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COMMUNE

# GUIDELINES FOR COMMON MANAGEMENT OF NATURAL HAZARDS AND OTHER EMERGENCY SITUATIONS IN BYALA, GRADINARI, MALU



MALU  
COMMUNE





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COMMUNE**

## **GUIDELINES FOR COMMON MANAGEMENT OF NATURAL HAZARDS AND OTHER EMERGENCY SITUATIONS IN BYALA, GRĂDINARI, MALU**

Elaborated within the project

„*GRADE* - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region”, project code 15.3.1.018, e-MS code ROBG-126, co-financed by the European Union through the INTERREG V-A Romania-Bulgaria Program



**MALU  
COMMUNE**

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## 1. Presentation of the context

The project „GRADE - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region” has materialized as a result of the need for the population of the three communities to take measures in order to counteract the risks that occur recurrently on their territories (floods, fires, difficult winter conditions), which are becoming more relevant as the communities get closer and the barriers between them get blurred.

Emergency situations endanger the lives and property of the inhabitants of these areas, damaging the environment, too. This has a negative impact on the sustainable development of the communities and on their members' quality of life, a reason for which joint intervention measures are necessary - some of these will be undertaken within the framework of or as a direct result of the implementation of the GRADe project.

### 1.1 Presentation of the partners

The project „GRADE - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region” is implemented in partnership by three local public authorities - two on the Romanian territory, in Giurgiu County - Grădinari Commune (project leader) and Malu Commune, and one in the Ruse District of Bulgaria - Byala Municipality. We will briefly present the three partners.

#### GRADE PROJECT PRESENTATION Title

*„GRADE - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region”*

#### Partners

- Territorial administrative unit
  - Grădinari Commune
- Territorial administrative unit
  - Malu Commune
- Byala Municipality

#### Program

INTERREG V-A Romania-Bulgaria

#### Aim

- limiting the effects of climate
- change on the environment of the three partner communities
- improving the planning and coordination capacity of the beneficiaries

#### Specific objectives

- improvement of joint capacity and increase of the intervention capacity
- supporting a high level of public awareness in the area of risk management in the three communities involved.

#### *Territorial administrative unit Grădinari Commune, Giurgiu County, Romania*

Leader of „GRADE - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region” project, Grădinari Commune is a rural settlement in the northeast of Giurgiu County, 26 km from Bucharest, respectively 10 km from the town Bolintin Vale, with a stable population of

3,780 inhabitants, distributed in the composing localities, as follows: Grădinari - 1,130 people; Zorile - 1,270 people and Tântava - 1,380 people.

The access roads in the commune are represented by 401A, respectively 412A county roads, both well-functioning. The total area of the commune is 555 ha within the built-up area, respectively 2,699 ha outside the built-up areas, totaling 3,254 hectares.

The climate of the commune is temperate-continental and presents transition features, resulting from the interference of the climatic elements of the west of the Romanian Plain with those of the eastern part, the topoclimate being influenced by local features of the natural and anthropic units and subunits, making the winters cold and frosty. The influence of the east- continental and Arctic cold air masses causes temperatures with monthly averages between + 0.3° C and -3.2° C, with monthly averages of minimum temperatures between -11.5° C and -16.4° C.

Precipitation falls in the form of heavy snow, covering the soil with a layer different in thickness and stability.

In general, over 50 days of snowfall are recorded, the first snow falling at the end of November - beginning of December, and the last in the second half of March.

The movement of air is conditioned by the location and modification of the baric values of the regional or continental areas and has the same general characteristics as the Romanian Plain, the local differentiations being related to the morpho-hydrographic peculiarities. The predominant wind on the territory of the commune, known as the "north wind", has appreciable intensities and durations, storm-sweeping the snow.

The climatic characteristics are also the ones that have generated the need for purchasing technologically performant equipment and machinery that are specific for the removal of negative effects resulting from these sometimes-extreme weather events.

### Results targeted by the GRADe project

- improving the quality of risk management in this area by:
  - professionalizing human resources
  - purchasing intervention equipment
- improving the planning and coordination capacity in emergency situations in case of floods, fires or difficult winter conditions
  - raising awareness on environmental issues and protecting the population from the risks of these natural disasters.

### *Territorial administrative unit Malu Commune, Giurgiu County, Romania*

A partner in the GRADe project, Malu Commune is a rural settlement within Giurgiu County, 14 km from Giurgiu Municipality, in the Burnazului Plain of the Danube Floodplain, along the right bank of the river, between 507 and 510 kilometers, being crossed by the national road 5-C Giurgiu-Zimnicea. The neighbors of the locality are: to the east - Slobozia Commune, to the west - Vedeia Commune, to the north - Gogoşari Commune, to the south - the Danube River, in front of Ivanovo locality and Pirgovo village, being twinned to the latter in 2014.

The Malu Commune is made up of one locality with the same name, with a total area of 7,317 hectares and a stable population of 2,667 inhabitants.

The pronounced continental-arid character of the climate during summer that is specific to the locality, coupled with the winds conditioned by the action of anti-cyclones in the south and in the east, contributes to the increase of occurrence and stoking of fires in the area, which in time has generated the need for purchasing specific equipment and machinery to manage these incidents.

The Malu Commune has a drinking water supply system connected to a station made up of 4 deep water wells and 2 basins of 750m<sup>3</sup> each, to which more than 700 households are connected.

A risk to be considered is that the prolonged drought, cumulated with the large number of newly connected consumers, generate higher values of the volume of water consumed than the volume of water extracted in the same unit of time, a technical aspect that could require the temporary restriction of the provision of drinking water to households, in order to ensure a safe source of supply for the General Inspectorate for Emergency Situations and that acquired through the GRADe project in case of fires, both in the Malu commune and in the adjacent localities.

### **Byala Municipality, Ruse District, Bulgaria**

Byala municipality is a locality situated in the southern part of the Ruse district, in the northern-central part of Bulgaria, in the Danube Floodplain area, about 20 km from the river. It is named after its administrative center - the city of Byala. It is bordered by the districts of Veliko Tarnovo and Targovishte. To the north it is bordered by the Tsenevo municipality, to the northeast by Borovo municipality and to the west by the Polski Trambesh municipality.

The area is located at the intersection of several major roads of the country - European roads E85 and E83, I-51 and I-52, linking the center of Ruse province and Veliko Tarnovo, Pleven, Svishtov towns, respectively the capital of the country Sofia and the Shipka Pass. The Yantra River crosses the area from south to north.

Situated in the Yantra River meadow, with rich opportunities for irrigated agriculture development and the chance to have rich harvests, Byala Municipality stretches over an area of 341 km<sup>2</sup>.

In the municipality there are 11 distinct settlements, with the administrative center at Byala: Koprivets, Dryanovets, Bistrentsi, Lom Cherkovna, Polsko Kosovo, Peychinovo, Bosilkovtsi, Starmen, Botrov and Pet Klandentsi. The total population is of about 14,910 people, of which 9,243 in the urban area and the rest in the villages.

The Byala Municipality territory is situated at the border between the western part of the eastern extremity of the Danube Floodplain and the eastern part of the Middle Danube Floodplain, with the border passing through Byala to the west and through the villages Bistrentsi and Pet Kladentsi to the east. The relief of the municipality is that of a plain in the west and of hills in the central and eastern parts.

#### **Activities within the GRADe project**

- purchase of intervention equipment effective in case of floods, fires or difficult winter conditions
- common applications for managing risk situations
- organizing campaigns with the aim of raising awareness within the communities involved in the project about the risks and measures during emergency situations.

In the western part of the municipality, along the villages Polsko Kosovo, Starmen and Botrov, as well as the Byala municipal center, on a length of about 27 km, passes the lower stream of Yantra River.

The right bank of the river is steep and the left one is wide and sloping, occupied by a large agricultural area. In the east, along the villages Dryanovets and Koprivets, passes a part of the middle stream of the Baniska Lom River (the left tributary of Cherni Lom, Rusenski Lom). Its valley near the village Koprivets is steep compared to the surrounding terrain, but very wide. In the continuation of the village and then in the village Dve Mogili, the valley has the character of a canyon. On the right side, near the village Koprivets flows its largest tributary - the Kayadjik River, which crosses the Byala municipality in its entirety.

The climatic features of the municipality are given by the warm and dry summers and the cold winters, with an annual average of precipitation of about 600 l/m<sup>2</sup>, with a relative humidity of 70%, which creates a recurrent flood potential during spring, due to snow melting.

In the municipality there are a number of dams whose waters are mainly used for the irrigation of agricultural land. The largest of these are Baniska (on the Baniska Lom River), Boika River (on the Kayadzhik River), Kircha and Tyfcheva Gora (south of Bistrentsi), Karaslaka (southwest of the Peychinovo village) and others.

## 1.2 Aim of the cooperation

For an efficient management of emergency situations, the authorities of the three communities need a mechanism to enable joint intervention in case of the occurrence of such an event on their territory, by creating an integrated monitoring and coordination system, which allows direct, accurate and rapid communication between partners in order to shorten the time of information transmission along the decision-making chain and thus optimize the decision-making and management of intervention process.

**The guidelines** contribute to:

- streamlining the organization of the intervention by setting cooperation limits to ensure the coordination of the forces and of the intervention equipment acquired during the project by the Joint Committee for the Coordination of Voluntary Services Activity (set up under the GRADe project)
- establishing the information-decision flow at the Committee level and in relation to the bodies with competences in the field
- establishing common notification, monitoring and intervention procedures in case of specific emergencies (floods, fires, difficult winter conditions), observing the Joint Action Plan<sup>1</sup> of the institutions with relevant responsibilities in the two countries involved, in force at the time of creating these guidelines
- implementation of an information, training and awareness campaign for the communities in the cross-border area covered by the project.

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<sup>1</sup> Joint action plan in the areas of competence of the General Inspectorate for Emergency Situations and the General Directorate for Fire Safety and Civil Protection

The **aim** is to determine over time the creation of a participatory attitude of the population in the areas affected by emergency situations, in order to prevent the installation of panic and the dissemination of conflicting information in time of disaster.

A cross-border approach requires the implementation of a **concept coordinated among the local actors**, and this document creates the general framework to be followed for this aim.

The **guidelines** present:

- the applicable legal framework
- the description of the involved communities
- the types of natural disasters they face
- the forces involved in disaster intervention measures
- management of cross-border disaster interventions.

*The basics of cooperation* within the GRADe project include:

- preparing citizens for emergency situations
- implementing actions based on common principles and norms
- harmonizing actions and implementing joint training in relation to specific situations faced by the involved communities - floods, fires, difficult winter conditions
- integrating the actions of the institutions involved in the prevention and intervention actions
- preparing the members of the Joint Committee for the Coordination of Voluntary Services Activity
- preparing the action plan
- the use of the resources acquired within the project in the design of the defense measures required in case of emergency.

These are part of the **basic principles** of complementarity, transparency, coordination and division of responsibility in order to achieve the proposed goal.

## 2. The legal framework in

For the purposes of this chapter, the legal documents in force at the time of drawing-up of the guidelines, relevant for this topic, have been consulted and indicated.

The references are not exhaustive, and concern exclusively documents of importance strictly for the context of the project „GRADe - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region”.

### 2.1 Relevant European and national legislation

At the European and national level there are several normative acts and intervention instruments applicable to the field - the most important ones are reviewed below.

#### **The EU Civil Protection Mechanism<sup>2</sup>**

In 2001, the EU Civil Protection Mechanism was adopted, endowed with its own financial mechanism and can be activated at the request of the governments of the states which consider that they need advanced civil protection in the event of a humanitarian crisis generated by a natural disaster.

This is an instrument of intervention made available to member states and third-party states to be activated if their national capacities prove to be insufficient.

The mechanism is a voluntary pooling of resources previously allocated, which can be deployed either inside or outside the limits of the Union.

This tool allows member states or third-party states to make a request for assistance which is sent to the Emergency Response Coordination Center of the European Commission. Other states may or may not comply with it.

'The voluntary reserve of means' is often demanded and has greatly diminished in recent years, given that climate change has led to a decline in member states' ability to

#### **Romania**

**The most important normative act in the field**

**Emergency Ordinance no. 211 of 15 April 2004, approved by Law no. 15/2005**

- establishes the National Emergency Management System in order to:
- prevent and manage emergency situations
- ensure and coordinate human, material and other resources needed to restore the state of normality
- defines the terms and expressions of reference
- establishes the principles of emergency situation management
- conducts an inventory of the actions and measures to be taken
- provides for the composition and responsibilities of the bodies in the coordination of the National Emergency Management System

<sup>2</sup> Further information on this Mechanism can be accessed at the following links:  
<https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX%3A32013D1313>,  
[http://ec.europa.eu/echo/what/civil-protection/mechanism\\_en](http://ec.europa.eu/echo/what/civil-protection/mechanism_en).

support each other in their assistance efforts, being themselves confronted with their own limits.

Through this mechanism<sup>3</sup>, the European Union coordinates the response to various emergency situations caused by natural or man-made disasters at its level.

**The objectives of the European Union Civil Protection Mechanism are:**

- promoting cooperation between national civil protection authorities
- increasing the awareness and preparedness of the population regarding disasters
- access of affected communities to coordinated, effective and quick assistance.

The mechanism is coordinated at the operational level through the **Emergency Response Coordination Center**, which operates non-stop. On 23 November 2017, the European Commission adopted a proposal aimed at modifying the legislative framework applicable to the Mechanism, mainly aiming at reducing bureaucracy for providing faster emergency assistance and implementing additional prevention measures.

Since its inception, the Mechanism has been activated over 230 times.

## Bulgaria

**The most important normative act in the field**

**Law 97 on disaster protection, amended and completed on December 5, 2017**

- general information
- applicable definitions
- principles related to:
  - disaster protection
  - planning disaster protection
  - adoption of the National Disaster Protection Plan adopted by the Ministerial Council
- creating a unitary rescue system

## Common legislation

- At the basis for the establishment of cooperation for the joint management of emergency interventions at the level of the three communities involved in the GRADe project lies a series of common regulations with implications in the field, as follows:
- The friendship, cooperation and good neighborhood treaty between Romania and the Republic of Bulgaria, signed in Sofia, on 27 January 1992
- Agreement between the Government of Romania and the Government of the Republic of Bulgaria on cooperation in the field of civil protection, in time of peace (Bucharest, January 18, 1996)
- Protocol between the Governments of Romania, Republic of Turkey and Republic of Bulgaria on cooperation in the field of emergency humanitarian assistance, signed at Çeşme on 12 May 2002
- Agreement between the Government of Romania and the Government of the Republic of Bulgaria on the Romanian-Bulgarian state border regime, collaboration and mutual assistance on border issues, ratified by Law no. 39/ 02.03.2007 for Romania, respectively the Decision of the Bulgarian Government no. 745/30.10.2006 for Bulgaria.

<sup>3</sup> Reformed by Decision no. 1313/2013/EU to make it more adaptive and geared towards disaster prevention and preparedness

## 2.2 Alert infrastructure for efficient management of emergency situations

In Romania the operational management of emergency situations at the national level is placed under the National Center for Coordination and Management of Intervention. It is set up at the level of the General Inspectorate for Emergency Situations, a body which ensures the permanent flow of information for the Government's Operational Command Center.

Local volunteer<sup>4</sup> services are constituted by the local councils, the coordination of the activity being carried out by the County Inspectorate for Emergency Situations.

### *Cross-Border Center for Management and Coordination of Interventions: Role. Tasks*

The Giurgiu Cross-Border Center for Management and Coordination of Interventions brings together specialists from the operative structure of the two institutions with competences in the cross-border intervention area:

- County Inspectorate for Emergency Situations Giurgiu County
- Regional Directorate for Fire Safety and Civil Protection Ruse.

The **role** of the Cross-Border Center for Management and Coordination of Interventions is to coordinate all specialized professional and intervention institutions that are part of the cross-border emergency management system.

Together with the decision makers, the Center ensures:

- **making informed, accurate and timely decisions** to eliminate risks with potential for loss of human life or significant material damages
- **allocation of forces and means**
- **minimum response time** in emergency situations.

#### **The Center's tasks:**

- ensure the inter-operability level between the structures participating in the intervention
- ensure the information-decision flow in emergency situations during the interventions until the restoration to the previous situation in all the affected areas

#### **Cross-Border Center for Management and Coordination of Interventions**

also has responsibilities regarding:

- monitoring the parameters of the internal water quota in Giurgiu County
- warning, alerting and alarming the population in the disaster propagation direction
- notifying the population exposed to various types of emergency generating risks

#### **Aim:**

reducing the impact of hydro-meteorological dangerous events on the population and on the environment in affected areas.

<sup>4</sup> Art. 31 par. (3) of Law no. 307 of 2006 on fire protection with subsequent amendments and completions.

- organize technical and human resources
- set out the tactical strategy of intervention actions
  - activity planning
  - providing resources
  - training and engaging the response capability
  - planning missions and ensuring intervention
- restore and reestablish response capacity
- manage the assessment of the level of damage and destruction in areas of disaster manifestation
- coordinate the actions to be taken in order to limit the negative effects
- ensure the management of emergency warehouses
- ensure the management of medical interventions, including the provision of international humanitarian aid.

### *Joint Romanian-Bulgarian Cross-Border Committee: Role. Tasks*

The activities of the Cross-Border Center for Management and Coordination of Interventions are operationalized by the Romanian-Bulgarian Cross-border Joint Committee, based on the bilateral agreements and treaties concluded<sup>5</sup>, namely the Common Cross-Border Cooperation Regulation, in compliance with the Joint Intervention Plan in the fields of competence of the General Inspectorate for Emergency Situations and the General Directorate for Fire Safety and Civil Protection.

The role of the **Romanian - Bulgarian Joint Cross - Border Committee** is to:

- **streamline cooperation** during interventions and joint training activities by intervention structures and logistic and communication support structures in Romania and Bulgaria
- **ensure coordination** of forces and means of intervention
- **establish the information-decision flow**
- establish **common** notification, monitoring and intervention **procedures**.
- The **responsibilities** of the Joint Cross-Border Committee are:
  - unitary and permanent coordination of emergency management activities
  - contact point in relation with bodies and organizations with responsibilities in the field
  - publicize the evolution of the operative situation and the interventions carried out
  - The responsibilities of the Committee correspond to those assumed by the **Joint Committee for the Coordination of the Volunteer Services Activity in Byala, Grădinari, Malu**, created within the GRADe project.

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<sup>5</sup> See Section "Common Legislation", p. 9

## ***Joint action plan in the areas of competence of the General Inspectorate for Emergency Situations and the General Directorate for Fire Safety and Civil Protection***

The plan is operative at the time of drafting these guidelines. It was designed to ensure the efficiency of cooperation between the two institutions with relevant responsibilities in Romania and Bulgaria in the cross-border area, based on common regulations relevant to the field<sup>6</sup>.

### **Aim:**

- Coordinating existing forces and resources in each country
- establishing the information-decision flow
- establishing common notification, monitoring and intervention procedures.

### **Responsibilities of the involved structures:**

- permanent and unitary coordination of emergency management activities
- functioning as national contact points in relation with various stakeholders
- publicize the evolution of the operational situation
- publicize intervention actions of fire extinguishing, providing emergency medical assistance, interventions to save people in life-threatening hostile environments, CBRN missions.

The contingency plan **structures preparedness for intervention** in case of cross-border emergencies by indicating:

- the concepts of action
- the presentation of the notification and information flow
- the procedures to be followed in case of crossing the state border
- details related to mission execution, logistical and financial provisioning for the missions
  - travelling
  - accommodating and feeding the intervention forces
  - provisioning and logistics of specific equipment and materials/ machinery
  - financial provisioning for the missions
  - ensuring communications.

### **Common procedures regard:**

- managing the emergency situations produced in the Romanian-Bulgarian cross-border area

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<sup>6</sup> See Section "Common Legislation", p. 9

- monitoring and notification of emergencies produced in the Romanian-Bulgarian cross-border area
- logistic provisioning of the missions carried out in the Romanian-Bulgarian cross-border area
- ensuring communications in emergency situations in the Romanian-Bulgarian cross-border area
- crossing of the state border in emergency situations produced in the Romanian-Bulgarian cross-border area
- informing the population in emergency situations produced in the Romanian-Bulgarian cross-border area.

These will be the basis for the deployment of the intervention in case of emergency situations in the GRADe project communities.

### 3. Types of risks specific to the communities involved in the GRADe project

This chapter is dedicated to describing the communities involved in implementing the GRADe project and the specific risks of natural disasters most commonly encountered in each of them, especially dealing with those with higher incidence - difficult winter conditions, fires, floods.

The existing civil protection means at the start of each project implementation are presented, but also the value generated by the project through the purchase of specific equipment and machinery meant to increase the response capacity of the intervention forces for each community - Grădinari, Malu, Byala, as well as the actions to be taken by local public authorities in this respect.

#### ***3.1 Description of the types of specific risks for each community involved in the GRADe project. Forces participating in natural disaster intervention measures***

Each of the three communities faces a series of natural disasters, and below we briefly mention the specificity of each of them and the forces employed in case of necessity.

***Types of specific local risks. Synthesis of negative events generating emergency situations in territorial administrative unit Grădinari Commune, Giurgiu County, Romania.***

In Grădinari Commune, for the 1,370 individual households existing at the level of the locality, the following types of risks were identified in the territorial profile: extreme meteorological phenomena, forest fires (this belongs to Bolintin Vale Forestry), floods (the Argeş, Sabar, Ilfovăţ rivers), destructive phenomena of geological origin.

Between 2006 and 2017, at the level of the Grădinari Commune a total of 139 **emergency generating negative events** were recorded: 49 fires, 5 floods, 25 heavy snows, 6 prolonged droughts, 7 traffic accidents, 38 hospital transport and another type of risk, unspecified.

#### **Territorial administrative unit Grădinari - means available before GRADe:**

- civil protection
  - 3 tractors
  - 2 cars with blades
  - 4 trailers
  - 2 emptying tankers

- transport:
  - 2 voles
  - 8 tip-up trucks 1 motor grader

#### **Equipment and machinery purchased through the GRADe project:**

- a 120 kVA electric power generator
  - a water and foam backhoe
    - a motor pump
  - tractor with trailer and snowblade
    - 10 mobile phones
- 10 TETRA transmitter-receiver stations

In neither of these interventions the risk-taking formation that participated belonged to the Emergency Situations Inspectorate, all being done locally through the **Voluntary Emergency Service of the Grădinari Commune**.

It gains a consistent support from the GRADe project in terms of increasing the response capability for operational emergency interventions by ensuring performant technical equipment needed to manage them.

At the beginning of the implementation of the GRADe project, notification and alarming was provided exclusively through the telephone booth provided by the Post Office, respectively with the three bells of the local churches, with only one electric siren in the whole 5.5 KW commune, but which is not maintained.

A consistent support is also represented by the appropriate training of the members of the **Joint Committee for the Coordination of Voluntary Services Activity in Grădinari, Malu, Byala** within the GRADe project. The three members are an integral part of the group of people designated as resources engaged in the joint management of emergency situations.

Their selection has been carried out on a non-discriminatory basis, in compliance with the appropriate physical and psychological training requirements, based on the skills and abilities considered necessary for the fulfillment of the tasks assigned.

They are also responsible for the training of the economic operators and the staff of the public institutions subordinated to the local public authority, respectively the Drinking Water Supply Service, the Cultural House in which Grădinari Library works, the "Zorile" School with grades I-IV, the Grădinari School, respectively the Tântava School.

### ***Types of specific local risks. Synthesis of negative events generating emergency situations in territorial administrative unit Malu Commune, Giurgiu County, Romania***

The natural risks in the Malu Commune are forest fires, floods due to the Danube River, the Jianca River and the ponds that make up the hydrographic network of the locality; dangerous weather phenomena, earthquakes. The identified technological risks are related to nuclear accidents, serious transport accidents, respectively failure of public utilities.

#### **The forces and means of intervention in Giurgiu County acting in Bulgarian the Ruse District**

- 1 water and foam truck
- 1 crane for fires and accidents
- 1 SMURD ambulance for medical assistance

#### **The forces and means of intervention in Ruse district acting in Romania in Giurgiu County**

- 1 water and foam truck
- 1 ladder for fire intervention
- 1 truck for extrication in case of earthquakes or accidents
- 1 CBRN truck intended for intervention in case of nuclear, biological, chemical and radiological accidents and for the decontamination of intervention personnel and persons affected by epizooties)
  - 1 motor pump
  - 1 flood minibus
- 1 mobile command point coordinating interventions for all types of disasters and other cross-border emergencies.

134 negative events generating emergency have been recorded over the last ten years in Malu Commune: fires - 56; floods - 10; prolonged drought - 8; traffic accidents - 3; drainage - 2; hospital transportation - 54; unspecified intervention - 1.

The incidence of fires recorded in Malu Commune reveals that they were most frequently generated by intentional actions, defective or uncleaned chimneys, smoking, faulty or improvised electrical installations, open fire, or children who play with fire.

Since most of the interventions had as main object the fire, at the level of the territorial administrative unit it was decided to acquire directly or through the GRADe project leader equipment that would provide emergency intervention in such situations and ensure communication between the partners and the institutions with responsibilities in this area.

The following forces are involved in the prevention and management of local emergency situations: Local Committee for Emergency Situations -Malu Commune; Voluntary Emergency Service - Malu Commune; Local Council of Malu Commune; Medical office - Malu Commune; Emergency Situations Inspectorate of Giurgiu County; economic operators within the radius of the territorial administrative unit that provide technical support in emergency situations caused by disasters or interventions in large-scale emergencies.

These are joined by the 3 members of the **Joint Committee for Coordination of the Volunteer Services Activity in Grădinari, Malu, Byala** under the GRADe project „GRADe - Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region”.

### ***Types of risks. Synthesis of negative events generating emergency situations in Byala Municipality, Ruse District, Bulgaria***

In Byala municipality, the main types of risks are floods, landslides, forest fires, respectively extreme weather phenomena such as drought, strong winds, massive snowfalls.

The most frequent type of risk is the flood, as in the Byala Municipality there are several key factors that cause floods:

- river spills/ increase of river water quotas as a result of snow melting during spring. This phenomenon is extremely dangerous when snow melting is accompanied by abundant rainfall
- abundant rain and the occurrence of large

#### **Equipment and machinery purchased through the GRADe project:**

- 1 120 kVA electric power generator
- 1 blade and bucket backhoe
- 1 10.000l capacity tanker
- 10 TETRA portable radio stations
- 10 mobile phones.

#### **UAT MALU - means available before GRADe:**

- 3 small capacity blade and bucket backhoes
  - 1 ambulance
- 1 passenger minibus - 24 seats
- 1 Voma type special truck for decoupling the sewerage network
  - 1 snow cutter

#### **Equipment and machinery purchased through the GRADe project:**

- a 120 kVA electric power generator
  - a motor pump
  - a water and foam truck
  - 10 mobile phones
  - 10 TETRA radio stations

quantities of water in the valleys

- clogging of river sections, resulting in accumulation of stone residues, uprooted trees, ice formations
- floods due to rising groundwater levels
- uncontrolled release of water from several reservoirs in the same valley
- destruction of hydro-technical facilities, dams, dikes, embankments etc.
- floods caused by natural disasters - earthquakes, landslides, strong storms, ice dams, and others.

Typical for the municipality are floods due to the sudden rise of river water levels during spring and summer due to heavy rainfall and melting of the snow along the Yantra, Rousse Lom, Baniski Lom and Shipa rivers.

Floods may also occur because of water spills as a result of partial or total demolition of the dam walls of the municipality - Baniska, Boyka and Peychinovo. Localities that may be partially or totally affected: Byala, Starmen, Dryanovets, Koprivets and others, along with about 10,000 hectares of arable land.

The most common effects of the floods in Byala are:

- flooding of basements and first floors of residential and commercial buildings
- partial demolition of old or severely damaged buildings where it is no longer possible to live
- victims, homeless people, evacuations and temporary accommodations
- damage to roads and facilities along the roads
- damage to common power supply systems
- failure of communication facilities
- disruption of the production cycle of companies and enterprises
- increase of the danger represented by fallen energy lines, damaged gas pipes
- drinking water contamination

## Alerts/ Meteorological warnings

### COLOR CODE

- **green code** - no massive snowfall is predicted, no special precaution is indicated
- **yellow code** - masses temporarily dangerous for certain activities, but common for the respective period/ area.

### Yellow code alert

- for a short period of time and on restricted areas there maybe interruptions in power supply
- possible disturbances on transport routes
- possible damages to households.

- **orange code** - heavy snowfall, massive, dangerous massive snowfall, high intensity degree.

### Orange code alert

- electric power supply interruptions
- major damage to the forest sector, water, gas and communication networks
- very difficult traffic conditions, with disturbances isolation of some communities
- interruption of navigation and of maneuvers on inland waterways, ports and harbors, due to decreased visibility.

- substantial losses in agriculture in flooded areas and drowned animals
- need for preventive measures at a health level due to the risk of an epidemics.

The forces participating in the intervention measures in case of emergency situations in Byala Municipality are represented by:

- the local fire brigades
- the police department
- volunteer units (including members of the Joint Committee for the Coordination of the Volunteer Services Activity in Byala)
- emergency medical unit.

### ***3.2 Presentation of risk situations in the three communities: difficult winter conditions, floods, fires. Prevention and intervention measures in case of emergency***

This subchapter describes the risk situations specific to each of the three localities involved in the implementation of the GRADe project.

It incorporates the information and proposals for intervention in the event of a cross-border disaster resulting from the working and training meetings that took place within the project under the direct coordination of the Cross-Border Center for Management and Coordination of Interventions- Giurgiu.

#### ***Difficult winter conditions***

Difficult winter conditions are a natural phenomenon with high potential for disrupting socio-economic activities by making it difficult or even blocking access to human communities or their vital areas.

Snowfall can occur as a result of a severe snow storm (heavy snowfall causing substantial visibility reduction and accumulation of snow heaps) or a blizzard (also characterized by low temperatures and strong winds).

Given that the effects of these phenomena described above are causing important material damage and/ or generating loss of human lives, they fall within the category of natural disasters requiring concerted intervention by local public authorities and cooperation from the population in the affected areas.

***Difficult winter conditions = the fall of substantial amounts of snow in a short period of time generating the snowfall phenomenon, whether or not accompanied by blizzard.***

#### **Alerts/ Meteorological warnings**

##### **COLOR CODE**

- **red code** - applied for heavy snowfall or massive snowfall that is expected to be dangerous, of high intensity and with disastrous effects.

##### **Red code alert is extremely serious:**

- circulation is likely to become impractical for a long time on all modes of transport: air, rail, water and road
- utility and telecommunication networks may suffer major damage for several days
- many localities may be isolated
- the life of the inhabitants may be endangered

Depending on the severity of the massive snowfall, alerts and meteorological warnings are issued according to a **color code**.

Authorities/ institutions and operational structures have **specific tasks** in actions of prevention, response (operational coordination and support measures, until the restoration of normality), post event evaluation/ investigation and recovery/ rehabilitation (actions conducted up to achieving the normality state).

#### **Measures for prevention and intervention in case of emergency caused by difficult winter conditions:**

- signing contracts for continual maintenance during the cold season of county and national roads
- provision of anti-skid materials and continuous supply
- installing snow fences in areas with known problems
- early intervention with specific means of snow removal
- closing down problematic roads
- cleaning and clearing the carriageable
- assessing all people with severe conditions/ pregnant women/ dialysis patients
- ensuring the supply of units in the medical network
- preparing the population for active participation alongside the specialized forces in actions undertaken by the authorities by:
  - removing the snow in the adjacent areas of the individual households
  - clearing away bystreets, streets and other infrastructure elements that provide access to communities
- identifying homeless people and where they can be found/ establishing locations where these people can be accommodated and fed
- identification of the premises where relocation, accommodation and feeding can be provided for people caught in traffic or affected by dangerous weather phenomena
- verification and maintenance of alert systems to ensure timely alarm
- timely warning of the population about the eventual occurrence of dangerous meteorological phenomena with severe consequences
- ensuring permanent service at the town hall headquarters with the members of the **Joint Committee for the Coordination of the Volunteer Services Activity** or other trained and instructed personnel during the alerts or meteorological warnings and ensuring their functioning for the entire period provided in the alerts or warnings

#### **Actions to manage intervention in case of snowfall:**

- recognition of place and estimation of consequences
- organization of the action apparatus and distribution of formations and means in each work point
  - establishing access routes and ensuring links between different formations and work points
- establishing ties with those caught by snowfall
  - proper organization of rescue and evacuation
- provide protection against frostbite and frost.

- execution of snow removal around hydro-stations and permanent clearing away of access routes
- modification/ suspension of school program, due to the problems caused by extreme meteorological phenomena
- ensuring stocks of materials and spare parts, preparing the intervention teams
- emergency action in case of damages to drinking water supply networks and sewage networks
- ensuring mutual cooperation and support, permanent exchange of data and information on the evolution of the operational situation
- removal of the canopy of trees located on the routes of electricity transport and distribution networks in order to prevent significant damage that can occur as a result of ice and hoarfrost deposition on electric cables
- The **civilian population** must also follow a series of preventive and action measures in the event of difficult winter conditions:
  - keeping up to date on weather conditions and avoiding unnecessary travel
  - if this cannot be avoided, adequately equip and travel only during the day
  - only use the main roads and communicate the route, ensuring that the vehicle is equipped for winter conditions, respectively fueled
  - provide a reserve of:
    - food, water and fuel
    - different means of heating and lighting independent of the power grid
  - keep snow and ice clearance tools easily accessible.

## **|Fires**

***Fire = a burning initiated by a defined cause, with or without a man's will, out of control, destroying material goods, endangering life, and for whose interruption it is necessary to use methods, processes, means and extinguishing agents.***

The incidence of fires recorded at the level of the three partners and analyzed in the meetings of the members of the Joint Coordination Committee for Volunteer Activities reveals that the most frequent incidents in the three communities are represented by:

- open fire by destroying by fire domestic, fodder waste or dry vegetation from gardens, courtyards, agricultural land (stubble field after harvesting)
- ignition of household waste during windy weather; the location of waste to be destroyed by burning near barns, animal shelters, foddors
- the use of candles, lamps, lighting lamps or cooking appliances on petrol in households or household annexes without taking preventive measures
- the storage of ash with unextinguished ash in inadequate places, near storage rooms, sheds, foddors

- the use of improvised smoke houses in warehouses or attics; defective or improvised electrical installations - use of electric conductors or cables that are defective or uninsulated from combustible materials
- overloading electrical installations by usage by consumers with a power exceeding the nominal power established for the respective networks
- the existence of aging electrical installations or improvisations carried out by unauthorized persons
- replacing original fuses with oversized and improvised ones
- unsupervised electrical appliances with high electrical voltage or their location near combustible materials
- smoking in places where there is a fire hazard and without complying with the rules for preventing fire or forgetting unextinguished cigarettes, forgotten or randomly thrown on combustible materials
- children's play with fire, in a context in which they have been left unsupervised and there is no constant concern for educating them about the risks this entails.

#### Measures of intervention in case of forest or stubble field fires

- for extinguishing forest or stubble field fires there is a need for a concerted intervention with that of firefighters, who have special techniques and training, as vehicles with pumps and tankers or airplanes and helicopters are needed
- fire insulation by creating protective corridors - cutting and removing trees on certain strands or directions.

Fire **intervention measures** in buildings or household annexes are those established by each local public authority, through a local plan in this regard.

**Drought prevention measures** during dry weather when most such incidents occur include:

- identification of sectors where the risk of fire increases in conditions of high atmospheric temperatures and drought
- prohibiting the use of open fire in areas affected by advanced dryness
- temporary restriction of works favoring the production of fires
- protection against the direct effect of sun rays on containers with flammable substances by storage in the shade
- intensification of controls in areas with agricultural crops and forest vegetation
- ensuring and daily checking of water reserves for fires.

## |Floods

***Flood = covering the land with a stagnant or moving water layer which, by size and duration, can cause human casualties and material destruction, which disrupts the proper development of socio-economic activities in the affected area.***

Flooding is a natural disaster which temporarily covers with water a terrain which is not routinely covered, by overflowing flood-like waters, influenced by various natural or man-made factors. The former ones are represented by the relief forms, the hydrographic

volume registered in the area, in addition to the geoclimatic influence, and the latter ones by the level of monitoring of the protection works in the field and/ or the preventive education degree of the population in this regard.

The most common causes of flooding in the partner localities, following the information received during the training session<sup>7</sup> and working groups<sup>8</sup> within the GRADe project, are:

- lack of an adequate automatic tracking and forecasting hydrometeorological system for early warning
- torrential precipitation, sudden melting of snow
- leakage from the slopes due to massive deforestation/ undersized afforestation
- intensification of morphological processes in the watercourses
- building of buildings without authorization in floodplains
- waste stored in minor and/ or major riverbeds
- water overflows due to low transiting capacity through the minor riverbed
- carrying out embankment works without calculating the changes made on the water flows and taking appropriate measures/ inappropriate/ non-remedial maintenance
- breaking of the dams
- unrealized unclogging or realized inappropriately
- inadequately sized/ maintenance/ clogging of sewerage networks in order to take rainwater.

### Measures to protect the population and animals against floods

- organization, assignment and endowment of emergency services in order to take part in ensuring protection measures and management of rescue actions
- establishing the places and conditions in which temporary evacuation actions in floodplains are to be carried out
- provide notification and alarm about the danger of floods
- organizing and conducting rescue operations
- providing health care and implementing measures to avoid the occurrence of epidemics
- ensuring the necessary conditions for the distressed with regards to accommodation, water, food, medical care, transport, etc.

### Intervention in the emergency situation caused by floods involves:

- preventive activities
- prevention

<sup>7</sup> Organized on May 3, 2017, in Giurgiu, with the participation of the specialists of the Cross-Border Center for Management and Coordination of Interventions of Emergency Situations Inspectorate "Vlașca" of the Giurgiu county

<sup>8</sup> The working groups were organized in Malu, on June 22 2017, respectively in Byala, on July 25 2017.

- protection
- training
- operative management activities
- resources organization
- coordination and conducting intervention activities
- limiting and assessing effects
- protecting the population
- rehabilitation activities
- evaluation of the process and of the intervention itself in order to improve planning and management of a similar crisis situation
- restoring/ completing/ expanding the resource necessary used.

Following the simulation exercises done and the centralization of the information received from the specialists of the Cross-Border Center for Management and Coordination of Interventions, a set of best practice measures resulted, in line with the integrated management of the emergency situations in the cross-border area, agreed through the bilateral strategic documents between Romania and Bulgaria, to be taken over by the communities targeted by the project, but also by others facing similar situations.

#### **Flood prevention measures to diminish or eliminate their destructive action:**

- perform works in order to retain/ delay the leakage of water from the slopes, the lower tributaries or torrents formed as a result of heavy rains or snow melting
- re/ afforestation of the slopes
- creating types of coatings that favor the infiltration and drainage of water from the slopes
- construction of dams for containment at the bottom of the valleys
- changing the lower stream of rivers by building dams and channels, making temporary pools on sectors of meadows
- establishment of prohibition/ restriction/ construction warning zones in the flood channel area
- applying design measures that allow buildings and other civil or industrial constructions to withstand the increase in water levels and the speed of their movement.

In order to achieve an efficient joint management of emergency situations in the three cross-border communities, the necessity of the intervention procedure and its analysis was highlighted at the meetings of the members of the Joint Coordination Committee of Volunteer Activities, in order to be adapted to the practical possibilities of intervention, the specific of the areas of intervention, the manifestation of the type of risk, respectively the intervention equipment acquired within the GRADe project.

The committee will coordinate its activity of intervention in case of cross-border emergency situations arising from natural disasters or other types of risks with that of competent institutions, local and regional public administrations in the cross-border area to ensure that the impact on the population and on the goods is reduced through adequate planning, in compliance with the standards in the field, under the conditions of environmental protection.

## 4. The organization of intervention activities in the event of natural disasters or other cross-border emergencies

Preparing for intervention in the context of joint management of natural disasters and other emergencies signifies all the actions that are organized and implemented to provide emergency response for various types of risk.

Actions to intervene in the face of such risks consist of:

- drawing up operative documents
- spacial planning
- population training
- ensuring the ability to respond related to the type of risk
- execution of alerts in crisis situations with citizens
- early provision of accommodation facilities for sheltering the population - habitat conditions, food, medicine and water
- ensuring fuel - lubricant stocks necessary to support technical intervention over a long period of time
- ensuring the means of communication and the information-decision flow.

### 4.1 Management and coordination: deployment of emergency response interventions in case of natural disasters

Emergency management is the set of activities and procedures used by decision-makers, institutions and public services capable of identifying and monitoring risk sources, assessing information and analyzing the situation, preparing forecasts, establishing action options and implementing them in order to restore the normalcy situation.

To ensure success in managing and conducting intervention actions and shortening emergency response times, the work of theoretical and practical training in the field, both for institutions and for the population, must be carried out thoroughly and systematically, as planned, engaging all intervention structures and those with which they co-operate in situations of crisis or disasters.

This activity is materialized by performing practical intervention exercises, during which each partner verifies in a normal manner the viability of his/ her own intervention plans tailored to specific types of risk, the cooperation plans, the information - decision - operation flow, respectively the operative capacity for intervention and technical support.

The observed dysfunctions will be analyzed and eliminated by adopting the most viable measures in the intervention plans for the resumption of the operative intervention document, the intervention devices, the adoption of procedures and intervention techniques.

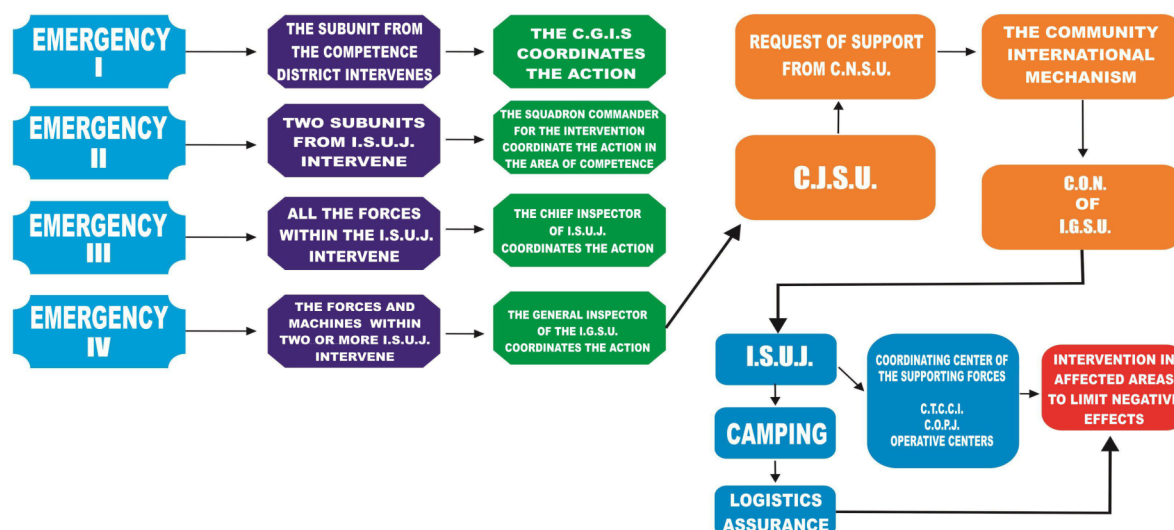
**Emergency management at cross-border level** takes place in three stages, as follows:

- **Stage I** (Normalcy or Pre-Disaster): includes analysis, assessment, and synthesis activities at the local level on emergency situations, while pursuing the implementation of the provisions of the Emergency Prevention and Management Regulations;
- **Stage II** (during the disaster): The Joint Coordination Committee for the Activity of Volunteer Services in Grădinari, Malu, Byala coordinates outright and directly its own intervention actions, while cooperating with deconcentrated and decentralized institutions at local level, both from within the Interior Ministries of the two countries, as well as from the local public administration. The intervention strategy is put into practice and the risk-specific intervention forces and means are coordinated, with a view to shorten the response time.
- **Stage III** (post-disaster): includes activities to restore normalcy and restore the ability to respond.

### *Organization of resources and intervention*

In the case of emergencies within the territory of the local government partner units of the GRADe project, the logistic intervention shall be ensured on the basis of a set of predetermined rules and measures, by joint participation with forces and means of intervention from all of the partners.

## THE SCHEME OF INTERVENTION ACTIONS IN CASE OF NATURAL DISASTERS



**The organization of resources and intervention** takes place as follows:

- notification of the disaster is issued/ received
- Intervention equipment/ devices are prepared and fueled
- provision of specific substances and/ or extinguishers is assured, depending on the type of disaster, i.e. checking the equipment and their accessories
- food and drinking water resources are provided by each partner; later to be taken over by the partner that requested the support
- checking for the necessary documents
- other possible costs are provided: road/ bridge charges, fueling or possible medical costs.
- competent institutions will be notified of the border crossing point into the neighboring state
- contacting of the designated contact person
- all documents are prepared according to legal requirements
  - record sheets
  - consumer vouchers
  - official reports
  - technical finding reports, etc.

**Documents necessary to ensure border crossing of equipment/ devices**

**(the original and 2 photocopies):**

- identity documents
  - driving licenses
  - record sheets
- mandatory civil liability insurance
- green card, periodical technical inspection
- technical list, equipment, and other intervention tools
- complete inventory for each intervention device

#### **Logistics assurance of the intervening forces missions coming in support**

- arrival at the intervention site
- Organizing a base of operations after the support team arrives
- ensuring the supply with the everything needed
  - food
  - fuel
  - water
  - substances needed for interventions
  - fuel reserves
  - auxiliary supplies
  - sanitary materials
  - pharmaceuticals.
- providing technical assistance throughout the intervention
- ensuring accommodation for the attending staff
- at the end of the intervention is necessary materials are added/ the necessary supporting documents are prepared.

As far as means of communication, the way of communicating and transmitting data will be established by mutual agreement, in accordance with the information-decision flow.

### *Limiting and assessing effects*

Limitation of effects and damage assessment are activities that take place concurrently or immediately after the actual intervention, representing all the activities carried out after the vulnerabilities of the disaster have ceased with a view to their inventory on social and economic domains in order to allocate the material funds necessary for the rehabilitation and restoration to normalcy of the affected areas.

It is done concurrently in order to minimize the occurrence of other disasters:

- law-enforcement measures
- restrict access to the area of disaster
- rerouting of traffic.

### *Protecting the population*

An important aspect is the early informing of the population about a state or possible state of emergency, through the means of alerts, alarms and warnings received from specialized institutions.

This is vital in terms of diminishing the number of human victims and/ or of material losses, and of serious environmental damage.

For the same purpose, the assessment of the degree of destruction of buildings and the identification of blocked access paths are carried out in order to safely extract the population and take them to shelter.

If people need to be evacuated, their transport will be ensured to previously identified accommodation places, with the provision of food and essential necessities.

### *Rehabilitation*

In the post-disaster phase of the evolution of the event, the choice and implementation of actions is conditioned by the type of disaster and the direction of propagation of the effects of the disaster.

At this stage, we need to:

- centralize and assess damages communicated by citizens

### **Post-disaster measures to protect the population**

- informing the population in advance by means of:
  - alert
  - alarm
  - warning
- sweep/ search for survivors and victims
- providing first-aid medical and psychological assistance
  - providing first aid and/ or emergency aid
  - injured transport and hospitalization
  - prophylaxis for epidemics and/ or outbreaks
- assessing the degree of destruction of buildings
- identify blocked access paths
- identification of damage to water, electricity and/ or gas networks in order to prevent other additional disasters

- centralize and assess damages identified by members of the Joint Coordination Committee for Voluntary Activities
- transmitting and capitalizing on information
- adaptation of intervention strategy and operative documents
- ensuring simultaneous response times are shortened
- providing intervention capacities appropriate to the specificity of the disaster, its intensity and area of occurrence.
- Post-disaster activities are run to:
- ensure continuity of protection in endangered areas
- maintain/ intensify previously applied measures
- improve the conduct of future intervention action.

#### **Purpose of rehabilitation actions:**

- locating and removing the aftermath of the disaster
  - saving people
  - mitigation of losses
- returning to the previous state
- analyzing and improving future interventions
- providing funds for more efficient management in the future

Intervention and rehabilitation are activities aimed at reducing the effects of disasters in saving lives, avoiding and minimizing material damage, and restoring to previous state.

On the basis of the analyzes carried out, it is proposed to also allocate future funding to materials which will allow future management of the emergency situations arising from natural disasters, especially to potentially sensitive areas where we can identify a recurrence of such phenomena, with view to permanent monitoring.

## ***4.2 Information-decision flow in case of natural disasters***

The information-decision flow is essential in the management of emergency situations caused by natural disasters.

#### **Through the information-decision flow we transmit bidirectionally:**

- raw information and data
- processed data (forecasts, warnings, solutions)
- exploitation orders or messages of local or regional interest.

In order to achieve a fair flow, there is a need for an efficient communications network that intersects the dispatchers of all deconcentrated and decentralized institutions, economic operators and institutions within the local public administration.

This allows extraordinary situations to be linked to the intervention efforts that eventually lead to a return to previous normality.

The flow must be organized in such a way as to allow interested parties and partners to be notified in a timely and regular manner about any operative change related to an emergency situation in the cross-border area potentially affecting the population or the environment.

**Mandatory stages for assuring an optimal information and decision-making flow:**

- collection, selection and centralization of data and information
- establishing the overall concept of planning, preparing, organizing and delivering response actions
- establishing the specific concept of emergency action.

This activity takes place both during normality and during hazard manifestation, i.e. after re-establishing normality and the restoration of response capacities.

The information flow and the decisions for the management of cross-border emergency situations are carried out on multiple levels, at local level, as well as at the level of Giurgiu County, and the Ruse District respectively, to and from the specific operational centers, as well as at national level when the situation demands it.

The request for support or assistance is always made in writing, as well as the decision to offer it (Schemes 1 and 2 on notifications and the information flow in Grădinari and Byala), the preliminary activities regarding:

- monitoring the operational situation at the level of each territorial administrative unit
- transmitting or receiving, as the case may be, notification of either the occurrence or the imminence of occurrence of the emergency
- analysis of the operational situation
- assessing the possibility of having cross-border effects.

**Communication of information in cross-border interventions**

- made in writing
  - Made in English
  - decisions must be communicated without delay to:
    - subordinate operating structures
    - economic operators
    - deconcentrated and decentralized institutions
- all those who are part of the defense system at the local level

**Actions to ensure protection measures and action to locate and eliminate the disaster**

- domestic help
  - intervention of following level formations
    - local
    - county
    - national
    - international
- including accessing the International Civil Protection Mechanism
- the order and priority of execution of these actions are determined according to the development phases of the event:
    - initial
    - intermediate
    - final.

If the situation can be managed locally, this will happen without involving the partner/ partners in the neighboring country, otherwise the information exchange needed to prepare the intervention will be carried out. Subsequently, support is requested, confirmed and the border crossing point for this matter is announced.

Constant monitoring of the activities and measures undertaken will be carried out, aiming to achieve the informational flow with the structures involved in the procedure, as well as informing the population on the basis of a common set of rules of communication and the Communication strategy concerning the common management of natural risks and other Emergency situations carried out within the GRADe project, with the purpose of:

- Enhancing the knowledge and awareness of the population in affected communities on major disaster risks and the subsequent preventive measures
- sending a joint message concerning:
  - types of risks
  - alarm system
  - proper behavior
  - emergency Response
  - first aid
  - types of resources
  - rescue facilities available.

After the activities are carried out there will be, an **analysis, including the media**, which will assess:

- the manner in which the intervention takes place
- the Degree of risk elimination
- the way risk was eliminated.

The contact points for the exchange of information on the management of cross-border emergency situations at the level of the regional institutions with responsibilities in the field are represented by:

- Gabriela-Alina Olexiuc, ISU Giurgiu: +40753049960; [relatiipublice@isugiurgiu.ro](mailto:relatiipublice@isugiurgiu.ro); [isugiurgiu@yahoo.com](mailto:isugiurgiu@yahoo.com)

- Daniela Malcheva, DRPPC Ruse: +359888137870.

### Information management in emergency situations

- Media coverage to:
  - avoid panic setting in
  - credibility
- to have/ maintain open the communication channel with the public
- organizing media events for the teams that took part in the intervention
- Press materials - circulated between partners to harmonize information
- information requirements
  - appropriate
  - objective
  - relevant
  - affordable
  - continuous
- in case of emergencies the population information plan is followed

## 5. Preparedness for emergency situations generated by natural disasters and other types of emergencies

Prevention consists of a set of long-term activities designed to reduce the likelihood of an emergency situation or of calamities or catastrophes.

Forecasting and training are the set of short-term activities that relate to:

- estimating the likelihood of disaster occurrence in a given area
- estimating the consequences of the negative effects it can produce in a time unit
- implementing Operational Intervention Plans to reduce vulnerability and reverse the negative effects.

**Detection and alarm** are extremely important, being activities for:

- identifying the disaster manifestation area
- the potential magnitude of negative effects and likelihood of production
- the nature and intensity of the disaster
- evolution and estimated time of triggering.

### |Principles of training and prevention

**The principles of emergency training and prevention are:**

- the driving unit - through the decision order; includes features and elements of leadership in general
- the supremacy of the objectives - presupposes the existence of a full concordance between the organization of the state institutions with attributions in the management of the emergency situations and their missions in emergency situations)
- efficiency of the structures (organization for operation with maximum yield and minimum expenses)
- the division of labor and specialization (strict specialization to enable the accomplishment of the missions)
- principle of flexibility and flexibility of structures (their diversity according to destination and mission).

### 5.1 The role of local public authorities in the cross-border area in the implementation of integrated management for the management of emergency situations in competence areas

The training of the local public authorities in Giurgiu County in the field of emergency situations is carried out in accordance with the Emergency Plan prepared at the county level, a similar document being based on the preparation of the public

authorities in Byala, according to the plan of the General Directorate of Firefighters and Civic Protection, in accordance with the Act on Protection against Disasters, as amended and supplemented 97/5 December 2017.

The economic operators in Giurgiu County receive an extract issued by the Inspectorate for Emergency Situations in order to draw up their own training plan, endorsed by the aforementioned structure.

This plan also compulsorily includes practical preparation, through conventions, training, exercises, competitions and preventive activities during the local controls.

On an annual or monthly basis, various categories of personnel are prepared at the level of emergency inspectorates, ranging from:

- Economic operators
- public institutions classified for this purpose from a risk perspective
- Operational centers with temporary activity at the level of municipalities, cities
- Inspectorates, Heads of Voluntary Public Services and Private Emergency Services.

There is a Voluntary Emergency Service<sup>9</sup> within the Grădinari and Malu Townships.

There could be various disasters on the territory of the Byala municipality that could cause significant human and material losses. The nature of these consequences of probable disasters requires the preparation of all forces and means of protecting the population and the implementation of preliminary measures to reduce their harmful impact.

The possible consequences for the population in the event of disasters require continuous and consistent training in this regard on how to protect and inform the involved parts and the population in a timely manner.

Studies show that the risk of natural disasters is rising as a consequence of climate change and intensive social-economic development. The damage caused in recent years is an indication that the public is not sufficiently prepared to face such an emerging risk.

It has been found that a comprehensive policy on natural disaster risk management and other emergencies needs to be put in place with structural measures to deal with such situations.

## **Structural measures for managing emergency situations**

These measures are primarily aimed at promoting the strengthening of the institutional framework and the development of partnerships in the field of emergency and environment protection management in the cross-border region targeted by the

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<sup>9</sup> Established on the basis of Art. 15 of Law no. 481/2004 on civil protection, of the Government Decision no. 642/ 29.06.2004 for the approval of Criteria for Classification of Administrative-Territorial Units, Public Institutions and Economic Operators in terms of Civil Protection, depending on the specific risks, respectively on the Order of the Home Secretary no. 718 of 30.06.2005 for the approval of Performance Criteria for the Organizational Structure and Endowment of Voluntary Services for Emergency Situations, modified and completed with OMIRA no. 195/ 205.2007.

authorities in Byala, according to the plan of the General Directorate of Firefighters and Civic Protection, in accordance with the Act on Protection against Disasters, as amended and supplemented 97/5 December 2017.

The economic operators in Giurgiu County receive an extract issued by the Inspectorate for Emergency Situations in order to draw up their own training plan, endorsed by the aforementioned structure.

This plan also compulsorily includes practical preparation, through conventions, training, exercises, competitions and preventive activities during the local controls.

On an annual or monthly basis, various categories of personnel are prepared at the level of emergency inspectorates, ranging from:

- Economic operators
- public institutions classified for this purpose from a risk perspective
- Operational centers with temporary activity at the level of municipalities, cities
- Inspectorates, Heads of Voluntary Public Services and Private Emergency Services.

There is a Voluntary Emergency Service<sup>9</sup> within the Grădinari and Malu Townships.

There could be various disasters on the territory of the Byala municipality that could cause significant human and material losses. The nature of these consequences of probable disasters requires the preparation of all forces and means of protecting the population and the implementation of preliminary measures to reduce their harmful impact.

The possible consequences for the population in the event of disasters require continuous and consistent training in this regard on how to protect and inform the involved parts and the population in a timely manner.

Studies show that the risk of natural disasters is rising as a consequence of climate change and intensive social-economic development. The damage caused in recent years is an indication that the public is not sufficiently prepared to face such an emerging risk.

It has been found that a comprehensive policy on natural disaster risk management and other emergencies needs to be put in place with structural measures to deal with such situations.

## **Structural measures for managing emergency situations**

These measures are primarily aimed at promoting the strengthening of the institutional framework and the development of partnerships in the field of emergency and environment protection management in the cross-border region targeted by the

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GRADE project, as well as encouraging the communities from Grădinari, Malu, Byala to take part in joint actions in the field, in order to promote and support sustainable cross-border cooperation in the field of emergency management.

Informing and educating the public in the cross-border area covered by the project on the risks, prevention and mitigation of the effects of destructive natural phenomena, especially floods, will be carried out in a structured manner, based on the Communication Strategy on the Common Management of Natural Hazards and Other Emergency situations in Grădinari, Malu, Byala.

Also an activity that circumscribes the structural measures adopted for the management of emergency situations is the elaboration and conclusion of collaboration protocols with the institutions dealing with the management of emergency situations, but also the analysis of the operational situation at cross-border level and the elaboration of common procedures for action in the field of emergency situations management of environmental parameters and emergency situations in the Giurgiu - Ruse region.

## **5.2 Preparedness for intervention**

The preparation for intervention is based on the unitary set of rules regarding the activities/ measures to be taken in the case of emergencies in the Romanian-Bulgarian cross-border area of the areas covered by the communities involved in the GRADe project in order to save and protect human lives, material and immaterial goods, and the removal of negative effects caused by extreme events.

Upon receipt of notification of the occurrence of an emergency situation on the territory of one of the administrative-territorial units, pre-selection of the forces and means of intervention is carried out and further information is required if necessary.

Support is requested in writing by the local public authority within which the emergency situation occurred, in English, and later on the analysis of the possibility of granting support from the other partner authorities, indicating in case of confirmation and the forces displaced in this purpose.

The preparation of the logistical cross-border emergency intervention mission is then carried out, and it is very important at this time to inform the competent authorities of the intention to transit the state border and the indication of the forces/ equipment/ devices that make the journey.

The affected part of the emergency will provide fuel and accessories to those arriving and will ensure the compatibility of the equipment used. The means of communication used in the case of such intervention will be mobile phones and TETRA portable radio stations purchased within the project and licensed/ programmed according to the regulations of each state.

During the execution of the support mission, if the operative situation so requires, additional forces and means of support will be required after the intervention is completed by withdrawing the forces and means of support in compliance with the same procedure for crossing the border, restoring the reserve of forces or, where appropriate, replacing the resources used.

Throughout the course of the intervention, the communication and the permanent exchange of information between the parties, as well as informing the population about the state of intervention and the measures adopted, shall be ensured.

### 5.3 Joint Committee for the Coordination of Voluntary Services Activity in Byala, Grădinari, Malu

The Joint Coordination Committee for Activities of Volunteer Services in Byala, Grădinari, Malu that was established within the GRADe project is subject to the provisions of Art. 31 par. (3) of Law no. 307 of 2006 on fire protection with subsequent amendments and completions, the performance criteria it has to fulfill are those established by order of the Secretary of internal affairs no. 96/2016 for the approval of Performance Criteria for the establishment, assignment and endowment of voluntary services and private emergency services, as subsequently amended and supplemented.

Members of the Joint Committee are assimilated to volunteer staff from voluntary emergency services, their status being approved by Decision no. 1579 of 2005 with subsequent amendments and completions, being selected in the spirit of civic solidarity.

The members of the Committee participate voluntarily in the actions organized by the local partner public authorities within the project "GRADe - Joint risk prevention and management system for Gradinari - Malu - Byala communities for a safe and developed cross-border region". The same normative act regulates the rights and obligations they have.

The members of the committee were appointed by decisions of the mayors of the localities involved in the project.

The tasks of the Joint Coordination Committee for the Activities of Volunteer Services cover mainly the following activities:

- information and training on knowledge and observance of rules and measures for prevention, behavior and defense against fires or disasters
- verifying how to enforce rules, provisions, instructions, and prevention measures

#### Cross-border management of emergency situations

aimed through the current Guidelines:

- shorten response times
- reduce loss of life and material goods
- make timely and quick interventions
- maintain public order and security
  - maintain normal status at the level of competence areas
  - reduce the risk of disasters at cross-border level
- protect life and the environment against the negative effects of emergency situations
  - ensure the interoperability between the participating intervention structures through the Joint Coordination Committee of the Activity of Volunteer Services in Byala, Gradinari, Malu
- increase the ability of the three partners to allocate response equipment correlated with the level and type of risk
- develop a participatory attitude of the population from the three communities - Grădinari, Malu, Byala.

- execution of intervention actions for firefighting, search and rescue, first aid, limitation of the effects of an emergency, protection of people and material goods, environment, evacuation, etc.

## | Conclusions

Policies promoted by the two states, Romania and Bulgaria, in disaster management are two of the major objectives of regional policy promoted by the European Union in the field of convergence and cross-border cooperation.

They aim at reducing imbalances in the cross-border management of emergencies arising from the negative effects of disasters, as well as identifying common risks, ensuring information and notification of the population about the occurrence or imminence of the occurrence of the types of risk, i.e. ensuring the intervention through reciprocity in restoring normalcy in the affected area.

The work of the Joint Committee to coordinate the activity of the Volunteer Service in Grădinari, Malu, Byala is based on the principles established by the Joint Intervention Plan in the areas of competence of the General Inspectorate for Emergency Situations and the General Directorate of Fire and Civil Protection.

The desideratum is to ensure that the same set of rules and measures are in place to ensure joint intervention in emergency situations involving the participation of forces and means from the communities involved in the "Joint risk prevention and management system for Grădinari - Malu - Byala communities for a safe and developed cross-border region" project

## 6. Annexes

### 6.1 Glossary of terms

In order to ensure the correlation of the intervention in case of emergency situations, it is necessary to use unitary terminology. This glossary of terms presents the usual terms in the guidelines<sup>10</sup>:

#### **emergency medical help**

medical assistance provided to victims by qualified staff before reaching the hospital

#### **alarm**

bringing to the attention of the population, through dedicated means using predefined messages, the authorized information on the occurrence of emergency situations. Alarm can be preceded by a warning or introduced directly

#### **alarm/ alert for intervention**

bringing to the attention of the population, through dedicated means using predefined messages, the authorized information on the occurrence of emergency situations. Alarm can be preceded by a warning or introduced directly

#### **the magnitude of the emergency situation**

the extent of the area of manifestation of the destructive effects in which people's lives, the functioning of the institutions of the democratic state, the values and interests of the community are threatened or affected

#### **warning**

informing the population by any means of the authorized information about the imminence of emergency situations

#### **the base of operations**

the area established by the receiving State of assistance, arranged during the course of the intervention actions for the reception and registration of forces and means

#### **intervention capacity**

all the forces and means that can be made available to the Partner State under the Collaboration Protocol

#### **technical-tactical characteristics of the means of intervention**

the technical and operational performance of the means of intervention specified in the technical books provided by the manufacturer

#### **County Operational Center**

ISJU structure that provides intervention monitoring, coordination and management functions at county level

#### **National Operational Center**

IGSU structure that provides intervention monitoring, coordination and operational management functions at national level

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<sup>10</sup> Terminology used by the General Inspectorate for Emergency Situations, respectively by the Regional Directorate of Fire and Civil Protection.

### **commander of the action**

person who assures the management and operational coordination of all forces and means in case of special emergency situations

### **the commander of the intervention**

the person from IJSU/ Regional Directorate of Fire and Civil Protection that provides management on site and the operational coordination of the professional, voluntary and private intervention structures

### **Committees for Emergency Situations**

inter-institutional structures set up at national, ministerial, county and local level to coordinate emergency prevention and management actions

### **public communication in emergency situations**

information brought to the attention of the public before or during emergency situations, by means of media, regarding the behavior to be adopted by the public and the evolution of the produced phenomena and of what is predicted

### **the tactical conception of intervention**

how to use forces and means available in a unitary conception to limit and remove the effects of an emergency. It is determined by the intervention commander

### **disaster**

the event triggered by the occurrence of certain types of risks, of natural or man-made causes, generating human, material losses or environmental changes and which, due to its magnitude, intensity and consequences, reaches or exceeds the specific gravity levels established by the Regulations for the management of the emergency situations, elaborated and approved according to the law

### **cross-border disaster**

a natural destructive phenomenon of geological or meteorological origin, suddenly produced as a mass phenomenon, which manifests at the same time and space within two or more neighboring states

### **operative documents**

preparation, organization, management, deployment, recording, analysis, evaluation and reporting of intervention actions

### **the duration of the intervention operations**

the period of time (expressed in hours) during which the crews of the Partner State participated in the intervention on the territory of the Beneficiary State

### **the effects of the emergency situation**

the quantification of loss of life and the damage caused by the occurrence of a type of risk

### **eviction**

a protective measure adopted prior to or during emergency situations consisting in the organized removal of the population, animals and goods from the area possibly affected or affected by the type of risk and their accommodation in designated spaces that provide the necessary conditions for the survival and continuation of the activity. The evacuation measure can be set up at the level of communities or public institutions and economic operators

### **risk factor**

phenomenon, process or complex of congruent circumstances at the same time and space that can determine or favor the production of certain types of risk

### **managing emergency situations**

identifying, recording and evaluating risk types and their determinants, notifying stakeholders, alerting the population, limiting, removing or counteracting risk factors as well as the negative effects and impact of such exceptional events. The set of intervention measures adopted on the basis of the data and information resulting from the process of monitoring the emergency situation

### **affected households**

the numerical expression of individual dwellings (including annexes) which have been damaged as a result of the occurrence of a type of risk

### **hazard/disaster**

a situation that presents a level of threat to people's lives, their health, property (material goods and buildings) and the environment

### **impact**

the effect of the disaster - loss of life, harm, illness and other negative effects on physical and mental health, social well-being; property damage, property destruction, loss of services, social and economic disruption, environmental degradation

### **incident**

the hazard situation that is about to happen

### **public information**

communicating information to the public free of charge

### **General Inspectorate for Emergency Situations**

a specialized institution subordinated to the Ministry of Administration and Interior of Romania; integrates at national level actions in the fields of the protection of life, goods and the environment in emergency situations; is a regulatory authority in the areas of fire and civil protection

### **County Inspectorate for Emergency Situations**

specialized institution subordinated to IGSU, which integrates at county level the actions carried out in the fields of protection of life, goods and the environment in emergency situations

### **the intensity of the emergency situation**

the speed of evolution of destructive phenomena and the degree of disturbance of the normality state

### **operative intervention**

for Bulgarian partners, the operative intervention includes both the intervention itself and the initial rehabilitation measures

### **appraisal/ notification**

the activity of transmitting authorized information on the imminence of occurrence or the occurrence of emergency situations between public administration institutions and

authorities involved in the management of emergency situations

### **emergency management**

the integrated set of measures adopted for the prevention and management of emergency situations

### **missions**

operative tasks assigned to intervention teams by the commander of the intervention/ action, depending on the competencies of the personnel and the technical and operational performance of the means of intervention

### **monitoring**

centralizing and evaluating data and information on the possibility of manifestation or evolution of some types of risk; is provided by the institution that manages the type of risk

### **monitoring the emergency situation**

the monitoring process necessary for the systematic evaluation of the parameter dynamics of the situation at hand, the knowledge of the type, the size and intensity of the event, its evolution and its social implications, as well as the way to fulfill the measures set up for the management of the emergency situation

### **affected economic operators**

the numerical expression of economic operators who have suffered site damage as a result of the occurrence of a type of risk

### **risk analysis and coverage plan**

complex document containing the potential risks identified at the level of the administrative-territorial units, the measures, actions and resources necessary for the prevention and management of the emergency situations

### **affected population**

the number of people whose material goods, property or physical integrity has been affected as a result of the occurrence of a type of risk

### **isolated population**

the number of people still isolated due to the blocking of access routes as a result of the occurrence of a type of risk

### **pre-alarm**

transmission of warning messages/ signals to authorities about the likelihood of disasters

### **training**

agreements and plans, educating and informing the community to effectively deal with emergencies and disasters

### **prevention/ mitigation**

the elimination or reduction of the impact of disasters and/ or reduction of sensitivity and increase of community resilience to the impact of these disasters

### **fire prevention**

the integrated set of measures, organizational, technical, humanitarian and public information measures planned, organized and realized to reduce the likelihood of

production and to limit the effects of emergency situations

#### **first intervention**

actions taken to limit and remove the effects of an emergency situation by people in the workplace and/ or SVSU/ SPSU

#### **specific procedures cooperation protocol**

standardized joint actions for: notification, request/ assistance, border crossing, registration and evidence of intervention forces, intervention, operative reporting, communications, professional training, evaluation of interventions

#### **cooperation protocol**

the legal norm on which the cooperation actions are implemented

#### **reply**

activating plans and arrangements for effective disaster management measures at the time of the event

#### **restoration**

supporting community affected by emergency or disaster situations in physical reconstruction of infrastructure and emotional, social, economic and physical well-being restoration

#### **Private Service for Emergency Situations**

an intervention structure set up at the level of localities, on a voluntary basis, which ensures emergency response actions within the administrative-territorial unit

#### **Voluntary Emergency Service**

an intervention structure set up at the level of localities, on a voluntary basis, which ensures emergency response actions within the administrative-territorial unit

#### **National Emergency Situation Management System**

network of competent bodies, organs and structures that ensure the prevention and management of emergency situations and the coordination of human, material and financial resources necessary to restore the state of normalcy

#### **situation of civil protection**

the situation generated by the imminence of the occurrence or the occurrence of disasters that endanger or affect life, environment, goods and cultural and heritage values by the level of gravity

#### **emergency situation**

exceptional event, of non-militaristic nature, determined by a type of risk that, by its size and intensity, threatens the life and health of the population, the environment, the important material and cultural values; it is necessary to take urgent measures and actions, to allocate additional resources and to manage the forces and means involved in order to restore normalcy

#### **operative situation**

global picture of the field situation; data and information on the type of risk produced, the consequences of the emergency situations, the allocated resources, the need to supplement them, the events prognosis

### **alert status**

temporary adoption at local level of exceptional measures during special emergency situations involving the increase of the operational capacity of all intervention structures at the level of a locality or of a county, the restriction of some citizens' rights and freedoms

### **emergency status**

a set of exceptional measures of a political, economic and public order nature applicable to the whole territory of the country or to some administrative-territorial units which are established in situations determined by present or imminent serious threats to national security or the functioning of constitutional democracy or the imminence or occurrence of calamities that make it necessary to prevent, limit or remove, as appropriate, the effects of disasters

### **potentially emergent state of emergency situation**

a complex of risk factors whose uncontrolled and imminent evolution could harm life and population, important material and cultural values, environmental factors

### **intervention subunit**

professional intervention structure of the ISJU/ Regional Fire and Civil Protection Directorate providing emergency response actions in a part of the county/ district

### **emergency**

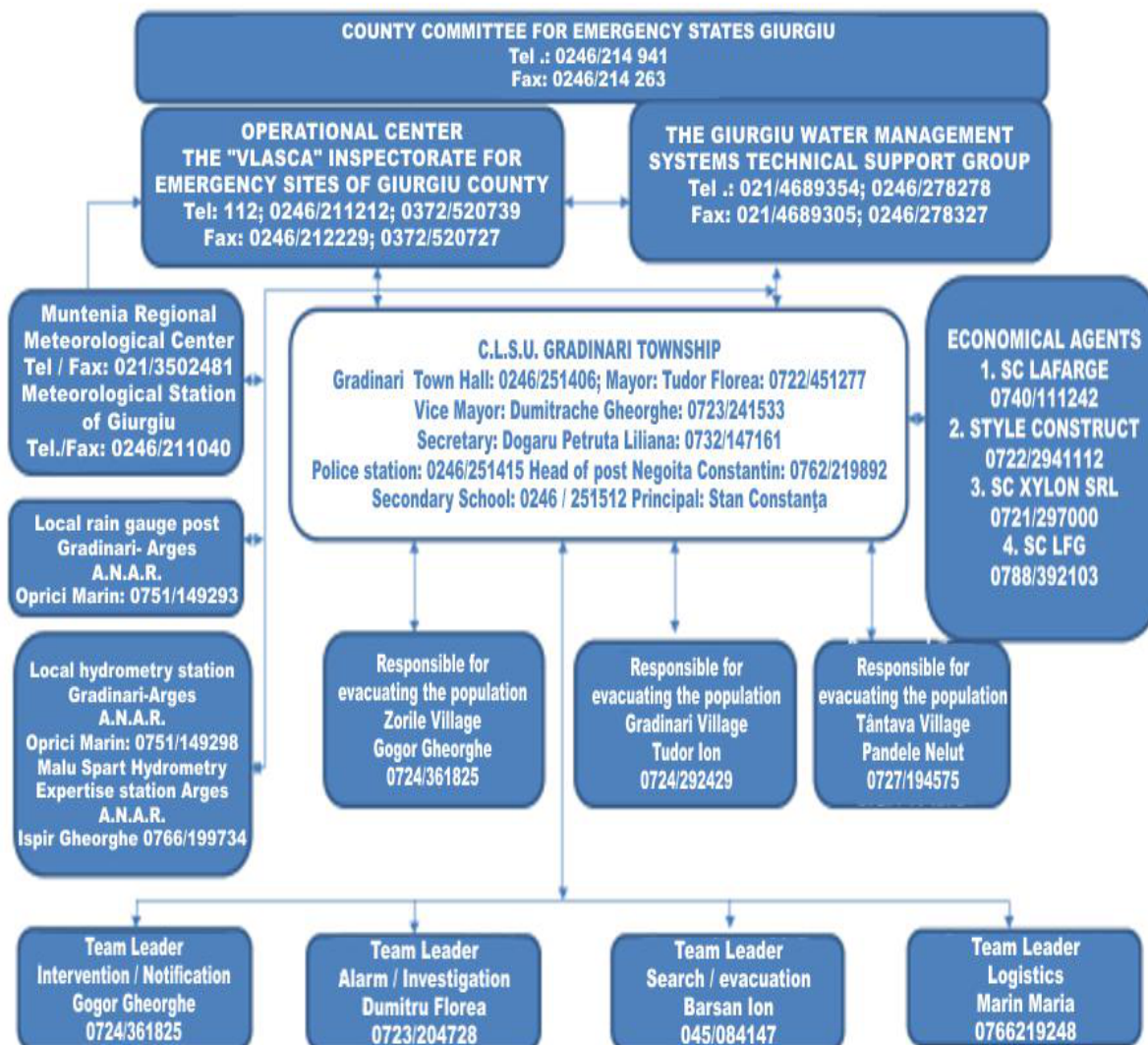
an actual or imminent event that endangers or threatens to endanger life, property or the environment and requires a meaningful and coordinated response

### **vulnerability**

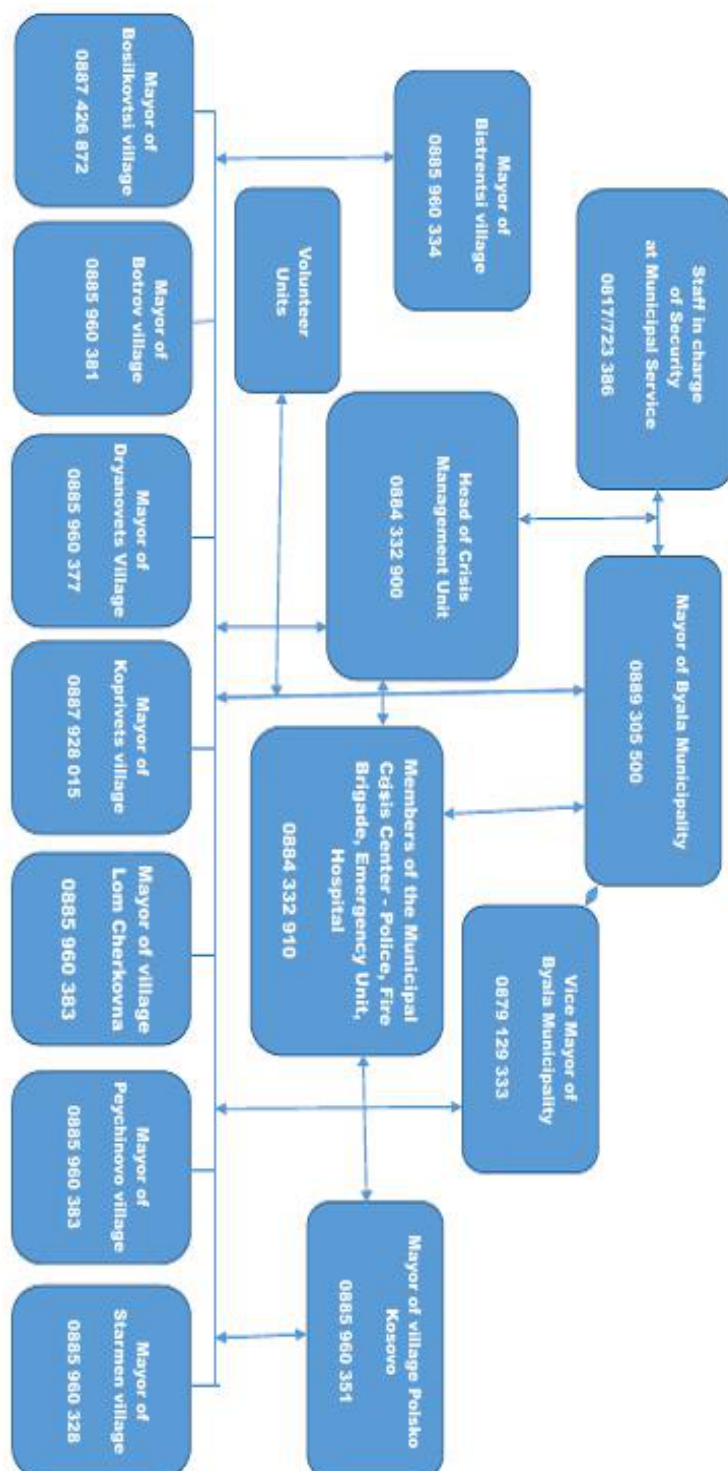
represents the point/ weaknesses of an entity that can exploit one or more threats

## 6.2 Scheme 1 - Scheme of notifications and information circuit in Grădinari commune

Scheme of notifications and information circuit in the Gradinari Township



### 6.3 Scheme 2 - Scheme of notifications and information circuit in Byala municipality



## 6.4 Bibliographical references:

- „Planul de apărare împotriva inundațiilor, ghețurilor și poluărilor accidentale 2014-2017. Comuna Grădinari, Județul Giurgiu” (“Anti-flood, ice and accidental flood control plan 2014-2017. Grădinari Township, Giurgiu County)
- „Planul de analiză și acoperire a riscurilor al Comunei Malu, Anul 2015” (“Malu Commune’s Risk Analysis and Coverage Plan, Year 2015”)
- „Plan de intervenție comună în domeniile de competență ale Inspectoratului General pentru Situații de Urgență și Directoratului General de Pompieri și Protecție Civilă” (Joint action plan in the areas of competence of the General Inspectorate for Emergency Situations and the General Directorate for Fire and Civil Protection”)
- „Proceduri comune de notificare, monitorizare și intervenție” (“Joint Notification, Monitoring and Intervention Procedures”), ghid realizat în cadrul proiectului cu titlul Joint Risk Monitoring during Emergencies in the Danube Area Border, implementat de către Inspectoratul General pentru Situații de Urgență și transmis spre citare conformă prin adresa nr. 127056/06.03.2018
- „Glosar de termeni” (“Glossary of Terms”), ghid realizat în cadrul proiectului cu titlul Joint Risk Monitoring during Emergencies in the Danube Area Border, implementat de către Inspectoratul General pentru Situații de Urgență și transmis spre citare conformă prin adresa nr. 127056/06.03.2018

## 6.5 Web resources

- <https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX%3A32013D1313>
- [http://ec.europa.eu/echo/what/civil-protection/mechanism\\_en](http://ec.europa.eu/echo/what/civil-protection/mechanism_en)

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