational Centre for Emergency Situations of the Ministry of Environment and Water, to the Operational Centre of the National Administration of Romanian Waters and to the Operational Centres of the Directorate the waters;
b) ensures the safe functioning of the national network of its own hydrological measurements;
c) draws up instructions for the development and transmission of warnings and forecasts regarding the occurrence of dangerous hydrological phenomena, approved by the Committee of Ministers;
d) provides methodological guidance and coordination to the national hydrological measurement network.

National Meteorological Administration - ANM:

a) ensures that forecasts and warnings regarding dangerous meteorological phenomena are produced and transmitted to the Operational Centre for Emergency Situations of the Ministry of Environment and Water, to the National Operational Centre within the General Emergency Inspection Centre, to the Operational Centre of the Romanian National Administration water 'and to the Operations Centres of the Water Directorate, as well as other stakeholders;
b) ensures the safe operation of the national meteorological measurement network;
c) develops instructions for setting critical thresholds for dangerous meteorological phenomena and for developing and transmitting alerts and forecasts for the occurrence of these phenomena, approved by the Committee of Ministers.

The District Councils, the General Council of the Municipality of Bucharest, the local councils of municipalities, cities and communes and the local councils of the sectors of the municipality of Bucharest have the following basic powers:

a) to approve the organisation of the Inspectorate and the formations for protection and emergency intervention at the level of the administrative-territorial unit, analyse annually and whenever necessary for the activity, and take measures to improve it;
b) to approve the annual and prospective plans for the provision of human, material and financial resources for the prevention and management of emergencies;
c) to participate, as required by law, in the provision of funding for civil protection measures and actions, as well as in emergency services and structures having legal authority in this field;
d) to establish, in accordance with the law, special taxes on the civil protection line;
e) to establish, in accordance with the law and with the opinion of the General Inspectorate for Emergency Situations, centres for training and assessment of the personnel of the voluntary emergency services;
f) to manage, store, maintain and ensure the preservation of equipment and protective and intervention materials through specialized subordinate services;
g) to provide the necessary facilities for the operation of the Emergency Inspectorate, their security as well as that of the Operations Centres as well as the storage space for intervention materials.

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The Technical Support Group within the County Committee has the following specific powers:

a) ensures, through the care of the Water Management System, in cooperation with the County Emergency Inspectorate, the development of a county flood protection plan, hazardous meteorological phenomena, accidents of hydraulic structures and emergency contamination by comparing defence plans prepared municipal, city and municipal emergency committees and plans for the prevention and control of accidental pollution in potentially polluting water uses and plans for limited and use of water in deficient periods;

b) provides technical assistance to the municipal, city and municipal committees for the preparation of specific protection plans;

c) approves plans for protection against floods, icing and municipal, urban and municipal emergency pollution in order to be approved by the chairman of the county emergency committee;

d) coordinates technically the actions for the management of flood-related emergencies, dangerous meteorological phenomena, accidents of hydraulic installations and accidental pollution of the territory, applying the provisions of flood protection plans, plans for the prevention and control of emergency pollution, as well as for shortfall periods providing links to the Ministry of Committee and the Ministry of Environment and Water Operational Centre for Emergency Situations, with the Waters Directorate with the County Committees located upstream and downstream in accordance with the operating information system;

e) provides specialised advice within the Regional Emergency Committee to include in the local budgets the costs necessary to create and replenish emergency supplies and supplies caused by floods, ice and pollution, and to maintain and repair of hydraulic structures with their own defensive role, as well as maintenance of river bottoms in water bodies in the area;

f) ensures through the Operational Centre of the Water Management System permanent cooperation with the Operational Centre of the District Emergency Inspectorate, preparation of daily operational reports during emergencies, synthesis reports after their termination, as well as their submission to the Operational Centre to The Ministry of Environment and Water and the Operational Centre of the Water Directorate, which transmits it to the Operational Centre of the National Administration "ApeleRomâne";

g) ensures, in cooperation with the County Emergency Inspectorate, the organisation and deployment of simulation exercises at the district level to check the functioning of the meteorological information flow of the warning and alarm message of the population, of the main information flow in case of accidental pollution; training the local public administration in managing specific types of risk;

h) ensures the annual organisation of the activity to check the technical and functional state of the hydraulic structures with a flood defence role, as well as to monitor the measures and activities established on that occasion;

i) participates in the committee set up by the County Emergency Committee in the assessment and determination of damages caused by floods of waterways, slopes, hydrotechnical equipment accidents, hydrological drought and accidental pollution.

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The Regional Emergency Inspectorate's Operations Centre has the following key features:

a) carries out analysis, evaluation and synthesis activities related to emergency situations relating to competence;

b) monitors the development of emergencies and inform, where appropriate, the Chair of the Emergency Committee and other authorities empowered to take preventive or intervention measures, proposing, by law, the establishment of alert status;

c) develops the specific concept for the planning, preparation, organisation and deployment of response actions, as well as the concept of emergency response, in accordance with internal rules issued on the basis of responsibilities for the types of risk management and the support functions performed;

d) submits proposals to the Emergency Committee, respectively to the National Committee, through the General Inspectorate, on emergency and preventive intervention;

e) follows the application of the provisions of the Emergency Management Regulation and of the specific types of risk/intervention/cooperation plans;

f) ensures the prompt transmission of decisions, regulations and orders and aims to maintain communication with the National Operations Centre, the Operations Centres with permanent functioning, with other bodies involved in emergency management, as well as with the mission's own forces;

g) centralizes requests for resources required to perform maintenance functions before and during emergencies and forward them to the authorities empowered to authorize them;

h) ensures that communications received from notifications are communicated to the subordinate structures, those with whom they cooperate and to local authorities;

i) assesses the likely impact of sources of risk;

k) manages the database of emergency situations assigned to the Authority;

l) carries out activities in the field of receiving and providing international assistance, emergency medical treatment, psychological and religious assistance;

m) fulfils other obligations in accordance with internal regulations issued on the basis of legal provisions.

INSTITUTION OF THE PREFERENCE - Giurgiu County:

- organizes and chairs the County Emergency Committee;
- regulate the organisation, distribution and functioning of the Regional Emergency Committee;
- coordinates and verifies the activities of decentralized services that are in line with the specialists of the Regional Emergency Committee.

EMERGENCY COMMITTEE - Giurgiu County:

- is an advisory body organized and managed by the county prefect;
- it includes heads of decentralized services, managers and directors of economic institutions and operators who own or manage risk sources and infrastructure;

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- informs the National Committee through the General Inspectorate of potential emergencies and the danger posed by their threat;
- evaluates the emergencies occurring in the administrative-territorial units, establishes specific measures and actions for their management and monitors their implementation;
- declares, with the approval of the Minister of Administration and Interior, the state of the alert at the county level or in several localities of the county and propose a state of emergency;
- analyses and approves county plans for providing the human, material and financial resources needed to manage emergencies;
- informs the National Committee and the District Council about the activity;
- fulfils all other duties and tasks established by law or by the National Committee.

EMERGENCY SITUATION INSPECTORATE OF GIURGIU COUNTY:

- is a decentralised public service under the authority of the General Emergency Inspectorate (I.G.S.U.) of the Ministry of the Interior (M.A.I.) specialising in emergency management;
- performs missions to prevent, monitor and manage emergencies;
- at county level, the activity is coordinated by the county prefect;
- performs preventive training and protection of the population;
- realizes the conditions necessary for survival in emergencies;
- participates in the preservation of cultural, archival, heritage, material values and the environment;
- organises and carries out operational intervention to limit and eliminate the effects of emergencies.

WATER MANAGEMENT SYSTEM (S.G.A.) OF GIURGIU COUNTY :

- an institution specialized in groundwater and surface water management, inland or transboundary, as appropriate, within the Ministry of Environment and Water (M.M.G.A.);
- prevents, controls and reduces water pollution, which can determine territorial effects;
- checks the safe and rational use of water bodies;
- ensures the conservation and restoration of ecosystems;
- develops and transmits hydrological forecasts;
- organises and implements the collection of samples from the surrounding water bodies.

3.2.4.2. Institutions and bodies involved in the risk management of: FLOODS, FIRES, SNOW OVERLOAD in Ruse Region and in the Republic of Bulgaria, and their role in Emergency Management

Legislation:

- Disaster Protection Act;
- National Strategy for Disaster Risk Reduction;

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- The current methodology is "Guidelines for the Development and Preparation of Implementation of Disaster Plans", these guidelines are given by the Council for the Reduction of Risk of Disasters before the Council of Ministers of the Republic of Bulgaria, in accordance with Art. 9 paragraph 15 of the Disaster Protection Act;
- Ordinance on the procedure for creating and organizing the activities of voluntary formations for the prevention or management of disasters, fires and emergencies and the elimination of their consequences;
- Strategy for disasters, fires and other emergency protection units in the Republic of Bulgaria.

The role of executive authorities in emergency management:

The central implementing bodies are developing disaster protection plans to fulfil the obligations set out in the National Disaster Management Plan.

The education of the population on the behaviour and emergency response and the implementation of these necessary measures for protection against disasters are organized by the mayors of the municipalities.

The coordination of the components and the unique rescue system is carried out through operational centres of communication and information of the Ministry of Interior.

Communication and operational information centres:

- Receive and evaluate emergency information;
- Notify the competent components of the single rescue system and coordinate follow-up activities on the basis of standard operating procedures;
- Notify the executive authorities of any disaster;
- Include additional forces and resources of the basic elements and other components of the single rescue system in accordance with the emergency rescue and recovery plan;
- Work at the request of the mayor of the settlement, the mayor of the municipality or the governor.

Volunteer units:

They are created by the mayor of the municipality through a decision of the municipal council.

The duties of the mayor of the municipality:

- Concludes volunteering contracts;
- Provides volunteer training and equipment;
- Provides volunteers for all insured social risks;
- Signs a training contract for volunteer teams.

The Director of the Directorate General Fire Safety and Population Protection has the following responsibilities:

- Maintains a register of volunteer units;
- Defines a unique code for volunteer units;

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- Gives a personal identification number to each volunteer;
- Maintains a register of training volunteers.

National Headquarters for Disaster Risk Reduction and Implementation of the National Disaster Protection Plan and an Interdepartmental Commission for Reconstruction and Assistance, hereinafter referred to as "the Commission", are hereby set up at the Council of Ministers. The Commission is headed by the Minister of the Interior.

The representatives of the National Association of the Municipalities of the Republic of Bulgaria and the regional governors participate with advisory rights in the work of the commission.

The Commission is assisted technically by the Directorate-General for Fire Safety and Population Protection - Ministry of the Interior.

If necessary, the Commission may also include experts from ministries and agencies from other organisations.

Disaster relief and rehabilitation includes the provision of emergency services, assistance for site rehabilitation and disaster recovery.

Emergency assistance is organized and provided by the mayors of municipalities and includes:

- Temporary feeding and shelter for victims, pets and farms;
- Distribution of clothing and household goods to victims;
- Take other necessary measures.

Emergency recovery activities are organized by the executive authorities in accordance with their functions as defined by the Disaster Protection Act, Special Laws and other provisions.

The Council of Ministers models the state's policy on disaster protection.

The Council of Ministers, Art. 62 of the Disaster Protection Act:

- Performs general disaster management;
- Adopts the National Disaster Protection Programme and the annual plans for its implementation;
- Adopts the National Disaster Protection Plan and the National Disaster Rescue and Recovery Plan;
- Introduces a national early warning system and alerts the bodies of the executive power and the population in the event of a disaster and establishes by ordinance the conditions and procedure for action during a disaster, as proposed by the Minister of the Interior;
- Provides financial resources for disaster protection.

The Regional Governor, Art. 64 of the Disaster Protection Act:

- Organises and manages disaster protection in the area;
- Organises the development and approval of the regional disaster protection plan;
- Approves the regional emergency response plan for workplace emergencies;

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- Organises and is responsible for preparing the regional administration for disaster behaviour and response and implementing the necessary protection measures;
- Coordinates and controls disaster preparedness prepared by the regional administration; territorial units of ministries and agencies, legal and natural persons in the district;
- Organises and controls the implementation of preventive measures to prevent or reduce the effects of disasters;
- Provides data on the preparation of the National Disaster Protection Plan;
- The Governor has the task of setting up a disaster prevention organisation;
- Submits to the Ministry of the Interior an annual report on disaster protection activities.

In the event of a disaster occurring in the territory of the district, the Governor:

- May implement the regional disaster protection plan;
- May declare a state of emergency in the territory of the district or part thereof;
- Exchanges information with the Ministry of Interior's communication and information centre can attract additional forces and resources through it;
- Organises, coordinates and controls the disaster relief and recovery process.

The Mayor of the Municipality, Art. 65 of the Disaster Protection Act:

- Organises and manages disaster protection on the territory of the municipality;
- Organises the development and submit for approval to the municipal council a municipal disaster protection plan, provide information on the preparation of the district plan and approve the external emergency plans;
- Organises, coordinates and implements preventative measures to prevent or reduce the effects of disasters;
- Provides timely information to the population in the event of a threat or disaster;
- Plans funds in the draft municipal budget for the provision of the activities on the plan for disaster protection in the municipality, as well as a reserve for emergency and unforeseen expenditures related to the protection of the population;
- Provides the Regional Governor with an annual report on disaster protection activities.

In the event of a disaster on the territory of the municipality, the mayor has the following powers, Art. 65 of the Disaster Protection Act:

- to coordinate emergency rescue and recovery operations;
- to establishment of a rescue and recovery coordination headquarters in the event of an emergency;
- to declare a state of emergency on the territory of the municipality;
- to exchanges information with the Operations Centre - Communication and Information Centre of the Ministry of Interior in the area;
- to involve legal and natural persons for the provision of personal or material assistance in relation to their capabilities;
- to include activities to protect and create volunteer units;

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- require coordination from the district governor;
- to organise and coordinate temporary evacuation and offer immediate assistance to victims;
- to organise and coordinates the provision of disaster relief to the population;
- to organise and controls the implementation of emergency recovery activities.

3.2.5. Legal and institutional situation in Romania and Bulgaria in the field of emergency response

Disaster management can be defined as "all knowledge of the management process oriented to maximize results with minimal effort, in the case of natural or man-made events, in the conduct of economic and social activities".

Disaster management ***is a science*** because it meets all the criteria for identifying and quantifying the theoretical elements of a disaster.

It ***is an art***, that represents a way of leading a community made up of different social categories, eras, cultural backgrounds, to a greater or lesser degree, as well as the optimal and effective use of all kinds of resources to achieve the proposed goal.

This is also an art, because the management of pre-disaster measures, and especially post-disaster actions, takes into account the effects of certain phenomena, *such as: panic, mood and psyche of people against the harsh realities, the struggle for survival and overcoming difficult moments* in social -economic plan and search for appropriate solutions in extreme situations.

Spatial planning is important when working with policymakers to ban construction in flood zones. If construction is absolutely necessary, only flood-adapted buildings should be allowed. Flood risk areas should also be identified to provide a topic for analysis of those planning land improvement work.

It is very important that you *plan your evacuation in a clear and easy to understand way, as well as confidence-building messages over time and an accurate flow of information* that needs to be disseminated to the general public. Social vulnerability, low incomes and the elderly must always be taken into account.

Rehabilitation and all post-flood action should be considered an opportunity as people are ready to learn and more easily adopt minimization measures immediately after the flood. Well-planned flood management plans and new measures to minimize the risks of floods should also be presented during this period, and it would even be possible to move a number of people. Rehabilitation should have less impact on economic growth if population spending is substantially reduced through the use of savings.

Insurance policies should encourage people not to build water bodies. Also, home buyers should be alert, especially if they are buying property in a flood zone.

3.2.6. Rules of conduct in risk situations

Emergencies are presented as exceptional events of a non-military nature, which in their scale and intensity endanger the life and health of the population, the environment, important material and cultural values, and restoration of normal state requires the adoption of emergency

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measures and actions, the allocation of additional resources. and unified management of the forces and resources involved.

The large number of types of risks, as well as their frequency of occurrence, which endangers the life and health of the population, environment, public and private heritage, determine the factors responsible for carrying out concerted actions for updating the normative acts that regulate the activity of prevention of emergency situations, with particular attention being paid to information and education of the population in order to raise the awareness of citizens about the risks in the area in which they live and to make them aware of the risks involved. native measures and the behaviour they will have in different emergencies.

Many of the effects of emergencies can be limited or even eliminated if acted upon in a timely and correct manner. However, in order to be able to act on time and to intervene properly, it is necessary to refer to the experience gained during interventions, and in the event of a disaster, it is advisable to inform the population in advance of the dangers that it may face to take measures and rules to prevent possible emergencies and to participate in exercises and simulations organized by local public authorities or professional intervention forces.

This document contains relevant information on hazards that may arise in the area of project feasibility, as well as risk control measures to mitigate their effects, including related measures provided for by national, transposed Community legislation or national programmes. It contains elements of particular importance and usefulness for subjects and citizens that must act through appropriate practices appropriate to the type of risk in order to reduce or eliminate the adverse effects caused by an emergency that may occur in the adjacent area and may affects the safety, health and even life of people, the environment, material and cultural values, etc. It is addressed both to the population and to the structures involved in emergency management, while at the same time knowledge and compliance with its provisions also guarantees a reduction in the cost for returning to a normal state after a disaster has occurred.

The best practices and rules of behaviour presented are a combination of the research presented in the specialist literature and the experience gained during the intervention forces. good practice rules cover ***three types of risk*** = *forest fires, floods, massive snowfall* = occurring mainly in the Giurgiu-Ruse area, which must be dealt with effectively, with adequate forces and means to prevent or reduce the effect of them.

3.2.6.1. Rules of conduct in risk situations during FLOODS

1. *What is an Emergency?*

An exceptional event of a non-military nature, which by its size and intensity threatens the life and health of the population, the environment, important tangible and cultural values, and urgent measures and actions need to be taken to restore normal status, allocating additional measures. resources and unitary management of the forces and resources involved.

2. *How does flood occur?*

The flood occurs when the riverbed cannot absorb all the fallen water from the sky. The waters of large rivers rise and fall more slowly than those of small rivers. In this way, in a small river basin, river waters can rise or fall in minutes or hours. In the case of large rivers, rising and

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falling of the water can take a long time. Therefore, in large rivers, the flood may continue for several days as it takes time to drain all the water that has leaked.

The flooding is due to the natural overflows of water flows caused by increased flow due to rainfall and/or sudden melting of the snow layer or blockages caused by the insufficient size of the drainage sections of the bridges and bridges, blockages caused by ice or floating pollution (waste and timber), landslides, river deposits and avalanches, as well as floods on slopes.

3. *Why are floods more common?*

Floods and landslides are largely due to the destruction of forests in river basins. Forests play an important role in protecting erosion slopes. In their absence, the slopes collapse, streams appear that destroy the banks, clog the riverbeds and lead to catastrophic water spills. The only long-term solution is the development of the forestry fund.

4. *What is directly or indirectly at risk of flooding?*

- the lives of people and their goods, as well as the lives of animals;
- social, cultural, administrative and heritage goals;
- production capacities (companies, industrial platforms, power plants, agro-zootechnical farms, fishing facilities, ports and others);
- dams and other hydraulic works that represent sources of downstream risk in the event of accidents;
- road, rail and sea communication roads, electricity supply networks, gases, sources and systems for water supply and sewerage, treatment plants, telecommunication networks and others;
- natural environment (aquatic and terrestrial ecosystems, forests, agricultural land, urban areas, etc.).

5. *Who manages flood response activities?*

The mayor. He implements the flood protection plan and proceeds to provide the technical means and materials specific to the situation.

6. *What are the responsibilities of the mayor for emergency management caused by floods:*

- to provide the staff and the necessary conditions for establishing a permanent office and verify the performance of this service;
- to provide the necessary resources and establishes the responsibilities for warning and alerting the population in flood risk areas;
- to direct flood agencies to organize periodic actions to inform the population of the risk of floods and of the measures that must be taken by each citizen to reduce damage;
- to ensure, through the flood agencies, the preparation of local flood protection plans, displaying excerpts from those plans, which exclude confidential information on the institution's website and the mayor's office;

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- to provide, through the flood agencies, centralization of data on the effects of hazardous meteorological events;
- to provide, through local councils, the necessary resources to create and replenish stockpiles of flood protection materials and facilities at the mayoralty level, to maintain and repair the hydraulic structures of their own administration and to maintain river beds in the area;
- to ensure the construction and proper maintenance of ditches and sewers, removal of timber and debris, drainage sections of bridges and bridges;
- to instruct flood agencies to publicize in public the importance of colour codes of meteorological and hydrological warnings, as well as the importance of the population's sound alarms;
- to ensure through the emergency volunteer services continuous surveillance during the water flows of sections of bridges and smaller bridges in the area of the area to prevent flooding;
- to organise, annually and as necessary, training of the members of the Local Committee on their assigned tasks for warning/alerting the population in the villages belonging to the municipalities;
- to provide the necessary resources to equip the Volunteer Emergency Services with specific materials and resources for flood intervention;
- to organise, annually and as necessary, training of the members of the Local Committee on their assigned tasks for warning/alerting the population in the villages belonging to the municipalities;
- to provide the necessary resources to equip Volunteer Emergency Services with specific materials and resources for flood intervention.

7. What measures are available to local emergency committees in case of floods?

- providing perseverance at the mayor's office with trained staff for receiving notifications, forecasts and weather warnings, for decisions of the Regional Emergency Committee;
- preparing and submitting operational reports;
- using all available means to provide priority warning and/or signalling to the population and targets in flood risk areas due to floods, slopes and accidents to hydraulic structures;
- activating operational defence operations in threatened areas, in accordance with the provisions of approved defence plans, consisting mainly of continuous surveillance of risk areas; directing the forces and means of interference, raising and strengthening the dams and shores according to the maximum projected elevations; organizes the evacuation of the population, animals and goods in accordance with the Emergency Evacuation Plan;
- taking measures to avoid or eliminate flooding of floating rubbish and ice, especially in areas of bridges and bridges, water nests, drainage waters from the built-up area of the settlements;
- ensuring the involvement of the volunteer services in the operational activities carried out by the unit specialists performing defence-related actions against floods;

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- localizing the spilled waters as well as those coming from infiltration and leakage on the slopes and directs them to the river beds, gravitationally or by pumping;
- providing additional sources of water supply to the population during periods when the water is not drinkable.

8. ***What measures can be taken by local emergency committees after the flood?***

- the re-launching of water supply facilities, the evacuation of the affected industrial and domestic wastewater, as well as the evacuation of floods and sewage from agricultural land, through the excavation of drainage channels and the installation of mobile pumping units;
- implementation of the necessary sanitary-epidemic measures;
- identification of the physical and material damage caused by the floods and the measures necessary to restore the objectives affected;
- reconstruction of communication paths of bridges and bridges, restoration of water pumping installations;
- restoration of telecommunication lines and electricity transmission;
- repair and commissioning of water, steam, gas, oil, damaged or destroyed pipes;
- launching the socio-economic goals concerned;
- assisting the population in restoring or repairing personal property that has been damaged or destroyed;
- destruction of temporary defence hydraulic works, which impedes the normal development of activities and the restoration of materials that can be used, the restoration of degraded earthworks, the elimination of damage to hydraulic works..

9. In the event of an order by the Mayor to organise/set up camp for the victims of the evacuation in the event of a flood, the following shall be guaranteed:

- accommodation of the victims, provision of water, food, necessities, medical assistance and establishing new possibilities for temporary accommodation of the victims;
- shelter, feeding and providing veterinary assistance to the animals evacuated;
- the implementation of the material security device through the commander of the law enforcement agencies.

10. What are the rehabilitation measures taken by the Mayor after the flood?

- assessment of the damages caused by floods in the territory of the administrative-territorial unit through the establishment of a local commission to assess the damages caused by the floods;
- implementation of the measures adopted by the decision of the Local Emergency Committee after the cessation of dangerous hydrological phenomena by:
- informing the population of the measures to be implemented;
- coordinating interventions to address the effects of floods;

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- organising measures to drain water from spills, leakage and precipitation;
- adopting measures to disinfect the sources and installations for water supply, as well as the affected lands;
- adoption of measures for restoration of the affected infrastructure (communication roads of bridges and bridges, restoration of telecommunication and power lines, damages to water supply and gas pipelines);
- identify the material and financial resources needed to repair damaged or destroyed homes.

11. How to prevent diseases in flooded areas?

By vaccination against typhoid fever and hepatitis A, chlorine lime disinfection of wells, houses and basements where the water flows. Water will be consumed 30 minutes after boiling. Maintaining body hygiene, avoiding prolonged exposure to cold, urgent telephone 112 will report fever symptoms, abdominal pain, vomiting.

12. *What is the most serious illness after the flood?*

Leptospirosis, a disease caused by a group of microorganisms that develops in moist soil and hot water, but withstands low temperatures for up to a year in ice. It can last up to 10-20 days in outdoor pools, up to several weeks in urine, and up to several days in food. Leptospirosis microorganisms do not withstand drought and high temperatures and are sensitive to sunlight. Disinfectants (chloramine, lime chlorides, phenol) easily destroy leptospiral microorganisms, which are also sensitive to antibiotics. Natural outbreaks are mostly low relief areas (river beds, lakes). The main animal source is cattle and pigs, but the circulation of leptospiral microorganisms is maintained by rats. The transmission of the disease from animals to humans is easily accomplished in various ways: in animal care, in contact with the urine of diseased animals, or in food containing rodent-infected products. Symptoms: chills, fever, general weakness, insomnia, nausea, vomiting, lower back pain. All patients with leptospirosis should be hospitalized.

13. What are the basic rules for behaviour and action in the event of a flood?

- receiving alarms transmitted through the civil protection system;
- listening to official information and meteorological reports;
- informing local authorities about floods, landslides, major accidents;
- holding stocks for several days;
- taking food with you in the event of an evacuation to be used on the road.

14. When the flood surprises you at home and if you have time, take the following steps to protect the property in your property:

- bring some things to the house or put them in a safe place (yard furniture, garden tools or other moving objects that can be blown away or taken out of water);
- protect the windows from being broken by strong winds, water, floating objects or flooding;

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- evacuate animals and valuables to designated asylum sites;
- lock the doors of the house and windows after switching off the water, gas and electrical installations;
- do not store sandbags outside the walls of the house; it is better to let the flood water flow freely through the base, or if you are sure that you will be flooded, proceed to the base flood yourself.

15. When the flood surprises you at home and if a flood is imminent, proceed as follows:

- move items that can be moved to the top of the house, switch off electrical appliances and leave the house with the whole family and move to a pre-established place of refuge (upper floors, roofs, heights or other high places) that cannot be reached by maximum water levels;
- in the event that you are surprised outside the house (on the street, at school, in the park, in the theatre, at the train station, on the bus, in the shop and other places), you must strictly observe the communications received and the places of refuge located the closest.

16. If the evacuation is ordered/ordered, follow the following rules:

- observe the evacuation order established: children, the elderly, the sick and, in the first place, the most endangered areas;
- turn off the water, gas, electricity and close the windows before leaving the house;
- remove the animals from the farm (stables, shelters) and direct them to places for protection;
- when leaving the house, take your personal documents, stock up on food, water, sanitary kits, lighting, radio, and in cold weather put on warmer clothes;
- when you arrive at the place of refuge, keep calm, take the seats, protect and control the children, follow the established measures.

17. When returning home, observe the following:

- do not enter the house if it has been damaged or has become unhygienic;
- do not touch the electrical wires;
- do not drink water directly from the source, but only after it has been boiled;
- consume food only after it has been cleaned, cooked and, as appropriate, controlled by the sanitary authorities;
- do not use water, gas, electricity unless approved by specialized bodies;
- assist victims of floods;
- carry out work on flood relief, cleaning the shore, cleaning the house and furniture, disinfecting the rooms, repairing damage;
- mentally and financially support people affected by floods through hospitality, donation of material goods, food, medicines.

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18. Rules and measures to be taken PREVENTIONALLY to reduce the effects of flooding:

- cleaning, expanding or constructing rainwater collection canals where there is none;
- drainage and supply of water to the sewer so that it does not stop in households and does not become muddy;
- regulation of streams, their cleaning, as well as ducts and manifolds, of the valleys, to ensure the command of the formation of possible streams;
- creation of reserve pools for catching of rivers;
- it is recommended that the owners of structures located in the direction of the floods on the slopes have channels for water capture and management;
- clearing the pillars holding the bridges and bridges from flood-borne materials to avoid the formation of real enclosures that may affect the environment or even their sustainability;
- purchase of sand-filled bags to prevent water intrusion or to strengthen the banks and dams;
- performing drainage work as a result of rainfall in areas affected by landslides to prevent it from penetrating cracks formed to prevent their reactivation;
- landscaping, shore and dike protection;
- purchasing at the level of each site pumps as they are necessary for the evacuation of water from the buildings of the institutions and the population from the respective areas, because in cases of major force majeure the forces of the Emergency Inspectorate are not sufficient.

3.2.6.2. Rules of conduct in risk situations during FIRE

1. What is fire?

Self-combustion, which takes place without control of time and space, causes loss of human life and/or material damage and requires organised intervention to interrupt the combustion process.

2. How does fire occur?

A fire always occurs when there are three elements together: the presence of fuel, the presence of substances that support the combustion, and the presence of a source of fire. It can occur in homes, both urban and rural, for industrial purposes, in agricultural areas (plains) or forests. Theoretically, where there is a fuel (a fuel substance) and an oxidizer (oxygen in the air), whenever a source of ignition may occur that can generate a fire. Where there is a fire, the phenomenon of its spread occurs. The propagation of fire is effected by burning in a surface unit of a combustible substance and by the action of factors that favour or inhibit the propagation. The purpose is to limit the spread of fire:

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- avoiding large-scale fires and their consequences, such as the loss of vital services such as communal dispensaries, communications facilities, loss of resources, and large-scale destruction of residential and domestic households.
- maintaining the stability of the structural support members so that users can leave the structure or otherwise be rescued;
- an opportunity for intervention by S.V.S.U./professional emergency services and fire control (thermal radiation from large fires can prevent fire/rescue crews from approaching).

3. Why the number of fires is increasing?

Fires are largely due to:

- the use of open fire;
- the use of defective or improvised electrical installations;
- smoking in places where there is a risk of fire;
- defective or uncleaned chimneys;
- children's play with fire;
- defective, improvised or uncleaned heating means;
- improper use of liquefied gas / gas cylinders.

4. How to prevent fires?

By:

- banning smoking in places with a risk of explosion and fire;
- prohibition on the use of matches, candles, oil lamps in fire-hazardous premises (feed stores, stables, basements, other outbuildings, bridges and bridges) and explosives (near gas cylinders, natural gas installations, storage rooms petroleum products), as well as agricultural activities - (in cereal fields, meadows ...), in forests and in the vicinity;
- use of electrical installations, electrical appliances, electrical cables, sockets, switches without improvisation/malfunction. For the elimination of defective electrical appliances and installations, consult with certified in this regard individuals and legal entities.
- chimneys are inspected, cleaned and repaired periodically by specialized and authorized personnel in accordance with the applicable legal provisions;
- LPG cylinders are used with pressure regulators (clocks), seals and rubber hoses and in accordance with legal requirements;
- ban on the storage of wood, fodder or other easily combustible or combustible materials (cylinders, oil drums, ...) in the bases of buildings;
- supervision of any fire, whether inside or outside the house;

5. What are the basic rules/obligations in case of fire?

- the person who notices the fire is obliged to notify in any way the emergency services (Unique National Emergency Call System 112), the mayor or the police and to take measures to limit and extinguish the fire as far as possible;

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- every person should provide assistance, as rationally as possible, to people in danger or difficulty, on their own initiative or at the request of the victim, to representatives of public administration bodies and to emergency services staff;
- fire extinguishers, water, sand, soil, coatings, etc. will be used to extinguish the fires;
- natural and legal persons are obliged to comply with the technical regulations and provisions for fire protection and not to endanger life, goods and environment through their decisions and facts;
- in the case of fires caused by forests, plantations, crops, stems, pastures and meadows, people in the surrounding area must immediately intervene with the means at their disposal to limit and extinguish them;
- in the case of force majeure caused by a fire, natural and legal persons who own, who in any form, land, buildings, technical installations or vehicles have the following obligations:
  - to enable unconditional access to emergency services and assistance providers;
  - to allow the unconditional use of water, proprietary materials and means of salvage, extinguishing and limiting the effects of fires that occur in one's own or other's property;
  - to adopt the measures established by the intervention commander for clearing the land, demolition or part of the construction, cutting/dismantling the vehicles, suspending activities or evacuating the endangered area and providing self-support and the means to implement these measures.

6. What we do in the event of a fire?

- Immediately report the fire - to the Unique National Emergency Call System 112, regardless of the degree of fire at the time of observation;
- Alarm staff of S.V.S.U. from the respective settlement;
- Power outage;
- Emergency evacuation of users from neighbouring areas affected by the fire;
- Evacuation of materials that may contribute to the development of fire and other valuable goods existing in the area affected by the fire, to minimize material losses in places not affected by the intervention;
- Localization and extinguishing of the fire with the first available means and ensuring protection of personnel involved in the evacuation of consumers, material goods and extinguishing the fire;
- Unblocking access routes (where needed) and providing intervention forces with access to the site of fire.

Making an emergency call ***112*** is free of charge and can be made from any fixed or mobile telephone network. The more accurate the information, the faster the intervention of firefighters will be, faster, more effective and more secure.

The person making the call to ***112*** must provide all the information requested by the operator and the call will be completed at his/her decision.

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7. What do you do if fire surprises you at home?

- Alarm all persons in the house and neighbours, exit the yard and call emergency number 112;
- If you sleep, wake everyone in the house, do not panic and help evacuate everyone;
- Close the doors, this helps to stop the spread of fire;
- Smoking is done on the knees or by pulling on the belly, because less smoke is near the floor;
- DO NOT return under any circumstances to collect documents, valuables, money, clothing, or other valuable items;
- Wait for the arrival of firefighters (*S.V.S.U., military firefighters*) near the house where the fire is.

On arrival, inform them of the situation in the house and the possible presence of other people trapped inside it. Fire fighters can find people left inside faster than you.

8. How to act after a fire?

- Care will be taken to preserve any evidence that may help identify the cause of the fire;
- Research activities and analysis of the circumstances of the outbreak of fire by the staff of the local public administration and the authorized institutions will be carried out;
- The negative effects of the fire will be eliminated by the employees of the local public administration or by specialized companies, as the case may be;
- The guidelines and regulations of local public administration bodies will be respected;
- Relatives will be informed that you are safe, otherwise the authorities may waste time looking for you;
- Entry into the building(s) affected by the fire will be very careful.

9. Who conducts the fire fighting?

The Mayor coordinates the permanent organisation of the fire intervention at the administrative-territorial unit level, ensures the participation in the intervention of the volunteer emergency service with the means for equipping and conducting the intervention, until the fire is extinguished or until the forces of Emergency Inspectorate "Vlashka" of Giurgiu County arrive.

10. What is the worst consequence of a fire?

The most serious consequence of a fire is the loss of life, and it is generally believed that deaths caused by fire events are caused by exposure to high temperatures, leading to burns. However, statistics show another deadly cause, namely the inhalation of toxic fumes and gases such as:

- carbon monoxide (CO) - the number one casualty in a fire; in the earth's atmosphere it is found at a concentration of 1 ppm (parts per million); becomes dangerous at concentrations above 200 ppm (ppm) and at 12000 ppm (ppm) one dies in 1-3 minutes;

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- hydrogen cyanide (HCN) is another extremely hazardous combustion product that is life-threatening even at concentrations of 100 ppm (parts per million);
- carbon dioxide (CO2) - a suffocating gas that causes the respiratory rate to accelerate;
- hydrogen sulphide (H2S) - Causes dizziness and vomiting;
- nitric oxide (NO) - attacks the central nervous system;
- ammonia (NH3) - comes from the combustion of nitrogen-containing substances (wool, acrylic textiles, phenols, resins, etc.) and causes death at concentrations above 0.65%;
- hydrochloric acid (HCl) - is produced by burning plastics and is lethal at concentrations above 1500 ppm (parts per million).

3.2.6.3. Rules of conduct in risk situations during snow overload

1. When does the snowstorm come?

By snow accumulation on the road surface caused by heavy snowfall or blizzards involving large amounts of snow, where the position of the road against the wind and the transverse profile favour the formation of snow accumulations of more than 0.3 m in discontinuous or continuous sectors.

Snowfall is generally of a particular nature with regard to protection measures, in the sense that these types of disasters, with rare exceptions, occur over a longer period and there is scope for some measures to be taken so that most of them effects to be reduced.

2. Why are snowfalls becoming more common?

Snowfall is the result of heavy snowfall and blizzards that can last from several hours to several days. In particular, they impede the movement of vehicles of all types, air, road, rail, agricultural activities, supply of raw materials, electricity and gas, telecommunications, etc. To remove large amounts of snow from access roads and to resume economic and social activities, a large number of mechanized means and people are needed.

3. Snow warnings and meteorological warnings

Meteorological reports and warnings regarding snowfall due to heavy snowfall/snowfall/blizzards will be accompanied by a colour code set as follows:

a) ***A yellow code warning means:***

- in the short term, traffic conditions by road (road, sea, rail) can become difficult and interruptions may occur;
- power outages may occur in the short term and in limited areas;
- damage to households can be caused.

b) ***An orange code warning means:***

- traffic conditions by road (road, sea, rail) can become very difficult and disturbances can occur, leading to the isolation of some communities;
- interruption of navigation and inland waterway traffic, ports and rivers due to reduced visibility;
- power outages may occur;
- damage to households can be caused;

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- significant damage may occur in the forestry sector;
- some damages may affect the water, gas and communication networks.

c) ***Red code warning means:***

- long-term traffic risks will be impractical for all modes of transport: rail, sea and road, seriously affecting human activities and economic life;
- many areas can be isolated, endangering the lives of residents;
- utility and telecommunications networks can suffer extensive damage for several days;
- very significant material damage can occur;
- major damage to forestry can occur;
- interruption of navigation and inland waterway traffic, ports and rivers due to reduced visibility.

4. What are the consequences of snow overload?

- endangering people's life or health;
- blocking economic activity;
- interruptions in the supply of electricity, heat, gas and drinking water;
- isolation of some areas and inability to provide food and medicines to the public and animals;
- blocking the evacuation of sick and pregnant women to hospital units;
- the deterioration of some buildings (headquarters of institutions, companies, houses, outbuildings, etc.) due to the weight of the snow cover;
- deterioration of human movement;
- damage to electrical and telephone networks connected by cables, breaking or collapsing trees due to snow weight and avalanches that can block certain roads or railways.

5. What are the organisational measures and preparatory and preventive actions for managing snowmelt emergencies established by local public administrations?

Local public administration bodies shall establish organisational measures and preparatory and preventative actions to manage snow-borne emergencies, such as:

- establishment of operational groups at the level of local institutions and public administration;
- developing stock plans for the cold season;
- providing specific equipment;
- finalising plans to repair specific winter intervention techniques;
- drawing up operational plans for winter action.

6. Who manages the intervention during snow overload?

The Mayor establishes, in accordance with the provisions of the Indicative Ordinance for the Prevention and Combatting Snowfall on Public Roads AND 525-2013, the regime of intervention for the prevention and control of snowfall and icing on public roads belonging to his administration.

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7. What are the specific emergency activities related to meteorological codes and warning codes of local public authorities (to mayoralties) in the event of a snowstorm?

a) *Yellow code:*

Local public authorities in the risk area check the viability of their winter action plans, alert structures with which they have contracts for snow removal services or staff training, check technical resources and intervention stocks, alert the population about the development of time and the need for additional supplies.

b) *Orange code:*

Local public authorities in the area at risk are interfering with structures to provide snow removal services in clearing county and communal roads, preventing the isolation of the area and ensuring normal supply conditions for the population and for economic activities.

c) *Red code:*

Local public authorities in the area at risk are interfering with structures to provide snow removal services in clearing county and communal roads, preventing the isolation of the area and ensuring normal supply conditions for the population and for economic activities.

8. What is a snowstorm evaluation/investigation?

Local government bodies appoint committees to evaluate/investigate the effects of snow accumulation caused by heavy snowfall, heavy snowfall, blizzards, and the blocking of rail and land roads that have affected road, county, and road work along the railways or traffic routes, if they are located in the administration of public space, as well as in local economic activity.

District and communal roads can be damaged in the road and as a result of the intervention, squares, roundabouts, railings, road markings and road signs may be affected. The canals and bridges may change due to the weight of the snow accumulated. Electrical and landline telephone networks and television signal cables may also be affected. The Commission draws up reports on the damage assessed and proposes normalization measures.

9. What are the recovery/rehabilitation activities after snow overload?

Local authorities (mayoralties):

- continue snow-clearing activities to unblock all settlements and ensure that supplies are provided under normal conditions;
- establishes social protection measures for the homeless, the elderly, left alone, people with serious health conditions without carers, etc .;
- apply measures for repair and re-affixing of the affected road signs on the district and municipal roads, for repair activities on railway or road routes belonging to the affected public space;
- other measure.

10. Who is considered as intervention personnel - local public administration bodies and economic operators.

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11. What is considered in the preparation of intervention staff?

- early identification of individual competencies within teams and crews in the structure, role and goals set for managing the type of risk;
- knowledge of first aid in emergency situations;
- training through exercises by staff and deployed teams;
- participation in national / international exercises in the field;
- mastering the provisions of the intervention plan in accordance with competences;
- mastering occupational safety standards during the intervention;
- providing and using appropriate protective equipment for the situation.

12. How is operational coordination at local level during high-intensity/disaster emergencies?

At the level of local public administration bodies, the activity is carried out by the structures with powers in normal working mode.

When announcing code yellow:

- contracted economic operators and intervention teams are notified of the yellow code;
- the means of intervention are started and checked;
- the strengths and resources that will act during the first intervention have been identified.

When announcing code orange:

- persistence is established at the level of mayoralties located in the alert areas;
- the county or local committees are called for emergency;
- the intervention teams are organized in circles, ensuring constant attendance and gradual intervention;
- measures are taken to identify sick, pregnant and isolated persons for transportation to hospital or safe areas;
- the intervention tools work according to the schedule and act on the allocated parts.

When announcing code red:

- persistence is provided by a person in a management position (Mayor/Deputy Mayor);
- intervention teams operate fully in accordance with the rotation schedule for rest and intervention, in collaboration with the structures that provide support missions;
- the intervention funds work according to the timetable and act on the allocated schemes and sectors.

Situations requiring evacuation?

• blocking passengers in trains and vehicles blocked in the snow under conditions where their stay in the means of travel can endanger their lives;

• blocking animals in such situations, and their shelter is necessary for the same reasons as to avoid material damage in the event of their death.

Evacuation in these cases may be carried out by rail (from the nearest stations not affected by rail traffic) or vehicles from other entities (MAI, MApN) or economic operators.

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• Isolation of terrain due to snowstorms caused by heavy snowfall, massive snowfall and blizzards, which threatens the lives of citizens with urgent medical needs.

In this case it is necessary to concentrate the efforts of all intervention forces in the appropriate place in order to provide the necessary first aid and to evacuate the victims to the hospital units.

13. What are the basic rules in case of snow overload?

- Absolutely any type of travel will be avoided if not required;
- If you need to travel, however, appropriate clothing will be taken;
- Constant information on weather conditions on radio and television;
- In order to cope at home, prepare yourself with food, water and fuel supplies and provide various means of heating and cooking;
- Prepare lighting fixtures independent of the mains;
- Keep snow cleaners handy;
- In the case of a car journey, it should be provided with snow chains, shovels, scrapers, tow cable, reserve fuel and reported to the travel destination;
- If the vehicle breaks down, do not panic, remain calm, switch on the emergency lights, turn on the lights and wait for assistance;
- Do not leave the vehicles to seek help as there is a risk of frostbite;
- Travel only during the day and use the main roads;
- Avoid overload.

14. What to do if you find yourself blocked/buried?

- The car will be towed to the right side of the road;
- Emergency lights will be switched on and a towel will be attached to the radio antenna or window;
- At night, the light inside the vehicle will be turned on so that the rescue team can find the vehicle more easily;
- The event is reported to 112, indicating where the vehicle has been blocked and will not leave until intervention/rescue teams arrive;
- The vehicle does not leave unless you see a building that can provide shelter;
- Start the engine and the heating system for about 10 minutes every hour to keep the heat inside. When the engine is running, the window is slightly opened for ventilation;
- Exhaust pipe snow should be cleaned periodically;
- The body moves to keep warm while avoiding fatigue;
- Monitor for signs of frostbite or hypothermia. Easy exercises will be done to maintain good blood circulation.
- If there are more people in the car, they will sleep in a row. Old newspapers, papers or seat covers will be used to insulate the car.
- Physical fatigue to be avoided. Cold weather loads the heart.

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- Efforts like clearing snow or pushing your car around may cause a heart attack or exacerbate existing heart problems.
- Drink enough water to avoid dehydration. Do not go out into the wind.

15. What are the specific diseases for the period?

The most common diseases are: flu, pneumonia, laryngitis, urinary tract infection, rotavirus and colds.

- Flu is a contagious respiratory infection, and symptoms appear three days after exposure to the virus. Flu symptoms include: fever, chills, sore throat, cough, runny nose and back and leg pain.
- Pneumonia is manifested by inflammation of the lungs and can be detected by fever, chills, coughing, bad breath and chest pain. In order to prevent the onset of the disease, contact with people who already have this condition should be avoided and also hygiene rules should be observed.
- Laryngitis is a viral infection of the larynx.
- Frosts are caused by cold due to cold temperatures. Frozen skin is whitish and firm. The risk factors are: dehydration, inappropriate clothing.

16. How are period-specific illnesses prevented?

The flu vaccine is the solution and can keep us out of the flu and colds in the winter. Antibiotics are not effective against diseases, except for bacterial infection.

In case of frost, suitable clothing is required.

In the case of laryngitis, cold drinks from the refrigerator should be avoided and clothing suitable for the period should be worn.

Maintaining strict body hygiene, with frequent hand washing when necessary, but especially after blowing the nose, coughing, sneezing and contact with sick people; avoid, as far as possible, human agglomerations and contact with people with influenza or those suspected to have it; use handkerchiefs for personal hygiene when coughing or sneezing, ventilate rooms and offices, maintaining a temperature of 20-21 degrees Celsius.

It is recommended to avoid self-medication and visit your family doctor in case of symptoms of flu, cold or respiratory infections.

3.3. Risk assessment

3.3.1.The concept of risk

In practice, the partners involved in the project use different definitions of risk derived from international literature. Comparisons show that different definitions ultimately have the same meaning. They only add elements to the concept of risk.

The two main definitions are:

Risk = probability X impact

isk = Danger X vulnerability

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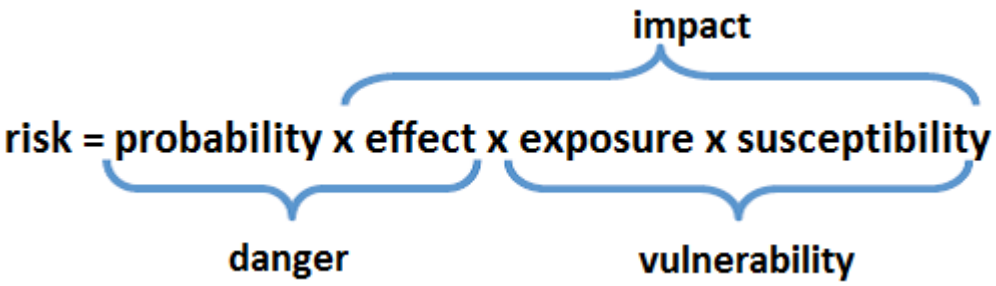
It is important to differentiate between the English terms **risk** and ***hazard***, which in some languages are translated by the same word.

If the ***second definition*** is taken into account, the difference between **risk** and **danger** lies in the vulnerability of the victims: the potential danger involves only the (*probable*) negative effect of an incident (*disaster or crisis*). The degree of vulnerability of humans and the environment to such an effect determines whether the risk is significant.

Let us illustrate this: flood itself can be considered a ***danger***. However, if it occurs in a non-populated area with no economic and environmental value, then we say that there is ***no*** or ***little risk***.

Vulnerability is a composite concept that includes *exposure* and *susceptibility*. Let us illustrate this: the degree to which buildings are vulnerable to flooding depends on both the degree of exposure (*what is the height of the water?*) And the degree to which the buildings are really affected by water (*what material are they made of and how solid are they?*).

The difference in the two definitions is in the grouping of concepts.
Combining these concepts creates the following complex definition:



The formulas are intended to indicate that risk is a ***composite concept*** made up of different components, but the results ***should NOT*** simply be multiplied. This would lead political or administrative leaders to reach unreasonable conclusions that the likelihood and impact by definition should be equally taken into account. It is important that in the **risk assessment**, both ***probability*** and ***impact*** are analysed and evaluated separately.

Each part of the risk concept is needed to identify risk mitigation measures.

An additional reason for the ***separate*** analysis of the different components of the concept of risk is that ***each*** of them can lead to different types of ***protection measures***. A risk can be reduced by overcoming the ***elements of occurrence***, underlying ***effect, exposure and susceptibility***. For each type of disaster or crisis, it is appropriate to consider which are the most determining elements of the risk and, where appropriate, ***where the greatest opportunities for reducing it are***.

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3.3.2. Risk mitigation

Within the project, what should be understood by "mitigation by reducing the likelihood and/or impact of a disaster and/or vulnerability to society". In other words, risk mitigation includes all forms of risk reduction for the various elements The distinction between risk management and crisis management is not absolute for the partners' experience. Preparatory measures for specific risks (*expectation*), such as territorial planning for access to emergency services or evacuation opportunities can be interpreted as preventative or reducing measures, but the project focuses on spatial planning and planning, but identified practical experience and many other risk reduction options. Territorial integration and planning are often the most important mitigation options. On the other hand, a successful mitigation strategy often involves a group of measures (not just territorial/spatial ones).

The common thing between ***risk*** management and ***crisis management*** measures is that we sometimes call them ***"multilayered security"***, a term that comes from the manufacturing industry. This concept is based on the principle that there are several ***layers*** of security ***around each risk***. The exact determination of layers varies by country and sector.

In all cases, the primary, ***internal layers*** relate to risk management - the structural focus on physical (safety) danger and prevention, the reduction of dangerous situations, and the minimization of impact in the actual breach of physical safety. ***The outer layers*** relate to the actual follow-up rescue and recovery operations.

Discussing the structure of safety risks and the potential for mitigation through territorial planning requires a systematic approach. Risks should be identified as early as possible and the effects of safety measures should be assessed as soon as possible. New research should be monitored and opportunities for improving safety where available. The process of mitigating risks begins with their awareness.

3.3.3. Structure and content of the risk assessment process

In the process of exchanging experience, the project partners concluded that the steps followed by all in the risk assessment are based on the same ***basic principles***. It is logical that the terminology and definitions differ in each language, but the partners agreed that there are ***3 phases*** in the ***risk assessment***, as in the international literature:

- *Risk identification*
- *Risk analysis*
- *Risk evaluation*

3.3.3.1. First phases – Risk identification

Given the definition of risk, the term ***risk identification*** is preferable to the more popular ***hazard identification***. Risk identification requires both the causes (sources of risk) and the victims (*vulnerable*) to be identified at the same time. The combination of both gives the opportunity to grasp the spatial distribution of risk, or in other words to identify high-risk places and situations. Therefore, risk identification is defined as "the process of identifying, identifying and describing existing or ***potential risk situations***."

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Obviously the first question that arises is - what are the risks **ARE** and which **ARE NOT** included? The answer may be different for different countries and municipalities, and may also depend on the actual purpose of the risk assessment. In many EU Member States, national legislation defines ***the types of risk that local authorities are responsible for***. This is sometimes specified in detailed guidance on the types of risk objects and vulnerabilities that ***local authorities*** need to address for a given risk, for example through an environmental impact assessment. In other cases, national governments instruct local authorities to evaluate a specific group of risks that may vary each year.

Through comparisons between partners, the following REGISTER /list/ of safety risks, which is usually included in the assessment, was derived:

- Natural disasters
  - *Floods*
  - *Earthquakes*
  - *Landslides*
  - *Forest fires*
  - *Volcanic eruptions*
  - *Extreme weather conditions (cold, heat, drought)*
- Technological risks
  - *Incidents with the production, use, storage and transportation of hazardous materials (flammable, explosive and toxic);*
  - *Nuclear/radiological incidents;*
  - *Disruption of utilities (gas, electricity, drinking water, wastewater treatment);*
  - *Interruption of telecommunication and information technologies;*
    - Transport risks
  - *Airplane crashes;*
  - *Ship accidents;*
  - *Railway accidents;*
  - *Road accidents.*

It is also important to take into account intentional incidents, such as ***terrorism and sabotage***. Such malicious acts of people or groups are regarded as specific, human-caused events that may relate to the disasters and crises mentioned above (often co-occurring due to the domino effect). They are a particular problem that must be weighed separately when assessing all types of risk. The likelihood of deliberate incidents requires a different type of assessment than the likelihood of natural phenomena or technological risks. Moreover, the impact of an intentional incident is often different in that it is aimed at causing the greatest possible damage.

Risk identification is a **lengthy** process aimed not only at current high-risk situations. The risks are constantly changing. Economic development can lead to new high-risk human activities. Periodic changes in land use (*spatial and urban planning measures, and decision*) may bring the vulnerable sites closer to the sources of risk, but may also offer opportunities to reduce the risk. The frequency and severity of natural disasters develop over time. Future identification plans should therefore take risk identification into account. This may include both the territorial

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development of new residential and industrial areas as well as technological developments, and changes in society that can pose new challenges. For example, we can give the impact of climate change on risks such as floods and extreme climatic conditions, the impact of new social and media technologies on the speed at which public discontent can spread, or the impact of hydrogen vehicles on risk areas around gas stations, for example.

In addition to this, it is also important to take account of past risks in the register. Incidents that have occurred, or have been avoided, can contribute to analysing the historical recurrence of certain types of disasters and crises and the real strength of their effects. Historical research can help us assess the risk of the present and reveal gaps in identifying risk.

An essential part of identifying a risk and risk register is presenting it with its ***geographical component of the so-called risk card***.

Based on the partners' practical experience, various advice can be given.

When creating a risk card, careful consideration should be given to its reusable potential. Demand determines supply: A risk map that is designed for a particular application may in practice present additional needs. They may not always be easily satisfied if not taken into account in advance.

Common ***examples of using risk mapping are:***

- as a means of planning and determining risk mitigation policy;
- as a means of communication with citizens about risk;
- as a means of licensing high-risk activities;
- as an operational tool for crisis commissions to determine the location and (possible) effects of incidents;
- as an operational vehicle for ambulance vehicles.

Different types of applications create different searches for the quality and accessibility of the risk card.

Reusing it for the most part will result in better card quality, but this is not always desirable and achievable. Therefore, consideration should be given to setting the goals of a risk card.

The reusability requirements must also be taken into account as well as the extent of the risks involved: what types of disasters or crises (*initially*) have been taken into account or not taken into account. The chance of a successful project is greatest when the goals are realistic. It is a good idea to start with just a few risks and a few layers of the map and not expand until you have completed the initial steps.

Those who have the information need to dynamically update the data. For all types of card use, basic information must be updated. A risk card should always be up-to-date. Obtaining information directly from the source is the best guarantee of its accuracy. An agreement with the "holders" of information is needed to update the data and directly design the new information on the risk map. A risk card usually includes information from different sources. This is why managing information is not a single institution's task, but requires the cooperation of the entire network of partners, often both public and private organisations. It is good if all parties are aware of the importance of the card with the risks to their organisation.

- ***Just one risk card does not guarantee public awareness of the risk***

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Public access to a risk map is ***only the first step*** towards awareness of risks ***by citizens, organisations and businesses***. Only with an effective communication strategy is it possible to achieve a good use and understanding of a risk card. Even then, it is not certain that people will actually take action to prepare for disasters. An important lesson is that in the end, the risk card is most effective if it offers concrete steps to take in the event of different types of incidents. Without such information, knowing the risks in your environment can be a "burden" to the citizens above all else - why pay attention to the risks in your neighbourhood if you cannot take action on your own? To understand the real information needs of residents in the neighbourhood, you need to carefully consider public involvement in the risk map development process.

- ***Guaranteeing the rules for the security of classified information;***

Certain risk information can be misused when planning terrorist attacks or sabotage. Therefore, the question of whether or not to publish a risk card should always be considered during the design process. The importance of transparent risk-taking communication must be weighed against the chances of any abuse. Another consideration is that usually most of the information on the risk card is already freely available through other means. In this sense, the risk card is often not an additional security threat. Information that is truly classified or strictly confidential requires a security strategy.

Different levels of access to the risk mapping system need to be introduced. This may be necessary even at the risk of cards being used only by professionals, as hundreds or even thousands of professionals need access to.

- ***Risks do not recognize artificial limits;***

Each risk card has boundaries. However, the risk does not respect the administrative boundaries created by man, and often even the natural boundaries. Disaster in one area can often directly affect another. Recent volcanic eruptions have shown that in some cases the effect can be felt for thousands of kilometres. A public administration, whether local, municipal, regional or national, should always take into account the provision of information about potential risks that go beyond its borders. Especially for the risks that cross borders between EU member states, ***the Helsinki Treaty stipulates that governments should inform each other of the dangers arising within 15 km of the country's borders***.

3.3.3.2. Second phase – Risk analysis

Risk analysis is ***the second step*** in risk assessment. This step can be defined as "a process for determining the nature and relative power of risk." The aim is to prioritize the risks that most need political attention. The approach to this step is determined by the notion of risk that underlies it.

According to the UN, for example, risk assessment is aimed at identifying hazards and vulnerabilities. The European Union uses this definition but focuses on assessing probability and impact. As already stated, ***both definitions*** of risk actually ***reflect the same factors***. However, the choice of a definition has its implications when presenting the risk analysis. In some cases, risks are classified according to danger and vulnerability, in others - by probability and impact. The project presented ***examples of both approaches***. One approach is not necessarily better than the other, but when choosing a method, it is important to know the difference between

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them. As a general rule, the ***hazard and vulnerability*** approach is particularly useful for a separate analysis of natural disasters (*single risk approach*), since humans cannot influence hazards such as earthquakes, volcanoes and extreme climatic conditions. For these risks, it is especially important to focus on appropriate vulnerability analysis (*people, economy, ecology*) as they are the only risk reduction options.

On the other hand, the *likelihood and impact* approach is appropriate for simultaneously analysing different types of risk because it enables the results to be presented through a chart that facilitates opinion leaders in a transparent comparison of the relative strength of a given risk. This is also called the ***"multi-risk approach"***.

- ***Single risk approach:***

In the single-risk approach, the ***focus is on risk analysis (disaster or crisis)*** of a particular type, usually in a given geographical area and over a period of time. There are many examples of this type of analysis, such as *forest fires, floods and landslides*. This type of risk analysis aims to identify which of the identified areas are most at risk in order to implement a ***risk and/or crisis management policy***.

The methods for ***single-risk analysis*** are very different. For example, the risk factors for forest fires are different from those for floods. The results of such risk analyses are the most difficult to compare. On the other hand, such a risk-specific approach can contribute to more targeted policies than the general approach.

- ***Multi-risk approach:***

In the ***multi-risk approach***, in principle, all possible safety risks (from the list presented above) could be considered simultaneously. This means, for example, that risks such as ***explosions*** must be made comparable to ***social unrest***, or major ***infectious diseases***, to the disruption of ***utilities***. In order to be able to compare completely different risks in a multi-risk approach, some criterion is needed to measure the consequences of risk to the "vital interests" of society. The concept of ***"vital interests"*** has been used for a long time by several countries and is now also part of the proposed common approach to national risk assessment in the EU.

A commonly used method of ***multi-risk analysis*** is the so-called ***scenario analysis***. Insights into present and future dangerous situations do not necessarily translate as risk analysis. It is impossible to try to analyse hundreds and even thousands of dangerous situations separately. Instead, in scenario analysis, a ***scenario is developed according to each risk category***. The main reason for using scenarios as a risk assessment tool is the ability to define the critical elements of a disaster or crisis ***as the basis for strategic policies***.

Scenario analysis allows the identification of the most important factors that can be overcome by a disaster or crisis - both by reducing the risk ***(likelihood, impact and vulnerability)*** and by disaster preparedness.

- ***Different types of risk may require different types of analysis:***

It is important to assess in advance which approach meets the objectives of the risk assessment. Sometimes the risk is obvious and a priority, so there is no need to compare it with other risks. In this case, a single-risk approach is the best option for risk localization and policy-making. The exact method for such a single-risk approach depends a lot on the risk

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characteristics identified. In other cases, it is more appropriate to undertake multi-risk analysis in order to prioritize the risks to be addressed.

- ***Focus on the need for current risk policies:***

Risk analysis ***is not an end in itself***. It is a ***means of prioritizing risks*** in order to focus available financial and human resources, as well as political attention to the "right" risks. In addition, risk analysis is a way of identifying policy decisions. Effective risk analysis helps to understand the nature of risk while identifying opportunities for improving risk management and crisis management. ***The scenario analysis*** is used for this purpose. It seeks ***cause*** and ***effect***. This makes it possible to identify targeted strategic and policy measures for all aspects of multi-layer security and for all types of impacts.

- ***Developing a network of partners:***

Risk analysis requires information, expertise and experience. No public administration directly disposes of all this within its organisation, which is even more valid for small municipalities, such as these participants in this project. Therefore, ***risk analysis always requires close cooperation AT LEAST by several public and private organisations***. Public administrations need to develop ***networking skills*** and good relationships with all partners. A good affiliate network will serve not only the purposes of analysis, but also the real implementation of policies and investment of funds in achieving the objectives of the project.

- ***Organising the structural implementation of risk analysis processes:***

Just like risk mapping, ***risk analysis must be a continuous process*** as risks change over time. The implementation of early risk management policies ideally leads to an adequate risk analysis that demonstrates the effectiveness of the measures. This may lead to new political priorities in the field. It is therefore important to maintain the awareness and competence of the authorities responsible for risk analysis processes.

3.3.3.3.Third phase – Risk evaluation

The third last phase of risk assessment is called ***risk evaluation***. At this stage, the conclusions of risk identification and risk analysis ***are provided to policy makers and opinion leaders***.

Risk and crisis management is not intended to achieve ***absolute security***, but is ***part of a socio-political assessment***, hat takes into account the public interest in risk activities. For ***example***, modern society ***could not do without dangerous substances***. It is also inconceivable that people living in areas susceptible to floods, landslides or volcanic eruptions be completely evacuated. Ultimately, *the **goal** is to achieve a level of security that is **acceptable** to both politicians and citizens*. This means that politicians and administrative leaders will always have to evaluate the results of any risk analysis on the basis of ***their own value system and preferences***.

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In order to decide ***which*** of the analysed risks ***should be selected*** as a priority, many different criteria should be taken into account, ***such as:***

- public awareness of the risks and concerns of residents;
- the relative importance of vital interests: ***for example***, for one leader, the risks with potentially many casualties may be most important and for another, the risks with severe economic or environmental consequences may be a priority;
- existing policy priorities and programmes: ***for example***, existing risk reduction programmes;
- instructions from higher levels of government: ***for example***, national priorities and budget allocation;
- prestigious projects such as new homes or industries;
- quick profits: cheap measures that have significant benefits;
- the economic importance of certain risk activities;
- imbalance between risk level and actual disaster preparedness.

Security professionals should carry out an objective risk analysis, but they should be aware that decision makers will interpret the results based on their own subjective political preferences. Therefore, it is an option to **ask** the decision makers ***explicitly*** about ***their subjective evaluation criteria***.

3.4. Completing the risk register

The risk register was created with a product of Microsoft Office 2013. The Access 2013 application provides the ability to build databases. Through it, after defining the required functionality and the data needed to create and maintain a risk register, 9 units were built. the correlation tables shown in Figure 1.

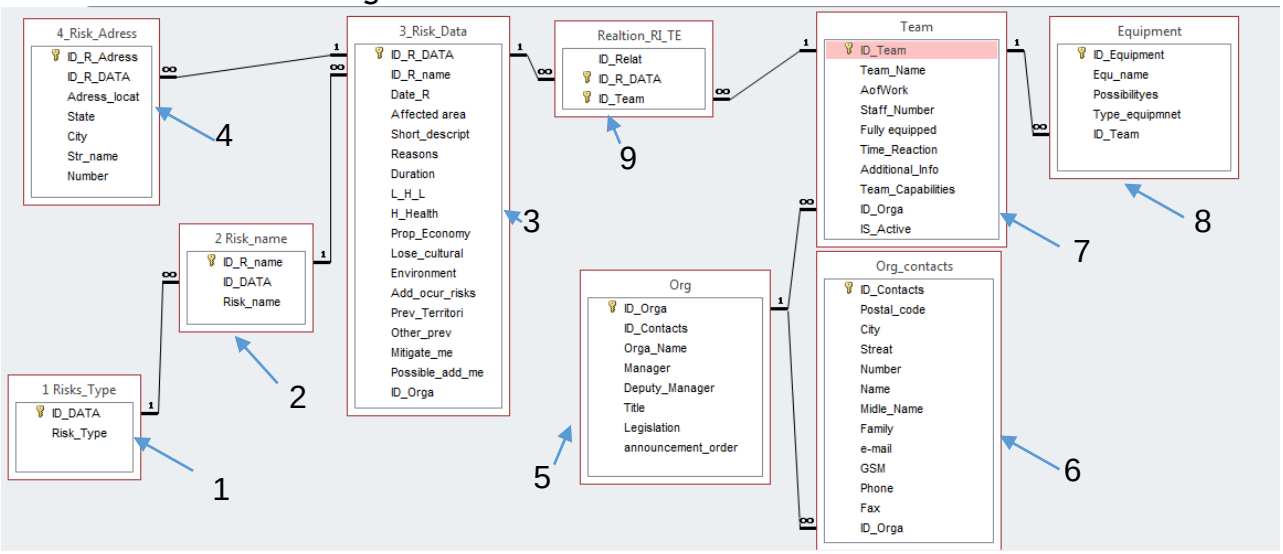

Figure 1

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The basic concept of the established database for the risk register consists of the following components:

- ***Type of risk*** - when developing a strategy for better coordination and effective responses to a joint cross-border partnership /Strategy/, the types of risks that may occur on the territory of the cross-border municipality of Tsenovo and the communes of Hotarele and Greaca are defined. The types of risk identified were Natural Disasters, Technological Risks, Transportation Risks, Intentional Incidents and Medical Risk. The risk types are listed in Table 1 Risks_Type (indicated by arrow number 1 in Figure 1). Each type of risk can be subdivided into several sub-types, as indicated in ***Table 1***.

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Table - 1

Risk type	Risk name
Natural disasters	
	Floods
	Earthquakes
	Landslides
	Forest fires
	Volcanic eruptions
	Extreme meteorological conditions - snowfall and overload
	Extreme weather conditions - heat, drought
Technological risks	
	Incidents involving the production, use, storage and transportation of hazardous materials (flammable, explosive and toxic)
	Nuclear/radiological incidents
	Disruption of utilities (gas, electricity, drinking water, wastewater treatment)
	Interruption of telecommunication and information technologies
Transport risks	
	Airplane crashes
	Ship accidents
	Railway accidents
	Road accidents
Deliberate incidents	
	Terrorism
	Sabotage
Medical	
	Infectious diseases in humans
	Infectious diseases in animals

- ***The risk types*** are summarized in table ***„2 Risk_name"*** (indicated by arrow number 2 in Figure 1), which is linked to a key field in the risk type table.
- The basic data for the construction and operation of the risk register are defined in table ***„3_Risk_Data"*** (*indicated by the arrow number 3 in figure 1*).
  The data contained therein is shown in ***table - 2***.

Table - 2

Date	
State/Region	
City	
Street	
Number	
Affected area / origin point (GPS coordinates)	

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Short description	
Causes of occurrence	
Duration Period of Event / Disaster(Duration in days)	
Loss of human life	
Damage to human health	
Significant damage to property and / or economy	
Losses of cultural heritage	
Significant environmental impacts associated with soil, water or air pollution by chemical, biological or radioactive substances and materials or the destruction of species.	
Additionally occurred risks	
Preventive and territorial development protection	
Other preventive protective measures	
Measures taken to mitigate	
Used human resource	
Used equipment, machines, specific equipment	
Possible additional mitigation measures	

- As the risk may occur in several places at the same time, it is envisaged that many addresses can be stored as parameters of a risk situation (*table indicated by arrow number 4 in figure 1*).
- When a risk situation arises, there should be a reaction from the responsible departments and authorities. An action plan for natural and man-made disasters may be introduced, and the forces and resources previously enrolled in the plan may be drawn accordingly. Accordingly, in the risk register, there is a place to enter data for teams equipped with the appropriate technical support for action in risk situations. The data for the organisations to which the teams belong and the technical support are organized in ***Tables 5 to 8 of Figure 1***.
- ***Table - 9*** is intended to link the risk register and the team data provided for in the natural and man-made disaster plans.

3.5. Risk response

The effective **response** to natural disasters is ***predetermined by the cyclical nature of risk management***, as an essential component of preventative ***preparation*** and lasting ***recovery*** after their occurrence.

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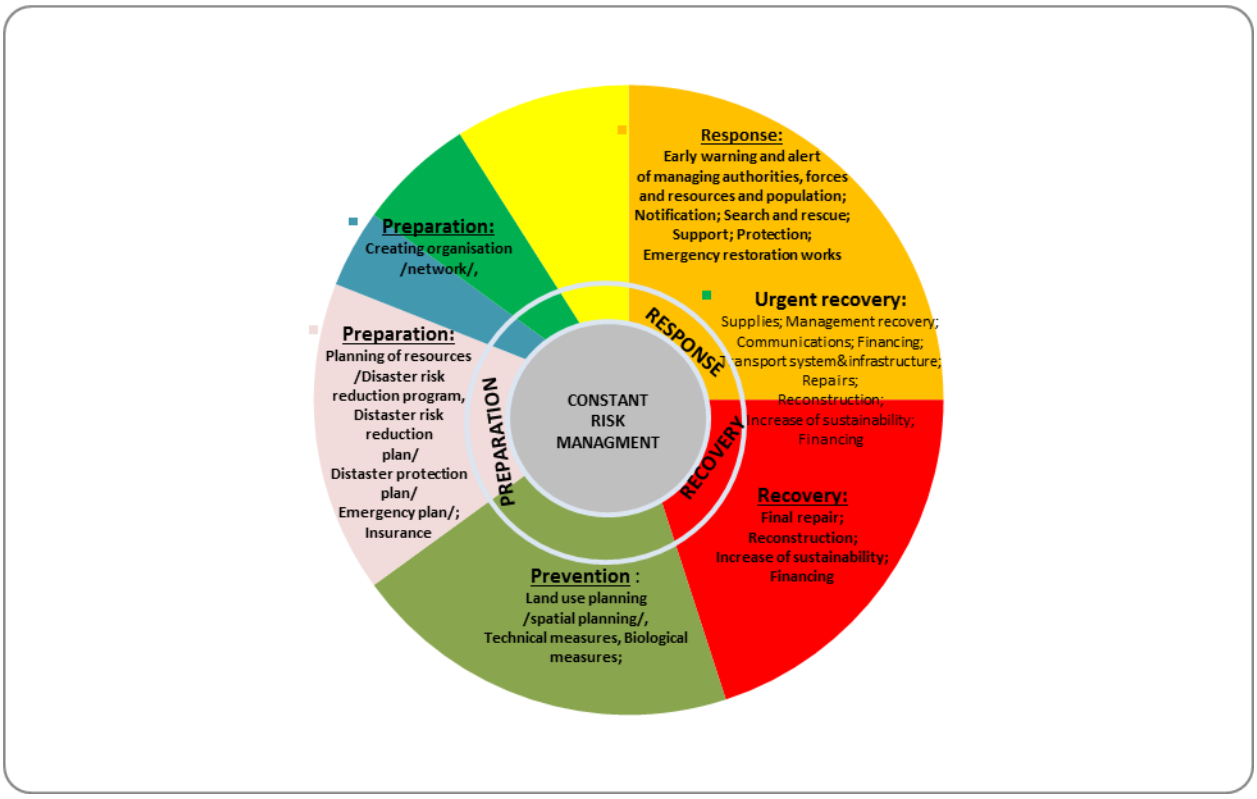

The process of planning and implementing mitigation policies will be considered **here***:*

- How can the conclusions of the risk assessment be translated into concrete and feasible policy decisions?
- How does mitigation planning and implementation work?
- What are the opportunities for attracting attention to the safety and protection of the population in case of significant territorial changes?
- How can local authorities coordinate their risk management policies with those of other territorial units, public and private organisations?

Key factors /*tools*/ affecting the ***response*** to natural disasters /*and to a much greater extent*/ for better coordination and efficient response of a joint cross-border partnership between the municipality of Tsenovo on the Bulgarian side, the communes of Hotarele and Greaca on the Romanian side.

3.5.1. Financing

The first prerequisite for the implementation of a plan is, of course, resource /*financial, personnel and material-technical*/ security. Once the objectives have been set and the measures of the disaster prevention plan are clear, the parties concerned need to know what their contribution will be. In the end, it comes down to the actual allocation of budgets, to attracting the right experts and using the available material resources.

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The general conclusion is that, especially in cross-border areas, ***it is not easy*** to get into ***the different types of budgets for disaster mitigation***. Budgets that are specifically set for disaster relief are very few, while at the same time such measures can be financed by many other common costs that do not specify risk prevention tools. The overall exchange of experience between project partners shows that budgets set for disaster prevention ***vary widely*** in municipalities/communes and states, not only in size, but also in their relative share of municipal and general state budgets.

In any case, the overall amount of budgets set aside ***explicitly for disaster prevention*** is relatively small compared to territorial and infrastructure development budgets. While ***territorial development*** budgets are measured in millions /*billions*/, disaster prevention budgets ***are limited to the tens, hundreds of thousands*** /*millions*/. On the one hand, this is understandable in terms of social impact, but on the other hand, it shows that the financing of disaster prevention measures, as part of territorial development projects, is negligible given the overall cost of such projects. Therefore, it is unrealistic to negotiate with a municipality or ministry for the provision of a safety budget along a railway line, for example, when, at the same time, the value of contracts with railway line companies is hundreds or even thousands of times greater..

Another topic to be discussed is that many risks are caused or exacerbated by the implementation of measures for territorial development /*spatial planning, land use*/. This is not only where territorial development leads to the emergence of new risk (*such as an industrial area or increased transport of hazardous substances*), but also when new vulnerable sites (*residential buildings or schools*) are constructed close to existing risk sites. created by humans or in an area threatened by natural disasters.

Therefore, ***the overall conclusion*** is that more attention needs to be paid *to the extent to which security measures are part of territorial and infrastructural development, including financially*.

Discussing the financing of risk prevention measures, the project partners reached ***the following conclusions:***

- **Integrating disaster prevention into other budgets and creating public-private partnerships**

A major factor in funding *disaster prevention measures is to try to integrate them into projects funded by other budgets*. It is not only a matter of paying for the risk that is created, but also of reducing costs by integrating safety measures with other construction activities.

For example, during a road reconstruction, ***it can be raised above flood levels*** to function as an ***evacuation route*****.** Highway noise walls can be used at the same time to reduce the effects of an explosion or explosion. There are innumerable possibilities for ***combining safety measures*** with the necessary construction activities as long as the partners agree to consider them. This requires close cooperation between public administrations, and often public-private partnerships.

Thus, we come to ***the second conclusion:***

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- **Search for common interests and situations in which everyone wins.**

Another factor in the success of funding is the creation of ***public-private partnerships*** or strong cooperation between public institutions. In order to convince interested public administrations and even private companies that they need ***to transfer budgets*** from other sectors or projects ***to risk prevention measures***, it is important to clarify their benefits. It is necessary to find common interests in defining the measures.

For example, a forestry company can easily understand the need for fire prevention measures because forests are part of its commercial interests. Similarly, every municipal government (*government*) should be able to understand the need for security/safety measures, for example, to prevent the overall loss of infrastructure due to a dangerous goods incident, not only from the perspective of potential victims, but also and to reduce the potential harm to the national economy as a whole.

Nevertheless, the creation of ***cross-border partnerships*** means more than sharing common interests. It also involves identifying situations where everyone wins: even if the interest is not mutual, certain risk prevention measures can simultaneously contribute to the achievement of different goals. ***For example***, reducing existing risks may increase the value of the terrain and its opportunities for use, or the preparedness for disaster management, combined with environmentalists, can improve nature conservation.

- **Organising early inclusion (third conclusion):**

Part of the ***RISK-R*** approach is ***early inclusion***. The identification of common interests must be carried out at ***the earliest possible stage*** and involve measures aimed at spatial planning and the prevention of natural hazards. The ***second step*** is to ***collaborate on risk assessment*** to build a common understanding and awareness of the problem. It is advisable, without haste, to involve the relevant partners in the targeting phase in order ***to be able to compare policy objectives related to disasters with those pursued by other interests***.

- **Utilizing the findings of the Cost-benefit analysis (fourth conclusion)**;

As explained above, it is ***advisable*** to carry out a ***cost-benefit analysis*** in order to choose the right prevention strategy. This analysis also helps to ***identify opportunities*** for financing risk reduction plans.

On the one hand, this analysis gives a clear idea of the initial investment for the implementation of safety measures, the structural maintenance costs and the depreciation period. This determines which budgets are available at what time. On the other hand, the ***cost-benefit analysis*** shows how either party will benefit from the security/safety measures.

In order to find suitable financing, it ***may be*** helpful to look at the ***balance*** between those ***who pay*** and those ***who earn***. If a sector or stakeholder ***has many of the intended benefits***, it is ***logical that they should be involved in the risk mitigation strategy***. However, this is not always necessary in advance or another option is to ***agree to reinvest the benefits in future risk mitigation projects***. Such forms of solidarity of the winning countries can persuade the paying countries to play their role.

- **Organising cooperation beyond administrative borders (fifth conclusion).**

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The difficulty of applying the "solidarity principle" described is that, in many cases, the benefits and costs are at different *(territorial)* levels, as well as the risks themselves often go beyond administrative borders, especially for cross-border regions.

For example, in the case of river floods, upstream prevention measures can reduce downstream risk. Or a particular route for the safe transport of dangerous goods may reduce the risk in one part of the territory at the expense of another. This way of 'problem-sharing' ***requires cross-border cooperation and funding from local /municipal/ EU Member State governments***. This is not an easy task because the usual tendency is for public administrations to adhere to their formal responsibilities for the territory they are responsible for.

This leads us to the ***second success factor*** in implementing disaster prevention strategies:

3.5.2. Networking

The number of scientific theories for networking is unlimited. However, the ***project should focus*** on the practical lessons and best practices of local, national /regional/ administrations in each country. Without claiming to "undo" scientific theories or even include them, the first result of discussions with project partners is the common practical approach ***to start networking*** - ***evaluating*** the network. The steps of such an assessment are comparable to those of the ***risk evaluation*** (see above) and the ***evaluation of opportunities*** (see above).

THE FIRST STEP is *to identify the network* - to identify all the key actors involved in the decision-making process. The main areas in which stakeholders need to be identified, ***are international and national legislation, local regulations, the allocation of*** *(financial)* ***resources and the actual setting of political objectives***.

THE SECOND STEP is to prepare a network analysis: to determine both ***the formal***, as well as the ***informal relations*** of local /*municipal*/ executive authorities, the administrative-territorial structures at all levels of government of all identified stakeholders.

For example, is there a certain hierarchy in decision making, are there formal consultation meetings or formal procedures to be followed, ***does any partner have veto power***? Which organisations are a natural partner of the network, which key players have good informal connections? Кои организации са естествен партньор на мрежата, кои ключови играчи имат добри неформални връзки?

THE LAST STEP *is an assessment of the network - deciding which stakeholders are "most important" to be involved and how*. To this end, it may be useful to define some specific decision-making criteria, and in smaller networks the assessment can be done quite naturally and based on existing experience.

- **Especially important: the network is created as early as possible.**

Networking is presented here, ***as part of the implementation of disaster prevention strategies***, but in reality it should start at a much earlier stage in this process. The best way to get support in disaster management is to ***build a common understanding of the problems available***. Adequate ***risk awareness by all partners involved*** can be achieved by including them in the earliest stages of risk assessment.

- **Maintaining the network.**

Networking is a ***structural activity***. Keeping in touch with partners only when they need it will cause tension. **We recommend** that you keep in touch with them, *even when you do not*

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need to, and build a structural relationship in which you depend on each other. To rely on each other and help, regardless of the circumstances. And above all, stick to the word given, because lost trust is hard to win.

- **It starts with clear arrangements for the process.**

At the beginning of the risk prevention process, it is important to know the commitments of all partners and what each of them can expect. At what points in the process will be consulted, how will formal decisions be made, what expertise is expected from each municipality /municipality/ organisation? A ***transparent co-operation agreement or a general statement of principle*** can make the process itself smoother and significantly improve support for achieving the best possible end result.

- **Thinking and discussing in advance who pays and who benefits?**

Ideally, part of the network analysis involves "who pays and who benefits". However, do not ***wait*** for this until the cost-benefit analysis phase as it will ***delay the disaster prevention process***. Therefore, it should be outlined who pays and who benefits generally at the outset - ***what can be the expected benefits and costs?*** Then that they will know the potential "partners and opponents" and will help to think about ***the strategy of how to unite around the idea***.

- **Work for common interests and goals**

Attracting partners to the network requires ***knowledge of their needs, capabilities and a common understanding of the issues***. As we have already explained in the financing section, ***it is again very important to consider all options for finding common interests and goals***. In order to ***form a network***, it is not always necessary to agree on everything - ***even just one common interest may be sufficient to cooperate on a particular policy*** over a particular period of time. Therefore refine your interests to the point where you can reach an agreement. A partner ***may in principle, oppose costly preventative measures***, but in this case he may still be convinced that it is in his interest.

- **A network of expertise is organised**

Networking and network management skills are much different than traditional civil protection /security/ skills. Professional risk expertise in some cases ***can lead to persistence*** in front of partners that they "do not understand" the need for risk management from the beginning. It is therefore ***important to be clear about the different roles*** in the disaster prevention process and the different competencies required to do so. This is first and foremost a problem, ***when networking becomes lobbying and advocacy for specific strategies*** for disaster mitigation.

3.5.3. Lobbying and Advocacy

Advocacy *is a process of trying to influence public policies and decisions to allocate resources within political, economic and social systems and institutions.*

Lobbyism *is a specific form of advocacy that seeks to influence decisions on laws and regulations.*

The project partners found that in some cases, advocacy may not be focused solely on influencing local /state/ policy, but also on ***influencing private organisations' policies***. From

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the point of view of local safety authorities, influencing private partners "to do their job" is actually quite important.

To ensure that risk mitigation policies are made and to improve co-operation and implementation of related plans, it ***may be necessary to develop a lobbying and advocacy strategy*** as part of the risk mitigation process.

It is a popular concept that ***lobbying and advocacy are more or less "corrupt" activities***, because they are often motivated by commercial interests. There are ***numerous examples*** of private companies ***influencing*** public policies ***to their advantage***.

On the other hand, lobbying can be motivated ***by moral, ethical or religious principles***, which are much higher than personal gain. In the general perspective of a well-functioning democracy ***advocacy practices*** are part of the ***"balance of power"***, that guarantees that conflicts of interest are political. In cases of disaster prevention, often the ***main conflict*** of interest is between fundamental vital interests of society – ***protection*** /*safety*/ against ***economy*** or ***protection*** /*safety*/ against ***environment***

Another reason why lobbying and advocacy are important for disaster prevention is the fact that there is no single government body responsible for all phases of this process.

In order to implement ***prevention strategies***, ***the cooperation of all stakeholders*** is needed. This means that everyone must be convinced of the importance of the goals set and their contribution to achieving them.

As described above, in many cases even ***co-financing*** from other stakeholders is required, and this ***requires advocacy***.

- **Examples of lobbying and advocacy**
  - media campaign;
  - public speeches;
  - participation in public hearings;
  - publication of (scientific) studies;
  - publication of articles, brochures, etc..;
  - public opinion polls/referendum;
  - on-site visits to explain a decision;
  - consultations/meetings between decision makers at different bodies;
  - involvement of decision-makers at the beginning of policy-making processes (*i.e. in a steering committee*).
- **Knowledge of the processes of lobbying and advocacy**

Security /*safety*/ is often in conflict with other vital public interests. Mostly different stakeholders and organisations try to influence public order at the same time. For economic and commercial interests, lobbying and advocacy are traditionally common. It is recommended that civil servants working in the field of security and spatial planning are familiar with the processes of lobbying and advocacy. Each one that you can be lobbied by others, but also that you can play ***your own role*** in convincing politicians of the importance of mitigating risk.

- **Preparedness and creation of a "window of opportunities"**

Lobbying and advocacy create a "window of opportunity". Seizing the opportunity when public fears or incidents arise makes it easier to include disaster prevention on the political

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agenda. In such cases, we must be prepared with a dossier with objective information (*facts and figures*) about the risks and a clear overview of different professional opinions.

It is a good idea to consider in advance a ***public speaker***. **For example** when lobbying before a municipal council /*government*/ for specific disaster relief measures, the mayor or the governor/prefect may act as a public speaker on behalf of the partner network.

- **Risk awareness advocacy**

Support for disaster relief begins with an awareness of the nature and extent of disasters. Advocacy should also include risk awareness activities for the general public as well as key stakeholders and political actors in the decision-making process. This proves the importance of carefully considering advocacy throughout the process, not just the ***"risk assessment"*** stage. Stakeholder engagement and the general public in risk assessment enhances their understanding and support.

- **Public-private partnership advocacy;**

Close public-private partnerships are needed for almost all disaster mitigation plans. Advocacy processes must envisage activities to improve understanding of the need for and subsequent desire for cooperation.

- **Striving to influence political paradigms;**

Risk mitigation ***advocacy should have a greater purpose*** than the goals of a disaster prevention plan. As mentioned above, ***it is important that safety/security*** become one of the factors in territorial and economic development as a whole. This means a ***change in the political paradigm*** in such a way that the early inclusion of security in spatial processes is seen ***as a benefit*** and ***NOT a cost***. It may also be necessary to pay more attention to disaster prevention than to subsequently addressing it.

- **Lobbying related to national and European legislation must be effective;**

In many countries, disaster mitigation is not yet regulated in territorial development legislation. If this can be achieved, the impact will be much greater advocacy for the implementation of a risk management plan.

It is paradoxical that the existing complex legislation in Bulgaria and Romania sometimes fails good cooperation. Of course, official safety rules are respected if the monitoring and implementation of the strategy is properly organized (*see below*), but while the security /*safety*/ rules are intended to determine the minimum level of protection /*safety*/, they could ***inadvertently*** make the ***minimum, maximum***. After all, why should additional measures be provided if all the formal requirements are met? The ***problem*** is that the main opportunities for risk mitigation in many cases arise ***outside the formal legal obligations***. Therefore, ***the main objective of lobbying*** in national and European legislation should be to ensure that the issues related to security /safety/ are included in territorial development processes.

- **Forming alliances;**

A strong coalition of different partners for all kinds of ***lobbying and advocacy strategies*** increases the chances of success. Together we are stronger! ***Local and regional authorities have traditionally worked together*** to influence national ***disaster prevention policies***. However, effectiveness can be enhanced if public-private partnerships are implemented in these types of advocacy. Alliances can be formed with ***development agencies*** or

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undertakings that join the ***public risk reduction target***, or with ***universities and academics*** that provide objective information about the risks and measures to prevent them. Also, citizens who are concerned about physical safety in their environment can be a strong partner in the union.

- **Authorizing other people;**

Often, you do not need to engage in a public debate personally as a security /safety/ specialist. Empowerment can be much more effective by helping others influence policy by providing the necessary objective information by contacting relevant stakeholders, helping to identify common goals in the terminology that decision makers understand.

- **Consider making ecology a "natural" safety partner?**

Both ***for protection*** /*safety*/ and ***the environment***, the most important opposing interest is economic and commercial profit. However, ecology can counteract risk prevention processes when conflicting ***protection*** /*safety*/ interest interests do not become transparent. This is mainly ***the cases of natural*** disasters such as forest fires and floods, for which some ***mitigation measures*** may ***conflict with*** *(traditional)* ***methods of environmental protection***. In addition, in areas where the risks relate to protected areas and overall environmental risk awareness is not optimal, ***disaster preparedness may be hampered***. This must be ***avoided*** because ecology has a ***large lobbying power*** with broad public support. In order to strengthen the link between the two spheres, ***coalitions*** can be envisaged ***between safety and environmental organisations***. At the local level, this can be done for specific risks. At ***national and international*** levels, ***global warming*** may be the basis for coalitions because it seriously increases the likelihood and impact of disasters.

3.5.4. Public participation

A common conclusion of the project partners is that *before planning disaster response measures, the opportunity assessment process (see above) should take into account not only the physical and environmental factors but also the social aspects related to the acceptability of final decisions*. In other words, ***public opinion must be addressed*** and compared to the ***expert judgment on safety policies***. For this reason, public participation is a necessary prerequisite for the risk prevention process.

Public participation is important for ***several reasons***.

First of all, it is an important tool for raising awareness of the risks. By participating in discussions about risk prevention, people learn about objectively existing physical risks.

Further involvement in the development of a risk management strategy is a necessary starting point for the implementation of safety measures by the people themselves. Combining public participation with risk training helps to inform citizens how they can prevent incidents, how to act during an incident (resilience and confidence) and how to accelerate subsequent recovery. If properly organized, public participation can improve the perception of measures and the desire for public involvement.

There are many different ways to organize civic participation. In most countries, it is partially regulated by national law, for example, requiring local authorities to inform and / or involve citizens in certain stages of policy implementation. However, it is recommended to go

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beyond these formal requirements and identify ways of participation that are appropriate for the particularities of the risk and the target groups.

3.5.5. Advice and recommendations

- **Distinguish between target groups when evaluating your network;**

The assessment of the network should take into account the different public (*stakeholder*) groups:

  - *Who lives within the risk area?*
  - *Who has a commercial interest such as tourism, business, farming?*
  - *What are the local stakeholder groups that have proven significant in the past?*

- **Organise participation in each stage of the disaster mitigation process;**
  It is important from the very beginning ***to get people involved***. They need to be told that the municipality /*government*/ will start thinking about the risks. It would be a good idea to be involved in risk assessment and to enable them to provide local (*historical*) information from their own past experience, to allow them to set risk assessment criteria, to have transparency in setting political goals. and above all, allow them to participate in the development of a disaster mitigation strategy and to find situations in which both their security and their local interests benefit.
- **Consider confidentiality of information;**

In the process of mitigating the effects of risks, confidential information may appear, such as the assessment of security risks, terrorism or specific industries. ***Formal requirements*** vary across EU countries, but it is always advisable to consider in advance what information you may or may not disclose.

- **Select different tools and be flexible;**

The findings of a network assessment may, for example, lead to the creation of one or more "focus groups" to oversee the entire mitigation process and to give a ***thorough assessment*** of public opinion on risk and protection /safety measures/. Other opportunities for public participation are ***public discussions***, ***information and educational campaigns***. Different approaches are needed for different target groups. Be flexible and change tactics if necessary.

- **Use links to target groups;**

In principle, local government, the "government" is not always the best-received message-sender. It is up to people to choose ***who is the greatest authority***. You need to think about what might be the most influential link to different target groups such as local opinion leaders, key players in the community, priests or your boss. It is necessary to address the target groups "within their territory" and "in their own language".

3.5.6. Monitoring and implementation

A disaster mitigation plan can only be effective if the correct implementation of the measures is ensured.

Continuous monitoring is also required for this purpose. When monitoring reveals deficiencies in implementation, implementation of legal obligations and formal agreements are often the next step.

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According to the project partners, the following things need to be considered ***for proper monitoring and implementation***:

- **Changing political preferences;**

Representatives of public institutions and political parties often hold office for only ***four to five years***. Nonetheless, policies related to disaster relief are much longer-term. This means that during the process of implementing the measures, ***political coalitions may change,*** as well as ***political preferences*** regarding disaster prevention. One of the tasks of civil servants and technical experts is to monitor the impact of ***new policy programmes*** on existing plans. n some cases, ***the implementation of a strategy may be halted***, but most times changes to disaster relief remain hidden. It is important to signal cases where failure to implement a single measure can lead to a complete failure of the disaster management strategy.

There is always a risk that after the implementation of the most visible measures, ***the longer-term and less visible ones to be ignored*** in the future.

- **Network monitoring and evaluation;**

As already noted, the ***disaster prevention process*** involves different institutions with different responsibilities. The implementation of the measures also requires good cooperation, sometimes even involving private entities. In such a network, it is important to reach ***prior agreement*** on monitoring and evaluation - *Which public authority will exercise its official rights and which exactly? Do all partners take the leading role in monitoring (and potential implementation of measures) for example the municipality or district, county, province?*

- **Official judicial instruments;**

The bodies of central and local executive authorities and their administrations have different legal means of monitoring and enforcement. In the case of criminal negligence, the penal code may apply. In other cases, public institutions may require measures to be implemented through formal directives or instructions and even fine, for example, construction companies.

In the case of intergovernmental cooperation, this can sometimes be more difficult.

For example, it is not typical and it is not often applied */it is legally unacceptable/* ***for a municipality*** to give official instructions to the territorial units of ministries and departments /Regional Environmental and Water Inspectorate, Basin Directorate, Fire Department, Police, etc./.

- **Disaster mitigation measures implemented by citizens;**

Often the disaster mitigation strategy involves some kind of action taken by the citizens themselves.

For example, for the prevention of forest fires, residents would contribute by not storing combustible materials in their premises or by engaging in emergency supplies of water and food from private homes under extreme weather conditions. The implementation of these types of measures requires special attention from the government. In such cases, it is often more difficult for public administrations to use official orders. Investing in risk awareness and specific

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instructions on how to act *(preventative, preparedness or during the actual incident)* can be more effective.

For example, reducing the impact of snowfall requires the assistance of citizens.

- **Risk monitoring;**

The purpose of the disaster prevention plan is to reduce the risks. Therefore, following the implementation of risk mitigation measures, a new risk assessment needs to be made to examine the impact of policies.

In a ***multi-risk approach***, this can lead to a new prioritization of the different risks, which means that more attention will be paid in the future to another type of risk. In the ***single-risk approach***, a new risk assessment may lead to new prevention measures in other territories. In any case, it is important to present ***the real impact of disaster mitigation policies*** through a new risk assessment and, if possible, ***a new "risk diagram"*** that reflects its mitigation. ***In other words, feedback on risk assessment is needed***. After all, it is only logical that municipal councillors, politicians and decision-makers should get an idea of the ***real results of their chosen policies***.

3.5.7. Assessment of risk mitigation processes

The final part of any policy is the feedback and the reference to the beginning of a new process. Planning for risk mitigation is a comprehensive process involving a network of different partners and different expertise. Of course, many ***conclusions*** will be drawn during this process that will be useful for ***future plans***.

The overall assessment of the overall process ***provides a professional outcome that can enhance the desire for future collaboration with risk management partners***.

3.6. Risk prevention measures

The need ***for sustainable strategic risk planning, one of the most important elements of preparation***, is becoming more and more aware in the EU. The efforts of governments, districts and municipalities in many Member States are aimed at making more appropriate use of structural risk reduction /*mitigation*/ plans for the needs of territorial and economic development policies.

In principle, governments are considering how the concept of 'multilayer' security ***can help coordinate risk reduction on the one hand with crisis management on the other***? But how can all this be done in practice? What are the things that should and should not be done?

This Strategy provides an overview of the experience of three municipalities and two areas from 2 EU countries to "reduce risk by reducing the likelihood and/or impact of the danger and / or vulnerability of the population and society as a whole." It is noteworthy that the practical experience of partners does not make a clear distinction between risk management and crisis management.

For example, spatial measures that can both address risk reduction and improve preparedness for actual incidents or even better recovery thereafter.

Three types of risk management and safety against natural disasters can be distinguished in the practical experience of partners:

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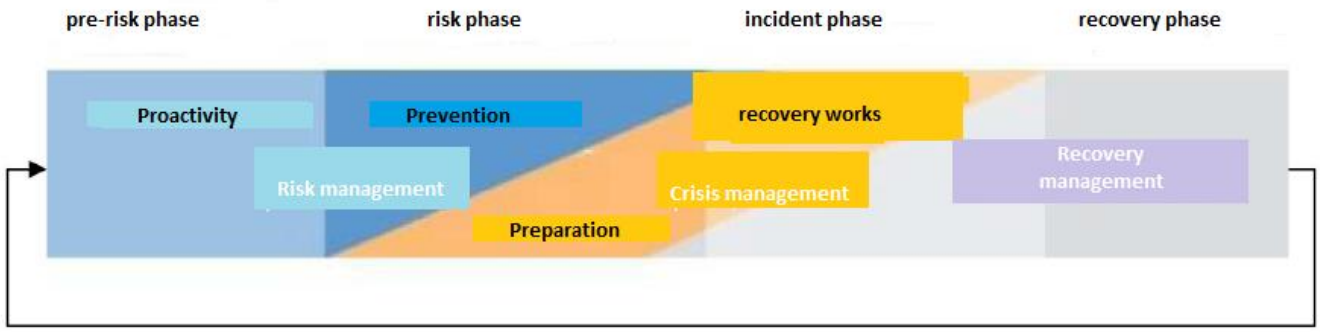
- risk management aimed at reducing risk;
- crisis management aimed at overcoming the consequences of a real incident (*materialised risk*);
- and management of recovery aimed at restoring society to a normal pre-disaster lifestyle.

On the other hand, ***four phases*** can be distinguished*:*

- pre-risk phase;
- a phase in which the risk exists but is not materialized;
- phase of the incident;
- and the recovery phase.

The three types of risk management and safety do not strictly correspond ***with the phases, but gradually move from phase to phase***.



In ***the pre-occurrence phase of risk***, also called pro-active, everything is aimed ***at the highest form of risk management: PREVENTION not to turn*** a situation ***into a risk***.

This is ***the most basic form of planning for action***: ***as soon as a risk is generated, attention is drawn to prevention measures***, to reducing the likelihood, the potential effect of a disaster and the vulnerability (*exposure and sensitivity*) of the risk "elements" to that effect.

At the same time, in this risk phase, responsible public and private partners, rapid response services, such as emergency services, are preparing for the disaster. Preparation includes disaster ***planning, exercises and training***, but as already emphasized, ***it may also include spatial and spatial planning measures***.

Examples *are emergency access routes, firefighter water supplies, and clearing grounds for disaster operations*.

In addition, във ***recovery management can be initiated in the risk phase*** by ***preparing measures that make recovery easier***.

Such examples are *recovery plans and contracts with private partners to recover utilities*.

Structural and even territorial restoration measures can also be taken. ***For example***, an additional route may be built for cases where the main one is blocked by landslides or floods, or a production reserve may be prepared from a separate location in an industrial plant. Another example is the *planting of trees that recover shortly after a forest fire*. However, in practice,

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experience shows that this kind of measures is not a priority for decision-makers because all attention is focused on risk mitigation and disaster preparedness.

In the ***disaster phase***, preparation becomes a real ***"disaster preparedness***" or assistance. It is during this phase that the recovery begins. Many of the emergency services' actions can be characterized as recovery and not as real preparedness. As time progresses, priorities change more and more from responding to recovery until, after all, the true disaster phase is over and the ***recovery phase*** follows.

A new situation arises during the ***recovery phase***. ***Recovery*** can allow for a reassessment of risks. In most cases, the emergence of a crisis or disaster draws public and political attention to the risks. This new awareness of risk can greatly reduce its uptake, leading to different types of mitigation strategies. Therefore, the cycle is closed: from ***the recovery phase***, it goes back to the ***pre-risk phase***.

The question is what kind of activities are needed for a successful disaster management strategy?

Responses are included below in the content of the ***Disaster Management Plans***.

3.6.1. Differences in planning processes

During the project implementation it was found that in practice, most of the ***disaster relief processes*** do not happen ***"by the book"***. The number of cases in which the responsible authorities have made a conscious decision to initiate a comprehensive mitigation process and to follow a complete and rational planning process is very small. If this is to happen, however, it is mostly based on a government provision that shows that regional and local authorities are required to develop plans for a particular type of risk. In these cases, the government mainly establishes general principles and sometimes even provides financial resources for the specific risk.

However, in the broader perspective of different planning approaches, the cases in which a conscious decision to initiate a comprehensive mitigation process is taken are limited. In most cases, mitigation is not the primary objective. Security is often just one of the vital interests that must be taken into account, along with interests such as economics and ecology. The result of partner discussions is the typologization of ***four types*** of disaster planning processes resulting from two distinguishing features of the underlying cause or motivation of the process.

The first distinction is between existing risk situations and new ones.

The second difference is between processes that are mainly focused on the sources of risk (hazards) themselves and those that focus on the elements at risk (vulnerabilities).

In the figure (below), these two dimensions are compared, resulting in the typologizing of **four types** of risk mitigation **plans**.

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3.6.1.1. Mitigation of new hazards

The first type of plan concerns new (*or increased*) hazards. In the case of man-made risks, it mainly concerns the creation of new industries and new infrastructure (*for the transport of dangerous substances*). These types of risk are regulated by many legislative forms, such as the ***SEVESO-II (96/82 / EG) 1*** guidelines, which require risk assessment, environmental assessment and risk prevention policies. In these cases, the mitigation process is aimed at transparently assessing the planned economic benefits of the proposed activities against the (*potential*) cost of risk mitigation and actual incident damage. Generally, mitigation measures planned can be one chapter or paragraph in the overall development plan, but depending on the legal obligations, a stand-alone disaster (*and disaster preparedness*) plan may also be required. In the event of a new or increased natural disaster, there are less formal or legal reasons for drawing up a mitigation plan or paragraph. A robust risk identification approach is needed to provide early warning of new or increased natural risks and to recognize the need for a specific mitigation plan.

Examples are plans to mitigate the effects of global warming.

3.6.1.2. Mitigation in territorial development

The second type of mitigating processes are when there are new developments, but not new hazards, but new vulnerabilities. This includes the development of new housing projects, new "vulnerable sites" (*such as hospitals, schools*) and new public service infrastructure (*such as gas stations or pumping stations*) that could be covered by human or natural hazards. These changes are not motivated mainly by risk reduction, but mostly by economic gains. In these cases, the legislation governing the development process also applies. However, in our practical experience, land-use legislation in the EU Member States is not always sufficient, taking into account aspects of mitigating physical safety risks. The fire safety of individual buildings is highly regulated, but there is no overall territorial vision for all safety risks. From a risk planning

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perspective, the most important task for this type of development is to focus attention on the risks at the earliest stages of design, and to include a disaster mitigation paragraph in the development plan.

3.6.1.3. Mitigation of existing hazards

The third type of disaster planning processes most closely meet the definition of "textbook". They are viewed from the perspective of existing hazards.

On the basis of a complete risk assessment, in-depth information can be drawn ***to identify the risks to be mitigated***. A plan could be developed for them, incorporating all measures from the perspective of "multilayer safety". This type of fundamental mitigation process is very limited.

It is rare to find ***a multi-risk territorial approach to mitigation planning***, starting with an assessment of all types of risk. Moreover, examples of whole (*single-risk*) plans show that particular attention is paid to non-structural measures and disaster relief. The reason for this is ***logical***: structural and territorial measures are ***very expensive*** and apply when there are other (*economic*) interests in territorial development.

3.6.1.4. Mitigation during restructuring

The fourth type of mitigation is viewed from the perspective of existing vulnerabilities. These are the cases where municipalities decide to restructure (*redevelop, re-plan*) an existing area. As with the new (*territorial*) development, these types of cases are mainly but not primarily motivated by risk mitigation. However, decision-makers can take safety measures into account, as existing risk situations are often already identified and discussed. In these cases, the aim may be to cover security interests in an overall restructuring plan.

Discussing the previous concepts and exchanging practical experiences and good practices ***with the project partners we have reached*** the following ***GENERAL CONCLUSIONS*** on mitigation processes:

- **Integrating safety interests with other processes;**

The main and most important conclusion for partners is: *to try to integrate risk and safety management interests into different plans at different levels of development planning*.

Most of these opportunities arise from economic interest-driven development. The actual number of overall disaster protection plans /*safety*/ is very small.

- **Network creation;**

It is clear from the previous conclusions that a ***good network of communication and management structures should be considered***. Stakeholder interaction is vital as it is important to know exactly what and how each partner should do. Many mitigation opportunities are driven by other (economic) interests; it is important to help public and private organisations understand the interests involved in risk and safety management.

During the work on the project, the topic of networking, mixed funding and the use of the Disaster Risk Reduction Strategy and/or a specific mitigation plan were discussed when the following issues were taken into account:

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- **Mitigation or multilayer safety?**

Mitigation is only one of the aspects of risk management. In a multi-layer security approach, important aspects such as ***readiness and recovery*** can also be taken into account. Territorial planning measures addressing the risks may ***NOT be limited to mitigation*** - territorial planning may also take measures to improve disaster preparedness, ***such as*** providing suitable escape routes, supplying fire extinguishing water , roads and emergency areas, etc.

- **For one risk or many /more/ risks?**

Most disaster mitigation plans are drawn up ONLY for one risk (*for example floods*) and even for one risk location (*for example a specific industrial site*). However, sometimes plans cover more than one risk and even the whole set of risks in a multi-risk approach. In this sense, it is worth considering what exactly is wanted.

- **Geographic coverage?**

Different risks have different scope.

Flood risks, for example, are concentrated around river basins, ***landslides*** occur more in mountainous areas, and ***forest fires*** - only in forests. On the other hand, some risks are not limited, such as a flu pandemic or the spread of ***radioactive dust***.

In any case, most risks are not automatically limited by the artificial boundaries of a municipality, district, region or even a country. This means that mitigation measures for different risks often have different geographical scope. Therefore, mitigation plans may differ from each other.

It is much more logical for flood risks to plan at the ***Basin Directorate*** level than at the municipal level. It is a good idea to carefully consider what is the right scale for the plan and the interaction with which partners should be sought and implemented.

- **Joint or split planning?**

Often plans are drawn up in partnership between several sites, municipalities, districts and countries. However, in some cases, partners prefer to make ***their own plan*** and even refuse to cooperate with other partners and even major authorities.

Sometimes the division of work into ***phases*** can be useful, ***such as*** the creation of a ***joint plan with joint goals***, which will be implemented through several (*partial*) ***plans*** of interested partners. This would help the implementation of the overall plan because each partner would take the necessary measures according to their (*own*) plan, which is an appropriate option and our specific case.

- **Lead partner?**

Different (*governmental, territorial units*) organisations are ***lead*** organisations in relation to different types of disasters. Mostly primary levels of government (*municipalities, communes, districts, districts, regions*) are leading, but sometimes organisations such as forestry or water management lead the risk mitigation processes. As a consequence, there may be different mitigation plans for different organisations, but for the same risk, and hence a different lead.

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3.6.2. Start of the mitigation process

In many cases, mitigation processes do not have a clearly identifiable starting point. As explained previously, many processes with risk implications and mitigation capabilities are triggered by other interests beyond physical safety. When attempting to integrate mitigation into economic development and territorial planning, the most important task is to have early warning of initiatives. Ideally, in the initial phase of identifying ideas and concepts for a new development plan, ***protection*** /safety/ professionals are automatically invited to participate.

Ideally, any mitigation process should begin with a transparent definition of the problem and a description of the general and specific goals.

- What do the responsible institutions want to achieve?
- What are their instructions to the authorities concerned?
- What is the scope and budget of the organisation?

3.6.2.1. Risk assessment

Risk assessment: this first step of the mitigation process is extremely important. Of course, only when there is a good idea of the risks can the next steps of the mitigation process be taken – *they were already presented at each of the three phases of the risk assessment*:

- risk identification;
- risk analysis;
- risk evaluation.

Risk assessment as a last step involves comparing the results of the risk analysis with the political and social criteria to determine whether the degree of risk is acceptable and tolerable.

Therefore, the outcome of the risk assessment is not only an insight into the present and future risks of the territory, but also a political prioritization of the risks: which of the risks requires the planning of prevention and protection measures?

3.6.2.2. Setting goals

The partners in this project believe that ***political consultation on risk analysis*** should include another aspect - once the nature of the risks has been understood and the political attitudes to prioritizing them are clear, goals should be set for each of the priority priorities chosen. risks. In the context of the project, the objective is defined as a (political) solution to a specific risk mitigation policy (also disaster preparedness) in terms of the desired and measurable outcome for the community.

The goals should be:

- ***Specific:*** refer to a specific priority risk;
- ***Measurable:*** results for society can be measured, for example: at what percentage risk is reduced.
- ***Acceptable***: the goals must be acceptable to decision makers and stakeholders.
- ***Realistic:*** the goals must be realistic.
- ***Time bound***: the goals are set for a specific time period.

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This type of policy objective is considered a necessary guideline for the further identification and analysis *(of costs and benefits)* of risk mitigation measures that will ultimately shape a specific mitigation plan. Without a grasp of policy objectives, there is a serious risk that the ex-post technical evaluation of mitigation measures may lead to wrong policies.

For example in the case of tunnel safety, experts can conduct studies on life-saving measures, while for politicians the most important thing may be protection against tunnel collapse, as this would cause serious damage to transport and industry as well as to the national economy. Without first consulting the politicians, technical research and peer review may prove unnecessary.

On the other hand, the expectations after such political consultation for the purposes should not be too high: without knowing the financial implications of the ***final risk mitigation strategy***, it is not known whether the chosen policy objectives will remain until the end of the risk mitigation process.

Preferences may change if funding for the objectives is high. Moreover, prior to the assessment of mitigation measures, one does not know for sure which type of measures will be most profitable. Therefore, setting targets should not limit the subsequent technical study very much. It should be possible to evaluate other risk reduction measures that are not directly targeted, as they may be more preferable in the end. For this reason, goal setting should be limited to the desired effect on society and should not include specific measures.

Examples of such purposes are:

- "We want to reduce the likelihood of catastrophic flooding in our area from once every 1000 years to once every 10,000 years."
- "We do not want new vulnerabilities in high risk landslides."
- "We want to make sure that the new development plans do not jeopardize the environmental value of Natura 2000."
- "We want to reduce the number of forest fires by 30%."
- "We want citizens to be provided with drinking water for 24 hours in the event of a failure in the water supply network."

The main ***policy issues***, which define ***these goals:***

- How we want to deal with risk - ***through risk management, crisis management or recovery management?***
- In the case of risk management: what we want to mitigate - **the likelihood, the effect or the vulnerability?**
- In the case of crisis management or recovery management: ***do we want to increase the readiness or resilience of rapid response services, or the confidence in our own citizens and businesses?***
- Finally, what kind of impact we want to mitigate: **economic, environmental, physical.**

3.6.2.3. Assessment of capabilities

In the ***earlier stages*** of the risk mitigation process, the ***nature and severity of the risk***, as well as the political goals, were understood. The next step is the ***capabilities assessment***,

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which is defined in the project as "*the process of identifying, analysing and evaluating the risk management capabilities available to reduce priority risks, as well as the crisis management and recovery capabilities that improve disaster relief and reconstruction work.*"

Capabilities in this case are defined as *"all possible factors, measures and policies in which the risk can be reduced and the final outcome of disasters and crises can be positively affected"*. It is important that the capabilities relate ***not only to the operational capacity of the rapid response services - fire trucks or ambulances, but also to mitigation measures, or in other words, all possible measures in multilayer safety***.

The purpose of the capabilities assessment is to facilitate policy makers in making strategic decisions about specific policies and measures that contribute to the objectives set.

This phase is, in fact, the most strategic one*: **where are our weaknesses in our ability to reduce risks and what can we do to prevent them***?

The partners in this project make the most distinct difference in the ***three parts of the capabilities assessment***, which are similar /similar/ to those in the risk assessment:

- ***Identify capabilities:*** to think about the causes and consequences of finding opportunities to mitigate risk.
- ***Capabilities analysis:*** to study the relative value of identified opportunities.
- ***Assessing capabilities:*** comparing policy options with policymakers.

Capability identification is a continuation of the scenario analysis that is applied to the risk assessment: by examining the different scenarios, specific measures that contribute to the achievement of the chosen objectives can be identified. As a result, a list of different measures is drawn up, ranging from specific on-site safety measures to general measures such as public education to increase one's confidence and culture of behaviour in a disaster and emergency situation.

The next two phases of the capability assessment are best illustrated by the following ***figure***.

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When weighing the risks with possible mitigation (and preparedness) measures, the ***first question*** that arises is: ***what are the best measures?*** The answer to this question ***is the ultimate goal of opportunity analysis***.

This may require ***quantification of projected positive effects*** and ideally should include a cost-benefit analysis (*see below*).

The second question is: what measures are most appropriate for decision makers?

The best thing is NOT REALLY the most acceptable. The result of a ***cost-benefit analysis*** can help to ***objectify a political assessment***, but other political preferences and interests can always interfere. It is the responsibility of the ***specialists and experts*** to make the decision-makers aware of the relevant information, but the ***final decision*** must be made by the ***senior officials of the elected positions who are also responsible for this***.

3.6.2.4. Cost-benefit analysis

Ideally, opportunity analysis ***includes cost-benefit analysis***.

Cost-benefit analysis is defined by the EU as: ***"a procedure for evaluating the feasibility of a project by matching the benefits and costs."***

The results can be expressed in various ways, including through an internal rate of return, a net present value and a cost-benefit ratio."

The purpose of the cost-benefit analysis *is to enable informed decisions on the use of scarce public resources.*

Cost-benefit analysis is widely used in EU countries and in particular at national level in the areas of infrastructure, environment, traffic safety, territorial planning, external security and risk management.

In order to be able to use cost-benefit analysis in the risk mitigation process, it is

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important ***not to reduce it*** to monetary value alone. At the heart of risk reduction, the vital interests of society must be included: both economic and social, related to casualties, material or environmental damage. Therefore, the cost-benefit or social cost-benefit analysis should also contain information about effects (*advantages and disadvantages*) that do not have a fixed monetary value.

As this requires a multi-criteria approach, cost-benefit analysis needs diverse expertise.

From their practical experience, ***the project partners exchanged the following cost-benefit analysis lessons***:

- Cost-benefit analysis to facilitate informed decision-making requires different types of expertise. This includes not only technical expertise on mitigation measures such as risk management, crisis and recovery management, engineering, forestry, geology and geostatistics, but also specific economic and statistical expertise. This is usually lacking in municipalities and professional safety organisations.

The likelihood of a risk has a very large impact on the cost-benefit analysis results. It is of great importance whether infrastructure investments in risk mitigation measures should be evaluated on the basis of some scenario, every ***10***, ***100*** or ***1000*** years. The problem is that the risk likelihood estimate is very uncertain. The macro-factors that determine the likelihood of risk are highly volatile. When this uncertainty cannot be reduced, the outcome of a cost-benefit analysis may in many cases be either positive or negative.

- The likelihood of climate events is difficult to calculate over a longer period of time due to global warming. For example, floods, as well as landslides and snow-induced landslides are likely to occur more frequently in the future. This means that with the continued discoveries and insights into global warming, the cost-benefit analysis of disaster mitigation needs to be continually reviewed.
- A specific problem is the spatiotemporal variability of the risks, which means that their likelihood and impact can be very different in time and space. Therefore, cost-benefit analysis is in many cases true to a ***specific location and timeframe and should be repeated several times to make informed decisions for larger areas***.
- In most cases, an extensive study is required to calculate vulnerabilities and potential damages in euro. Many times this is neither possible nor necessary.

3.6.3. Possible content of the disaster risk mitigation plan

There are different types of disaster plans and the content of all is different. Based on the mitigation processes described and the experience of the project partners, ***the following content of the plan may be proposed:***

Chapter 1. Introduction

Any plan to mitigate spatial risks must begin with ***regulatory grounds and a clear definition of the problem***. Why the participating institutions decided to develop this plan?

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This may include a ***general description of the risks*** to the given ***cross-border region*** and the vital interests of the society at risk, as well as the initial political decisions and formal tasks of the plan.

Secondly, the introduction should include a ***description of the objectives*** set at the beginning of the mitigation process. What is the expected result of the plan?

Chapter 2. Organisation

At the outset of planning, it should be clear ***what the responsibilities and mandates*** of the partners involved are. This chapter should give a general description of the legal framework:

- Which national and regional/local laws govern the mitigation process?
- What are the competences of public authorities and private partners? In addition, the mechanisms for cooperation between partners should be described.
- Which partners are the coordinators?
- How are information flows guaranteed?
- What are the formal decision-making processes?

Chapter 3. Risk assessment

This chapter presents the results of risk identification, analysis and evaluation. In order to provide a practical view of the risks, it is advisable to include maps of the relevant types of risk at a level appropriate to the needs of local policy makers, decision makers, key stakeholders and the general public. In case the mitigation plan covers all the dangers, the result of the risk analysis can be presented using a risk chart.

Chapter 4. Objectives and measures for risk mitigation

Following the risk assessment, an opportunity assessment should be made based on the objectives set by the decision-makers. In the mitigation plan, the outcome of the opportunity assessment is presented as a (*group of*) measures for each type of hazard within the plan.

This may include:

- Risk management:
  - *Proactive measures;*
  - *Probability mitigation measures;*
  - *Impact mitigation measures;*
  - *Vulnerabilities mitigation measures.*

- Crisis management:
  - *Preparedness measures (safe areas, training, training, materials);*
  - *Organisational description of the response and operational hierarchy;*
  - *Scenario procedures, job descriptions.*

- Recovery management:
  - *Preventive measures to improve sustainability and recovery;*
  - *Readiness for recovery;*

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- *Organising restoration work.*

The opportunity assessment itself, including cost-benefit analysis, can be presented as a separate application.

Chapter 5. Resources

Financial, material and human resources are required to implement the proposed measures. This chapter describes the financing and available workforce.

Chapter 6. Public participation

The project partners consider the involvement of the local and cross-border community to be a good risk reduction strategy. A successful mitigation strategy always involves some kind of ***autonomy and risk communication***. This is important enough to justify the existence of a separate chapter in the mitigation plan. This may include community action, risk communication, residual risk reporting and public participation procedures in decision-making and implementation processes.

Chapter 7. Updating

The risk reduction plan should never be static. New risks and processes need to be identified on time and the results of the actual implementation of the measures may require updating of the plan(s). Therefore, it is assumed that a separate chapter in the plan describes the responsibilities associated with the preparation, evaluation and updating of the plan. This may include a procedure for evaluation, feedback collection and examination of results. It is also recommended that risk mitigation and disaster preparedness policies be tested in practice through operational training. This may be a good basis for future updates and new risk mitigation processes.

Annexes:

The annexes may include a list of beneficiaries of the mitigation plan and an overview of the full legal framework and the corresponding official documents, tables, charts, etc.

3.7. Measures to overcome the effects of natural and man-made disasters

3.7.1. Phases of overcoming the consequences of a natural disaster

Natural disaster response activities *consist of disaster response and short-term response activities*. The main focus of these actions is on ***saving lives***, but it also includes *protecting infrastructure, delivering vital goods and services, and protecting the environment*.

The measures in the plans shall be drawn up on the basis of assessments of previous reported hazards and risks. These plans define the competent authorities as well as their ***necessary protection, rescue, assistance and recovery activities***.

- ***Protection/Conservation*** - includes organisational, technical and other measures for immediate individual and collective protection of the population, animals, property, cultural wealth and the environment from the effects of natural and other disasters;

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- ***Rescue*** - includes measures and procedures for the search and rescue of people whose lives or health are at risk, saving animals, property, cultural wealth and the environment from the effects of natural and other disasters;
- ***Assistance*** - includes measures and services of specialists, rescue organisations, the use of protection and rescue equipment, and other similar means;
- ***Recovery*** - this is a ***phase of reconstruction*** of the affected settlements and territories to their original state from pre-disaster in terms of living conditions, infrastructure, communication and social organisation.

Activities in the recovery phase initially include redevelopment of the destroyed property and reconstruction of the underlying infrastructures.

3.7.2. Management bodies, forces and resources of overcoming the consequences

Most important is the role of the ***Constant Readiness System***, whose main purpose is to improve the assessment and awareness of the effects of the disaster and to increase knowledge of practical skills and actions to deal with these situations in a timely manner.

This objective must be achieved by different actors at different ***stages of the disaster management cycle***.

This includes ***improving communication and the exchange of information*** between risk experts, decision makers and rapid response services.

The Constant Readiness System */CRS/* consists of ***several components and modules***, intended to assist stakeholders */users/ in matters of planning, risk assessment, decision making, communication, the actual conduct of disaster recovery*. These modules are designed to allow flexibility for different needs in the respective regions.

The Constant Readiness System, aims at building similar modules for identification and management of natural disasters risk in the cross-border region of Tsenovo municipality on the Bulgarian side and the communes of Hotarele and Greaca from the Romanian side and synchronization of the responses in the course of rescue and rehabilitation activities.

Its construction requires the need to respond adequately in situations of floods and other natural disasters, which can be implemented more effectively and efficiently at the cross-border level, with the coordinated efforts of all affected and potentially endangered municipalities.

3.7.3. Components of the architecture of the Constant Readiness System

The Constant Readiness System offered in the project is ***a set of components, based primarily on the existing communication and information facilities in the administrations and settlements of the three municipalities, which allow for easy integration, provision and use of disaster management information, and forces and means of overcoming their consequences***.

The system will support the information needs, coordination and interaction of the Managing Authorities and Rapid Response Teams on the Bulgarian and Romanian territories at the different stages of the Disaster Management Cycle.

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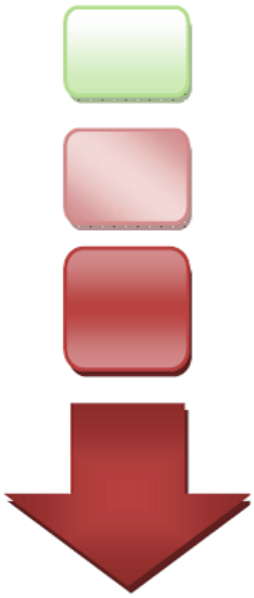
3.7.4. Assessment of the existing disaster situation – a key moment in the work of the CRS

3.7.4.1. Risk degree depending on the situation development



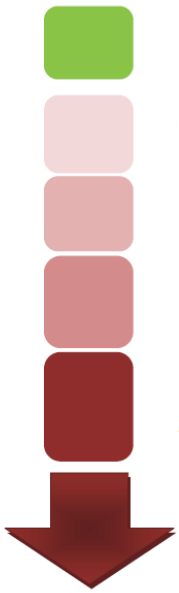
Safe situation - when the risk determinants are at safe levels

Dangerous situation - the risk determinants are above safe levels

Flood threat - there is an increase in the magnitudes that determine the risk of flooding at risk sites

Risk situation - all the quantities that determine the threat of flood have reached the values at which high risk wave will be formed

3.7.4.2. Measures and actions depending on the situation development



Normal/safe situation - no evidence of a risk event

Situation of increased caution - there is evidence of a possible risk event occurrence and development

Pre-alarm situation - direct monitoring of the dangerous body of water (river, dam, etc.) is required

Alarm situation - the protection services are informed of the potential flood risk and are ready for action

Situation expected to cause damage - there are conditions for damage (the magnitudes characterising flood risk are at levels suggesting that damage could be caused)

Disaster situation - the degree of damage is above the permissible level

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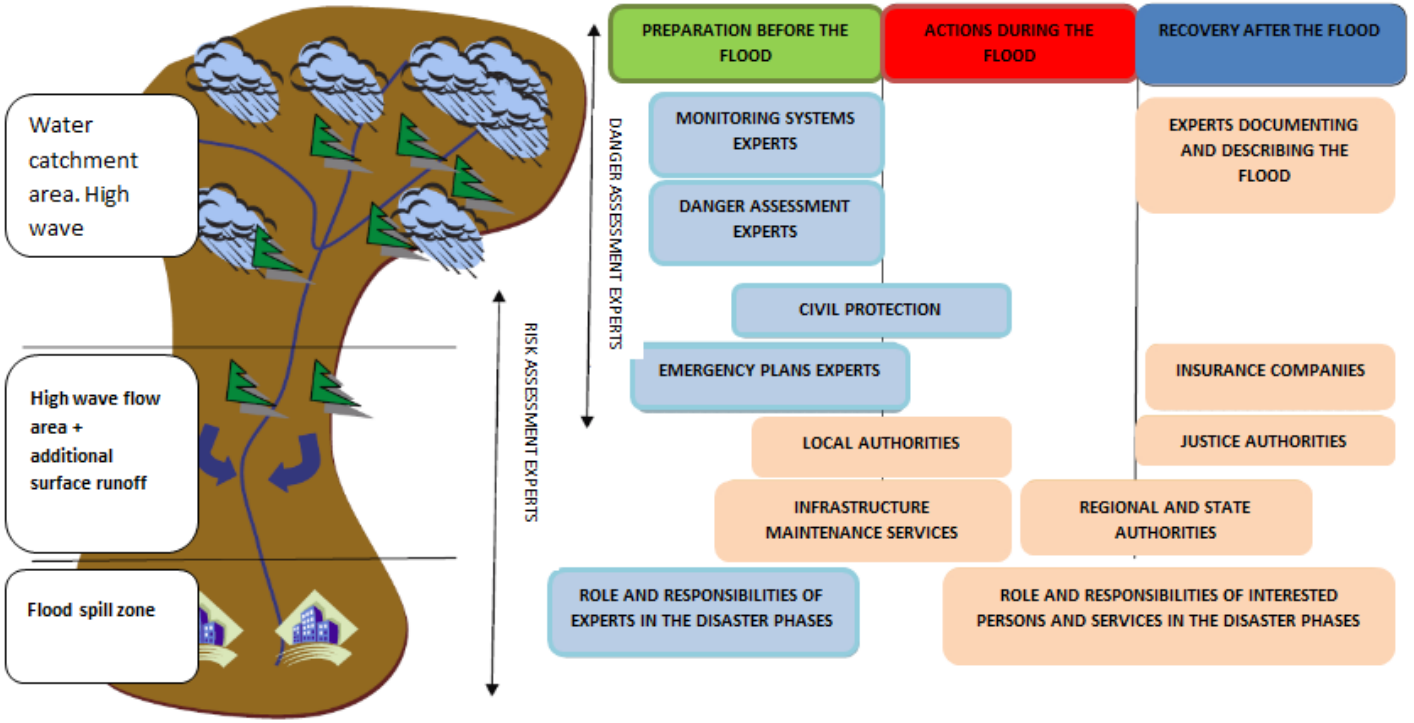
3.7.4.3. Role and responsibilities of natural and legal stakeholders

3. Role and responsibilities of the concerned services and persons, experts, local, regional and state authorities in the Constant Readiness System in case of flood



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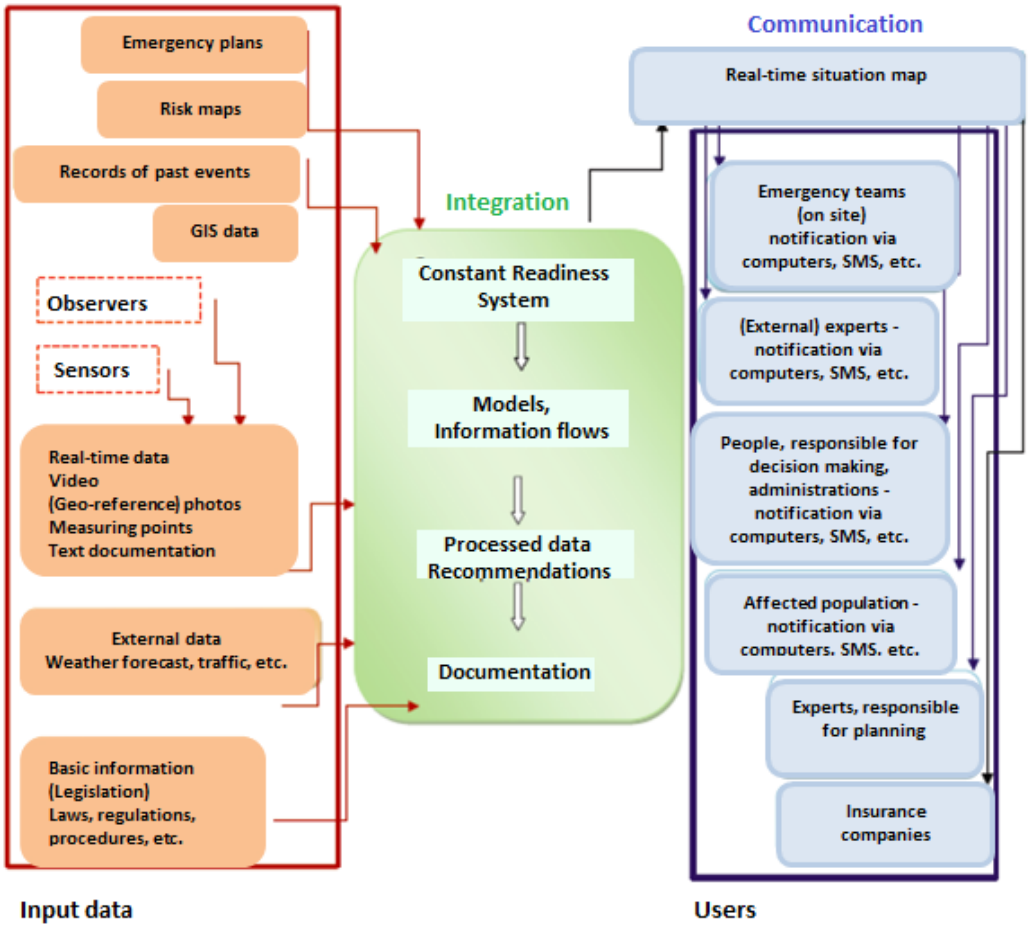
3.7.5. Integrating data and information and linking it with stakeholders and services to the architecture of the Constant Readiness System

3.7.5.1. Architecture of the Constant Readiness System



3.7.5.2. Strategies for overcoming consequences /Recovery strategies/

Recovery strategies make it possible to quickly normalize a post-disaster situation. They should be based on data collected in the hazard assessment to ensure that they meet the basic requirements and needs of the population. They should also take into account all possible accidents and interruptions in recovery activities.

Specific strategies to consider are:

- ***In extreme circumstances***, it may or may be desirable or necessary to transfer functions to sites, in whole or in part, elsewhere.
- **Such an example is** a change of water source or closure of a landfill and transportation of waste to another landfill.

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- ***The recovery plan*** should identify such locations that are suitable for the functions it is intended to assume. The plan should also set out the circumstances in which the relocation will be undertaken, as well as the exact location of the sites or infrastructure.
- ***Recovery resources and equipment***. In the event of significant damage, parts of the infrastructure may need to be replaced. The recovery plan may indicate emergency measures for the purchase, delivery and commissioning of the replaced parts or sections of the infrastructure. This may include arrangements with suppliers and local companies for the provision of equipment and resources (*construction materials*), the pre-purchase and ***storing in emergency warehouses*** of spare critical elements for the technical infrastructure, as well as contingency plans.
- ***Roles and responsibilities***. The plan should identify the teams and persons responsible for emergencies in the different zones. Participants need to understand their responsibilities and the expectations that are placed on them; they must be fully prepared for action as soon as possible.

  Actions in the ***recovery plan*** must be described briefly and clearly so that planners can quickly and easily find the information they need and perform the tasks assigned to them.

3.8. Monitoring and reporting - rules, principles and indicators for monitoring, evaluating and reporting strategy implementation

3.8.1. Methodological rules for monitoring, evaluating and reporting the implementation of the strategy, programmes and plans related to it

3.8.1.1. Basic provisions

These Methodological Rules/METHODOLOGICAL RULES FOR MONITORING AND ASSESSMENT OF THE IMPLEMENTATION OF SECTORAL STRATEGIES AND PROGRAMMES - Developed in implementation of Contract No.557/23.10.2012, part of Project No A10-13-50 / 20.02.2012/are the result of analysis, studies, evaluations, consultations and trainings related to the coordination and implementation of policies at the municipal and district level, coordination of local policies for sustainable development and prosperity.

We have used them to assist us in organising, conducting and reviewing the impact assessments of this strategy, plans and programmes related to it operating on the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca.

In this regard, they are aimed at developing monitoring tasks and appropriate tools to monitor the implementation of this municipal strategy, the programmes, related plans, and the monitoring plan, which identifies those responsible for the individual tasks, frequency of completion, sources of information, structure and content of evaluation reports.

In order to designate a local strategy, programme, plan and policy as rational, effective and efficient, it is assumed that it has clearly ***established and achievable goals, as well as a set of concrete measures that have been best implemented***. One of the means of ensuring rationality, effectiveness and efficiency is ***the assessment*** of the consequences of the actions that have led us to certain conditions.

Assessment is an activity that attempts to systematically and objectively progress on the path to a given outcome and its achievement. It can, in practice, show the implications of past

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and present initiatives, explain policy choices, inform local authorities about the costs and benefits of the different options, and set a new framework for debating the most pressing issues. the relevant municipality.

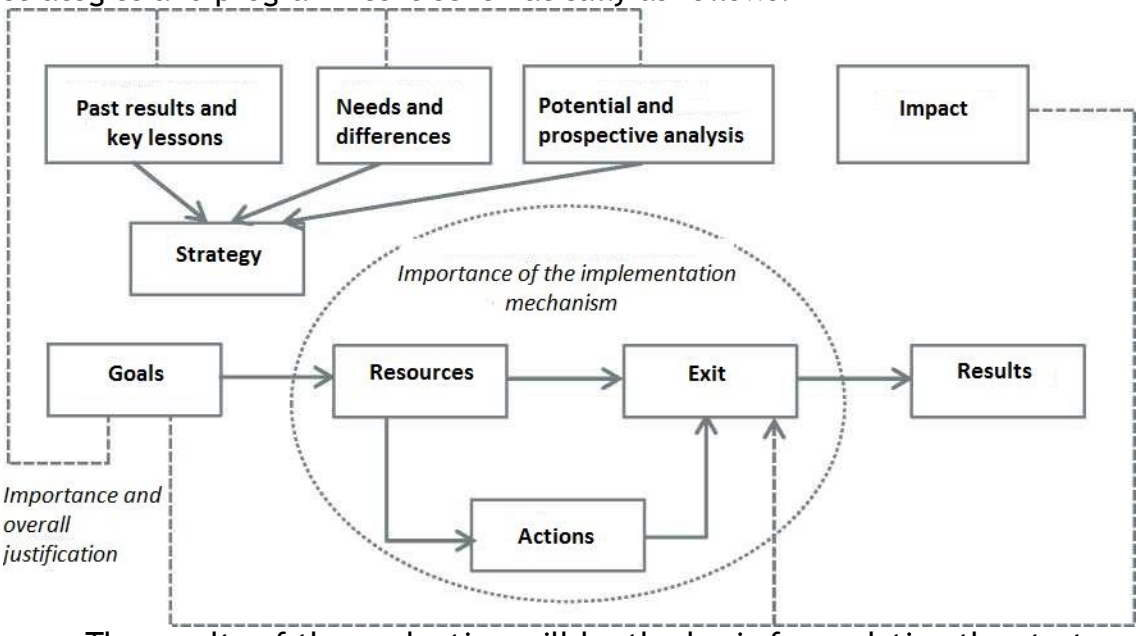
Assessment is a structured process and, in the context of these rules, is reflected in the practical evaluation of a strategy/programme and specific public policies.

Its main objective is to support the development of high quality and competitive municipal policies related to the monitoring and management of natural disaster risk, on the basis of which local needs will be met and the necessary resources efficiently allocated to achieve the desired state of prevention and protection of them on the territory of the cross-border municipalities / communes /, partners in this project.

In its implementation, the following will be taken into account:

- Lessons learned from previous experience;
- The socio-economic context of the strategy/programme interventions;
- Strategic choice of action priorities and their internal and external consistency;
- Quantification of goals;
- Assessment of the expected socio-economic impact and allocation of resources;
- The strategy/programme implementation system.

The logic of the methodological rules for monitoring and evaluating the implementation of strategies and programmes is schematically as follows:



The results of the evaluation will be the basis for updating the strategy/programme or for taking corrective actions.

3.8.1.2. Principles for evaluating the implementation of the strategy/programmes/plans

These Methodological Rules comply with the following principles, fundamental to the process of planning, programming, managing, resourcing, monitoring, controlling and evaluating

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the implementation of strategies, plans and programmes for the implementation of state and municipal policies for disaster risk prevention and management:

- ***Principle 1:*** Unity of strategy/programme;
- ***Principle 2:*** Adequacy and relevance of strategy/programme;
- ***Principle 3:*** Applicability of strategy/programme;
- ***Principle 4:*** Overall impact of the strategy/programme;
- ***Principle 5:*** Policy effectiveness and efficiency;
- ***Principle 6:*** Financial management;
- ***Principle 7:*** Openness, transparency and publicity;
- ***Principle 8:*** Monitoring and reporting;
- ***Principle 9:*** Sustainability.

3.8.1.3. Characteristics of the methodological rules

The methodological rules for monitoring and evaluating the implementation of strategies and programmes are based ***mainly*** on an analysis of the implementation of the ***9 principles*** of strategic planning at local /municipal/ level, on methodologies already tested and on good practices identified. Their development has taken into account the guidelines in the Regional Development Act, the Disaster Protection Act, the Ministry of the Interior, the Guide for the Implementation, Monitoring and Evaluation of Policies and Legislation in Bulgaria and the Practical Guide of the European Commission on Programme Monitoring and Evaluation Indicators ***2014-2020***.

Methodological rules for monitoring and evaluating the implementation of strategies and programmes are ***a universal and typified tool***, that allows comparisons of the respective strategic or programming documents of individual municipalities to be compared. Through this methodology, progress on the Strategy/Programme can be quantified annually and ***recommendations*** and ***corrective actions*** can be made on the basis of the results obtained.

The methodology is based on the analysis of specific facts that can be obtained from the review of documents, reports and other officially available data on the work of the municipal administrations and the municipal councils under the Strategy/Programme. It is suitable for implementation by both municipal administrations and non-governmental organisations and consulting teams. In order to obtain greater impartiality of the evaluation, it is advisable to include a consultant in the evaluation committee.

Every two years, specific indicators and questions should be reviewed and evaluated. In case of changes in the legislative framework concerning the work of the Bulgarian municipalities, and / or in the case of changes in the practices and policies of the municipalities, these changes should be reflected in the formulation of new indicators / issues and the elimination of obsolete ones.

3.8.1.4. Scope

Methodological rules for monitoring and evaluating the implementation of strategies and programmes have scope at the municipal level. They are suitable for evaluating both strategies / programmes and Municipal plans and individual projects.

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The system of indicators complies with the basic planning principles and has been developed in a way that allows each municipality to self-assess and assess the extent to which the desired status has been achieved.

3.8.2. Structure of methodological rules for monitoring and evaluating the implementation of strategies and programmes

3.8.2.1. Formation approach

The methodological rules are based on 9 ***generally accepted principles*** of strategic planning.

The system of indicators and evaluation questions for the implementation of strategies / programmes is based on already established European practices regarding the formulation of indicators on the one hand, and on the other, on the latest developments in this field.

The ***SMART*** principle is followed in the formulation of indicators, i.e. the indicators are:

- ***Specific*** - specific - Indicators have a clear definition;
- ***Measurable*** - measurable - Indicators are targeted to a desired future state and are quantified so that they allow measurement;
- ***Achievable*** - achievable - How far the set values can be achieved;
- ***Relevant*** - relevant - The indicators are directly related to the objectives of the strategy/programme;
- ***Timely*** - time bound - The indicators are linked to a defined timeframe.

In the analysis of the key stages of strategic planning, and especially in the "***Implementation"*** part, important points have been identified that prove to be key to the implementation of each strategic, planning or programming document. The set of indicators thus formulated will assess the relevance of the respective strategy/programme, its coherence with other higher level documents and policies, as well as its relevance to local needs and concerns. The evaluation will show to what extent it is effective, efficient, impactful and public. Last but not least, a complete picture of the financial security of the respective strategy/programme, the complementary funding and accountability used will be obtained, and there will be no doubt about the extent to which the resources invested in the implementation of specific projects, measures and initiatives they provide added value and the results obtained are sustainable over time.

These Guidelines are intended to identify the changes that have led to the implementation of this strategy/programme and the establishment of causal relationships between ***goals - measures - activities - resources - results***.

3.8.2.2. Structure

The methodological rules for monitoring and evaluating the implementation of strategies and programmes consist of 9 principles, each of which has ***developed indicators, evaluation questions, sources of information and an evaluation scale:***

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Indicator

Indicator 1.2: The strategy/programme has been developed in accordance with generally accepted requirements and contains the main elements of such a document (analytical part, strategic part, action plan, resource allocation plan, control and monitoring system for implementation, document publicity measures).

Evaluation question with a description of its nature

Question 1.2: Does the strategy/programme contain all the essential elements of such a document?

The quality and strategic documents of the strategic and planning documents are discussed in terms of their content, scope, feasibility and feasibility. In this regard, each municipal strategy/programme, in order to be identified as such, must contain certain sound elements, arranged in a logical sequence and giving the maximum necessary information, so that it is possible to carry out qualitative analyses and form concrete actions by the users of the documents (local and state administration, business, potential investors, citizens, NGOs, etc.).

The answer to this question will indicate whether the document is structured and contains generally accepted elements of a strategy and programme.

Four-point rating scale

The degree of application is proved by:

- Extract from the content of the strategy/programme;
- A reference to the methodologies or guidelines used to develop strategies or plans;

Sources of information

Minutes of strategy/programme working group meetings.

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VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not contain the essential elements of such a document .
1 point	The strategy/programme has only an analytical part, a strategic part and an action plan.
2 points	The strategy/programme has only an analytical part, a strategic part, an action plan and a resource allocation plan.
3 points	The strategy/programme has an analytical part, a strategic part, an action plan, a resource allocation plan, a system for control and monitoring of implementation, document publicity measures.

3.8.2.3. Sources of information

Sources of information (*documents*) that have been developed and stored in the municipality/communes will be used to prepare the evaluation:

- Strategy/programme implementation reports;
- Reports on implementation of the Municipal Disaster Risk Reduction Programme, the Municipal Disaster Risk Reduction Plan, the Municipal Disaster Protection Plan;
- Reports on projects and initiatives implemented under the strategy/programme/plan;
- Decisions of the Municipal Council regarding the strategy/programme/plan;
- Extract from the content of the strategy/programme/plan;
- A reference to the methodologies, guidelines or rules used to develop strategies, programs or plans;
- Minutes of meetings of working groups on the drafting of the strategy/programme/ plan;
- Order of the mayor of the municipality to form a working group(s) and to prepare the strategy/programme, the plan;
- Results of consultations with the citizens of the municipality;
- Results of surveys conducted;
- Minutes of the meetings of the standing committees of the Municipal Council, which discussed the strategy/programme/plans and were attended by representatives of interested parties;
- Reports on projects and initiatives implemented under the strategy/programme/plan;
- Interim or final evaluations of the strategy/programme/plan;
- Results of studies conducted on the need for change in strategy/programme/plan;
- Recommendations of experts in the municipal administration;
- Recommendations for updating by a state body or regional administration;

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- Opinions of the district administration on the legality of decisions of the Municipal Council related to the implementation of the strategy/programme/plan;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme/plan;
- Decisions of the Municipal Council to adopt the municipal budget for two consecutive years prior to the year of the evaluation;
- Reports on the implementation of the municipal budget for two consecutive years before the year of the evaluation;
- Reports from the National Statistical Institute /NSI/ on the economic and social status of the municipality for the period of evaluation of the strategy/programme/ plan;
- Information from the National Centre for Environmental Protection /NCESP/ on the state and quality of the environment in the municipality for the evaluation period of the strategy /programme/ plan;
- Monthly reports on the cash execution of the municipal budget;
- Current reports on unpaid project costs, part of the strategy/programme;
- Enforcement letters for enforceable judgments on project obligations, part of strategy/programme/plan;
- Rules, procedures, mechanisms laid down by the Financial Management and Control System /SFFC/;
- Reference to public consultations or opinion polls on issues related to strategy/programme/ plan initiated by the Municipal Council or any of its standing committees;
- Reference to the speeches of citizens at regular sessions of the Municipal Council on strategy/programme issues for a period of two years before the date of the evaluation;
- Print screen on the official website of the municipality, where the strategy/programme/plan, the rules for access to public information, as well as contacts with the designated official responsible for providing public information are published;
- Reference to the websites where the strategy /programme/plan is published;
- Order to adopt procedural rules for access to public information;
- Order appointing an official from the municipal administration who is directly responsible for the provision of public information;
- Publications, reports, information messages, etc., on decisions taken, policies implemented, results achieved, projects prepared and implemented, measures and initiatives implemented, resources invested, public procurement carried out, etc., on the implementation of the strategy/programme;
- Information on the number of press releases sent to the media with information on the strategy/programme/plan;
- References from the register of the prepared/implemented projects under the strategy/programme/plan;
- Information from the public procurement register on the number of procedures performed in selecting contractors for activities and measures under the strategy/programme/plan;

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- Invitations to the media to participate in public hearings, report on work done, open tenders related to the strategy/programme/plan;
- Invitations for public discussions on the strategy/programme/plan;
- Publications of public discussions on the strategy/programme/plan;
- Minutes of public discussions of the strategy/programme/plan;
- Minutes of meetings with citizens;
- Mayor activity reports;
- Schedule of visits to mayoralties;
- Annual strategy/programme/plan implementation programme;
- Annual Mayor Management Programme;
- Information on the number of staff and the structure of the municipal administration;
- Information on what part of the project management teams, part of the strategy/programme are composed of municipal administration staff and what part of external (attracted) experts;
- Other sources.

In addition to the sources of information described above, other documents existing in the municipality and useful for establishing the current status may be used to carry out the assessment.

For questions for which no evidence or information is available, interviews with administration staff may be conducted for the needs of the evaluation to obtain the necessary information.

3.8.3. Elements of the methodology for monitoring and evaluating the implementation of the strategy and plans /programmes/

3.8.3.1. Types of questions and evaluation of answers

The methodological rules for monitoring and evaluating the implementation of strategies and programs are based on the ***evaluation of 9 principles***, for each of which there are developed ***from 2 to 8 indicators***, one question per each indicators. ***A 4-point rating scale*** (zero, one, two and three points) has been developed for each of the questions, with detailed instructions on what documents prove the achievement of the given assessment in the respective municipality.

Each of the principles has a different relative weight in the overall evaluation of the strategy/programme:

No. PRINCIPLE	Relative weight in overall score
Principle 1: Unity of strategy/programme	5%
Principle 2: Adequacy and relevance of strategy/programme	8.3%

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Principle 3: Applicability of strategy/programme	13.3%
Principle 4: Overall impact of the strategy/programme	46.7%
Principle 5: Policy effectiveness and efficiency	3.3%
Principle 6: Financial management	5%
Principle 7: Openness, transparency and publicity	6.7%
Principle 8: Monitoring and reporting	6.7%
Principle 9: Sustainability	5%

3.8.3.2. Principles, indicators, evaluation questions and scale

PRINCIPLE 1: Unity of strategy/programme

Municipal planning should be systematic, ie. to be based on the interconnections of the individual elements, on the existence of a unified direction for the development of all the constituent parts of its system.

Planning elements in a municipality are its subdivisions and areas of responsibility, as well as the individual parts of the planning process. The interaction between the units and the different areas of local responsibility is based on the coordination of their work at horizontal level. But the unified direction of the planning activity, the community of the goals of all elements, becomes possible within the vertical unity of the units, their integration. Coordination of the planning activities of the different functional units means that it is not possible to plan effectively the actions of each area of activity of the municipality if there is no coordinated planning activity for all units at a given level. Changes to the strategies and plans of one area should also be reflected in the plans of the other areas and areas..

The integration of planning work implies that there is diversity in the municipality in terms of the separate planning processes and the private plans of the units, ***i.e. there is a multifaceted nature of the planning subsystems***. It should be noted, however, that each of these subsystems operates out of the overall strategy and policy of the municipality, and each specific plan is part of the plan of the entire administrative-territorial unit.

All strategies and plans, created in the municipality, ***are not just a set*** of separate documents, ***but their interconnected system***.

Indicator 1.1: ***The strategy/programme has been developed in accordance with the unified development direction of the municipality***.

Question 1.1: ***Does the strategy / program correspond to the unified development direction of the municipality?***

Each strategy or program developed within a municipality should be consistent with the unified direction for its development and reflect the specific desired situation. The strategic or programming document should ***not*** be "isolated" but in line with all similar documents at the local level and should take into account the interrelations with other municipal spheres of action.

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The answer to this Question will show to what extent the strategy/programme takes into account its relation to the single development direction of the municipality and to what extent the actions included in it will contribute to the achievement of the planned goals.

The degree of application is proved by:

- Strategy/programme implementation reports;
- Reports on the implementation of the Municipal Development Plan;
- Reports on projects and initiatives implemented under the strategy/programme;
- Decisions of the Municipal Council regarding the strategy/program.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not correspond to the unified development direction of the municipality.
1 point	The strategy/programme is consistent with the single direction of development of the municipality in terms of one priority or objective.
2 points	The strategy/programme is in line with the unified direction of development of the municipality and this is evident from the public discussions held during its periodic reporting and the implemented projects and initiatives on it.
3 points	The strategy/programme is in line with the unified direction of development of the municipality and this is evident from the public discussions held on its periodic reporting and the implemented projects and initiatives on it. Periodic consultations with the local community on the need to update the strategy/programme in the context of a common vision for local and sustainable development.

Indicator 1.2: ***The strategy/programme has been developed in accordance with generally accepted requirements and contains the main elements of such a document (****analytical part, strategic part, action plan, resource allocation plan, control and monitoring system for implementation, document publicity measures****).***

Question 1.2: ***Does the strategy/programme contain all the essential elements of such a document?***

The quality of the strategic and planning documents is explained by their content, the scope of the problem, its applicability and feasibility. In this regard, each strategy / program, in order to be identified as such, must contain certain compulsory elements, arranged in a logical order and giving the maximum necessary information, so that it is possible to make qualitative analyses and to form concrete actions by the users of the documents (*local and state administration, business, potential investors, citizens, NGOs, etc.*).

The answer to this question will show whether the document is structured and contains commonly agreed policy and program elements.

The degree of application is proved by:

- Extract from the content of the strategy/programme;

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- A reference to the methodologies or guidelines used or to develop strategies or plans;
- Minutes of the meetings of the working groups on the drafting of the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not contain the essential elements of such a document.
1 point	The strategy/programme has only an analytical part, a strategic part and an action plan.
2 points	The strategy/programme has only the analytical part, the strategic part, the action plan and the resource allocation plan.
3 points	The strategy/programme has an analytical part, a strategic part, an action plan, a resource allocation plan, a control and monitoring system for implementation, document publicity measures.

Indicator 1.3: ***The strategy/programme has been developed in application of the principle of partnership with representatives of the civil sector:***

Question 1.3: ***Has the strategy/programme been developed with the involvement of all stakeholders and in partnership with the civil sector?***

The answer to this question will indicate whether the strategy / program has been developed in partnership with the civilian sector and whether the views on the issues of all stakeholders have been taken into account.

The degree of application is proved by:

- Order of the mayor of the municipality to form a working group(s) and to prepare the strategy/programme;
- Minutes of meetings of the working group(s) and drafting of the strategy / program;
- Results of consultations with the citizens of the municipality;
- Results of surveys conducted;
- Minutes of the meetings of the standing committees of the Municipal Council, which discussed the strategy/programme and were attended by representatives of interested parties.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme has not been developed with the involvement of all stakeholders and in partnership with the civil sector.
1 point	In developing the strategy/programme, the views of civil sector representatives have been taken into account.
2 points	The development of the strategy/programme has taken into account the views expressed by representatives of the civil sector and all stakeholders.

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3 points	The strategy/programme has been developed with the involvement of all stakeholders and in partnership with the civil sector. A working group(s) have been formed and representatives of the civil sector and all stakeholders have actively participated in the preparation of the analysis part, the strategic development guidelines and the action plan.

PRINCIPLE 2: Adequacy and relevance of strategy/programme

For the purposes of evaluation, the relevance / relevance and relevance of the strategy/programme should answer the question whether and to what extent the objectives of the document are consistent with:

- lessons learned from previous strategies and programs;
- the main problems and needs of the municipality;
- analysis of potential and prospects (***SWOT*** analysis);
- the priorities of higher level strategies, plans and policies;
- the political, economic and social environment in which the strategy/programme is implemented.

Indicator 2.1: ***Consistency with objectives at higher territorial (community) level or with global objectives***

Question 2.1: ***Does the strategy/programme fit with higher level strategies, plans and policies? Is there coherence and certainty with national structural/sectoral policies?***

The answer to this Question will indicate ***whether the relevance*** of the strategy/programme ***is ensured*** with higher-level strategies, plans and policies at national, regional and municipal level, as well as with specific sectoral or structural policies.

The degree of application is proved by:

- Strategy/programme implementation reports;
- Reports on the implementation of the Municipal Development Plan;
- Reports on projects and initiatives implemented under the strategy / program;
- Decisions of the Municipal Council regarding the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme is not in line with the higher level strategies, plans and policies.
1 point	The strategy/programme mentions higher-level strategies, plans and policies, but no logical link to themThe strategy/programme mentions higher-level strategies,
2 points	The strategy/programme is in line with the higher level strategies, plans and policies and this is evident from the planned measures for its implementation, respectively the financial plan and the sources of funding.

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3 points	The strategy/programme is in line with higher level strategies, plans and policies. The measures contained therein are consistent and consistent with relevant existing national structural/sectoral policies. The financial framework of the strategy/programme contains specific sources for financing each measure of the action plan. The projects/strategy projects implemented analyse and link their goals and objectives with higher-order strategies, programs and policies.

Indicator 2.2: ***Lessons from previous strategies and results from previous evaluations***

Question 2.2: ***Do the objectives of the strategy/programme fit the lessons of the previous strategies/programmes? Have previous recommendations, if any, been taken into account? Have any strategy/programme changes been made as a result of recommendations from other evaluations? What is the effect of the changes made?***

The answer to this Question will show ***to what extent the results of the implementation of previous strategies/programmes***, the recommendations of previous document evaluations and the changes made are taken into account.

The degree of application is proved by:

- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Results of studies conducted on the need for change in strategy/programme;
- Decisions of the Municipal Council to amend and supplement the strategy/programme;
- Recommendations of experts in the municipal administration;
- Recommendations for updating by a state body or a regional administration.

VALUATION OF THE FINDINGS:	
0 points	The objectives of the strategy/programme are not in line with the experience and lessons of previous strategies/programmes, the recommendations of previous evaluations have not been taken into account and no update of the strategy/programme has been made.
1 point	The lessons learned from the preparation and implementation of previous strategies/programmes have been taken into account in formulating the objectives of the strategy/programme. No previous evaluations of the strategy/programme have been made and therefore no possible recommendations have been taken into account.
2 points	The objectives of the strategy/programme are in line with the experience and lessons learned from previous strategies/programmes, the recommendations of previous evaluations have been taken into account and the strategy/programme has been updated. There is no feedback and measurement of the effect of changes made to the strategy/programme.

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3 points	The objectives of the strategy/programme are in line with the experience and lessons learned from previous program strategies, the recommendations of previous evaluations have been taken into account and the strategy/programme has been updated. Feedback and measurement of the effect of changes made in the strategy/programme was made.

Indicator 2.3: ***Relevance of strategy/programme***

Question 2.3: ***Are strategic goals consistent and relevant to national and European policies and priorities and changes in the socio-economic context?***

The answer to this question will show whether coherence between the objectives of the strategy/programme, on the one hand, and whether they are relevant in the context of policies, priorities and changes at national and European level, on the other, is ensured.

The degree of application is proved by:

- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Reports on projects and initiatives implemented under the strategy/programme;
- Decisions of the Municipal Council regarding the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategic objectives of the Strategy/Programme are consistent with each other but are not relevant to current national and European policies and priorities and changes in the socio-economic context. The strategy/programme should be updated to take account of new realities.
1 point	The strategic objectives of the Strategy/Programme are consistent with each other but are not relevant to current national and European policies and priorities and changes in the socio-economic context. Recommendations for updating the strategy/programme have been made and its updating is under preparation.
2 points	The strategic objectives of the Strategy/Programme are logically linked, coherent and consistent. They are formulated in a way that makes them relevant to current national and European policies and priorities, and to changes in the socio-economic context. Despite the deviations reported in the interim evaluations of the document, no action has been taken to update it. The strategy/programme does not have mechanisms in place for reporting and updating.

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3 points	The strategic objectives of the Strategy/Programme are logically linked, coherent and consistent. They are formulated in a way that makes them relevant to current national and European policies and priorities, and to changes in the socio-economic context. When the interim evaluations of the document revealed deviations in the relevance of the strategic objectives, steps were taken to update it. The strategy/programme has mechanisms in place for reporting and updating.

Indicator 2.4: ***Relevance of strategy/programme with applicable legislation***

Question 2.4: ***Is the strategy/programme directly linked to the applicable national regulatory framework?***

The answer to this question will indicate whether the strategy/programme takes into account the specifics of the applicable legislation.

The degree of application is proven by:

- Minutes of working group meetings to prepare the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Reports on projects and initiatives implemented under the strategy/programme;
- Decisions of the Municipal Council regarding the strategy/programme;
- Opinions of the district administration on the legality of decisions of the Municipal Council related to the implementation of the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The specific nature of the applicable legislation is not taken into account in the strategy/programme.
1 point	The strategy/programme takes into account the specificity only of the applicable legislation regarding strategic planning and regional development.
2 points	The strategy/programme takes into account the applicable regulatory framework for strategic planning, regional development and sector specificity.
3 points	The strategy/programme takes into account the applicable legislation regarding strategic planning, regional development and sector specificity. The strategy/programme also takes into account the specificities of the European legal framework for the sector.

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Indicator 2.5: Relevance of measures or system for monitoring, evaluating, reporting and updating strategy/programme

Question 2.5: Are the measures or system described in the strategy / program appropriate for monitoring, evaluating, reporting and updating it? Are there time periods for monitoring, evaluation, reporting and updating in the strategy/programme?

The answer to this question will indicate whether there are mechanisms in place to monitor, evaluate, report and update the strategy / program, to what extent they are credible and can have a preventive and corrective function in the course of its implementation.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects and initiatives implemented under the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not have any measures or system in place to monitor, evaluate, report and update it. The periods during which the municipality and those responsible for its implementation should undertake monitoring, evaluation, reporting and updating activities are also not described.
1 point	The strategy/programme does not have any measures or system in place to monitor, evaluate, report and update it. The time periods during which the municipality and those responsible for its implementation should undertake monitoring, evaluation, reporting and updating activities are described.
2 points	The strategy/programme outlines measures or a system for monitoring, evaluating, reporting and updating it. There are no specific periods for the municipality and those responsible for its implementation to undertake monitoring, evaluation, reporting and updating activities.
3 points	The strategy/programme shall detail the measures or system for monitoring, evaluating, reporting and updating it. There are fixed specific periods in which the municipality and those responsible for its implementation should take action to monitor, evaluate, report and update.

PRINCIPLE 3: Applicability of strategy/programme

Indicator 3.1: *Evaluation of the achievement of the strategic objectives*

Question 3.1: *Are indicators quantitatively measuring the overall, specific and operational objectives of the strategy/programme and data collection procedures? Are the output and target values of the indicators formulated? Do the target quantitative values in the strategy/programme continue to be valid?*

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The answer to this question will show to what extent the strategy/programme progress indicator system is reliable and can provide relevant information for the achievement of the strategic objectives.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy / program;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects and initiatives implemented under the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not have a system of indicators for reporting progress.
1 point	The strategy/programme has only a description of the possible indicators for progress reporting, they are not systematic, they are not quantifiable and the possible sources of information are not indicated.
2 points	The strategy/programme has a system of indicators for reporting progress. Not all indicators are formulated in such a way that their quantitative measurement is possible. Possible sources of information on the indicators are described.
3 points	The strategy/programme has an appropriate system of indicators for reporting progress. The indicators are formulated in such a way that they can be quantified and are objectively verifiable. Possible sources of information on the indicators are described.

Indicator 3.2: ***Evaluation of the progress of the strategy/programme by priority***

Question 3.2*: How many projects have been implemented under the strategy/programme action plan? What projects have been implemented outside the established action plan of the strategy/programme but are consistent with it and contribute to the achievement of its goals and objectives? How many other initiatives have been implemented within the strategy/programme?*

The answer to this question will show the extent to which the strategy / program has been implemented and the desired statuses have been achieved, in line with the strategic objectives.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;

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- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not contain an action plan with specific projects, measures and initiatives. No projects and initiatives implemented under the strategy/programme.
1 point	Up to ***25%*** of the planned projects have been implemented within the strategy / program. There are no projects and other initiatives implemented beyond the established action plan of the strategy / program that contribute to the achievement of its goals and objectives.
2 points	Within the strategy/programme, ***26%*** to ***60%*** of the planned projects have been implemented. Up to ***5*** projects have been implemented outside the established action plan of the strategy/programme that contribute to the achievement of its goals and objectives. No other initiatives within the strategy/programme have been implemented.
3 points	Within the strategy/programme, over ***61%*** of the planned projects have been implemented. There are over ***5*** projects implemented outside the established Action Plan of the Strategy/Programme that contribute to the achievement of its goals and objectives. There are 5 other initiatives within the Strategy/Programme implemented

Indicator 3.3: ***Evaluation of strategy/programme implementation***

Question 3.3: ***What are the results of the strategy/programme implementation so far? To what extent are the results achieved consistent with the indicative values of the Performance Indicators recorded in the document?***

The answer to this question will show to what extent the results of the strategy/programme implementation meet the pre-planned desired states.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS

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0 points	There are no performance indicators in the strategy/programme with a description of their relative weight. No results were achieved under the strategy/programme.
1 point	Strategy/programme implementation results achieved up to ***25%*** of the Indicative Performance Indicators.
2 points	The results of the implementation of the strategy/programme correspond to ***26%*** to ***60***% of the indicator value of the Performance Indicators.
3 points	The results of the implementation of the strategy/programme correspond to more than ***61%*** of the indicator value of the Performance Indicators.

Indicator 3.4: ***Evaluation of the extent to which the measures in the strategy/programme meet the identified needs in the analytical part of the document?***

Question 3.4: ***How the identified needs in the analytical part of the strategy/programme are reflected in the planned measures for its implementation?***

The answer to this question will identify, justify and link between them the existing deficits (needs) and resources, the opportunities and threats, the strategic choices made for goals and priorities, the measures and interventions for their implementation, the financial and organisational resources invested, the administrative procedures. to accomplish all aspects of programme implementation.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:	
0 points	The identified needs in the analytical part of the strategy/programme are not reflected in the planned measures for its implementation.
1 point	There are identified needs in the strategy/programme, but they are not reflected in the action plan.
2 points	There are identified needs in the strategy/programme and these are partially reflected in the action plan and specific projects.

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3 points	There are identified needs in the strategy/programme and these are fully reflected in the action plan and specific projects. At the time of the evaluation there were projects implemented in the Action Plan.

Indicator 3.5: ***Reflection of local priorities in strategy/program*** **me**
Question 3.5: ***Are local priorities reflected in the strategy/programme?***

The answer to this question will show to what extent the priorities and problems of the local community are reflected in the strategy/programme in the form of specific goals, intervention measures, projects and initiatives.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not reflect local priorities and is not reflected in specific objectives, intervention measures, projects and initiatives.
1 point	Local priorities are mentioned and described in the strategy/programme, but they are not reflected in the specific objectives of the objectives, intervention measures, projects and initiatives.
2 points	The strategy/programme reflects local priorities and is reflected in the specific objectives of the document.
3 points	The strategy/programme reflects local priorities and is reflected in specific objectives, intervention measures, projects and initiatives.

Indicator 3.6: ***Even distribution of intervention measures throughout the territory of the municipality***

Question 3.6: ***Are the intervention measures evenly distributed throughout the municipality or concentrated in the municipal centre?***

The answer to this question will show to what extent the intervention measures of the strategy/programme cover (cover) the territory of the municipality.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;

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- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not set out specific measures for interventions, projects and initiatives.
1 point	The specific interventions, projects and initiatives planned in the strategy/programme cover only the municipal centre
2 points	Specific intervention measures, projects and initiatives planned in the strategy/programme cover the municipal centre and only the larger mayoralties.
3 points	Specific measures for interventions, projects and initiatives planned in the strategy/programme cover the entire municipal territory - the municipal centre and all constituent mayoralties.

Indicator 3.7: ***Predictability of the multiannual financial framework and budget of the sectoral strategy/programme***

Question 3.7: ***Are the estimated financial estimates over the entire strategy/programme period evenly distributed? Is there a practice in planning financial resources for the municipality's annual budget for the implementation of the strategy/programme?***

The answer to this question will show the extent to which the intervention measures of the strategy / program are financially supported.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/program implementation reports;
- Decisions of the Municipal Council to adopt the municipal budget for two consecutive years prior to the year of the evaluation;
- Reports on the implementation of the municipal budget for two consecutive years before the year of the evaluation;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:

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0 points	The strategy/programme does not have a financial plan outlined for the specific interventions, projects and initiatives. The strategy/programme does not set out specific measures for interventions, projects and initiatives.
1 point	The strategy/programme has an action plan with specific interventions, projects and initiatives, but they are not financially valued.
2 points	The strategy/programme sets out a financial plan for the specific interventions, projects and initiatives by year. During the preparation of the annual budgets, financial resources are planned to partially cover the strategy/programme or specific projects/initiatives under it, but have not been paid in the course of its cash execution.
3 points	The strategy/programme sets out a financial plan for the specific interventions, projects and initiatives by year. In preparing the annual budgets, financial resources are planned to partially cover the strategy/programme or specific projects/initiatives under it.

Indicator 3.8: ***Quality in the organisation of the implementation of the strategy/programme***

Question 3.8: ***Has the strategy/programme implementation schedule been adhered to? What are the reasons for the delay, especially for activities and projects that have been identified as strategic but have not started in a timely or in the meantime?***

The answer to this question will show the extent to which an organisation has been established to execute the strategy/programme and the time schedule has been respected.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Decisions of the Municipal Council to adopt the municipal budget for two consecutive years prior to the year of the evaluation;
- Reports on the implementation of the municipal budget for two consecutive years before the year of the evaluation;
- Information on projects/initiatives implemented on the strategy/programme and the results achieved.

VALUATION OF THE FINDINGS:

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0 points	The strategy/programme does not have a timetable for the implementation of the specific interventions, projects and initiatives. The strategy/programme does not set out specific measures for interventions, projects and initiatives.
1 point	The strategy/programme has a timetable for implementation of the specific interventions, projects and initiatives, but it is common and not respected at the time of the evaluation.
2 points	The strategy/programme has a timetable for implementation of specific interventions, projects and initiatives that are being followed.
3 points	The strategy/programme has a timetable for strict implementation of specific interventions, projects and initiatives. It is constantly monitored and if deviations are taken, appropriate actions are taken to overcome the delay.

PRINCIPLE 4: Overall impact of the strategy/programme

Indicator 4.1: ***Impact of the strategy/programme on the economic development of the municipality***

Question 4.1: ***To what extent does the strategy/programme affect the economic development of the municipality?***

The answer to this Question will show to what extent the strategy/programme influences the economic development of the municipality, how it leads to the stimulation or negative impact of certain sectors, infrastructure and human resources.

The score of this Indicator is obtained as the sum of the values of the individual 11 subquestions.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/program implementation reports;
- Reports on projects and initiatives implemented under the strategy/programme;
- Information from the NSI on the economic status of the municipality for the period of the strategy/program evaluation.

VALUATION OF THE FINDINGS:	
Subquestion 4.1.1: Will any of the envisaged measures in the strategy/programme have a negative impact on possible expansion of production by limiting land use or setting restrictions on background pollution?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

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VALUATION OF THE FINDINGS:	
Subquestion 4.1.2: Will any of the envisaged measures in the strategy/programme have a negative impact on the possible expansion of production by limiting land use or setting restrictions on background pollution?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.1.3: Some of the measures under the strategy/programme envisaged would have a negative impact on the availability of workers with rare skills and could cause a shortage of such workers locally?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.1.4: Will any strategy/programme measures envisaged have a negative impact on the construction and maintenance of infrastructure needed for economic development?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.1.5: Will any strategy/programme measures impede capital investment in industry, agriculture and tourism?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.1.6: Will any strategy/programme measures envisaged have a negative impact on the municipality's ability to attract tourists?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

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VALUATION OF THE FINDINGS:	
Subquestion 4.1.7: Will any of the envisaged measures under the strategy/programme have a negative impact on the municipality's ability to use its natural resources, such as forests, water, medicinal plants and support its economic development?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.1.8: Do any of the proposed measures in the strategy/programme need to be modified; to envisage measures or to implement measures to prevent or reduce the negative impact on potential economic development opportunities?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:	
Subquestion 4.1.9: Do any of the envisaged strategy/programme measures have an impact outside the municipality?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

Indicator 4.2: ***Impact of the strategy/programme on the social development of the municipality***

Question 4.2: ***To what extent does the strategy/programme affect the social development of the municipality?***

The answer to this Question will show to what extent the strategy/programme has a positive or negative impact on the social sphere in the municipality.

The score of this Indicator is obtained as the sum of the values of the individual 8 subquestions.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;

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- Reports on projects and initiatives implemented under the strategy/programme;
- Information from the NSI on the state of the social sphere in the municipality for the evaluation period of the strategy/programme.

VALUATION OF THE FINDINGS:	
Subquestion 4.2.1: Will any of the envisaged measures under the strategy/programme have a negative impact on the quality of life of: the elderly and pensioners; people with disabilities/disabilities; children and young people?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.2.2: Will any of the envisaged measures in the strategy/programme have a negative impact on the opportunities and conditions for education and training, access for all citizens?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:	
Subquestion 4.2.3: Will any of the envisaged measures in the strategy / program have a negative or positive impact on the recreation and recreation areas (public spaces, green areas, etc.)?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.2.4: Will the cumulative effect of all measures under the strategy / program equally benefit all settlements or is it likely that some settlements will be more favourable than others?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:
Subquestion 4.2.5: Will any of the envisaged strategy/programme measures have a positive impact on the

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ethnic minorities in the municipality?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:	
Subquestion 4.2.6: Will any of the envisaged strategy/programme measures have a negative impact on the ethnic minorities in the municipality?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.2.7: Do any of the proposed measures in the strategy/programme need to be modified; to envisage new measures or to implement measures to prevent or reduce the negative impact on the livelihood of the population. Is it necessary to provide for compensation for social groups or persons because of the expected decrease in their income?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:	
Subquestion 4.2.8: Are any of the envisaged measures in the strategy/programme expected to have an impact outside the municipality? Have these measures been discussed with the potentially affected municipalities?	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

Indicator 4.3: Impact of the strategy/programme on environmental protection in the municipality

Question 4.3: To what extent and in what direction (positive or negative) does the strategy/programme affect the state of the environment in the municipality?

The answer to this question will show to what extent the strategy/programme influences the state of the environment in the municipality.

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The score of this Indicator is obtained as the sum of the values of the individual ***9*** subquestions.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Reports on projects and initiatives implemented under the strategy/programme;
- Information from the Nation Centre for Environment on the state and quality of the environment in the municipality for the period of the strategy/programme evaluation.

VALUATION OF THE FINDINGS:	
Subquestion 4.3.1: Will any of the envisaged measures in the strategy/programme have a negative impact on the environmental components (water, soil, atmosphere, natural resources, biodiversity) and their natural processes?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.3.2: Will any strategy/programme measures envisaged have a negative impact on existing (or proposed) protected areas?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.3.3: *Will any of the envisaged measures in the strategy/programme have a negative impact on rare or endangered species?*	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:
Subquestion 4.3.4. *Will any of the envisaged measures in the strategy/programme have a negative*

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impact on the quality of the environment and human health?	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.3.5: *Will any of the measures in the strategy/programme envisage increasing the use of renewable natural resources such as: wood, mushrooms, wild fruits and medicinal plants; surface and groundwater; agricultural land?*	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestionт 4.3.6: *Will any of the measures in the strategy/programme envisage reducing the opportunities for sustainable and equitable use of natural resources (so that all social groups have access to them and the speed of their use does not exceed the speed of their natural reproduction)?*	
0 points	Yes
1 point	Rather yes
2 points	Rather no
3 points	No

VALUATION OF THE FINDINGS:	
Subquestion 4.3.7: *Will any of the measures in the strategy / program have an impact on improving the quality of the environment and addressing existing environmental problems in the municipality (e.g. reducing pollution, increasing energy efficiency, building renewable energy sources, protecting biodiversity, reducing erosion, etc.)?*	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

VALUATION OF THE FINDINGS:

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Subquestion 4.3.8: *Are any of the envisaged measures in the strategy/programme expected to have an impact on the environment (e.g. poor air quality, soil pollution, surface and groundwater, etc.) outside the municipality? Have you discussed these measures with the potentially affected municipalities?*	
0 points	No
1 point	Rather no
2 points	Rather yes
3 points	Yes

PRINCIPLE 5: Policy effectiveness and efficiency:

- The results are in line with the goals for which there is public consensus.
- The maximum possible benefit is achieved with the resources available.
- Strategy/program implementation management systems help to evaluate and enhance the effectiveness and effects of its implementation.
- Audits are regularly carried out to evaluate and improve performance.

Indicator 5.1: ***The achieved results from the implementation of the strategy / program lead to the achievement of the set goals in it***

Question 5.1: ***What percentage of the planned implementation projects in the annual plan (program) of the strategy/programme (referring to the year preceding the evaluation) correspond to the timetable for their planned implementation and the achieved results meet the objectives set?***

The answer to this question will show how realistic the planning process is and is oriented towards achieving the set goals. It is also an Indicator of the will and ambition of the municipal leadership to lead a coherent and predictable development policy formulated in consensus with the locals.

The degree of application is proved by:

- Annual plan (program) for the implementation of the strategy/programme;
- Report on the implementation of the annual plan (programme) for the implementation of the strategy/programme;
- Strategy/programme implementation evaluation reports;
- Ongoing reports of groups/committees monitoring the implementation of the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	No plan (programme) has been adopted or no projects have been completed from the annual plan (programme) of the strategy/programme.
1 point	Up to 30% of the planned projects under the strategy/programme have been started and/or implemented during the year under review.

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2 points	From 31% to 65% of the planned projects under the strategy/programme were started and/or implemented during the year under review.
3 points	Over 65% of the planned projects under the strategy/programme were started and/or implemented during the year under review.

Indicator 5.2: ***Control and monitoring systems available to refine the strategy/programme***

Question 5.2: ***What percentage of the implemented projects, measures and initiatives under the strategy/programme are covered by the control and monitoring system?***

The answer to this question will show to what extent the municipality's management simultaneously monitors the resources invested in the projects, measures and initiatives being implemented so as to continuously improve the effectiveness and efficiency of the respective policies.

The degree of application is proved by:

- Procedures for monitoring and monitoring the implementation of projects, measures and initiatives;
- Instructions for applying the procedures;
- Minutes and current reports of groups/committees monitoring the implementation of the strategy/programme;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Expert recommendations for improving the strategy/programme;
- Information on projects and initiatives implemented under the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	No introduced systems.
1 point	From 1% to 50% of the implemented projects, measures and initiatives are covered by a control and monitoring system.
2 points	From 51% to 80% of the implemented projects, measures and initiatives are covered by a control and monitoring system and corrective actions are taken.
3 points	More than 80% of the implemented projects, measures and initiatives are covered by a control and monitoring system and corrective actions have been taken to improve them.

PRINCIPLE 6: Financial management:

- The cost-benefit relationship must be taken into account when formulating and implementing local public sector policies. Local authorities should look for fiscal

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equivalence - to provide public services at such a cost as taxes and fees tend to pay consumers and the benefits of public goods equal their costs.

- The appropriateness of financial management of the strategy/programme is monitored.
- A multi-annual financial plan of the strategy/programme with broad public consultation is being prepared.
- The local authority uses the mechanisms and opportunities to supplement the funding of measures, projects and initiatives under the strategy/programme.

Indicator 6.1: ***All municipal expenditures under the strategy/programme are planned and budgeted***

Question 6.1: ***What is the share of overdue liabilities (over 60 days from the occurrence of the payment obligation) from the total budget of the municipality as of December 31 of the last reported year for the projects under the strategy/programme?***

The answer to this question will show how much municipal government adheres to strict fiscal discipline in spending public finances on strategy / program projects and generates budget deficits from this.

The degree of application is proved by:

- Monthly reports on the cash execution of the municipal budget;
- Current reports on unpaid project costs, part of the strategy/programme;
- Enforcement letters for enforced court decisions on project obligations, part of strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	Over 31% is the share of overdue project liabilities, part of the strategy/programme.
1 point	From 16% to 30% is the share of overdue project liabilities, part of the strategy/programme.
2 points	From 1% to 15% is the share of overdue project liabilities, part of the strategy/programme.
3 points	No overdue project liabilities as part of strategy/programme.

Indicator 6.2: ***Use of additional funding to implement the strategy/programme***

Question 6.2: ***What is the share of complementary funding in the implementation of the strategy/programme direct lines for the last reported year?***

The answer to this question will indicate the extent to which additional funding is sought from various municipal, operational, government and other donor programs for the implementation of projects and measures of the strategy/programme.

The degree of application is proved by:

- Monthly reports on the cash execution of the municipal budget;
- Ongoing references to complementary project funding, part of the strategy/programme;

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- Information on the implemented projects under the strategy/programme and sources for their financing.

VALUATION OF THE FINDINGS:	
0 points	No additional funding is used to implement the strategy/programme projects.
1 point	1% to 15% is the share of complementary project funding, part of the strategy/programme.
2 points	From 15% to 30%, the share of complementary project financing is part of the strategy/programme.

Indicator 6.3: There are introduced Financial Management and Control Systems (FMCS)

Question 6.3: What percentage of the mandatory elements of the FMCS, in accordance with the methodological guidelines of the MoF, are implemented in your municipality?

The answer to this Question will show to what extent the municipal administration manages the funds in such a way as to ensure that the objectives of the organisation are achieved and to ensure the protection of the public interest.

The degree of application is proved by:

- All the rules, procedures, mechanisms put forward by the FMCS;
- Other sources at the discretion of the municipality.

VALUATION OF THE FINDINGS:	
0 points	No introduced financial management and control systems.
1 point	20% or of the mandatory elements of the financial management and control systems have not been introduced.
2 points	Between 1% and 20% have not been introduced.
3 points	Over 90% of the mandatory elements of the financial management and control systems have been introduced.

PRINCIPLE 7: Openness, transparency and publicity

In the context of these Methodological Rules, ***openness, transparency and publicity are taken into account:***

- Decisions on strategy/programme are taken and implemented in accordance with established rules and regulations.
- There is public access to all information about the strategy/programme and can be accessed on the official website of the municipality.

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- There is public access to information on decisions taken, policies implemented, results achieved, projects prepared and implemented, measures and initiatives implemented, resources invested, etc., on the implementation of the strategy/programme, which enables effective monitoring and monitoring contributes to the work of local authorities.
- Formed policies, specific development guidelines, measures, activities, projects and initiatives within the strategy/programme are publicly discussed to ensure public support, reach consensus and protect the interests of the local community.

Indicator 7.1: ***The activity of the Municipal Council regarding the strategy/me policy is open and transparent to the citizens***

Question 7.1: ***Does the public have permanent access to information on the activities of the Municipal Council regarding the strategy/programme? Is there any information on the decisions of the Municipal Council and its standing committees regarding the strategy/programme? Is there a way to connect the citizens with the municipal councillors and the municipal council as a whole on strategy/programme questions?***

The answer to this question will show the degree of openness and transparency of the work of the municipal councillors and the municipal council as a whole with regard to the strategy/programme and their willingness to consult the citizens.

The degree of application is proved by:

- Information on the decisions taken by the Municipal Council concerning the strategy/programme for a period of two years before the date of the evaluation;
- Information on the sources of access to the adopted decisions by the Municipal Council concerning the strategy/programme;
- Reference for public consultations or opinion polls on strategy/programme questions initiated by the Municipal Council or any of its standing committees.
- Reference to the speeches of citizens at regular sessions of the Municipal Council on strategy/program issues for a period of two years prior to the evaluation date.

VALUATION OF THE FINDINGS:	
0 points	Information on the activities of the Municipal Council regarding the strategy/programme is not available to the public. The decisions of the Municipal Council and its standing committees regarding the strategy/programme are not accessible to the general public. There is no established way of contacting citizens with municipal councillors and the Municipal Council as a whole on strategy/programme questions.

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1 point	The public has access to information on the activities of the Municipal Council regarding the strategy/programme. The decisions of the Municipal Council and its standing committees regarding the strategy/programme have not been published, but can be obtained by virtue of the Access to Public Information Act.
2 points	The public has access to information on the activities of the Municipal Council regarding the strategy/programme. The decisions of the Municipal Council and its standing committees regarding the strategy/programme are public and accessible to the general public. There is no established way of contacting citizens with municipal councillors and the Municipal Council as a whole on strategy/program questions.
3 points	The public has access to information on the activities of the Municipal Council regarding the strategy/programme. The decisions of the Municipal Council and its standing committees regarding the strategy/programme are public and accessible to the general public. There is a well-established way of connecting citizens with municipal councillors and the Municipal Council as a whole on strategy/programme questions.

Indicator 7.2: ***Introduced a clear procedure for access to public information on the strategy/programme***

Question 7.2: ***Is there an unobstructed access to the strategy/programme document on the Internet? Are there clear procedural rules for access to public information, including related to sectoral strategy/programme?***

The answer to this question will show two things: 1) a desire on the part of the local government for its citizens to be informed; and 2) openness and degree of fulfilment of some of the requirements of the Access to Public Information Act, as well as the willingness of the municipal administration to accept and respond to requests under the Access to Public Information Act.

The degree of application is proved by:

- "Print screen" of the official website of the municipality where the strategy/programme is published, the rules for access to public information, as well as contacts with the designated official directly responsible for the provision of public information;
- Reference to the websites where the strategy/programme is published;
- Order to adopt procedural rules for access to public information;
- Order appointing an official from the municipal administration who is directly responsible for the provision of public information.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme is not available on the Internet. The municipality does not have procedural rules for access to public information..

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1 point	The strategy/programme is not available on the Internet, only in paper format upon request under the Public Information Access Act. The municipality has introduced rules of procedure for access to public information.
2 points	The strategy/programme is available on the Internet, but some of its constituents are published, but not the document as a whole. The municipality has introduced procedural rules for access to public information and has been designated as the official responsible for processing requests for access to public information.
3 points	The strategy/programme is available on the Internet in its entirety and applications. The municipality has introduced procedural rules for access to public information and has been designated as the official responsible for processing requests for access to public information. Applications may also be submitted electronically.

Indicator 7.3: ***There is available information on the annual progress reports on the strategy/programme, the register(s) of projects prepared, implemented and implemented, measures and tenders announced and conducted, tenders and tenders***

Question 7.3: ***Is there access to the annual progress reports on the strategy/ programme, register(s) of the projects prepared and implemented, measures and initiatives, the tenders and tenders announced and carried out?***

The degree of application is proved by:

- Publications, reports, information messages, etc., on decisions taken, policies implemented, results achieved, projects prepared and implemented, measures and initiatives implemented, resources invested, public procurement carried out, etc., on the implementation of the strategy/programme;
- Information on the number of press releases sent to the media, with information on the strategy/programme;
- Reports from the register of projects/projects prepared and implemented under the strategy/programme;
- Information from the public procurement register on the number of procedures performed in selecting contractors for activities and measures under the strategy/programme;
- Invitations to the media to participate in public discussions, report on work done, open tenders related to the strategy/programme.

VALUATION OF THE FINDINGS:

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0 points	There is no public access to information on the decisions taken, the policies implemented, the results achieved, the projects prepared and implemented, the measures and initiatives implemented, the resources invested, the public procurement carried out, etc., regarding the implementation of the strategy/programme. Annual Strategy/Programme Progress Reports are not published and announced. A register of the projects prepared, implemented and implemented is not maintained. There is a common register for the public procurement and contracts concluded.
1 point	The media and on the official website of the municipality are published about the decisions taken, the policies implemented, the results achieved, the projects prepared and implemented, the measures and initiatives implemented, the resources invested, the public procurement carried out, etc., on the implementation of the strategy/programme. A register of the prepared and implemented projects is not maintained. There is a common register for the public procurement and contracts concluded. Media are only present at the public reports on the implementation of the strategy/programme and at some of the procurement procedures.
2 points	Information about the decisions taken, the policies implemented, the results achieved, the projects prepared and implemented, the implemented measures and initiatives, the invested resources, the public procurement, etc., on the implementation of the strategy/programme are published in the media and on the official website of the municipality. A public register is maintained for the prepared/implemented projects, measures and initiatives under the strategy/programme. There is a register for the announced public procurement and a register for the concluded contracts. The media are present at the public reports on the implementation of the strategy/programme and some of the procurement procedures.
3 points	Information about the decisions taken, the policies implemented, the results achieved, the projects prepared and implemented, the implemented measures and initiatives, the invested resources, the public procurement, etc., on the implementation of the strategy/programme are published in the media and on the official website of the municipality. A public register is maintained for the prepared and implemented projects, measures and initiatives under the strategy/programme, including in electronic format

Indicator 7.4*: There are practices for public discussion of the strategy/programme as well as policies, development guidelines, measures, activities, projects and initiatives within its scope*

Question 7.4: ***Have public discussions on the strategy/programme as well as policies, development guidelines, measures, activities, projects and initiatives within its scope been carried out?***

The answer to this question will show to what extent the formation, implementation and updating of sectoral policies, strategic and planning documents are carried out on clear, predictable and transparent rules and criteria and take into account public needs.

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The degree of application is proved by:

- Invitations for public discussions on the strategy/programme;
- Publications from public discussions on the strategy/programme;
- Minutes of public discussions of the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme, as well as related policies, development guidelines, measures, activities, projects and initiatives, has not been publicly discussed.
1 point	The strategy/programme is subject to public consultation in order to satisfy the explicit requirement of a regulatory document.
2 points	The strategy/programme is subject to public consultation, including when it is updated.
3 points	The strategy/programme, as well as its updates and related policies, development guidelines, measures, activities, projects and initiatives are subject to public consultation. In order to obtain a more complete view of the public opinion, surveys were conducted among the citizens of the municipality.

PRINCIPLE 8: Monitoring and accountability:

- The municipality is responsible for the effectiveness and efficiency of the strategy/programme implementation;
- Monitoring is done through the preparation and verification of different types of reports. The information is based on detailed Indicators and internal monitoring procedures in the strategy/programme. Obtained monitoring data informs the progress of strategy/programme implementation; for available problems; the need for corrective action; to optimize the resources used; to prevent irregularities and others.

Indicator 8.1: ***Accountability to citizens for the implementation of the strategy/programme***
Question 8.1: ***How often do the mayor/municipality and municipal councillors meet with citizens to report on the implementation of the strategy/programme?***

The answer to this question will show whether and how often the mayor reports to the citizens on the decisions taken to implement the strategy/programme, seeks their opinion, examines their interests in order to better satisfy them.

The degree of application is proved by:

- invitations to meetings via different channels;
- minutes of meetings with citizens;
- reports on the mayor's activity;

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- schedules of visits to mayoralties;
- an annual strategy/programme implementation program;
- Mayor's annual management program;
- other documents at the discretion of the municipality.

VALUATION OF THE FINDINGS:	
0 points	The mayor and the municipal councillors do not hold meetings with the citizens to report on the implementation of the strategy/programme.
1 point	The mayor and the municipal councillors only meet with citizens at the municipal centre and report on the implementation of the strategy/programme.
2 points	The mayor and municipal councillors hold organised meetings with citizens in all constituent mayoralties of the municipality at least once a year, at which they report on the implementation of the strategy/programme.
3 points	The mayor and municipal councillors hold organised meetings with citizens in all constituent mayoralties of the municipality more than once a year, informing them about the progress of the strategy/programme, accepting the problems and recommendations of the citizens and taking into account their implementation at subsequent meetings.

Indicator 8.2: ***Available and accessible information on ongoing and completed municipality/strategy projects?***

Question 8.2: ***Is information on current and completed strategy/programme projects available on the official website of the municipality or other public places, with a description of the planned or implemented activities, their budget, project contractors and the results achieved?***

The answer to this question will show whether and to what extent local government units are accountable to citizens for the quality of their actions for the implementation of the strategy/programme, to what extent the goals set in it have been achieved and every stakeholder has the opportunity to be informed about them.

The degree of application is proved by:

- The presence of a section on the relevant site of the municipality;
- Public register of projects in the municipality;
- Announced information on specialized boards in the municipality, specialized brochures, leaflets and more. materials;
- Publications.

VALUATION OF THE FINDINGS:

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0 points	The municipality does not have an official website or there is no information on current and completed projects.
1 point	The municipality has a dedicated section of its official website for ongoing and completed projects, but the information is incomplete or out of date.
2 points	The municipality has a specialized section of its official website for ongoing and completed projects and the information is complete or up-to-date.
3 points	The municipality has a specialized section of its official website for current and completed projects and the information is complete or up-to-date, there are forms for asking questions, which are answered systematically, other channels are used for reporting the results of the completed projects.

Indicator 8.3: ***Public resources are spent responsibly and responsibly.***

Question 8.3: ***Has a public procurement register been created and kept up-to-date within the municipality?***

Ensuring that local authorities have access to up-to-date public registers is a measure of both transparency and accountability of the administration's activities. The registers contain data that carry information about the actions or omissions of the authorized persons and in this sense they provide reporting data on the accomplishment by the local self-government body and the executive bodies on the territory of the municipality.

The answer to this question will show whether there is access to registers that provide information about the activities of the authorities.

The degree of application is proved by:

- Register published on the municipality's website;
- Free access to information in a certain order and others.

VALUATION OF THE FINDINGS:	
0 points	The municipality does not have a public procurement register.
1 points	The municipality does not have a register that duplicates the details of the register of the Public Procurement Agency.
2 points	The municipality has a register containing up-to-date information on all stages of the procurement and its results.
3 points	The municipality has a register containing up-to-date information on all stages of the procurement and its results. The information is also available through the online public procurement register.

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Indicator 8.4: ***Citizens' involvement in public discussions on the strategy/programme***

Question 8.4: ***Does the municipality manage to mobilize civic interest in conducting public discussions on the strategy/programme and in what forms?***

The answer to this question will show whether the municipality is making sufficient and systematic efforts to organize citizen participation in public discussions on sectoral policies. The extent to which organised discussions are formal and solely to comply with the law must be assessed, or the contribution of citizens to formulating local policies and draft decisions should be sought. The mobilization of the civic interest requires lengthy and focused work, which must be carried out by local administrations not only on a campaign basis.

The degree of application is proved by:

- Invitations for public debate on the strategy/programme in the press and electronic media;
- Lists of participants in strategy/programme discussions;
- Minutes of strategy/programme discussions;
- Suggestions made during strategy/programme discussions and others.

VALUATION OF THE FINDINGS:	
0 points	The municipality does not hold public discussions on the strategy/programme.
1 point	The municipality conducts public discussions of the strategy/programme required by the separate laws, informing the citizens about the place, day and time of the meeting, by announcing the entrance of the municipality.
2 points	The municipality conducts public discussions of the strategy/programme required by the separate laws, informing the citizens about the agenda, place, day and time of the meeting, through a campaign in the local mass media, prepares preliminary information materials, which are distributed in public places.
3 points	The municipality organizes and conducts public discussions on the strategy/programme, even if not required by law. The municipality informs the citizens about the agenda, place, day and time of the meeting, through a local media campaign and personal letters to active citizens and groups. Prepares information materials in a comprehensible/accessible language, which are distributed in public places.

PRINCIPLE 9: Sustainability

Indicator 9:1: ***Sustainability of the strategy/programme***

Question 9.1: ***To what extent changes resulting from the implementation of measures, projects and initiatives under the strategy/programme can be maintained after the program is completed and have the potential for lasting impact?***

The answer to this question shows to what extent positive changes resulting from the implementation of the strategy programme can be expected to continue after it is implemented.

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The degree of application is proved by:

- Excerpts from the content of the strategy/program in the Action Plan part;
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on projects and initiatives implemented under the strategy/programme.

VALUATION OF THE FINDINGS:	
0 points	The strategy/programme does not envisage specific measures, projects and initiatives to be implemented.
1 point	The strategy/programme details specific measures, projects and initiatives. At the time of the evaluation, 5% to 20% of them were fulfiled, they bring positive benefits for the citizens of the municipality and the achieved results are preserved.
2 points	The strategy/programme details specific measures, projects and initiatives. At the time of the evaluation, 21 to 60% of them were fulfiled, they bring positive benefits for the citizens of the municipality and the achieved results are preserved.
3 points	The strategy/programme details specific measures, projects and initiatives. At the time of the evaluation more than 61% of them were fulfiled, they bring positive benefits for the citizens of the municipality and the achieved results are preserved. The effects and benefits of implementing specific measures, projects and initiatives may be further enhanced by future strategy/programme updates or new local policies.

Indicator 9.2: ***Implementation of the principles of gender equality and non-discrimination, sustainable development and environmental protection***

Question 9.2: ***Does the strategy/programme incorporate the principles of gender equality and non-discrimination, sustainable development and environmental protection? How are they respected? There are limericks that guarantee their compliance?***

The answer to this question will show us to what extent, how it is respected and how the principles of gender equality and non-discrimination, sustainable development and environmental protection are guaranteed.

The degree of application is proved by:

- extracts from the content of the strategy/programme;
- interim or final evaluations of the strategy/programme;
- strategy/programme implementation reports;
- references to projects and initiatives implemented under the strategy/programme and measures to respect the principles of gender equality and non-discrimination, sustainable development and environmental protection.

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VALUATION OF THE FINDINGS:	
0 points	The strategy/programme is not in line with the principles of gender equality and non-discrimination, sustainable development and environmental protection and there are no measures for their implementation.
1 point	The strategy/programme only describes the principles of gender equality and non-discrimination, sustainable development and the environment, but no measures are put in place to implement them.
2 points	The strategy/programme is in line with the principles of gender equality and non-discrimination, sustainable development and environmental protection, specific measures are envisaged for their implementation, and some of them were implemented at the time of the evaluation.
3 points	The strategy/programme is in line with the principles of gender equality and non-discrimination, sustainable development and environmental protection, specific measures are envisaged for their implementation, and some of them were implemented at the time of the evaluation. All implemented projects under the strategy/programme have implemented actions leading to non-discrimination, sustainable development and environmental protection.

Indicator 9.3: ***Institutional and administrative capacity***

Question 9.3: ***Does the municipal administration have the necessary administrative capacity and competence to execute the strategy/programme?***

The answer to this question will show us to what extent, how it is respected and how the principles of gender equality and non-discrimination, sustainable development and environmental protection are guaranteed.

The degree of application is proved by:

- Excerpts from the content of the strategy/programme in the section "Management and implementation structure";
- Interim or final evaluations of the strategy/programme;
- Strategy/programme implementation reports;
- Information on the number of staff and the structure of the municipal administration;
- Information on what part of the project management teams, part of the strategy/programme are composed of municipal administration staff and what part of external (attracted) experts.

VALUATION OF THE FINDINGS:

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0 points	There are no designated staff or administrative units in the municipal administration responsible for the implementation, monitoring, reporting and updating of the strategy/programme.
1 point	The strategy/programme contains a description of all responsible administrative units for the implementation, monitoring, reporting and updating of the strategy/programme. The distribution of the duties and responsibilities of the units is not laid down in an individual administrative act.
2 points	There are no designated staff or administrative units in the municipal administration responsible for the implementation, monitoring, reporting and updating of the strategy/programme. These duties and responsibilities are described in a special order of the mayor of the municipality and their job descriptions
3 points	There are no designated staff or administrative units in the municipal administration responsible for the implementation, monitoring, reporting and updating of the strategy/programme. These duties and responsibilities are described in a special order of the mayor of the municipality and their job descriptions. There is a mechanism for creating flexible teams when needed. The strategy/programme staff are trained in strategic planning and policymaking.

3.8.4. GENERAL ASSESSMENT

After the evaluation of all questions under 3.2, the total net value of the assessment, expressed in points, is calculated.

The maximum score that can be obtained is ***180*** points. The ***Indicator 4*** quantification is derived from the summary scores of all Subquestions contained in the three main Questions.

Each of the evaluated strategies/programmes will fall into one of the following three groups according to the results obtained:

1. A very well implemented Strategy/Programme with the basic principles of strategic planning applied - over 85% of the maximum score (*from 153 to 180 points*).
2. A satisfactorily implemented Strategy/Programme with partially implemented basic principles of strategic planning - between ***55%*** and ***85%*** of the maximum points (*between 100 and 152 points*).
3. Poorly implemented Strategy/Programme with not implemented basic principles of strategic planning - under 55% of the maximum points (*under **99** points*).

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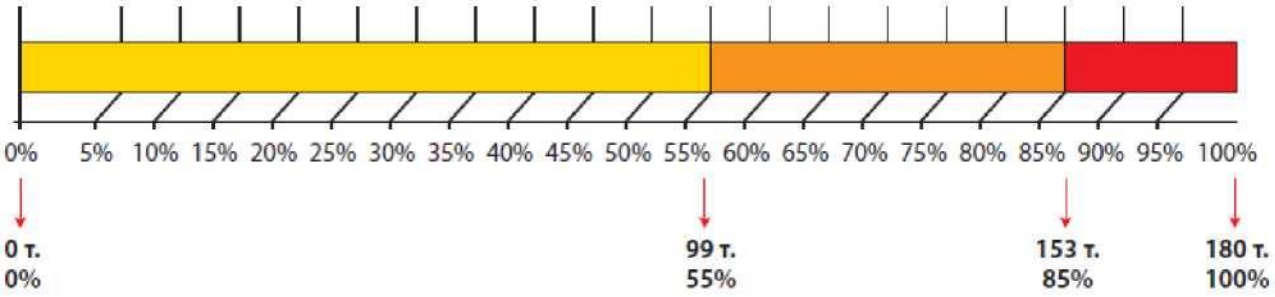

3.8.5. IMPLEMENTATION PROCEDURE

The methodology for implementing the Methodology involves performing several sequential and interrelated activities as follows:

3.8.5.1. Formation of a local evaluation committee:

The main task of the committee */In our case the Cross-border committee for the management of the Strategy - CBCMS/* will be to obtain the required information by completing a pre-set *Questionnaire, conducting the necessary interviews, discussions, etc*.

The local evaluation committee should consist of a maximum of ***10*** people in order to be sufficiently flexible and working. Its members include representatives of the municipal administration, the municipal council, the civil sector, the business, the media and more.

It is recommended that the identification of the specific members of the committee be carried out by, or in consultation with, the relevant community groups to which they are represented. In municipalities where local public advisory structures (*forms*) are already in place, they can be used as a basis for setting up an evaluation committee. In order to obtain greater impartiality of the evaluation, it is advisable to include a consultant in the evaluation committee.

For the better organisation of the work of the Committee, one of its members shall be appointed coordinator.

By its order, the mayor of the municipality determines the structure of the evaluation committee, its coordinator, goals and tasks, determines the time within which the evaluation should be carried out and instructs the departments and units in the municipal administration to assist in the work of the evaluation committee.

3.8.5.2. Provision of information needed for evaluation:

The self-assessment of the implementation of the respective Strategy/Programme is based on the methodology developed, where indicators and questions to them are also indicated with the necessary documents, proving the degree of implementation of the principles of strategic planning in the municipality.

The members of the evaluation committee have the task of collecting information on the Indicators and Questions defined in the methodology, and for this purpose they should be assisted by the heads of units in the municipal administration.

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3.8.5.3. Actual evaluation of the strategy/programme:

The evaluation committee should hold at least ***five meetings***. It is advisable to hold ***one meeting per week***.

At each meeting, the Coordinator of the process, the members of the committee and, with the decision of the committee, the heads of municipal units should be present in order to provide the information requested by the methodology.

At its first meeting, the coordinator introduces the committee members to the methodology and decides where and how the necessary information will be obtained, who and when will submit it to the committee.

At its first meeting, the committee came up with a decision stating:

- the timetable for the next meetings;
- the principles that will be considered for each of them;
- the necessary supporting documents to be produced;
- the units of the municipal administration, which should obtain the requested documents.

The decision is presented to the mayor of the municipality and to the chairman of the municipal council, as well as to the heads of municipal support units.

In subsequent meetings, committee members discuss the questionnaire and the data collected and reach consensus on the answers they provide for specific areas of the study. The idea is to consider the criteria under two principles of good governance at each meeting.

If additional information is required, the committee determines who and how it will obtain this information for the next meeting.

Minutes shall be taken at each meeting, indicating: the members of the committee present; the agenda of the meeting; debates; an inventory of the evidence presented in each indicator/question as required by the methodology; conclusions; committee decisions.

Once the evaluation committee has completed its work, the coordinator summarizes the data in the format prescribed by the methodology.

Each of the evaluated strategic or planning documents sectors falls into one of the following three groups according to the results obtained:

- A very well implemented strategy/programme with the basic principles of strategic planning implemented;
- Satisfactory implementation of the strategy/programme with partially implemented basic principles of strategic planning;
- Poorly implemented strategy/programme with the basic principles of strategic planning not implemented.

3.8.5.4. Preparation of the evaluation report:

The coordinator of the evaluation committee produces a **report** which is a descriptive analysis of the aggregated data. The content of the report should include:

I. Introduction
II. Methodology
III. Main components of the evaluation:

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1. Evaluation of Principle 1: Unity of strategy/programme
2. Evaluation of Principle 2: Adequacy and relevance of strategy/programme
3. Evaluation of Principle 3: Applicability of strategy/programme
4. Evaluation of Principle 4: Overall impact of the strategy/programme
5. Evaluation of Principle 5: Policy effectiveness and efficiency
6. Evaluation of Principle 6: Financial management
7. Evaluation of Principle 7: Openness, transparency and publicity
8. Evaluation of Principle 8: Monitoring and accountability
9. Evaluation of Principle 9: Sustainability

IV. Conclusions

V. Recommendations

VI. Annexes

The coordinator presents the descriptive analysis of the evaluation committee and it is adopted by consensus. This can be done at the last, closing meeting or through an e-mail conciliation procedure.

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3.8.6. ANNEXES:

ANNEX № 1 – EVALUATION TABLE

Question	PRINCIPLE	Proven up-to-date status *(describe the situation)*	Evaluation scale (*points number*)				Total points
			0	1	2	3	
	Principle 1: Unity of strategy/programme						0
1.1.	Is the strategy/programme in line with the municipality's uniform development direction?						0
1.2.	Does the strategy/programme contain all the essential elements of such a document?						0
1.3.	Has the strategy/programme been developed with the involvement of all stakeholders and in partnership with the civil sector?						0
Total for Principle 1:							**0**
	Principle 2: Adequacy and relevance of strategy/programme						
2.1.	Does the strategy/programme fit with higher level strategies, plans and policies? Is there coherence and certainty with national structural/sectoral policies?						0
2.2.	Do the objectives of the strategy/programme fit the lessons of the previous strategies/programmes? Have previous recommendations, if any, been taken into account? Have any strategy/programme changes been made as a result of recommendations from other evaluations? What is the effect of the changes made?						0
2.3.	Are strategic goals consistent and relevant to national and European policies and priorities and changes in the socio-economic context?						0
2.4.	Is there a direct link between the strategy/programme and the applicable national						0

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	regulatory framework?						
2.5.	Are the measures or system outlined in the strategy/programme appropriate for monitoring, evaluating, reporting and updating it? Are there time periods for monitoring, evaluation, reporting and updating in the strategy/programme?						0
Total for Principle 2:							**0**
	Principle 3: Applicability of strategy/programme						0
3.1.	Are indicators that quantify the overall, specific and operational objectives of the strategy/programme and data collection procedures? Have the Indicators' output and target values been formulated? Do the target quantitative values in the strategy/program continue to be valid?						0
3.2.	How many projects have been implemented under the strategy/programme action plan? What projects have been implemented outside the established action plan of the strategy/programme but are in line with it and contribute to the achievement of its goals and objectives? How many other initiatives have been implemented within the strategy/programme?						0
3.3.	What are the results of the strategy/programme implementation so far? To what extent are the results achieved consistent with the indicative values of the Performance indicators recorded in the document?						0
3.4.	How the identified needs in the analytical part of the strategy/programme are reflected in the planned measures for its implementation?						0
3.5.	Are the local priorities in the strategy/programme reflected?						0
3.6.	Are the intervention measures evenly distributed throughout the municipality or are they concentrated in the municipal centre?						0
3.7.	Are the estimated financial estimates over the entire strategy/programme period evenly distributed? Is there a practice in planning financial resources for the municipality's annual budget for the implementation of the strategy/programme?						0
3.8.	Has the strategy/programme implementation schedule been adhered to? What are						0

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	the reasons for the delay, especially for activities and projects that have been identified as strategic but have not started in a timely or in the meantime?						
Total for Principle 3:							**0**
	Principle 4: Overall impact of the strategy/programme						0
4.1.	To what extent does the strategy/programme affect the economic development of the municipality?						0
4.1.1	Will any strategy/programme measures envisaged have a negative impact on the viability of existing manufacturing plants through: • forgetting or reducing access to important local resources used as inputs for production; • increasing the cost of extracting these local resources; • increasing transportation costs for raw materials/production; • increasing the cost of waste disposal, air emissions, water?						0
4.1.2	Will any of the envisaged measures in the strategy / program have a negative impact on possible expansion of production by limiting land use or setting restrictions on background pollution?						0
4.1.3	Will any of the envisaged strategy/programme measures have a negative impact on existing transport infrastructure and planned improvements?						0
4.1.4	Will some of the measures under the strategy/programme envisaged have a negative impact on the availability of workers with rare skills and could they cause a shortage of such workers locally?						0
4.1.5	Will any strategy/programme measures envisaged have a negative impact on the construction and maintenance of infrastructure needed for economic development?						0
4.1.6	Will any strategy/programme measures impede capital investment in industry, agriculture and tourism?						0
4.1.7	Will any strategy/programme measures limit the availability and use of arable land for growing new crops, increasing the area for existing crops and introducing new						0

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	agricultural techniques?						
4.1.8	Will any of the envisaged measures under the strategy/programme have a negative impact on the municipality's ability to attract tourists?						0
4.1.9	Will any of the envisaged measures under the strategy/programme have a negative impact on the municipality's ability to use its natural resources, such as forests, water, medicinal plants and support its economic development?						0
4.1.10	Do any of the proposed measures in the strategy/programme need to be modified; to envisage measures or to implement measures to prevent or reduce the negative impact on potential economic development opportunities?						0
4.1.11	Do any of the envisaged strategy/programme measures have an impact outside the municipality?						0
Total for Subquestion 4.1:							**0**
4.2.	To what extent does the strategy/programme affect the social development of the municipality?						0
4.2.1.	Will any of the envisaged measures under the strategy/programme have a negative impact on the quality of life of: the elderly and pensioners; people with disabilities; children and young people?						0
4.2.2.	Will any of the envisaged measures in the strategy/programme have a negative impact on the opportunities and conditions for education and training, access for all citizens?						0
4.2.3.	Are any of the measures envisaged in the strategy/programme likely to have a negative or positive impact on leisure and recreation areas (public spaces, green areas, etc.)?						0
4.2.4.	Will the cumulative effect of all measures under the strategy/programme equally benefit all settlements or is it likely that some settlements will be more favourable than others?						0
4.2.5.	Will any of the envisaged strategy/programme measures have a positive impact on						0

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	the ethnic minorities in the municipality?						
4.2.6.	Will any of the envisaged strategy/programme measures have a negative impact on the ethnic minorities in the municipality?						0
4.2.7.	Do any of the proposed measures in the strategy/programme need to be modified; to envisage new measures or to implement measures to prevent or reduce the negative impact on the livelihood of the population. Is it necessary to provide for compensation for social groups or persons because of the expected decrease in their income?						0
4.2.8.	Are any of the envisaged measures in the strategy/programme expected to have an impact outside the municipality? Have these measures been discussed with the potentially affected municipalities?						0
Total for Subquestion 4.2:							**0**
4.3.	To what extent and in what direction (positive or negative) does the strategy/programme affect the state of the environment in the municipality?						0
4.3.1.	Will any of the envisaged measures in the strategy/programme have a negative impact on the environmental components (water, soil, atmosphere, natural resources, biodiversity) and their natural processes?						0
4.3.2.	Will any strategy/programme measures envisaged have a negative impact on existing (or proposed) protected areas?						0
4.3.3.	Will any of the envisaged measures in the strategy/programme have a negative impact on rare or endangered species?						0
4.3.4.	Will any of the envisaged measures in the strategy/programme have a negative impact on the quality of the environment and human health?						0
4.3.5.	Will any strategy/programme measures envisaged have a negative impact on recreation, tourism and recreation opportunities (parks, green spaces, specialized infrastructure)?						0
4.3.6.	Will any of the measures in the strategy/programme envisage increasing the use of						0

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	renewable natural resources such as: wood, mushrooms, wild fruits and medicinal plants; surface and groundwater; agricultural land?						
4.3.7.	Will any of the envisaged measures in the strategy/programme reduce the opportunities for sustainable and equitable use of natural resources (so that all social groups have access to them and the speed of their use does not exceed the speed of their natural reproduction)?						0
4.3.8.	Will any of the measures in the strategy/programme have an impact on improving the quality of the environment and addressing existing environmental problems in the municipality (e.g. reducing pollution, increasing energy efficiency, building renewable energy sources, protecting biodiversity, reducing erosion, etc.)?						0
4.3.9.	Are any of the envisaged measures in the strategy/programme expected to have an impact on the environment (e.g. poor air quality, soil pollution, surface and groundwater, etc.) outside the municipality? Have you discussed these measures with the potentially affected municipalities?						0
Total for Subquestion 4.3:							**0**
Total for Principle 4:							**0**
	Principle 5: Policy effectiveness and efficiency						0
5.1.	What percentage of the planned implementation projects in the annual plan (programme) of the strategy/programme (considering the year preceding the evaluation) correspond to the timetable for their planned implementation and the results achieved correspond to the set ones						0
5.2.	What percentage of the implemented projects, measures and initiatives under the strategy/programme are covered by a control and monitoring system?						0
Total for Principle 5:							**0**
	Principle 6: Financial management						0
6.1.	What is the share of overdue liabilities (over 60 days from the occurrence of the payment obligation) from the total budget of the municipality as of December 31 of						0

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	the last reported year for the projects under the strategy/programme?						
6.2.	What is the share of complementary funding in the implementation of the directives under the strategy/programme for the last reported year?						0
6.3.	What percentage of the mandatory elements of the Financial Management and Control System /SFFC/, in accordance with the methodological guidelines of the MoF, are implemented in your municipality?						0
Total for Principle 6:							**0**
	Principle 7: Openness, transparency and publicity						0
7.1.	Does the public have permanent access to information on the activities of the Municipal Council regarding the strategy/programme? Is there any information on the decisions of the Municipal Council and its standing committees regarding the strategy/programme? Is there a way for citizens to connect with the municipal councillors and the Municipal Council as a whole on strategy/program questions?						0
7.2.	Is there an unobstructed access to the strategy/programme document on the Internet? Are there clear procedural rules for access to public information, including related to sectoral strategy/programme?						0
7.3.	Is there access to the annual progress reports on the strategy/programme, register(s) of projects prepared and implemented, measures and initiatives, of public procurements, tenders and tenders?						0
7.4.	Have public discussions on the strategy/programme as well as policies, development guidelines, measures, activities, projects and initiatives within its scope been carried out?						0
Total for Principle 7:							**0**
	Principle 8: Monitoring and accountability						0
8.1.	How often does the mayor and municipal councillors meet with citizens to report on the implementation of the strategy/programme?						0
8.2.	Is information on current and completed strategy/programme projects available on						0

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	the official website of the municipality or other public places, with a description of the planned or implemented activities, their budget, project contractors and the results achieved?						
8.3.	Has a public procurement register been established and kept up-to-date within the municipality?						0
8.4.	Does the municipality manage to mobilize civic interest in conducting public discussions on the strategy/programme and in what forms?						0
Total for Principle 8:							**0**
	Principle 9: Sustainability						0
9.1.	To what extent changes resulting from the implementation of measures, projects and initiatives under the strategy/programme can be maintained after the programme is completed and have the potential for lasting impact?						0
9.2.	Does the strategy/programme incorporate the principles of gender equality and non-discrimination, sustainable development and environmental protection? How are they respected? Are there measures in place to ensure that they are complied with?						0
9.3.	Does the municipal administration have the necessary administrative capacity and competence to execute the strategy/programme?						0
Total for Principle 9:							**0**
TOTAL:							**0**

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4. RISK KNOWLEDGE MANAGEMENT IN TSENOVO, HOTARELE COMMUNE AND GREACA COMMUNE:

4.1. Decisions /proposals for the establishment/ implementation and improvement of the legal and institutional framework for implementing the joint Romanian-Bulgarian intervention in the event of an emergency.

4.1.1.Improvement of the legal and institutional framework

4.1.1.1. Main elements of cooperation:

- Preparation of citizens for emergencies, carried out by actions based on common principles and norms, harmonization of actions, general training in specific situations;
- The activities of organisations involved in prevention and intervention activities will be integrated;
- Preparation of the intervention team, adapted to the specific risk conditions, preparation of the team and preparation of the action plan;
- Use of national and international resources when designing safeguards, taking into account cost-effectiveness and task allocation;
- Emergency operations design, evaluation, risk management, strategic concepts, focusing on specific risks in the region.

4.1.1.2.. The cooperation will follow:

- The exchange of experience and information, with particular attention to pre-emergent preparatory actions and post-intervention assessments, and the possibility of requesting international assistance;
- Knowledge of international, national and regional initiatives in the field of preparation, preventive intervention;
- Informing citizens, increasing the level of responsibility of European citizens for protecting their own lives;
- Increased coherence between civil protection actions and actions implemented internationally;
- Developing common principles and directives using European experience, mitigating the effects of disasters through the use of techniques to assess potential risks;
- Improvement of interventions that will ensure effective management of emergencies caused by natural and technological disasters in the affected areas. (Identification of risk areas, development of proposals, information to the population, communication);
- Development of procedures for providing mutual assistance in the cross-border region, use of equipment;
- Developing a contingency plan for the region by type of risk;
- Potential risk assessment for each community;
- Develop procedures for risk management;

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- Legal provisions and regulation of the system of responsibilities during the intervention period;
- Use of new technologies/equipment and advice before purchasing them;
- Collaborative training, enhancements, common management and coordination applications of participating teams.

4.1.1.3. Cross-border and regional cooperation procedures aim at:

- Establishment of a coordination and monitoring system allowing direct relations between the two parties, prompt and correct information, harmonized emergency management in case of floods, snow accumulation, fires and preventive measures;
- Informing the population in the region and the involvement of civil society aim at making citizens take responsibility for their self-protection and preparing them for the prevention and elimination of the consequences of emergencies;
- Its cooperation contributes to building a climate of trust, common ideas and new initiatives such as the creation of a common network of experts, joint seminars, joint training programs and the creation of a common intervention team;
- Reducing the transmission time of information, data and decisions through the use of information media;
- Providing timely, accurate and complete information on decision and implementation factors;
- Optimising the decision-making process and managing the intervention.

4.1.1.4. Forms of regional cooperation assistance provided in the event of emergencies (flood, snow overload, fire).

In the event of an emergency, the contracting parties may, on the basis of a written request made by the responsible authority, provide mutual assistance. In urgent cases, the request may also be oral, but a confirmation letter will be sent as soon as possible within a maximum of ***24 hours of the request***.

The party requesting help will indicate:

a) location of emergency, time of production, characteristics, extent of extension, characteristics of the emergency situation at the time of request for assistance;
b) the intervention measures implemented;
c) characteristics of the aid requested and priority aid measures;
d) other useful details.

The relevant authorities should agree on the format used for the request for assistance.

The aid provider will decide as soon as possible and will inform the applicant of the conditions under which the aid may be offered, the specifics and amounts of the aid offered.

Communication will be open to details of the changing situation.

The Contracting Parties, through the responsible authorities, shall immediately inform each other of emergencies which may have consequences in the territory of the

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other Party and shall transmit the necessary information on the intervention in order to eliminate the effects caused by the prolongation of the emergency.

Other forms of cooperation.

Within the framework of the cooperation, the assistance offered includes intervention /*response teams*/, equipment, humanitarian convoys, search and rescue operations and other emergency response actions to save lives, protect public health , evacuating citizens, protecting the environment, reducing material, cultural losses and side effects.

In addition to emergency assistance, cooperation also includes other forms of action:

- Emergency forecasts, prevention, assessment, elimination of effects, exchange of experience in science, technology and practical applications;
- Conferences, studies, organisation of scientific programs, vocational training, cooperation of educational institutions and participation in common applications;
- Exchange of information on sources that may cause emergencies and potential effects, especially when the effects may reach the territory of the other country.
- Mutual information also includes the transmission of risk indicators measured for different types of emergencies;
- Establishment and use of a single monitoring system, development of joint projects in this regard

The principles of cross-border and regional cooperation should be as follows:

- the assistance provided should be neutral and impartial;
- the assistance provided should be complementary and not duplicate local action;
- assistance should not be used in areas of armed conflict;
- aid for imposing financial or other obligations on the recipient countries;
- there are customs and legislative agreements for litigation between partners;
- the team should wear distinctive (uniform) recognition marks and not be armed.

The operational and planned principles of intervention are:

- a clear definition of the purpose of the contractor's mission;
- concentration of effort;
- persistence;
- security;
- legitimacy;
- avoid duplication of effort and action.

The specificities of applying these planning principles are:

- the mission **must be synchronized** for each participant;

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- the mission is **performed exclusively** in support of local public authorities;
- any use of resources other than those initially provided makes the mission difficult.

In all situations, it is the application of basic principles such as:

- complementarity;
- transparency;
- coordination;
- division of responsibilities;
- focus on achieving the main goal.

Model of cross-border cooperation procedure:

Operational information shall be transmitted by the dispatcher at the "Crossborder centre for cooperation and management of the intervention, Giurgiu – Ruse" by fax or e-mail, requesting support to limit the effects of the emergency.

The request will specify the following information:

- Location of the flood, snowstorm, fire, date and time of their occurrence, nature, magnitude and status parameters at the time of request;
- Measures already taken and planned;
- The nature of the assistance requested and the priority aspects of first aid;
- All other necessary details;

Information is constantly updated depending on the situation:

The availability of the intervention team is confirmed. The party to which a request was made shall decide immediately on the granting of its assistance and shall inform the requesting party of its immediate capabilities, the nature, volume and conditions of the assistance offered;

A standardised form/procedure template may be adopted with respect to the request for assistance:

- Alert the intervention team. It takes about 2-3 hours to prepare for the mission.
- Informing the intervention team of the dispatcher who requested assistance regarding the time at which he or she will be at the border point or at the meeting place, about the intervention techniques and the number of persons:
- The intervention team will meet with a contact point at the border or meeting point;
- The contact point from the border post or meeting point will lead the intervention team to the affected area (flood, snowstorm, fire);
- The intervention team dispatcher sends to the dispatcher who requested assistance, information on fuel, accommodation and food required.

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The requesting party guarantees to the intervention team security, free emergency medical care, nutrition, accommodation, fuel as essential goods should the team's supplies run out.

- The intervention team is managed and coordinated by the competent authorities and persons, in accordance with the law of the country requesting assistance in the affected area (flood, snow overload, fire);
- The requesting party is obliged to use the intervention team only in accordance with its destination, qualifications and equipment;
- Providing the placement of an interpreter's translation team and means of communication (telephone, fax, internet, computer, radio stations, etc.).
- Reporting by the intervention team - every 12 hours.

The intervention team shall cease its activities and return immediately to the territory of the state of the requested rarty:

- if it has fulfilled his mission;
- when the competent local authorities decide by mutual agreement that it is not necessary to continue the intervention operations.

4.1.2. Package of proposals for management of emergencies caused by natural disasters (flood, fire, snowstorm)

- Incorporating the problem of disaster protection into the development strategy of the communities affected;
- Performing risk-specific protective work;
- Optimisation of the activities of the structures that provide the security activity against the identified risk;
- Development of research in the field;
- Education of the population regarding the standards of behaviour in the event of (*floods, snow overload, fires*);
- Exercises and applications with the forces and means of intervention;
- Preparation of decision-making factors;
- Conclusion of comprehensive humanitarian aid agreements in the event of risk between localities with twinning agreements;
- Creating and updating a computerized database of the risks of floods, snowfall, fires and the real capabilities of response structures;
- Testing standardised operating procedures.

4.2. A single risk management database for better coordination and efficient response. Risk register.

When you run the „RiskRegister.accdb", file containing the Risk Register database, because the functionality is built with macros, a warning may be displayed for them. The button shown in ***figure - 2*** must be pressed to allow them to be started.

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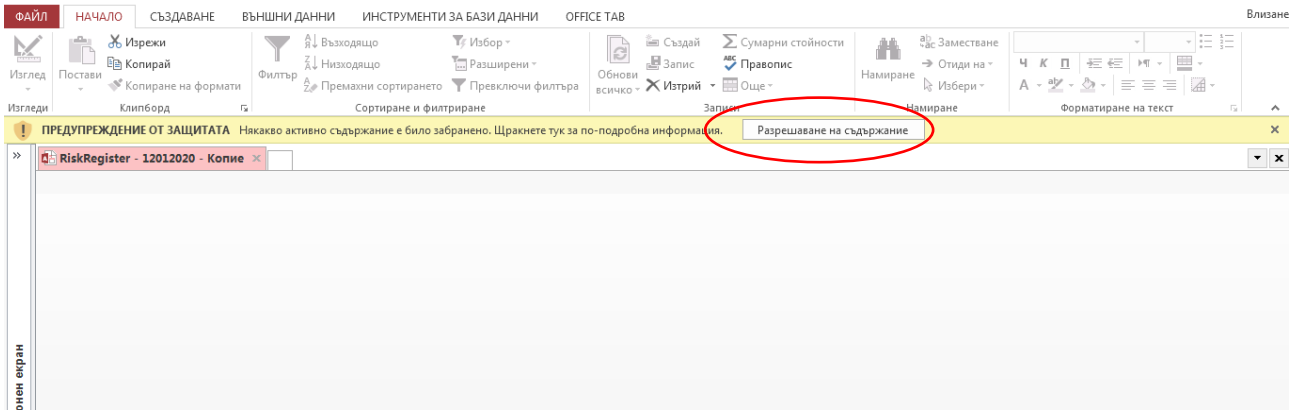

Figure - 2

The main dialogue box (*figure - 3*) is intended to access the full functionality of the built-in database for risk register.

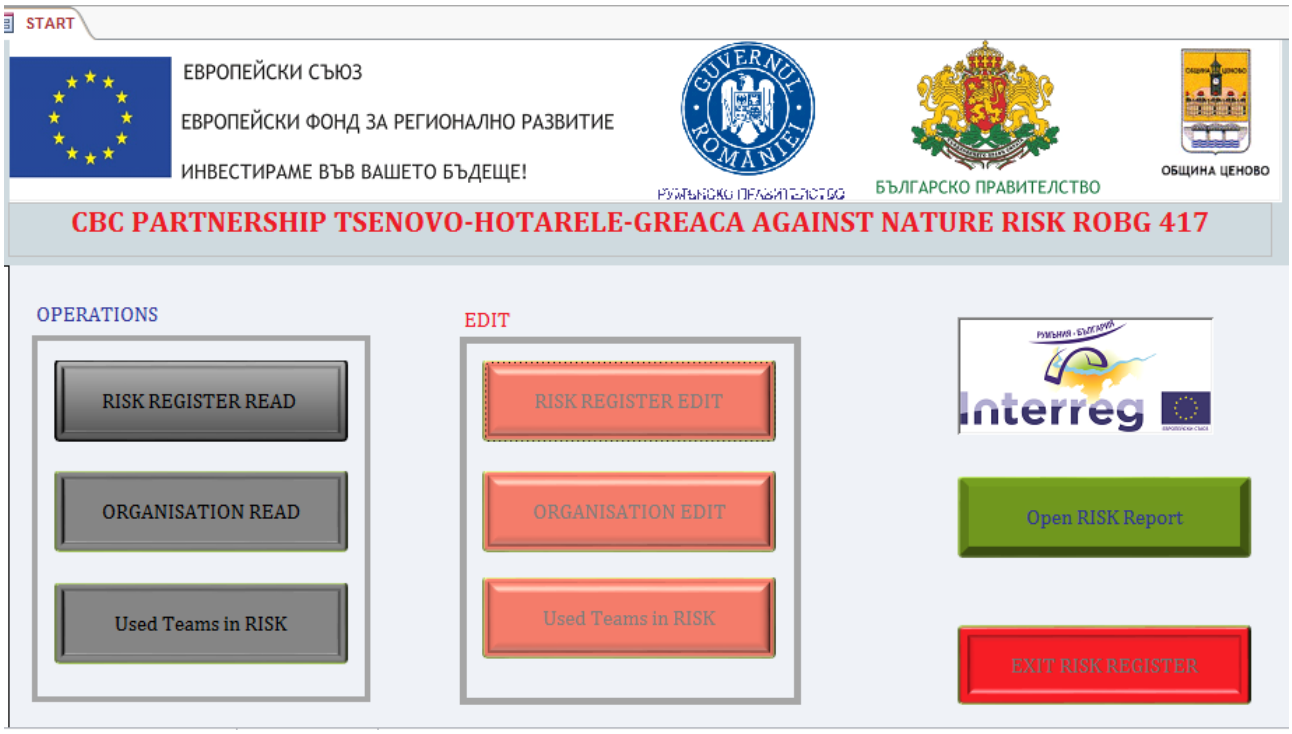

figure 3

The main dialogue box is made up of three groups of buttons:

- ***"Operational"***, located on the left side of the window. These buttons can be loaded data in such a way that the operator will not be able to change the data, and thus

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they will be prevented from accidental destruction and damage. The first "RISK REGISTER READ" button loads the risk register with all the data of the entered risks, if it happened in the past. The "ORGANISATION READ" button provides an overview of the enrolled organisations, their teams and the technical support involved in the prevention and elimination of the consequences of a risk. The "Used Teams in RISK" button provides information on which teams have been involved in eliminating the consequences of the risk.

- ***"Edit"*** - in the middle of the window there are three buttons corresponding to the functionality described above. In this section it is possible to enter, edit and remove all types of data written above.

The "***Open RISK Report***" generates a report with all the risks entered so that they can be printed. The "EXIT RISK REGISTER" button is intended to exit the database application.

Filling in the database consists of ***several basic steps*** as follows:

1. Entering data for organisations included in disaster plans by pressing the "ORGANISATION EDIT" button from the "EDIT" button group, loading the dialogue box shown in the figure 4.

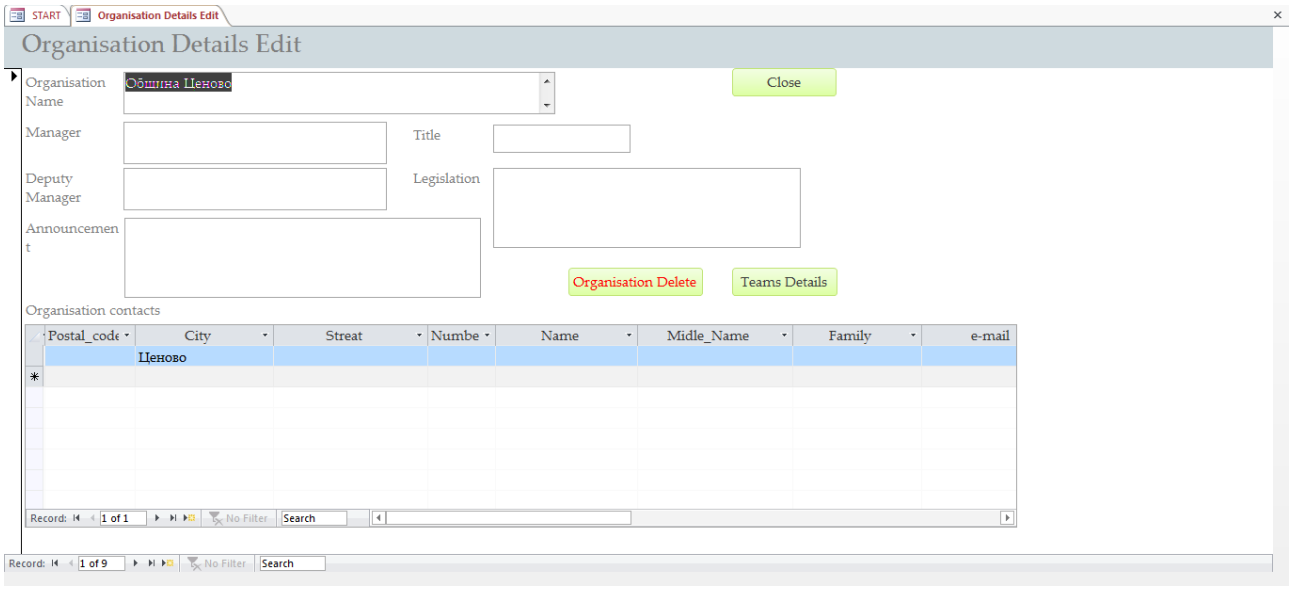

Figure 4

In the main window enter information about the organisation, such as the name of the organisation, manager and deputy manager, regulations defining the functions and the way the organisation works and the procedure for disclosure in case of risk.

The ***Organisation contacts*** section provides details on how to contact the organisation.

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There is also a button that can remove the organisation data – ***Organisation Delete***. The Teams Details button loads a dialogue box to fill in information about the teams available to the organisation - Figure 5.

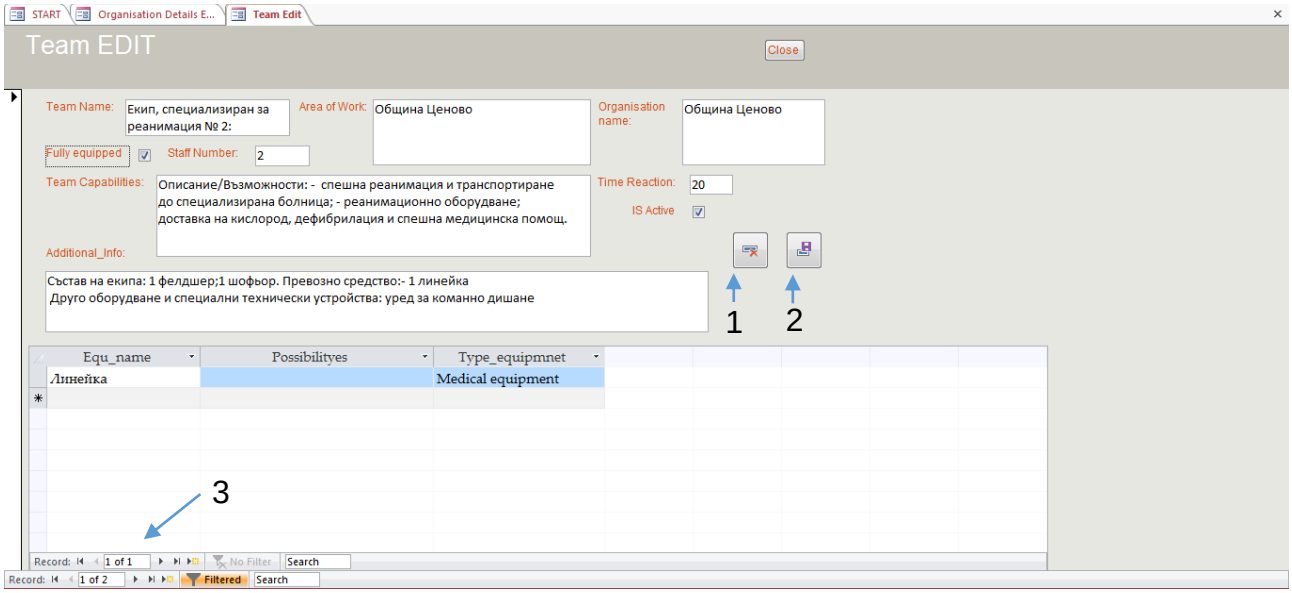

Figure 5

In this dialog, the basic information about the team is filled in and the ***Fully equipped*** section is activated when the team consists of staff equipped with the necessary technical equipment to be able to perform its assigned tasks. In the ***Time reaction*** section is introduced the time required for the team to travel to the risk location after it has been disclosed. Reaction time should be completed in minutes.

The ***Is Active*** section is required to link to the risk register. Past records should be kept as a record, and since teams at risk are recorded as participating, they should not be deleted even if they no longer exist or for some reason are excluded from the resource plan. in natural and man-made disasters. For this reason, a field is envisaged which, without destroying data on a team involved in coping with a risk, may be excluded from the teams currently in force.

At the bottom of the dialog, enter information about the equipment the team has, its capabilities and type. The type of equipment is selected from a list of predefined equipment types.

The button with the arrow and the ***number 1*** below it deletes the records for the displayed team. The ***number 2*** button is pressed after entering new data in the dialog box. At the bottom of each dialog there are navigation arrows in the open dialog entries - indicated by arrow ***number 3***.

Once the data for the organisations in the disaster plan have been initially entered, the risk data can be entered as well. This is done from the main dialogue box when the

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Risk Register Edit button is pressed. Then the main box for entering risk data is loading, shown on ***figure 6***.

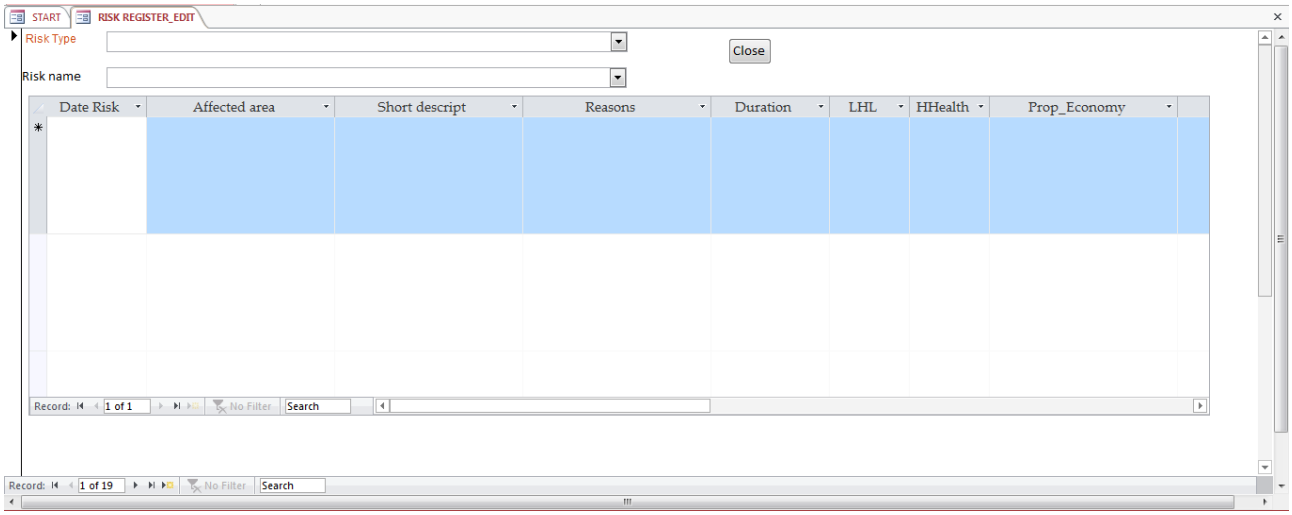

Figure - 6

The predefined risk types and the respective types for each type determine what risk has arisen. The risk data is also entered at the bottom of the box. After selecting the date on which the risk occurred with a keyboard arrow, the entry in the adjacent ***Affected area*** section is moved and a description of the place where the risk arose. The content of this section automatically becomes a link to a new dialogue box, detailing where the risk arose – ***figure - 7***.

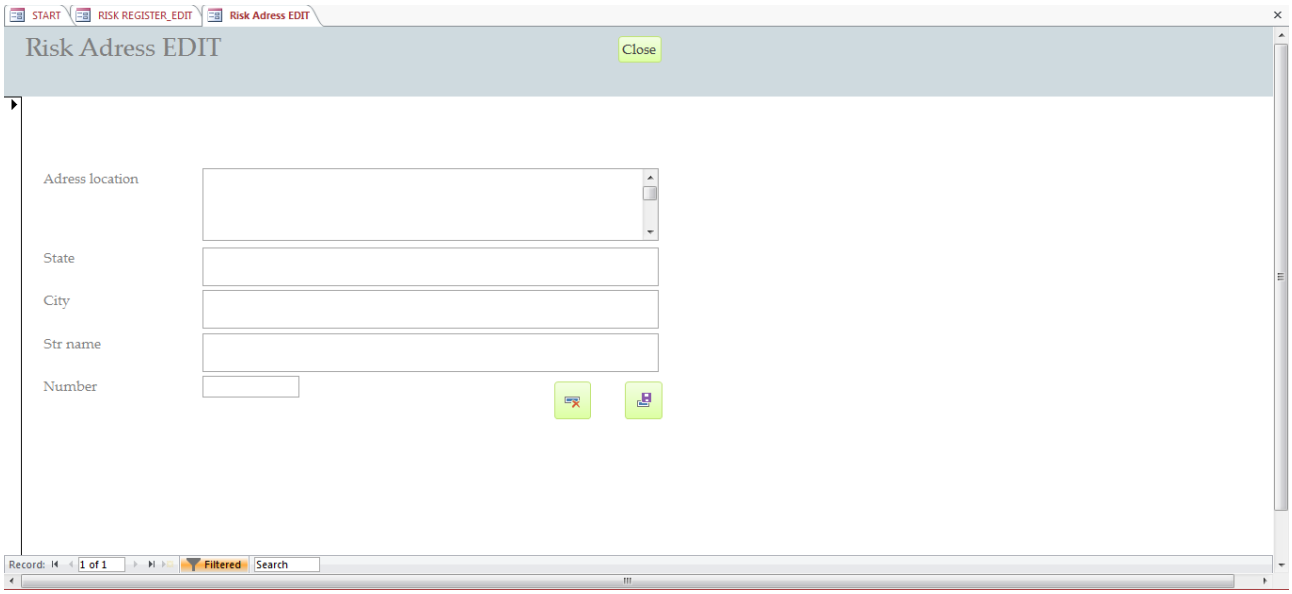

Figure - 7

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It is possible to enter data for different addresses and locations of occurrence of the same risk situation by pressing the record button after each data entry and with the navigation arrows at the bottom of the window a new record is created.

After entering all the addresses at risk and closing the window, the ***Short description*** section in the risk register should be entered. Similarly, the text that is introduced becomes a reference to a dialogue to identify the teams involved in the risk involved. Clicking on the entered text will open the dialog box of ***figure - 8***.

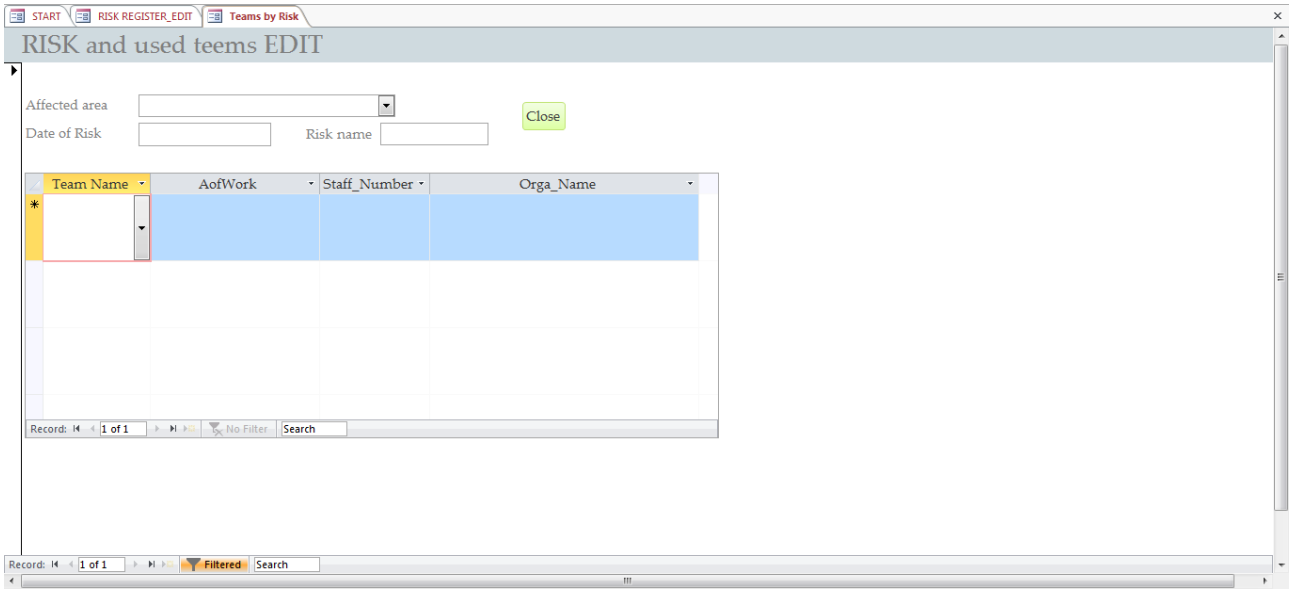

Figure - 8

When a Risk Date, Risk Name, and Occurrence Name is entered, this information will automatically appear in the dialog boxes. The teams in the ***Team Name*** section should be selected. Team names are automatically updated in this field after being entered as organisational teams. After selecting a team, the basic information about the team is automatically filled in in the other fields. Each team needs to be selected in a new row from the team table in this dialogue box.

In the event that teams need supplementing after a risk record has been created, it is not necessary to go through all the dialogue boxes to reach the one shown in ***figure 8***. From the main dialogue box, the ***Used Teams in Risk*** button in the ***EDIT*** tab can be pressed, which will open the same dialogue box. In this case, however, it is necessary to select the risk for which the changes will be made, and after creating a risk record, it is automatically updated in the ***Affected Area*** selection list. When selected from this list, the date and type of risk fields are automatically populated to help the operator navigate more easily.

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5. ACTION PLAN FOR ACHIEVING THE STRATEGIC GOALS

5.1. Activities:

GOAL	MEASURE	ACTIVITY	RESOURCES	OBSERVATION AND EVALUATION	BACKUP PLAN
1. Achieving community resilience in the face of disasters	1.1. Creating prerequisites for preparing and updating the flood risk assessment of other natural disasters, threat maps and risk maps for the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca.	1.1.1. Identification and analysis of disaster risks at regional, municipal and site level in a cross-border region.	1. According to the budget of the municipality/commune and their programs for the prevention of natural and technological	1. Cross-border committee for the management of the Strategy /CBCMS/	

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		1.1.2. Exploring adverse natural phenomena, especially in the context of increasing volatility and climate fragility, enabling a better understanding of risks, their management, increasing preparedness for response and minimizing adverse impacts.	risks		
		1.1.3. Collection, compilation, analysis and dissemination of statistical information on natural disasters, adverse impacts and losses through the use of international, national and local exchange mechanisms. On this basis, provide for measures to prevent and manage the consequences that will be subsequently impacted, both in updating the Municipal Disaster Risk Reduction Program and in the General Disaster Risk Reduction and Disaster Management Plans.			

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		1.1.4. Identification of areas that are susceptible to specific risks as a commonly used tool for all planning authorities and at the same time provide essential information to the public /*population*/ by: • continuous monitoring of landslides in the territory of the Ruse region; • preventing construction in landslides; • reliable drainage of rainwater and mandatory construction of sewage systems for wastewater; • construction of drainage systems to reduce groundwater levels; • if necessary, construction of retaining walls (concrete or gambion).			
		1.1.5. Gathering and in-depth analysis of information on the economic impact of disasters, which in turn enables the cost and benefit of different measures to prevent these disasters to be assessed.			

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	1.2. Enhancing the capacity of local authorities and their administrations to prepare and implement quality Disaster Risk Reduction Programmes and Plans */Disaster Management Plans/*.	1.2.1. Predicting possible disasters, using simulation models describing single-risk and multiple-risk scenarios, creating appropriate maps, and evaluating scenarios for the most likely situations, forecasting, collecting and analysing data, summarizing and disseminating information including and statistics on disasters, adverse impacts and losses, made possible through the use of international, national and local mechanisms.			

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		1.2.2. Application of dispersed, simulation models to describe the scenarios of the most probable radiation and chemical situation in the event of an accident at the Nuclear Power Plant and/or cross-border transfer of radioactive/toxic substances or in a transport incident for the purpose of carrying out the risk assessment, as a means of planning and determining risk reduction policy; as a means of communication with citizens about risk; as a means of licensing high-risk activities; as an operational tool for Crisis Commissions activity in determining the location and (*possible*) effects of incidents.			
		1.2.3. Preparation of a detailed inventory /*register*/ of existing sources of disaster-related information, as well as the creation of a joint information system for disaster data collection, currently missing.			

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		1.2.4. Promoting prevention and preparedness for faster response by improving capacity, resource and capability analysis by utilizing geographic information, modelling and modelling systems that are appropriate for the purpose.			
		1.2.5. Negotiate between project partners and those with disaster information to continuously and dynamically update data (*if possible in real time*). For all types of cards in use /GIS/ - ensure that the basic information contained on them is updated.			
	1.3. Identification and implementation of measures for increasing the resilience of critical infrastructure sites in the disaster area of the municipality of Tsenovo, communes Hotarele and Greaca.	1.3.1. Preparation of a register of critical infrastructure sites /CIS/ and planning of appropriate spatial planning measures to increase the resilience of critical infrastructure sites in disasters.			

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		1.3.2. Development of a plan for the protection of CIs and active work for continuous implementation of the measures set out therein, for enhancing the resilience of the sites of the critical infrastructure in case of natural disasters, identifying and assessing the risks for the continuity and sustainability of their activities and on that basis and appropriate preventive measures.			
		1.3.3. Completion of the technical certification of the works, with particular emphasis on the sites of the CI, and attention to the degree of seismic security, incl. and for immovable cultural property of national importance.			
		1.3.4. Organisation and undertaking of geo-protective and coastal strengthening measures in the sections with active coastal erosion along the Danube, Yantra and other inland rivers within the municipality of Tsenovo and the communes of Hotarele and Greaca.			

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		1.3.5. Organising and exercising strict control for strict adherence to the existing regulations in the field of spatial planning, investment design and the execution and operation of construction works.			
		1.3.6. Taking organisational and practical measures to increase the depreciated and unsecured seismic impacts buildings and facilities.			
		1.3.7. Preparation /development/ by the municipalities /*communes*/ - project partners, of forecast scenarios for the consequences of strong earthquakes, in order to identify the most vulnerable places and take additional measures, if necessary, for effective preventive protection of the objects from the CI and the buildings. residence of people.			
		1.3.8. Planning and undertaking deliberate preventive measures for the preparation of the critical infrastructure on the territory of the municipalities and communes - partners in the project, for work in extreme winter conditions.			

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	1.4. Increasing the capacity of local authorities and their administrations to prepare and implement, quality programmes and plans for disaster risk reduction, and emergency plans */disaster protection plans/*.	1.4.1. Establishment of a programme with appropriate training content for organizing joint training of the executive authorities and responsible representatives from their administrations, on the problems of prevention and management of natural risks in the context of cross-border cooperation between the Municipality of Tsenovo and the communes of Hotarele and Greaca. 1.4.2. Organising and conducting joint visits and training in exchange visits at the National Training Centres for Civil Protection, in Bulgaria and Romania, where the procedures for coordination and interaction of the governing bodies, forces and rapid reaction forces under the conditions of cross-border cooperation will be worked out between the Municipality of Tsenovo and the communes of Hotarele, Greaca. During the training, focus on the practical training of the representatives of the territorial executive bodies, their administrators, the response forces and the population.			
2. Capacity building for joint	2.1. Implementation of joint disaster risk reduction measures	2.1.1. Mitigating the risk of disasters and promoting a culture of resilience, not only by	1. According to the budget of	1. Cross-border committee for	

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disaster risk management on the territory of the Municipality of Tsenovo, communes Hotarele and Greaca	in accordance with programmes /plans/ for mitigation of disaster risk.	identifying and communicating hazards, physical, social and economic risks, but also by effectively using monitoring, forecasting, early warning and alert systems. 2.1.2. Acceptance and use by all project participants of the rules of the *"systematic approach to determine the best course of action in uncertainty through the identification, understanding, impact and communication of risk issues"* in cross-border cooperation. In doing so, identify the administrative details of the process and link the process and decision makers with respect to timeframe, reporting, process resources, etc.. 2.1.3. Determining the frequency of occurrence and the consequences associated with each possible natural disaster scenario identified for analysis, with the *risk identification* being carried out in the following order: • defining a methodology for assessing frequency and consequences; • determining the frequency of risk scenarios, • identifying the consequences of risk scenarios and • further refining stakeholder analysis. 2.1.4. Identifying acceptable risks in view of the	the municipality/commune and their programmes for the prevention of natural and technological risks	the management of the Strategy /CBCMS/	

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		consequences, needs and concerns of *project stakeholders /participants/ by joint risk assessment with particular attention to*: • cost and benefit calculation and integration • assessment of risk acceptability for stakeholders. In doing so, the *risk assessment* comes from one of three conclusions: • the current level of risk associated with the threat is acceptable; • no risk level is acceptable, or • the threat may be acceptable, but risk control measures must be evaluated.			
		2.1.5. Determining the effectiveness of *"risk control"* of natural disasters before they occur through*:* • identifying possible risk control options; • evaluating risk control options against different criteria (efficiency, cost, etc.); • an assessment of how stakeholders take the proposed action, • assessing options for managing residual risk; and • an assessment of how stakeholders perceive residual risk.			
		2.1.6. Implementation of the measures - the			

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		result of the risk management process and the introduction of a monitoring programme THROUGH: • development of implementation plans; • implementation of the selected control, financing and communication strategies; • assessing the effectiveness of the risk management decision-making process; and • introduction of a monitoring process.			
		2.1.7. Defining and implementing joint *Measures to prevent or mitigate the consequences of a radiation accident*, as part of the programmes and plans for risk reduction on the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca, such as: • maintaining the radiation monitoring system in continuous operation; • maintenance of a system for alerting in the event of an accident at the NPP; • development of emergency plans for potentially hazardous sites storing and operating with ionizing radiation sources in order to create an organisation for emergency response and maintain emergency preparedness; • maintaining teams for emergency and			

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		rescue operations; • recurrent training of teams by reproduction of emergency plans; • adoption of disaster protection plans by the regional administration, municipalities, legal entities (sole traders) and the population; • timely informing the population in the event of a radiation accident and hiding in collective remedies if necessary.			
		2.1.8. Defining and implementing joint *Measures to prevent or mitigate the consequences of an accident with dangerous substances* as part of the programmes and plans for reducing the risk of Tsenovo Municipality and the communes of Hotarele and Greaca, such as: • planning of the activities of the governing bodies and formations; • preliminary forecasting of the consequences of the occurrence of industrial accidents, depending on the type, quantity, harmful effects and spread of the industrial toxic substances released; • preparation and maintenance of teams of parts of the single rescue system designed to prevent and eliminate the			

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		consequences of accidents involving the release of dangerous substances; • establishment and maintenance of local systems for alerting the population to the risks of accidents involving the release of hazardous substances; • providing workers, employees and the population from the endangered areas of contamination of industrial toxic substances with individual remedies in accordance with the "Regulation on the procedure for creating, storing, updating, maintaining, providing and reporting the stocks of individual remedies", adopted by Decree No. 3 of January 10, 2009, promulgated in the State Gazette no. 5 of 20.01.2009, effective 20.01.2009 • keeping the collective remedies in good condition and hiding the population as needed, in accordance with the Ordinance on the construction, maintenance and use of collective remedies.			

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		2.1.9. Defining and implementing joint Measures to prevent or mitigate the effects of disasters resulting from vessel incidents as part of the programmes and plans for reducing the risk of the Municipality of Tsenovo and the communes of Hotarele and Greaca, such as: • Continuous monitoring of territorial waters by authorized authorities – "Maritime Administration", Executive Agency "Exploration and Maintenance of the Danube River" Ruse; • Predicting and evaluating the possible development of the incident and its consequences; • Expert judgment on whether the incident would lead to a disaster and whether the Unified Rescue System would be triggered.			
		2.1.10. To define and implement joint *Measures to prevent or reduce the effects of biological contamination*, as part of the programmes and plans for risk reduction of the Municipality of Tsenovo and the communes of Hotarele and Greaca. The biosecurity measures are the following:			

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		• monitoring of risk areas; • receiving, processing, summarizing and sharing information; • informing the public about the potential risks and actions for biological contamination; • training teams from parts of the single rescue system for biological contamination; • planning, creation and storage of inventories /medicines, vaccines, preparations, tests, etc./ to assist with biological contamination; • conducting local population training organised by the mayors of the municipalities to take the necessary action in the event of biological contamination.			
		2.1.11. Defining and implementing joint *Measures for the prevention and reduction of major fires*, as part of the programmes and plans for reducing the risk of the Municipality of Tsenovo and the communes of Hotarele and Greaca, such as: a/ For forests: • research, analysis and assessment of the risk of major forest fires in the area;			

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		• •development of maps classifying the forest fund by the degree of fire hazard; • organising interaction with the Executive Forest Agency bodies at the Ministry of Agriculture and Food in order to carry out effective activity on reducing the prerequisites for the occurrence of forest fires; • creating conditions and conducting a successful firefighting of any fires that may have occurred; • effective interaction with voluntary local units. b/ For agricultural arreys: • research, analysis and assessment of the risk of major fires in agricultural areas sown with cereals, oilseeds and fiber crops on the territory of the district; • establishment of an organisation for the implementation of measures for the protection of agricultural land and for the interaction with the Control-technical Inspectorate bodies at the Ministry of Agriculture and Food to take specific measures aimed at reducing the prerequisites for fire. • creating conditions for the successful			

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		firefighting of possible fires.			
	2.2. Enhancing the capacity of responsible local authorities and their subordinate management, forces and rapid response resources to organize and carry out effective preventive action and to respond to disasters in accordance with disaster plans /*emergency plans*/.	2.2.1. Investigation of current operations, expansion planning, integration, maintenance and construction of new monitoring, forecasting, early warning and alert systems, with particular attention to following: • assessment of the hydrological and meteorological situation by the National Institute of Meteorology and Hydrology/ (NIMH) at the Bulgarian Academy of Sciences and at the Regional Academy of Sciences/ for the territory of the cross-border municipality of Tsenovo, commune Hotarele, commune Greaca; • for the assessment of seismic activity / from the Institute of Geophysics at the Bulgarian Academy of Sciences and at the Regional Academy of Sciences/ for the territory of the cross-border municipality of Tsenovo, commune Hotarele, commune Greaca; • for specialised early-warning systems by telephone lines from duty officers in the cross-border municipality of Tsenovo, commune Hotarele, commune Greaca.			

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		2.2.2. Providing and keeping up to date information from the systems of the National Institute of Meteorology and Hydrology and the National Institute of Geophysics, Geodesy and Geography - Bulgarian Academy of Sciences for forecasting, monitoring and early warning of dangerous phenomena of hydrometeorological and seismic origin.			
		2.2.3. Encouragement of the process of building local alert systems (LAS) on the territory of the municipality of Tsenovo, communes Hotarele and Greaca, in sites representing sites I, II and Ill category under Art. 137 of the Law on Spatial Planning, or performing activities that create a disaster risk.			

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		2.2.4. Investigation of the possibilities and conception to integrate the already established on the territory of the Municipality of Tsenovo, the communes of Hotarele and the Greaca, local alert systems /LAS/ to the National System for Early Warning and Alerting (NSEWA) in case of disasters, and realising the possibility of public disclosure focused on sites with mass attendance .			
		2.2.5. Investigation of the possibilities for sharing the "TETRA standard" digital radio communication system of the Ministry of the Interior as a transmission medium between the elements of the National Early Warning and Alert System and enhancing cross-border real-time data exchange, forecasts and alerts by facilitating the development of regional standards/protocols for data sharing and exchange			

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		2.2.6. Explore opportunities and find appropriate technical and organisational solutions, and practical arrangements to reserve all possible means of communication, disclosure and prevention of natural disasters in cross-border territory.			
	2.3. Creating conditions and guidelines for the preparation of a joint plan, organisation of interaction and coordination between partners in the management of natural disaster risk.	2.3.1. Study of municipal programmes and plans for disaster risk reduction, municipal plans for disaster protection (*for crisis management*) in relation to: • Procedure for timely disclosure of staff and population; • Resource security in all its aspects; • Automate the collection and processing of resource information and monitoring systems for risk management purposes.			

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		2.3.2. Study thoroughly the existing laws and regulations (*Bulgarian, Romanian and EU*), the municipal "legislation" and on this basis to prepare the necessary proposals for the adoption of *regulations /Ordinances/, defining the future role of the municipality*/ with a view to creating the legal preconditions and the normal functioning of the system of constant readiness on the territory of the municipality of Tsenovo and the communes of Hotarele, Greaca.			
		2.3.3. Identify differences in planning processes between project partners in the following two areas: *The first* distinction is between existing risk situations and new ones. *The second* difference is between processes that are mainly focused on the sources of risk (*hazards*) themselves and those that focus on the elements at risk (*vulnerabilities*). Prepare flood risk assessment and prepare threat maps and risk maps.			

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		2.3.4. Joint assessment and mapping of risks from, earthquake, nuclear and radiation accident, geological risk, etc.;			
		2.3.5. Elaboration of criteria and operational procedure for triggering the *Constant Readiness System*, provided that a disaster incident occurs, has occurred or is in danger of occurring: • Loss of life, and/or • Damage to human health, and/or • Significant damage to property and / or economy and/or • Significant environmental effects related to soil, water or air pollution by chemical, biological or radioactive substances and materials or the destruction of species.			
	2.4. Defining the need and prerequisites for the establishment of an effective, resourced and technically assured *Constant Readiness System* for the purposes of disaster prevention and	2.4.1. Conducting a feasibility study on the need to establish an effective, resourced and technically sound *Constant Readiness System* for the purposes of disaster prevention and response, with appropriate conclusions and suggestions.			

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	response.	2.4.2. Preparation of the terms of reference for the development of an investment project and the establishment of an effective, resource-based and technically provided *Constant Readiness System* for the purposes of prevention and effective disaster response with appropriate procedures for the practical implementation of coordination and interaction between the managing authorities, forces and funds for natural disasters in the context of cross-border cooperation between the municipality of Tsenovo and the communes of Hotarele, Greaca.			
3. Achieving coherence in implementing sustainable development policies, adapting to climate change and reducing disaster risk	3.1. Exchange of positive experiences and good practices between project partners to reduce and prevent the adverse effects of climate change, increased risk of floods and other natural disasters on human health and safety, property and resources, as well as on the environment, together with European and global experience, it comprehensively applies and	3.1.1. Establishment of a joint operational procedure based on information from the National Water Management Centres in real time to exchange information on the status of surface waters throughout the cross-border area /*the meteorological forecasts of NIMH - BAS, Executive Agency "Exploration and Maintenance of the Danube River", and those at the Romanian territory*/, information from the systems for monitoring the water level of river hydrometric stations and the water level of dams .	1. According to the budget of the municipality/commune and their programmes for the prevention of natural and technological risks	1. Cross-border committee for the management of the Strategy /CBCMS/	

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	interprets it throughout their territory.	3.1.2. Development of a joint operational procedure for monitoring the early detection and disclosure of transboundary environmental */water, air, soil/* radioactive and toxic pollution, forest fires, etc. The centralized collection, processing and analysis of information will enable effective management decisions and proper allocation of tasks among all those involved in the management of disaster risk in cross-border territory.			
	3.2. Enhancing the capacity of administrations to prepare quality, coherent municipal programmes for the prevention and reduction of the risk of floods and other natural disasters through the exchange of good practices and experience.	3.2.1. Organising training of responsible partners from the administrations of the project partners to assess the likely effects of climate change on flood risk by reviewing and updating the ex-ante risk assessment, maps and risk management plans on the territory of Tsenovo Municipality and Hotarele and Greaca communes , on this basis, prepare the creation of programmes and plans for /prevention/ mitigation of the risk of natural disasters.			

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		3.2.2. Organising and conducting, with the active participation of "Danube Region" Basin Directorate discussing flood protection plans on the basis of which they should be updated, focusing efforts on prevention, protection and preparedness, including flood forecasts and early warning and alert systems for the Constant Readiness System to the population.			
	3.3. Enhancing the preparation of the territorial executive authorities and disaster response forces, implementation of disaster risk reduction plans, mutual assistance and disaster protection plans in the context of mutual assistance and joint cross-border partnership, between the Municipality of Tsenovo, the Hotarele commune and the Greaca commune.	3.3.1. Organisation of joint exercises /*staff trainings*/ to improve the preparation of the Constant Readiness System, local executive authorities, their administrations and disaster response forces.			
		3.3.2. Preparation of a Plan for the organisation of coordination and interaction of the management bodies, forces and rapid response resources, of joint cross-border cooperation in the management of natural disaster risk in the territory of the Municipality of Tsenovo and the communes of Hotarele and Greaca.			

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4. Achieving organisation sustainability, coordination and synergy of disaster management.	4.1. Survey /*review*/ on-site /of municipalities, communes and mayoralties/ for existing and to propose conditions for building new, common communication, and information technical means, systems, and procedures, for improvement of communication and information environment, for sustainable interaction of local authorities and their administrations involved in disaster risk management, rapid response services and voluntary units.	4.1.1. Carrying out a study /*review*/ of the initial data, of the existing situation and preparation of a specific plan for work in terrain activities, on the territory of the cross-border municipality of Tsenovo, Hotarele commune, Greaca commune. 4.1.2. Collecting and documenting initial data on existing disaster risk management techniques and technologies. 4.1.3. Carrying out a technical analysis of the existing communication and information infrastructure for emergency management on the territory of the cross-border municipality of Tsenovo, Hotarele commune, Greaca commune in relation to: • existence of an automated control system (CAD) for the needs of population protection in the cross-border municipality of Tsenovo, commune Hotarele, commune Greaca; • opportunities for the introduction of other advanced technologies that can be of use to response forces; • automated vehicle positioning capabilities, the ability to know where forces and response capabilities are, as well as a geographical information system	1. According to the budget of the municipality/commune and their programmes for the prevention of natural and technological risks	1. Cross-border committee for the management of the Strategy /CBCMS/	

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		(GIS) are all technologies that can be integrated with CAD; • existence of the Geographic Information System (GIS).			
		4.1.4. Development of a conceptual draft of a Permanent Preparedness System combining infrastructure, technologies and operational policies and procedures for emergency management/formulation of the conception for a Municipal Integrated System for Risk Management in Natural Disasters (*emergency situations*) in the municipality of Tsenovo, Hotarele commune and Greaca commune.			
		4.1.5. Preparation of a draft budget and identification of the sources of funding for the conceptual project for the needs of the cross-border municipality of Tsenovo, commune Hotarele, commune Gryaka.			

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		4.1.6. Use of the TETRA-standard Ministry of the Interior's digital radio communication system as a transmission medium between elements of the National Early Warning and Alert System and increase cross-border real-time data exchange, forecasts and warnings, facilitating the development of regional standards/protocols for sharing and sharing data.			
		4.1.7. Categorically guaranteed by creating or using appropriate protocols and procedures, public access to information from monitoring tools and systems, risk maps, as a *first step towards awareness of risks from citizens, organisations and enterprises*, through an effective communication strategy to achieve good use and understanding of each risk card.			
		4.1.8. Formulation of a specific proposal for the implementation of the Strategy, based on the conceptual design of the Constant Readiness System, in the following important areas: 1. Proposals for disaster risk prevention and management and control of natural disasters/emergencies. Emergency management and control will be implemented at three levels - national /Republic of Bulgaria and the Republic of Romania /district			

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		county and municipal /Tsenovo, Hotarele, Greaca/. 1.1. Proposals regarding the structure and organisation of the activity and interaction between the National Crisis Management Centres (Sofia, Bucharest) 1.2. Proposals regarding the structure and organisation of the activity and interaction between the REGIONAL/COUNTY crisis management centre (Reg. CMC/County CMC). 1.3. Proposals regarding the structure and organisation of the activity and interaction between the Municipal Crisis Management Centres (Tsenovo, Hotarele, Greaca) 2. Proposals for improvement and development of the structure, organisation of activity and interaction between Communication systems. 3. Proposals regarding the improvement and development of information systems. 4. Proposals for improvement and development of planning and regulatory framework. 5. Recommendations regarding the operation and use of the Single European Emergency Number 112 system 6. Recommendations for installed and operational Monitoring, Early Warning and Alert Systems.			

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		7. Recommendations for training disaster management authorities, forces, resources and populations.			
	4.2 Establishing local and/or integrating existing Early Warning and Alert Systems, as part of the National Systems of the two countries, for reliable early warning and alerting of the population, for the dangers recorded by meteorological, hydrological, seismological, chemical, biological, radiological, nuclear, environmental sites, institutions and organisations.	4.2.1. Integration of the already established on the territory of the Municipality of Tsenovo, communes Hotarele and Greaca, Local Alert Systems to the National Early Warning and Alert System in case of disasters and realization of the possibility for public awareness, focused on sites with mass attendance.			

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5.2. Resources for the implementation of the strategic plan:

Human **Available:** (e.g. voluntary labour) **Resources sought:**	**Material** **Available:** (e.g. office, office equipment, etc.) **Resources sought:**
Non-material **Available:** (e.g. good name, good contacts) **Resources sought:**	**Financial** **Available:** **Resources sought:**

Consideration should be given to all the resources, such as quantity and type *(materials, people, technique, etc.)* that will be needed to carry out the planned activities. They are then evaluated and plotted in the table.

5.3. Monitoring and evaluation of the implementation of the strategic plan

During the implementation of the strategic plan, short-term and long-term goals are monitored, reviewed and evaluated. Monitoring and control indicators are being developed to track the achievement of the objectives. Indicators should measure as directly as possible progress towards the goals, objectives and objectives set out in the strategic plan. In its development, the plan values for each of them are determined and how these values will change during the implementation of the activities, what the final values should be at the end of the planned period. They must be based on theory and practice and accepted by each of the teams as a valid measure of achievement. This means that the Indicators should be defined precisely for the purposes, be understood and not imply different interpretations.

In developing a strategic plan, ***the most commonly observed indicators are:***

a) ***Result indicators.*** Result indicators represent the direct and immediate effects generated by the project or programme. They are related to the goals of the project. Provides information on changes that affect the behaviour of direct beneficiaries.

b) ***Indicators for the implementation of the strategic plan***. Implementation indicators measure intermediate results compared to the original quantitative targets. They are developed in terms of efficiency and effectiveness of the implemented activities, quality of management of the organisation and financial performance.

c) Sustainability indicators. Sustainability indicators represent the consequences of a project or programme beyond the immediate effects on its direct beneficiaries. Two types can be defined D. Norton defines two types of impacts - specific and general.

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Specific impacts occur over a period of time but are directly related to the actions taken. Common impacts are long-term effects affecting a broad population. Measurement of the second type of impact is complex and it is often difficult to establish clear causal relationships.

d) Dissemination indicators. Dissemination of the results is related not only to their promotion, but also to the transfer of the successful experience. In this sense, it is an Indicator, both to manage the activities of the strategic plan during their implementation and to succeed upon their completion. Involving the local community in choosing a strategy, informing about services, discussing interim and deliverables are also part of the dissemination, insofar as changes in the environment are promoted, ideas emerge about how services can be improved and what new strategies can be developed.

During the implementation, the CBCMS team should constantly monitor and adapt the plan. If deadlines and targets are not met, the reason for this must be sought. The evaluation will show whether the activity is successful, what is successful and what, and whether there are needs that are left unmet and problems that are not solved. These needs and problems, in turn, should become the starting point for developing a back-up plan to achieve the goals..

6. OBSERVATION OF STRATEGY IMPLEMENTATION ACTIVITIES

6.1. Monitoring of the implementation of the Strategy

Monitoring and controlling the implementation of the Strategy is an integral part of the overall process of document implementation. The monitoring system must ensure the effective and efficient implementation of the planned measures and activities that fall within the scope of the Strategy. The role of the monitoring system is to ensure that the results set out in the strategy document are constantly monitored and disseminated. The monitoring process requires the collection of quantitative and qualitative data to perform the relevant activities. The monitoring system aims to provide the competent national, regional and local authorities in the Romania-Bulgaria cross-border region, as well as to all interested parties, with regular information on the progress towards achieving the set goals and results. The main objective is to identify deviations or risk areas in the implementation of the planned activities, thereby improving the implementation of the Strategy for Development, Improvement and Innovation and facilitating/improving the further development of the implementation process.

Based on the results of monitoring, timely changes and updates can be made in the way the Strategy is implemented. Monitoring is essential for the implementation of the strategic document, the implementation of which covers a long period (several time phases), extends to different municipal territories.

6.2. Constant monitoring

The strategy implies the availability of interconnected actions and resources *(technical, organisational, legal, financial, human, etc.)* for its implementation.

The monitoring and control mechanisms of the Strategy are also consistent with the following principles, fundamental to the process of planning, managing and

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implementing, monitoring, controlling and evaluating the implementation of strategic documents:

- Unity of the strategy document;
- Adequacy and relevance of the strategy document;
- Applicability of the strategy document;
- Overall impact of the strategy document;
- The effectiveness and efficiency of the strategy document;
- Financial management;
- Openness, transparency and publicity;
- Monitoring and reporting;
- Sustainability.

Only with all the elements in place and adhering to the principles outlined above would a Strategy have a real chance of success and the achievement of the objectives and expected results.

The process of monitoring the implementation of the Strategy will be carried out in compliance with several basic principles:

- Comprehensiveness of monitoring sites;
- Clarity and transparency;
- Objectivity;
- Mutual control and coordination between responsible institutional units;
- Having clear rules and procedures for monitoring;
- Partnership and interaction with all stakeholders.

Objects in the monitoring of the Strategy will be all elements for the evaluated:

- resource efficiency - the resources used can be financial, human, technical and any other means and/or assets;
- performance towards the goals - performance is measured as a percentage of the results achieved and the goals achieved.

The subjects of the monitoring of the progress of the Strategy are those bodies, institutional units and/or stakeholders directly or indirectly engaged and/or responsible for carrying out the monitoring activities. As follows:

- Representatives of municipal/district (county), regional, national authorities directly /indirectly responsible for the implementation of the evaluated Strategy;
- Representatives of the local population and structures of civil society, business, educational and scientific organisations, etc., as interested parties or participants in the monitoring process;
- External organisations /evaluators/ experts in cases of external monitoring.

Key elements of the Monitoring System:

- ***Planned results*** – the set results clearly outline the desired effect
- - the expected change as a result of the implementation of the Strategy;
- ***Monitoring indicators*** – identify the specific desired change by setting achievable target values;

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- ***Sources of information, methods and frequency of information gathering*** - The monitoring system provides sufficiently comprehensive and accurate information on the specific sources of information to track the key indicators identified, the means of data collection, and the periodicity of information collection for each of the defined indicators.

  Monitoring and evaluation are indispensable instruments of good governance. They are an integral and essential part of the decision-making process and management of the overall strategy development, implementation and evaluation cycle.

These tools create and guarantee:

- ***Effectiveness and efficiency of the Strategy:*** institutions, organisations and stakeholders deliver results that are relevant to public needs, making best use of available resources. Leaders and the public build a broad and long-term perspective on good governance and development. Improving the quality of the implementation of the Strategy, the results achieved, the products created and the services provided. The capacity of all institutions, organisations and their networks involved in the implementation of the Strategy is improving and developing.
- ***Accountability:*** answers to the question to what extent the Strategy achieves its objectives, how rationally public resources are used, what are the public impacts. Accountability enables all stakeholders - to assess the extent to which their interests are protected.
- ***Responsibility management***: Cross-border committee for the management of the Strategy /CBCMS/, in particular, the two operational teams responsible for the management of the Strategy make public the results of the implementation of the Strategy, take action in the event of a discrepancy between planned and obtained results.
- ***Transparency of management processes***: Information on the Strategy, procedures and responsible management organisations is accessible to interested parties and the public, channels of communication between stakeholders and open to them.
- ***Mechanisms for civic participation***: Active citizens are given the opportunity to participate in decision-making on the implementation of the Strategy or the need to change it.
- ***Concent:*** The public debate allows for the reconciliation of different interests and agreement and support for the implementation of the Strategy. In the process of monitoring and evaluating the Strategy, stakeholders are given the opportunity to influence them, which leads to the mobilization and coordination of public actions of different stakeholders.

The monitoring and evaluation methodology focuses on the analytical review and comparative analysis of the results and impact of the implementation of the Strategy, taking into account the socio-economic and political changes occurring at local, regional, national and European level.

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The evaluation of the Strategy needs to go through the following main stages: ***study, analysis and evaluation, coordination and completion***.

The assessment methodology is based on a structured and systematic process of collecting, analysing and presenting information and can be summarized as follows:

- ***Selection of the logic of the intervention*:** The evaluation methodology needs to focus on the implementation and improvement of the quality of planning. The focus on implementation is achieved by evaluating efficiency and effectiveness, while the focus on improving the quality and relevance of planning is achieved through:
  - up-to-date review of the implementation of the Strategy;
  - study the changes in the context of the Strategy;
  - making the necessary changes to maximize the impact of the Strategy.
- ***Development of evaluation methodology*** /We propose to use "Methodological rules for monitoring and evaluation of the implementation of sectoral strategies and programmes" - developed in implementation of contract No.57/23.10.2012, part of project No. a10-13-50/02/20/2012 - already discussed above/.

The methodological evaluation toolkit involves the use of certain evaluation criteria that characterize the realization potential and quality of results in the implementation of the Strategy:

- Strategic alignment and harmonization with the goals and priorities of local, regional, national and European policies for the protection of natural and man-made disasters for the relevant programming period;
- Regulatory compliance with the principles, rules and standards for risk management of natural and man-made disasters enshrined in national and European legislation
- Reflection and impact on the status and changes in the socio-economic profile of the Romania-Bulgaria cross-border region.
- Achieved results, impact and overall effectiveness of the implementation of the Strategy so far;
- Effective and efficient use of resources for the implementation of the Strategy;
- Political and social commitment, administrative and institutional capacity to implement the Strategy;
- Sustainability of the desired effects achieved - will they continue to exist beyond the time horizon of the Strategy?

The Strategy's monitoring indicators are not, in themselves, a sufficient basis for an objective assessment. To prepare one, a toolkit with criteria, additional indicators and evaluation questions has been developed to complement the quantitative and qualitative parameters set out in the Strategy. Its main objective is to contribute to an objective evaluation of the Strategy and effective follow-up planning.

Assessment is an activity that systematically and objectively assesses the progress made towards a given end result and its achievement.

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The main types of assessment of strategic documents are: *preliminary, intermediate and subsequent*.

The purpose of the ***preliminary assessment*** is to verify that the objectives set are relevant and meet the needs and capabilities of the entities involved in the implementation of the measures to achieve them.

The intermediate assessment has the task of signalling whether the interventions implemented are leading to the desired changes. For this reason, it is advisable to carry out this type of assessment once part of the planned actions have been completed. Using the intermediate assessment recommendations, action can be taken to change the implementation of projects and programmes if they are confirmed to be ineffective and not expected to have a positive impact.

Subsequent assessment primarily examines the impact of, and sustainability of, the results of the implemented interventions on the strategy. They are usually carried out after a certain time after the end of the activities, in order to allow the implementation of the results and the corresponding accumulation of change on the target groups/objects.

In connection with the development of the Strategy, only an ***intermediate and subsequent assessment*** will be carried out. The preliminary assessment of the Strategy was carried out during a series of roundtables in Romania and Bulgaria.

The assessment is a structured process and is reflected in the practical evaluation of the Strategy. Its main objective is to support the processes of monitoring and managing the risk of natural and man-made disasters, on the basis of which local needs will be met and the necessary resources efficiently allocated to achieve the desired state of safety and protection.

During its implementation the following should be taken into account:

- Lessons learned from previous experience;
- The socio-economic context of the activities carried out under the Strategy;
- Strategic choice of action priorities and their internal and external consistency;
- Quantification of goals;
- Assessment of the expected socio-economic impact and allocation of resources;
- Strategy monitoring system.

The results of the assessment are grounds for updating the Strategy or for taking corrective actions.

The specific change and progress made in the implementation of the Strategy and the achievement of planned results can only be tracked on the basis of specific values (*key indicators/indicators*).

Assessment reports of the Strategy:

The assessment of the Strategy is carried out periodically, depending on the type of assessment. Operational teams in Bulgaria and Romania provide progress reports on the Strategy. The reports shall contain a report on the activities carried out, the risks identified and the measures to overcome them.

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Periodic reports on the implementation of the Strategy:

The governing bodies of the municipality of Tsenovo and the communes of Hotarele and Greaca determine the period during which the operational teams for the implementation of the Strategy prepare progress reports. The report contains the interim results achieved on the specific activities, the implementation of the Strategy as a whole. The report shall monitor the implementation of the monitoring indicators set out in the strategy document.

The report is discussed at a meeting of CBCMS /Management Committee/ and submitted to the governing bodies for approval.

Where corrective measures are needed and changes to the overall Strategy are made, the operational teams in Bulgaria and Romania prepare a report for discussion by the Management Committee, on the basis of which a decision is prepared by the governing bodies.

An update decision is made by the managing authorities of the two partner organisations.

Intermediate assessment

The intermediate assessment shall be carried out after the start of the implementation of the Strategy each year. At the time of developing the Strategy, 2 intermediate assessments are recommended as follows:

- 1-st intermediate assessment – by the end of 2020
- 2-nd intermediate assessment – by the end of 2021

The intermediate assessment report shall be submitted and adopted by the governing bodies of the two partner organisations and a decision shall be taken, if necessary, to request a revision of the Strategy.

The results of the intermediate assessment shall be disseminated through appropriate channels.

Subsequent assessment

The subsequent assessment is carried out after a certain time (*preferably after the first year*) of the last year of the Strategy's time range.

The purpose of the subsequent assessment is to provide independent and up-to-date information on the results of the implementation of the Strategy, to make recommendations on the implementation of policies for the prevention and management of natural and man-made disasters.

To accomplish this purpose, the ***following tasks*** are performed*:*

- Examining the results of the implementation and the overall impact of the Strategy
- Up-to-date review of the implementation of the Strategy for compliance and applicability of the objectives and priorities set;
- Conclusions and recommendations for improving policies for the prevention and management of natural and man-made disasters.

The main criteria used in the ex-post evaluation of the Strategy are: adequacy and relevance, relevance, overall impact effectiveness and efficiency, financial

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management, openness, transparency and publicity, monitoring, accountability and sustainability.

It is within the powers of the governing bodies of the three organisations to decide whether an subsequent assessment of the Strategy will be carried out.

6.2.1. Continuous monitoring indicator catalogue

The indicators system is an integral part of the overall process related to monitoring and evaluating the implementation of the Strategy, as well as its updating. Indicators cover a broad range of topics that directly relate to policies for the prevention and management of natural and man-made disasters. Generally speaking, they measure the extent to which goals and measures are being met and justify the need to update the relevant strategic documents.

For the purposes of this Strategy, the Methodological Rules for Monitoring and Evaluation of the Implementation of Strategies and Programmes consisting of 9 principles are used, each of which has developed ***indicators, assessment questions, sources of information and an evaluation scale***, with individual groups following the dynamics of implementation at a hierarchical level in the structure of its strategic framework.

The methodological rules are based on ***9 generally accepted principles*** of strategic planning.

The system of indicators and questions for evaluating the implementation of strategies/programmes is based on already established European practices regarding the formulation of Indicators on the one hand, and on the other hand, on the latest trends in this field.

These Guidelines aim to identify the changes that have led to the implementation of this strategy/programme and the establishment of causal relationships between ***goals-measures-activities-resources-results***.

Here, we will briefly justify their selection.

The guiding principle in selecting Indicators is that they are quantifiable and their information accessible. All Indicators are formulated based on the key thematic components of the content at the appropriate hierarchical level of the strategic framework whose performance they measure. When aiming for impact or outcome, the most commonly used unit of measure becomes the percentage, as it allows one to measure the degree of change between the initial and final levels of implementation. Output indicators are 0 because the implementation of the Strategy is scheduled to start in the second half of 2020 and it is NOT appropriate to set baselines other than 0. Currently, another argument in favour of using a zero base is the fact that the Strategy seeks to develop policies for the prevention and management of natural and man-made disasters in the territory of the Romania-Bulgaria cross-border region ", which distinguishes itself almost at the same time as its launch.

The group of result indicators consists of quantitative indicators such as:

- Number of media publications on the implementation of activities for prevention and management of natural and man-made disasters in the territory of Tsenovo municipality, communes of Greaca and Hotarele in the cross-border region Romania

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- Bulgaria - assesses the degree of media presence, which in turn is an indicator of popularity;
- Number of stakeholder meetings - the indicator quantifies the benefits of joint activities with stakeholders;
- Number of partnerships established - the indicator quantifies the benefits of realized partnership initiatives;
- Increase in the number of volunteers attending training and training courses on prevention and protection in natural and man-made disasters;
- Number of initiatives for the development and improvement of prevention and protection - the indicator quantifies the benefits of implemented partnership initiatives;
- Number of events/forums/trainings on management capacity enhancement - the indicator gives a quantitative assessment of the benefits of conducted management capacity interventions.

6.2.2. Ways to collect information

Monitoring and evaluation involves exploring the baseline and monitoring over time the changes that interventions result from the implementation of the Strategy.

A variety of sources of information, as well as different methods and approaches for its collection can be used for monitoring and evaluation and monitoring.

The following sources of information should be used in the monitoring, evaluation and control of the Strategy:

A) Information derived from the websites of municipal administrations, internal documents available in the Cross-border Committee for Management of the Strategy, etc.

These categories of documents include:

- Periodic reports on the implementation of the Strategy;
- Periodic implementation reports of the Strategy prepared by the Operations Team;
- Information on implemented activities/projects and initiatives regarding the prevention and management of natural and man-made disasters in the territory of the Municipality of Tsenovo, the communes of Hotarele and Greaca in the cross-border region of Romania - Bulgaria;
- Reports, reports and other documents emanating from the relevant local administrations (leading project implementation organisations) directly related to the implementation of the respective policy or programme for the prevention and management of natural and man-made disasters;
- Recommendations for updating the Strategy as a result of changes or evaluation.

B) Sources of information stemming from documents issued by external bodies and institutions:

The following category of documents may be included in this category of sources of information:

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- Opinions from various institutions and control bodies regarding the implementation of the Strategy;
- Intermediate and subsequent assessments of the Strategy;
- Recommendations for updating the Strategy as a result of changes made or as a result of an evaluation.

C) Statistical information and information contained in databases collected at municipal, regional/county, national, regional levels

The following types of information are included in this category:

- Reports from the National Statistical Institute on key indicators for the national security sector (*safety and disaster protection*), for the policy evaluation period;
- Information from other institutions and organisations collecting and processing data at the regional level for the prevention and management of the risk of natural and man-made disasters in the territory of the Municipality of Tsenovo, the communes of Hotarele and Greaca in the cross-border region Romania - Bulgaria.

D) Information received from stakeholder feedback

The involvement and involvement of all stakeholders at every stage of the development and implementation of the Strategy is crucial both for the success of its implementation and for obtaining an objective and effective evaluation of its implementation.

There are different approaches and methods that could be used to obtain feedback from different stakeholders, which is a guarantee for an objective evaluation of the Strategy. Some of them are:

- Questionnaire survey;
- Online survey through the websites of participating organisations in the Cross-border Committee on Strategy Management, etc.

6.2.3. Organisational structure for monitoring and evaluation

The process of management, monitoring, evaluation and updating of the Strategy and the Programme for the realisation of the specific objectives will be carried out by the Cross-border Committee for Management of the Strategy (CBCMS), ***respectively with Bulgarian and Romanian components***.

The committee will be composed of managers and members:

- representatives of local/municipal authorities;
- representatives of district/district authorities;
- representatives of other stakeholders - business, investors, non-governmental organisations, scientific organisations, universities, etc.

The composition of the CBCMS will be further specified by the governing bodies of the two partner organisations. Like any aspect of the Development, Improvement and Innovation Strategy, the exact structure of the Committee will be subject to discussion and final approval by the governing bodies of the municipality and communes.

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The main task of the CBCMS is to take initiatives to implement the set activities in the Strategy, to initiate and coordinate among stakeholders, to maintain a permanent base with opportunities to apply with project proposals and to support and assist in the process of preparation for application, implementation and reporting of projects funded through national, European and other donor programmes.

Leaders will report to their governing bodies on progress in the implementation of the Strategy, challenges and obstacles encountered.

The Strategy Management Committee will periodically review and update the Programme /*Action Plan*/ to meet the specific objectives and budget for the implementation of the Strategy. In the event of a significant change in the socio-economic situation, the legislative framework or sources of funding, an update of the Programme will be proposed.

The monitoring and updating of the Programme /*Action Plan*/ for the realisation of the specific objectives of the Strategy should cover at least the following aspects:

- Review and update of the Strategy for the realisation of the specific goals - activities, milestones), processes of coordination and approval, etc.;
- Reviewing and updating the budget of the Strategy - cost statement and forecast of future financing opportunities.

Regarding the management, monitoring and control of the implementation of the Strategy and indicators, CBCMS shall have the following functions and responsibilities:

- Organises and coordinates the management, monitoring, control, monitoring, updating and reporting of the implementation of the Strategy.
- Proposes for approval by the governing bodies of the three partner organisations updated versions of the Programme for the realisation of the specific objectives of the Strategy.
- Coordinates ensuring that the Strategy is aligned with the goals and priorities of the municipal, district/county, regional, cross-border and national strategies, plans and programmes of the Strategy and proposes an update of the Strategy, if one is not available.

The CBCMS meetings may include representatives of industry organizations, scientific organisations, representatives of regional and central authorities and other interested parties in the Romania-Bulgaria cross-border region. Information on the Committee's activities will be published on the websites of its partner municipalities and communes, thus making it accessible to the general public. This practice, in combination with periodic consultations and stakeholder meetings, will ensure transparency in the implementation of the Strategy across the Romania-Bulgaria border region."

The operational teams of the municipality of Tsenovo and the communes of Hotarele and Greaca, representatives of NGOs, etc. should:

- Assist in the process of implementation and management of the activities included in the Strategy;

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- Monitor the progress of the implementation of the activities set out in the Programme for the realization of the specific objectives of the Strategy and the pre-set Indicators;
- Prepare periodic progress reports on the implementation of the Strategy;
- Perform the necessary administrative activities to support the work of the Committee - coordination, preparation of documents, etc .;
- Maintain thematic databases related to the implementation of the Stakeholder Strategy, donor programmes, funding opportunities, etc.
- Prepare reports and other reporting documents related to the implementation of the Strategy;
- Collect information on the extent to which the Indicators are being achieved;
- Collect information on the need to update the Strategy and more..

Stakeholder involvement:

Stakeholder consultation in the adoption, implementation, monitoring, control and evaluation of documents is being recognized as a working mechanism leading to an increase in the quality of strategic documents as well as to the legitimacy of decisions taken and of management as a whole. In this way, the decisions made reflect the interests not only of the authors of the strategy paper, but also of the stakeholders in their diversity.

Stakeholder involvement in the implementation, monitoring and evaluation processes of the Strategy leads to:

- Greater transparency and accountability of the Committee;
- Improving the quality of the Strategy because the Committee is informed of the various possible effects that it might have, which they would not otherwise have had access to;
- The strategy is responsive to and more reflective of the public interest;
- Improving the implementation of the Strategy;
- Predictability of the Strategy;
- Consideration of different points of view and interests.

The tools for involving stakeholders in the management, monitoring and evaluation of the Strategy may be: ***signing a Memorandum and/or Cooperation Agreements***, setting up consultative working groups, exchanging experience and other forms of informal feedback on the implementation of the Strategy. and others. We suggest that the focus should be on the first two instruments as a form of structured stakeholder cooperation.

Memorandum and/or Cooperation Agreements

The signing of the Memorandum and/or the Agreements with organisations and institutions representing the stakeholders is a tool that formalizes the consultation process of the Stakeholder Strategy. The ***Memorandum/Agreement*** may set out detailed procedures for consultation. The rules and procedures laid down in the document will bind the committee without, however, rendering the Strategy invalid, if it is impossible to involve a stakeholder group at any stage of its implementation, control or evaluation.

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The ***Memorandum/Agreement*** itself is desirable to be developed with the involvement of stakeholders and using good practices in a number of European countries.

Advisory working groups

The developed management model requires a partnership approach and involvement of stakeholders in the process of implementation and evaluation of the Strategy. In order to achieve broader support and legitimization of the objectives of the Strategy, appropriate working groups will be formed, as appropriate, a mechanism for direct involvement of stakeholders in the decision-making process related to the implementation of the Strategy.

Representatives of local and regional authorities

Representatives of local and regional authorities will be involved in the meetings of the Advisory Group when necessary and in accordance with their competences. In connection with the formation of the groups, the Committee will send an invitation to involve representatives of the relevant authorities to participate in the organized workshop.

Working meetings will provide:

- involvement of experts from local and regional authorities for their involvement in teams in the development of project proposals, for implementation of the planned activities in the Strategy;
- maintaining active communication with other stakeholders;
- maintaining a positive image of the Strategy;
- initiating projects to implement the Strategy.
- preparation of opinions and reports on problems and cases encountered in the implementation of the Strategy.

Representatives of branch organisations (Bulgaria and Romania)

The representatives of the branch organisations will participate in the meetings of an advisory group when necessary in accordance with their competences. In connection with the formation of the groups, the Committee will send an invitation for the inclusion of representatives from the relevant branch organisation to participate in the specifically organized workshop. Working meetings will provide:

- attracting experts from the industry for their involvement in teams in the development of project proposals, for the implementation of the planned activities in the Strategy;
- maintaining active communication with other stakeholders;
- maintaining a positive image of the Strategy;
- preparation of opinions and reports on problems and cases encountered in the implementation of the Strategy.

Representatives of educational and scientific organisations/institutions

Representatives of educational and scientific organisations will participate in the meetings of the Advisory Group when necessary and in accordance with their competences. In connection with the formation of the groups, the Committee will send

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an invitation to involve representatives of the organisation concerned to participate in the organised working meeting.

Working meetings will provide:

- attracting experts from educational and scientific organisations for their involvement in teams in the development of project proposals, for the implementation of the planned activities in the Strategy;
- maintaining active communication with other stakeholders;
- maintaining a positive image of the Strategy;
- preparation of opinions and reports on problems and cases encountered in the implementation of the Strategy.

Representatives of the territorial units of the central government

The representatives of the territorial units of the central authorities, on both sides, will be involved in the meetings of the Advisory Group when necessary and in accordance with their respective competences. In connection with the formation of the groups, the Committee will send an invitation to involve representatives of the institution concerned to participate in the organized workshop. Working meetings will provide:

- maintaining active communication with other stakeholders;
- maintaining a positive image of the Strategy;
- initiating projects to implement the Strategy.
- preparation of opinions and reports on problems and cases encountered in the implementation of the Strategy.

The Strategy management committee will strive to ensure sustainability in several aspects:

- ***Financial sustainability*** is related to the achievement of the results of the implementation of the Strategy and is conditioned by the financial stability of the sources of funding and the realization of the benefits expected from the activities / projects for the cross-border region Romania-Bulgaria. The Committee must anticipate all the necessary costs for the implementation of the individual activities, by requiring the updating of their budgets.
- ***Institutional sustainability*** involves the establishment and maintenance of formal and **„ad hoc"** partnerships *(consultative working groups)* and forms of stakeholder cooperation.

The successful implementation of the Strategy will largely be ensured by sound planning and the establishment of appropriate control mechanisms, which the Committee will implement as a good allocation of tasks and responsibilities among the experts included in the Committee.

The steps to accomplish the evaluation include the execution of several sequential and interrelated processes as follows:

Assessment team members

Responsible for the formation of the assessment teams are the Heads of the Committee for Management of the Strategy (CBCMS). Their proposals are approved by the governing bodies of the three partner organisations.

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It is also recommended that **stakeholder representatives** be involved in order to evaluate them more objectively and transparently.

Number of the members of the assessment team

It is recommended that the assessment team of the Strategy be composed of a minimum of three and a maximum of five, in order to have a flexible and working structure and to make decisions by a 2/3 majority.

Organisation and structure of the assessment team

The heads of the Committee should determine:

- the structure of the assessment team;
- coordinator;
- goals and tasks;
- the deadline for the assessment.

Collecting the data needed for the assessment

The evaluation toolkit also identifies documents that contain relevant information. The same documents, much of which are official documents, can also be used as documentary evidence of the effectiveness in implementing and adhering to the principles of strategic planning and management.

The members of the evaluation team are tasked with collecting the necessary data and information on the additional indicators and Questions identified in the toolkit, and for this purpose should be assisted by all participants in the implementation of the Strategy.

Gathering the necessary data can also be accomplished by completing semi-structured and structured questionnaires, conducting interviews, discussions, workshops, etc.

Assessment work of the team

When starting the work of the assessment team, the coordinator acquaints the team members with the methodology (mainly the principles laid down in it) and the rules for its implementation, and the meeting must end with a decision, which must include:

- the necessary supporting documents to be presented and examined in order to gather the necessary information and data - where and how they will be obtained, who and in what way will submit them to the committee;
- work schedules and subsequent meetings of the evaluation committee. The decision shall be submitted to the Heads of the Committee.

In subsequent meetings, team members are tasked with working on the substance and applying the methodology, discussing the questionnaire and the data collected and agreeing on the answers.

The purpose of each meeting is to review the monitoring indicators of the Strategy and the additional Indicators by the criteria included in the toolkit.

Should additional information and/or data be collected, the team will decide who and how to obtain this information for the next meeting.

Minutes shall be taken of each meeting in the which the following shall be included:

- attendees (members of the assessment team);

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- agenda for the meeting - it is particularly important to indicate the monitoring indicators and criteria to be considered at the relevant meeting;
- substantive discussions and discussions;
- an inventory of the evidence presented on each Monitoring Indicator and additional indicators/question as required by the methodology;
- conclusions;
- commission decisions.

Once the evaluation committee has completed its work, the coordinator summarizes the data.

As a result of the assessment, a summary report is prepared, which includes a descriptive analysis of the collected and aggregated data.

The content of the report may follow the following example structure:

I. Introduction

II. Methodology

III. Main components of the evaluation:

1. Evaluation of Principle1: Unity of the Strategy
2. Evaluation of Principle2: Adequacy and relevance of the Strategy
3. Evaluation of Principle3: Applicability of the Strategy
4. Evaluation of Principle4: Overall impact of the Strategy
5. Evaluation of Principle5: Effectiveness and efficiency of the Strategy
6. Evaluation of Principle6: Financial management
7. Evaluation of Principle7: Openness, transparency and publicity
8. Evaluation of Principle8: Monitoring and accountability
9. Evaluation of Principle9: Sustainability

IV. Evaluation of the implementation of the Strategy monitoring indicators

V. Conclusions

VI. Recommendations

VII. Annexes

7. Methodology for updating the strategy

7.1. Factors requiring the establishment of a strategy and methodology for updating strategic programmes

The developed Strategy can be defined as a complex dynamic system that has been formed, is being formed and will be formed in the future, on the one hand, on the basis of the development of prevention and risk management of natural and man-made disasters, and by another - in accordance with the intentions and desires of the society, expressed through regional planning and regional policy, formulated under a certain regulatory framework and specified through the developed and implemented models for the development of the Municipality of Tsenovo and the communes of Hotarele and Greeca in

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the Romania-Bulgaria cross-border region. The dynamics of these processes require the development of a flexible and adaptable strategic document that correctly reflects changes in factors and conditions for development. This document should set the necessary parameters adjusting the direction for enhancing the capacity of local authorities and their administrations, to prepare and implement quality Disaster Risk Reduction Programmes and Plans /*Disaster protection plans*/. An integral part of strategic planning is the evaluation of implementation and their subsequent updating, as appropriate.

In order to make the document more flexible and up-to-date due to changes and/or intermediate performance assessments, this methodology has been developed.

The methodology aims to provide in an accessible and synthesized way the basic requirements for updating the Strategy, as well as practical guidelines in five main groups:

- Summary of the key elements for the successful updating of the Strategy;
- Effective organisation of the update work;
- Updating the situation analysis;
- Updating the strategic part of the document;
- Monitoring system and indicators;
- The main factors that require updating of the Strategy are:
- Changes in economic and social conditions in the Romania-Bulgaria cross-border region;
- Updating of strategic documents at national, regional and European level;
- Changes in related national or EU legislation;
- Changes in sectoral strategies and programmes affecting the implementation of the Strategy;
- Conclusions, results and recommendations of interim evaluations.

The strategy has been developed for the period 2020-2025 and its implementation will be carried out in the context of dynamically changing factors and prerequisites, with a view to achieving the long-term and short-term objectives at local, regional and European level.

7.2. Method of correspondence with key documents influencing the implementation of the strategy

In updating the Strategy, it is essential, with a view to accurately updating the strategic framework, to carry out an in-depth review of strategic documents at European and national level, presenting the common framework for managing the risk of natural and man-made disasters.

In updating the Strategy, a thorough review of the changes in the overall framework for risk management and planning in the field of disaster prevention and protection in the cross-border region Romania-Bulgaria and the European Union needs to be carried out.

7.3. Method of compliance between objectives, priorities, measures and actions to implement the strategy

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The revision and updating of the Strategy is made in order to clarify whether the changes in the environment make it difficult or impossible to realize the Strategy and achieve the stated goals..

The update of the Strategy should be based on the following basic principles:

- **Realism -** it must set realistic goals, which means that they must be consistent not only with the development potential available, but also with factors such as the institutional environment, trends in the development of the system for prevention and management of natural risks, the level of training of staff in the national security, financial security and other sectors that can play a role in holding back the effective implementation of the Strategy;
- **Sustainability -** the Strategy should not contain tasks, activities and specific activities, the solution of which has an isolated, operational and campaign nature, with a short-term and quickly dampening effect on the fulfilment of the stated goals in the Strategy;
- **Continuity -** the updating of the Strategy should not start from scratch - continuity must be ensured with the current strategy document, with the municipal/county plans, sectoral strategies and programmes at national and European level;
- **Partnership -** the strategy should be the result of the joint efforts of a number of stakeholders (representatives of state, regional, municipal/county authorities, business, scientific and educational institutions and the non-governmental sector).

An important element of updating the strategic part is assessing the expectations of the implementation of the document. To do this, it is necessary to evaluate and strike a balance between the values and expectations of the stakeholders. The evaluation will define the starting points when updating the vision and will provide the necessary clarity on the political dimensions of the future updated strategic document.

The next step is the reformulation (updating) of the strategic part of the Strategy.

The basic principles on which the strategic framework of the Strategy should be based are:

- Partnership between institutions, stakeholders and civil society structures in the process of realizing strategic intentions;
- Coordination within and between management units at all levels, responsible for achieving the expected state of the area towards the planning horizon;
- Concentration of efforts, human and financial resources to achieve the goals set in the Strategy;
- Close engagement and integrity of the actions set out in the various programmes and strategic documents at national and European level to achieve a complex socio-economic impact;
- Being open to the complementarity and adaptability of strategic intentions to the changing environment of the Strategy;

The strategic objectives of the document specify the vision for the development of the strategic document.

They should be:

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- consistent with the fact that the Strategy is defined as a strategic document with a fixed horizon. This implies greater concreteness and clearer spatial conditioning. The strategic objectives are formulated, on the one hand, in accordance with the available potential for the development of the system for the prevention and management of natural disasters, the expectations of the stakeholders, and on the other, the need to reflect, as a matter of priority, the basic, overriding needs of the system for protection against disasters;
- compatible with the objectives and priorities for the development of the system for prevention and management of natural risks in national, regional and European strategic documents;
- consistent with the need for an integrated approach to address common development problems and to establish a unified approach to the planning and management of natural risks;
- in accordance with the requirement to increase the efficiency of the use of the instruments for planning and managing the prevention and management of natural risks, and in particular those funds coming from the state budget and the European Structural and Investment Funds;
- be clearly formulated in order to know what is expected to be achieved with the development of the system for prevention and management of natural risks and what will be the effect of achieving it; how the achievement of the strategic objectives will contribute not only to security and protection, but also to the development of the Romania-Bulgaria cross-border region; should have specific justification and clear, measurable performance criteria;
- priorities are determined on the basis of a comprehensive analysis (including SWOT analysis) to achieve the respective strategic objectives;
- the objectives need to be channelled into specific priority areas and specified in appropriate measures with a clear scope and expected results;
- specific objectives detail what we want to achieve in each priority area;
- the measures should reflect the specific actions required to fulfil the underlying strategic objectives, specific objectives and priorities for the development of the area concerned.

A characteristic feature of the collection of data for the implementation of the objectives of the Strategy in the cross-border region Romania-Bulgaria regarding the development of the system for prevention and management of natural risks are:

- the lack of official statistics at national and European level;
- a small amount of research sample of the system for prevention and management of natural risks, which are not representative for the region.

Before establishing a system of Indicators, a complete set of criteria must be created to evaluate the reliability of the source information and the Indicators themselves. The indicators must meet the following criteria:

- Rationale *(relevance)* - consistent with the common priorities and objectives of sustainable development;

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- Information security - to have a permanent source of information for each of them;
- Ability to present in quantitative terms *(ability to set value goals, and where possible to establish baseline)*;
- Simplicity *(comprehensibility)* - be easy to formulate and understand;
- Informativeness *(analytics)* of Indicators - they must carry sufficient information to draw appropriate conclusions and make decisions;
- Be complex, i.e. to be hierarchically linked to lower level Indicators. The main Indicators should correspond to the Complex.

7.4. Financial update method

The overall assessment of the resources required for the implementation of the updated document should not be seen as a financial plan or indicative financial table, but as a general expert assessment in terms of mainly the required financial resources.

Funds should be evaluated in the following areas:

- National funds;
- European funds;
- Other donor programmes;
- National funding (local budget and central);
- Private financing;
- Public-private financing.

The expert evaluation of the financial resources should be derived from the priorities of the Strategy and not necessarily be presented in absolute numbers and relative proportions. Rather, this should be done in the Annual Plans for its implementation, with the activities envisaged in them becoming an integral part of the Programme Budget of the respective municipality/commune.

When analysing and evaluating the financial resources needed, account should be taken of the funding constraints under the various programmes of the European Structural and Investment Funds. An essential element in the assessment of the necessary financial resources must be taken into account both in the degree of readiness for absorption of these funds in the respective years of the remaining period and in the likelihood that these funds will actually be received for the respective priority/activity in the respective year.

8. CONCLUSION

This strategy identifies strategic goals ***for better coordination and effective response of a joint cross-border partnership between the municipality of Tsenovo, the commune of Hotarele and the commune of Greaca, the approaches and principles***, the reduction of the risk of disasters and the priority areas of action for their achievement.

The Strategy is an important step towards building a comprehensive and coherent framework for the prevention of natural and man-made disasters, which will contribute to building an integrated approach to the policies of the three cross-border municipalities in this area.

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The implementation of the Strategy will ensure that disaster risk reduction is their top priority and will contribute to preventing and reducing their impact through active work at all levels of government, with very good coordination and coherence between responsible institutions. The implementation of the activities set out in the Strategy will ensure the sustainability of management in disaster prevention and protection.

This model will help not only to implement a unified approach to disaster risk reduction policy but also to ensure coherence between cross-border municipalities in the implementation of individual activities and measures and the rational use of available resources. Ensuring effective synergy in the implementation of vertical *(between municipal, district/county and national levels of government)* and horizontal *(between individual administrations of municipalities/communes, territorial units of ministries and departments within their territory, the private sector and the scientific community*), is key to achieving integrated disaster risk management in the cross-border region.

9. DOCUMENTS USED:

A) FROM THE REPUBLIC OF BULGARIA:

1. ***Disaster Protection Act**, issue no. 102, SG, 2006.Bulgarian*
2. ***Republic of Bulgaria Defence and Armed Forces Act**, S., 2003.*
3. ***Strategy for the development of voluntary formations** for protection against disasters, fires and other emergencies in the Republic of Bulgaria;*

4. ***RULES** on the organisation and activities of the Interdepartmental Commission for Reconstruction and Assistance to the Council of Ministers, in force since 13.04.2010, adopted by Decree No. 58 of 06.04.2010, prom. two. 28 of April 13, 2010, amend. two. Issue 7 of January 21, 2011, amend. and ext. two. 32 of 24 April 2012, amend. and ext. two. 75 of October 2, 2012, amend. two. issue 62 of July 12, 2013, amend. and ext. two. 25 of March 18, 2014, amend. two. Issue 60 of 22 July 2014, amend. and ext. two. issue 102 of December 12, 2014, amend. two. Issue 8 of January 30, 2015, amend. and ext. two. Issue 22 of March 22, 2016, amend. two. issue 40 of May 27, 2016, amend. and ext. two. issue 96 of December 2, 2016.*
5. ***Main aspects of the country's management in crises** of military and non-military nature, report of Brigadier General Boyko Simitchiev to the Sofia City Council, June 2007.*
6. ***ORDINANCE No. 8121з-758** of October 22, 2014 on the implementation of preventive activities by the bodies for fire safety and protection of the population of the Ministry of Interior S.G. issue 90/30.10.2014.*
7. ***Instruction No. Із-33/11.01.2012** on the procedure for implementation of emergency disaster recovery works (SG, issue 7 of 24.01.2012).*
8. ***Rules for the organisation of the activity** of the Ministry of Interior in emergency situations*

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9. ***Instruction No. Із-2401/16.09.2011*** *on chemical, biological and radiation protection in the event of incidents and accidents related to dangerous substances and materials (SG, issue 79 of 30.09.2011).*
10. ***Instruction No. Із-2695 of 18.10.2011*** *for the procedure for operational protection in case of floods.*
11. ***Ordinance № I з-3147 of 12.12.2011*** *on the procedure for carrying out preventive activities by the bodies of fire safety and protection of the population of the Ministry of Interior (SG No. 100 of 20.12.2011).*
12. ***Instruction No. Із-33/11.01.2012*** *on the procedure for carrying out emergency disaster recovery works (SG, issue 7 of 24.01.2012).*
13. ***National disaster risk reduction strategy*** *– 2016-2020*
14. ***Ordinance*** *on the procedure for establishing and organizing the activities of voluntary formations for the prevention or management of disasters, fires and emergencies and the elimination of their consequences;*
15. ***Instruction No. 915-8121*** *Conditions and procedure for implementation of operational protection in case of flood;*
16. ***Instruction No. 8121z-914*** *of December 1, 2014 on the conditions and regulations for the existence of emergency restoration works;*
17. ***Instruction No. 8121z-955*** *of December 8, 2014 on the terms and conditions for conducting search and rescue operations;*
18. ***Instruction No. 2*** *of July 5, 2004 on the preparation and training of children, pedagogical, administrative and support staff in kindergartens for the safe conduct of disasters, accidents, catastrophes and fires;*
19. ***Instructions for the operation of fire equipment****;*
20. ***Instruction No. 8121z-953*** *of December 8, 2014 on the conditions and procedures for the implementation of chemical, biological and radiation protection in the event of fires, disasters and accidents;*
21. ***Bulgarian Red Cross Act****;*
22. ***National Disaster Risk Reduction Strategy*** 2018-2030.
23. ***National Disaster Protection Plan*** – 2010
24. ***Disaster Protection Plan in Ruse Region*** – 2012
25. ***Guidelines*** *for the development and preparedness for the implementation of disaster protection plans - issued by the Council of Ministers on disaster risk reduction.*
26. ***General development plan of Ruse Municipality*** – preliminary project.
27. ***Bulgarian State Standard ISO 31000: "Risk Management - Principles and Guidelines".***
28. ***Bulgarian State Standard ISO 31010: "Risk Management*** – risk assessment methods".
29. ***Flood risk management plan for the Danube River Basin District*** 2016-2021.
30. ***Statistical information from National Statistical Institute*** – Territorial Statistical Bureau – Ruse.
31. ***Statistical information from NIMH -*** station - Ruse.

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32. ***Methodological rules for monitoring and assessment of the implementation of sectoral strategies and programmes*** – Developed in implementation of Contract No.57 / 23.10.2012, part of Project No A10-13-50 / 20.02.2012.

B) FROM THE REPUBLIC OF ROMANIA:

1. ***Government Emergency Ordinance No. 21/2004*** *of the National Emergency Management System, approved by amendments and implementations of* ***Act No. 15/2005****;*
2. ***Decision of the Government of Romania No. 1491/09.09.2004*** *approving a framework regulation on the organisational structure, responsibilities, functioning and equipment of the work committees and emergency centres;*
3. ***Government Ordinance No. 2288/2004*** *approving the allocation of key support functions provided by ministries, other central government bodies and non-governmental organisations in the field of emergency prevention and management;*
4. ***Act No. 481/2004 on Civil Protection****, as subsequently amended and implemented e.* ***Order of the Minister of Administration and Home Affairs No. 1259 of April 10, 2006*** *approving rules for organizing and securing the activity of warning and alerting in situations civil protection;*
5. ***Government Ordinance No. 642/2005*** *approving the criteria for the classification of administrative-territorial units, public institutions and economic entities in terms of civil protection, depending on the type of specific risks;*
6. ***Government Ordinance No. 501/2005*** *on approving criteria for the provision of funds for individual protection of citizens;*
7. ***Order of the Minister of Administration and Interior No. 1184*** *of April 6, 2006 approving norms for organizing and securing emergency evacuation activities;*
8. ***Government Ordinance No. 2288/2004*** *approving the allocation of key support functions provided by ministries, other central government bodies and non-governmental organisations in the field of emergency prevention and management;*
9. ***Government Ordinance No. 1.85/2005*** *approving a National Flood Risk Management Strategy;*
10. ***General Order of the Minister of Administration and Interior and the Minister of Environment and Water Management No. 638/420/2005*** *approving the Regulation on emergency management caused by floods, dangerous meteorological phenomena, incidents in hydraulic equipment and incidents pollution;*
11. ***General Order of the Minister of Administration and Interior and the Minister of Environment and Water Management No 1995/1160/2006*** *approving the Regulation on the prevention and management of emergencies at risk of earthquake and / or landslides*

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12. ***Guidelines of the Regional Governor and the Mayor*** *for emergency management in case of flood;*
13. ***Government Decree No. 95/2003*** *on the control of activities presenting a risk of major accidents involving dangerous substances;*
14. ***Order of the Minister of Administration and Interior No. 647/2005*** *approving methodological standards for the development of emergency plans in the event of accidents involving dangerous substances;*
15. ***Order of the Minister of Agriculture, Forestry, Water and Environment No. 142/2004*** *approving the procedure for the assessment of the safety report with regard to hazardous activities that cause major accidents with dangerous substances;*
16. ***Order of the Minister of Agriculture, Forestry, Water and Environment No. 1084/2003*** *approving the procedures for announcing activities related to accidents involving dangerous substances;*
17. ***Order of the Minister of Agriculture, Forestry, Water and Environment No. 251/2005*** *on the organisation and operation of risk staffs with regard to the control of activities posing a major accident risk;*
18. ***Order of the Minister of Agriculture, Forestry, Water and Environment No. 1299/2005*** *approving the inspection procedure;*
19. ***General Order of the Minister of Agriculture, Forestry, Water and Environment No. 2/211/118/2004*** *approving the regulation on the regulation and control of the transportation of waste on Romanian territory;*
20. ***Act No. 6/1991*** *Accession of Romania to the Convention on the basis of the control of the transport of hazardous waste.*
21. ***Order*** *of the Minister of Administration and Interior No. 684/2005 approving methodological standards for the planning, preparation and intervention in the event of a nuclear accident or radiation emergency;*
22. ***Order*** *of the Minister of Administration and Home Affairs No. 683/2005 approving the generation of data collection procedures and the validation of a response during a radiation accident.*
23. ***Order CNCAN No. 242*** *approving national security standards for the planning, preparation and intervention in the event of a nuclear accident or radiation emergency;*
24. ***Order No. И307 / 2006*** *on fire fighting, as subsequently amended and implemented;*
25. ***Government Decision No. 622/2004*** *on the creation of conditions for the entry into the market of construction products, as subsequently amended and transposed (transposed by the Construction Products Directive 89/106 / EEC);*
26. ***Order of the Minister of Administration and Home Affairs No. 1474/2006*** *approving the regulation regarding the planning, organisation, preparation and conduct of the emergency prevention activity;*
27. ***Order of the Minister of Administration and Interior No. 163/2006*** за approving common fire fighting regulations.