



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



PROJECT MIS ETC CODE 1283

JOINT MANAGEMENT FOR RISK PREVENTION IN EMERGENCY SITUATIONS WITHIN  
ROMANIA-SERBIA CROSS-BORDER COOPERATION

## TRAINING FOR COMMUNITY LEADERS

Module 1: Circumstances of High Risk

Module 2: Preparedness Measures

Module 3: How to Mobilize the Community in Case of  
Emergency Situations



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Table of Contents

Module 1: Circumstances of High Risk .....	3
Topic 1: Concept, Classification and Characteristics of Emergency Situations .....	3
Topic 2: Management of Emergency Situations.....	11
Topic 3: Risk Assessment of Natural Disasters and Other Accidents .....	21
Topic 4: Protection and Rescue Plans .....	31
Module 2: Preparedness Measures.....	36
Topic 1: Concept and Importance of Emergency Preparedness with Regard to Flooding .....	36
Topic 2: Content of Risk Assessment of Natural Disasters and Other Accidents....	41
Topic 3: Communication in Emergency Situations.....	46
Topic 4: Protection and Rescue Plans .....	51
Module 3: How to Mobilize the Community in Case of Emergency Situations ...	56
Topic 1: Role of Local Governments in Emergency Situations - Legal Basis .....	56
Topic 2: Alerting and Action Plans.....	64
Topic 3: The measures and procedures of citizens in emergency situations conditions .....	71
Topic 4: <b>Best Practices Examples and “Lessons Learned”</b> .....	77



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Module 1: Circumstances of High Risk

### *Topic 1: Concept, Classification and Characteristics of Emergency Situations*

The self-defence instinct and, at the same time, the self-preservation of the human being in hazardous situations have been the instincts that ensured the survival of a population in limit situations, military leaders having had, since ancient times, the priority mission of protecting civil population (elder people, children, women) in case of war.

In a certain moment of its existence, each community survived disasters and continued to grow and flourish.

Throughout time, the concept of people protection has evolved from organizing the protection of a population in case of war to protecting the population against all types of identified risks: risks related to natural or anthropic disasters, economic and social risks, as well as risks produced by military conflicts (a category that is not part of the herein presentation).

Although measures for preventing the negative effects of extreme natural manifestations have probably been taken ever since the first contacts between man and nature, the concerns for setting out a unitary and standard terminology in the field are much more recent, and they only date since the second half of the 20<sup>th</sup> century and, especially, since its last decade.

The efforts to define and to name, as accurately as possible, extreme natural phenomena have led to developing an operational terminology used nowadays by the majority of researchers involved in this direction.

#### HAZARD

It is a threatening event or the likelihood for a phenomenon, potentially producing damages in a certain area, to take place in a certain timeframe mentioned (*Internationally agreed glossary of basic terms related to disaster management*, DHA, 1992).

In this context, *hazard* represents the likelihood for a natural or anthropic phenomenon, hazardous for human kind, to take place in a certain period of time and whose consequences are caused by exceeding the safety measures any society imposes to itself.

Any hazard involves a pre-existing risk level of the considered space (Alexander, 1993, Wilhite, 2000, Smith, 2001). Therefore, assigning the degree of hazard to a natural phenomenon is not subject to producing material damages or victims, but to the potential of such consequences.

The right understanding of the relations between *hazard*, *vulnerability*, *risk* and *disaster* determines the accurate use of terminology. These relations are



integrated by Alexander (1993) as follows: “Hazard can be seen as a pre-disaster situation, in which there is a certain risk for a disaster to take place, especially because of the fact that a human community is placed in a vulnerable position”.

## DISASTER

According to the United Nations, under disasters one should understand a *serious damage of the society, producing important human and material losses, or major changes of the environment, exceeding the response capacity of that community, by using own available means. The affected society needs an outside extraordinary support in order to be able to return to normal.*

Disasters are determined by *risks* as rare and extreme events, occurred in the natural environment or generated by human activity that negatively affects human life, the property, the environment or the social - economic activity.

*According to their nature, hazards are classified in:*

### 1. Natural hazards:

- a) *Endogen*: volcanic and/ or related to earthquakes;
- b) Affecting mountainsides: landfalls, mud and debris flow, collapses, mass displacement, avalanches, surface erosion;
- c) *Climatic*: cyclones and tornadoes, tropical and extratropical storms, hurricanes, drought and desertification, other climatic hazards (lightning and thunders, blizzard, frost and hoar, ice build-ups)
- d) *Hydrologic and oceanographic*: floods, Tsunami waves; EL NINO-South oscillation, rise of the World Ocean level, sea ice and icebergs.
- e) *Biological, biophysical and astrophysical*: insect invasion, fires, meteorite fall.

### 2. Anthropic hazards:

- a) *Industrial and related to transports*;
- b) *Wars and nuclear accidents - their effect on society and environment.*

In the national legislation, by disaster one understands *an event caused by the initiation of certain types of risks because of natural or human causes, generating human or material losses or environmental changes and that, by their dimension, intensity and consequences, reaches or exceeds specific levels of seriousness set out by regulations regarding the management of emergency situations issued and approved by Law (Law 481/ 2004).*

## EMERGENCY SITUATION

It is defined as *an exceptional non-military event that, by its dimension and intensity, threatens people's life and health, the environment, important material and cultural values, while, for resetting normality, it is necessary to take urgent*



*measures and actions, to assign additional resources and to unitarily manage the forces and means involved* (Government Emergency Ordinance - O.U.G. 21/ 2004). Disasters are determined by risks as rare and extreme events, occurred in the natural environment or generated by human activity that negatively affects human beings, the environment or the social- economic activity.

## RISK

*Risk* is sometimes considered the synonym of hazard, but the first term also has a series of additional implications. More precisely, hazard is defined as a potential threat to people and their possessions, while *risk* as the likelihood for a hazard to take place.

There is no worldwide accepted definition of the risk, as perceptions are different from an individual to another and from a culture to another. In the context of managing the risk of disasters, the following definition is accepted:

*Risk represents the likelihood for a hazardous event to occur, by unfolding with a certain force, in a certain place and in certain a period of time. Risk refers to people and objects exposed to the risk of some natural events to take place.*

Figure 1: Concept of Risk



*Explanations (for figure1):* locations and populations in the yellow area are characterized by certain types of vulnerability; those in the red and orange areas are threatened by natural disasters. *In any case, risk might only occur in the orange area, where hazard and vulnerability coexist.*

Risk is something that has not yet taken place, something that it is estimated to happen in the future. If a risk is anticipated as very high, then there are 2 possibilities: eliminating the risk or reducing it as much as possible.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



In the national legislation, by risk one understands *the foreseen level of losses, likely to happen, estimated in victims, damaged properties, disturbed economic activities, impact on the environment due to a hazard taking place in a certain area and by referring to a certain time* (Romanian Government Decision - H.G.R. 642/2005).

## VULNERABILITY

*Vulnerability* represents the level of losses expected by an element or a group of elements (people, structures, goods, services, economic or social capital, etc.) that is exposed to a certain risk, following a disaster or a hazard. Vulnerability is determined on a scale from 0 to 1, or from 0% to 100% (suggested definition in the *Internationally agreed glossary of basic terms related to disaster management* (DHA, 1992)).

Vulnerability can only be identified and studied with references to a certain type of a specific hazard. The vulnerability of a specific type of hazard varies, based on sector and context: for example, in populated areas, vulnerability comes from the low quality of buildings and base infrastructure, in the field of health, it occurs following the lack of medicine supplies and first aid kits, while in the field of economic activities, such as agriculture, it occurs following the shortage of stocks, etc.

The vulnerability of a population or of an ecosystem involves different and interdependent factors that have to be taken into consideration when determining the vulnerability of a family, a locality or a country. It is like a spider web in which physical factors are closely connected to economic, cultural, political, institutional, ecological and other factors.

In order to ensure a common understanding in the process of *risk element assessment*, one also has to be aware of a series of definitions agreed at the level of the authorities in charge of the management of risks generating emergency situations, such as:

**Acceptable risk:** It represents the level of potential losses that a society or a community considers endurable, given the specific social, economic, political, cultural, technical and environmental conditions.

**Exposure:** It is represented by all the people, properties, systems or other elements existing in hazard areas that can bear certain losses. The exposure is variable according to the moment the event takes place, which can generate a different impact.

**Impact:** It represents the negative effects of a hazard, expressed as impacts on population, as economic and environmental impact, and social and psychological impact.

In Romania, the classification of the types of risks generating emergency situations is regulated by H.G.R. 557/2016, as follows:





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



TYPE OF RISK	ASSOCIATED RISK
1. Storms and Snow Storm	Snow storm
	Storms - strong wind and heavy precipitation
	Hail
2. Floods	Floods following a natural overflow of watercourses caused by the increase of flow capacities resulting from precipitation and/ or sudden melting of snow or blockage caused by undersized discharge openings of bridges and footbridges, blockage produced by ice or floating items (waste and wood material), landfalls, alluvium and snow avalanches, as well as floods caused by discharges from mountainsides.
	Floods caused by incidents, accidents or failures in hydro-technical constructions
3. Heavy Snowfalls	Heavy snow
	Blocking of highways and railways
4. Tornadoes	
5. Drought	Hydrologic
	Pedological
6. Extreme Temperatures	Ice build-up, hard rime, early or late frosts
	Glaze ice
	Ice bridges and dams on water (ice dam)
	Heat
7. Vegetation Fires	Fires at the level of forestry area
	Fires at the level of grasslands and/ or scrublands
	Fires at cereal crops
8. Avalanches	
9. Landfalls	
10. Earthquakes	
11. Accidents, Failures, Explosions and Fires in Industry, Including Landfalls Caused by Mine Exploitations or Other Technological Activities	
12. Accidents, Failures, Explosions and Fires in Activities of Transport and Storage of Hazardous Products	Major accidents with site implications
	Major accidents with implications outside the site
	Accidents with hazardous products during transport activities
13. Accidents, Failures, Explosions and Fires in Transport Activities	Terrestrial
	In the air
	Marine
	Road tunnels
	Railway tunnels
	At the subway
	On the cable
14. Accidents, Failures, Accidents or Other Events in Nuclear or Radiological Activities	



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



15. Water Pollution	That endangers human life, water environment and major water supply facilities
	With a major cross-border impact
	Accidental pollutions of watercourses
	Marine pollutions in the coastal area
	Marine pollutions
16. Collapses related to Constructions, Installations or Facilities	
17. Failure of Public Utilities	Important radio and TV networks
	Important communication and information networks
	Important electricity and gas networks
	Important thermal networks
	Important sewage and used water and rainwater treatment networks
	Break of dams or other incidents leading to flow capacity discharge, endangering human life
18. Falls of Atmosphere and Space Objects	
19. Unexploded or Un-deactivated Ammunition Left from Military Conflicts	
20. Infectious Disease Outbreaks	
21. Epizootic Diseases/Zoonosis	
22. Radiological Risk	
23. Fires	
24. Situations Determined by the Attack of Plant Damaging Bodies	

Classification of risks potentially generating emergency situations in subsequent norms:

OMAI (Order of the Ministry of Administration and Internal Affairs) 192/2012 decides, based on some specific thresholds defined by the *National Meteorological Administration*, the following disaster generating factors:

- Floods, following natural overflows of watercourses caused by the increase of flow capacities resulting from precipitation and/ or sudden melting of snow or blockage caused by undersized discharge openings of bridges and footbridges, blockage caused by ice or floating items (waste and wood material), landfalls, alluvium and snow avalanches, as well as floods caused by discharges from mountainside;
- Floods caused by incidents, accidents or failures at hydro-technical constructions;
- Floods caused by the rise of underground water level;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- d) Hazardous weather phenomena: heavy rains, heavy snow, storms and snow storms, ice build-up, hard rime, glazed frost, early or late frosts, heat, hail and droughts;
- e) Floods caused by marine storms;
- f) Hydrologic droughts (shortage of water at the source because of an extended drought);
- g) Accidental pollutions of watercourses and marine pollutions in the coastal area.

*The following are directly or indirectly exposed to these disasters:*

- a) Human life and **people's possessions**, as well as animal life;
- b) Social, cultural, administrative and patrimony facilities;
- c) Productive units (commercial companies, industrial platforms, electric stations, agricultural - animal farms, fish facilities, harbours and others);
- d) Dams and other hydro-technical works representing downstream risk sources, in case of accidents taking place;
- e) Means of road, railway and marine communication, electricity and gas supply networks, water supply and sewage systems and sources, treatment stations, telecommunication networks and others;;
- f) Natural environment (water and terrestrial ecosystems, forests, agricultural lands, urban areas of localities and others).

OMAI 1475/2006 defines the criteria that are taken into account when a disaster is declared, as follows:

- Fall of precipitation, at least triple than the multiannual average considered, within the catchment area, caused by activities and leading to massive floods in that area;
- Invasion of hazardous agents and contamination of agricultural crops with phytosanitary products;
- Forest fires;
- For hail prevention, a heavy natural weather disaster is considered when, following activities, a layer of hail of minimum 5cm is produced on more than 25% of the surface of the protected area.

The following are directly or indirectly *exposed to these disasters*:

- a) Population, as well as its movables and immovable;
- b) Social facilities;
- c) Productive units (commercial companies, electric stations, agricultural - animal farms, fish facilities, and others);



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- d) Means of road and railway communication, electrical and gas supply networks, water supply and sewage systems and sources, treatment stations, telecommunication networks and others;
- e) Natural environment (forests, agricultural lands, urban areas of localities and others).

### Bibliography:

*Government Emergency Ordinance No. 21 as of April 15, 2004 regarding the National Emergency Management System;*

*Law No. 15 as of February 28, 2005 for approving Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System;*

*Law No. 481 as of November 8, 2014, regarding civil protection reissued on the grounds of Art. II under Law No. 212/ 2006;*

*Decision No. 557 as of August 3, 2016 regarding the management of types of risk;*

*Order No. 192 as of August 2, 2012 for approving the Regulation regarding the management of emergency situations generated by floods, hazardous weather phenomena, accidents at hydro-technical constructions, accidental pollutions on watercourses and marine pollutions in the coastal area;*

*Order No. 1475 as of October 13, 2006, for approving the Regulation regarding the monitoring and management of emergency situations in phytosanitary field - invasions of hazardous agents and contamination of agricultural crops with phytosanitary products and the Regulation regarding the management of emergency situations following forest fires.*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Topic 2: Management of Emergency Situations

### Management of Emergency Situations

The emergency situation is characterized by its amplitude which represents the extent of the area its destructive effects take place, under which human life, the operation of **democratic state's institutions, the values** and interests of the community are threatened. Furthermore, the emergency situation is also characterized by its intensity that can be defined as the pace which destructive phenomena evolve with and the degree of normality disturbance. The previously mentioned elements have determined the law giver to regulate the management of the emergency situation.

From a legal perspective, the management of the emergency situation represents the set of activities developed and procedures used by decision makers, institutions and public service departments authorized to identify and monitor risk sources, to assess information and analyse the situation, to issue forecast, to set out variants of actions and to implement them for the purpose of resetting normality.

The management of emergency situations represents identifying, recording and assessing risks/ types of risks and their determining factors, notifying interested agents, warning the population, limiting, setting aside or fighting risk factors and, last but not the least, negative effects and the impact caused by negative/ exceptional events they can generate. In another train of thoughts, the management of emergency situations means applying policies, procedures and practices that have the identified objectives of analysing, assessing, treating, monitoring and reassessing risks in order to reduce them, so that human communities (citizens) can live, work and satisfy their needs and aspirations in a long lasting social and physical environment. In other words, the management of emergency situations has the main priority to increase the degree of civil safety.

Starting 2004, in Romania, for the purpose of *preventing and managing emergency situations, ensuring and coordinating human, material, financial and other resources needed for resetting normality*, the National Emergency Management System (SNMSU) was initiated (based on O.G. - Government Ordinance - No. 21/ 2004 with subsequent amendments).

It is organized by authorities of the public administration and it includes a network of competent organizations, bodies and structures, organized on competence levels or fields, *with the following structure*:

#### A. Committees for emergency situations:

- *National Committees for Special Emergency Situations/ National Committee for Natural Disasters (according to case);*
- *Ministerial committees and those of other central public institutions for emergency situations;*

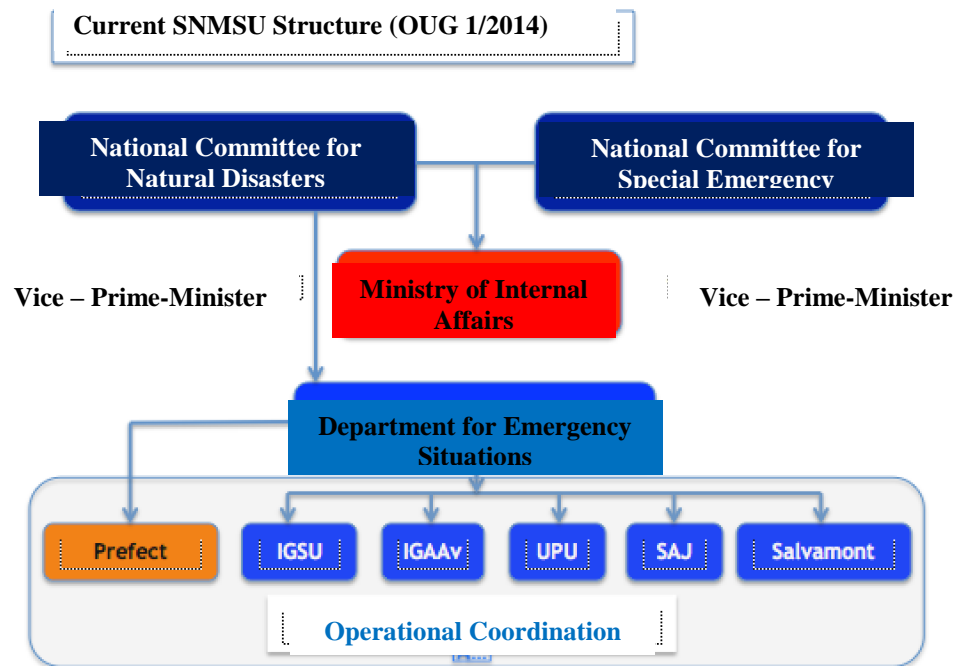


- County Committees for Emergency Situations, and The Committee of Bucharest Municipality for Emergency Situations;
- Local Committees for Emergency Situations;
- The General Inspectorate for Emergency Situations;
- Professional Emergency Services and Voluntary Emergency Services;
- Operative Centres and Centres for Intervention Coordination and Management;
- Action's commander.

The Committees for Emergency Situations are inter-institutional bodies for the support of the management, ensured by its coordinators. They will organize and operate at national and local level.

The Ministerial Committees and those of other public institutions for emergency situations (consisting of decision makers, experts and specialists from their own department), are built and operate under the coordination of ministers, namely heads of national public institutions.

The diagram regarding the new emergency management system:



SNMSU - National Emergency Management System

IGSU - General Inspectorate for Emergency Situations

IGAAv - General Inspectorate of Aviation

UPU - Emergency Receiving Unit

SAJ - County Ambulance Service



#### AT TERRITORIAL AND LOCAL LEVEL:

*The Committee of Bucharest Municipality for Emergency Situations* - consisting of the general mayor, sector mayors, heads of distributed, decentralized and communal management public services, institution managers, autonomous administrations, and commercial companies fulfilling functions for supporting the management of emergency situations, as well as managers of the economic agents that, by type of their activity, represent potential risk factors. The Committee is **appointed following prefect's instructions**;

*County Committees for Emergency Situations* - consisting of: president of the county council, heads of distributed, decentralized or communal management services, and other managers of institutions and commercial companies of county interest, fulfilling support functions in managing emergency situations, as well as managers of economic agents that, by type of their activity, represent risk factors. **The county council is appointed under prefects' instructions.**

*Local Committees for Emergency Situations* - at the level of municipalities, towns, sectors of Bucharest municipality and of communes - members: vice-mayor, the secretary of the commune, city or municipality, according to case, and representatives of public services and of main institutions and economic agents from the related territorial and administrative division, as well as managers or coordinators of economic agents, subsidiaries, branches or local working facilities, that, by the type of their activity, represent risk factors. The committee is appointed under the management of the mayor and with the approval of the prefect.

#### AT NATIONAL LEVEL:

*The General Inspectorate for Emergency Situations (IGSU)* - specialized body of the Ministry of Internal Affairs, ensures the unitary and permanent coordination of activities for the prevention and management of emergency situations. By means of the National Operational Centre, it ensures the permanent technical secretariat of the National Committee for Natural Disasters (CNCI) and the unitary coordination of interventions for the National Committee for Special Emergency Situations (CNSSU) and fulfils functions of monitoring, assessing, notifying, pre-warning, alerting and operationally and technically coordinating, at national level, structures with responsibilities in the management of emergency situations.

For the coordination and management of actions during the occurrence of emergency situations, at national level, the National Centre of Intervention Coordination and Management is activated, while its structure is designed for supporting the decision, and it is activated following the instructions of the Head of Department for Emergency Situations (MAI - Ministry of Internal Affairs) and that



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



includes specialists and experts, representatives of national structures existing within CNCI/ CNSSU.

*Operative Centres* - at the level of ministries and of other national public institutions with complex tasks and functions in managing emergency situations - fulfilling the same functions as IGSU (General Inspectorate for Emergency Situations), in fields of competence of ministries and national public institutions at whose level they operate.

#### AT LOCAL LEVEL:

*Professional Emergency Services*, operating as County/ Bucharest Municipality Inspectorates - specialized bodies within the Ministry of Internal Affairs, ensure, at county level and at the level of Bucharest Municipality, the unitary and permanent management of activities for the prevention and management of emergency situations. By means of operational centres, it ensures the permanent technical secretariat of the County or Bucharest Municipality Committee and it fulfils functions of monitoring, assessing, notifying, pre-warning, alerting and operationally and technically coordinating emergency situations at county/ Bucharest Municipality level.

At the level of Bucharest Municipality and of counties, at the occurrence of an emergency situations, the Centre of Bucharest Municipality for Intervention Coordination and Management (CMBCCI) is activated, along with the County Centre of Intervention Coordination and Management (CJCCI), designed for the support of the decision of the Committee of Bucharest Municipality for Emergency Situations/ County Committee for Emergency Situations. CJCCI is activated at the proposal of the chief inspector of Bucharest Municipality Inspectorate for Emergency Situations/ of the County Inspectorate for Emergency Situations, with the approval of the prefect. CMBCCI/ CJCCI is the structure including specialists and experts, representatives of the structures existing within CMBSU/ CJSU.

*Operative Centres with Temporary Activity* - constituted when *declaring an alert condition* or when the situation requires it at the level of municipalities, cities and communes; during a regular period of time, they are ensured by persons specifically appointed within the own body of that authority;

*Emergency teams* - constituted during emergency situations at the level of endangered or affected commercial companies that work together with structures of the National System.

*The management of emergency situations operates according to the following principles:*

- **Prevention and anticipation;**
- **Protection and saving the life of the population;**
- **Respecting people's liberties and fundamental rights;**
- **Taking responsibility** for the management of emergency situations;





- **Continuing the cooperation at regional, national and international level** between similar organizations and bodies;

- **Activities unfolding for managing emergency situations must be transparent**, so that they do not worsen the already existing effects;

- Progress and continuity of the actions of managing emergency situations, from the level of local public institutions authorities to the national public institution level, according to the extent of their intensity and amplitude;

- **Efficacy, an active co-working** and a subordination from hierarchic perspective of constituents of the National Emergency Management System.

## RISK FOR FLOODS

The management of emergency situations produced by floods is a topic of a, not only national, but especially local amplitude.

From my point of view, an important risk that I would like to approach is the flood risk and the implications of local public authorities, mainly of the Prefect Institutions, in the management of such risk.

Given the importance of managing the flood risk, the National Strategy for the Flood Risk Management has been elaborated. The purpose of this strategy is represented by diminishing the impact floods might have on citizens of the state and on their possessions, by means of a proper management and by policies able to respond to imposed standards, in order to protect the environment.

**“The strategy of flood management builds up the framework document for preparing and adopting some specific measures and actions, covering:**

- Knowing the flood risk;
- Monitoring the phenomenon of floods;
- Informing population;
- Considering the flood risk in all activities related to the activities of developing the territory;
- Adopting preventing measures;
- Preparing for emergency situation;
- Reconstruction and learning from previous **experience.**”

The strategy has 3 objectives: environmental, social and economic. Through the National Strategy for Flood Management, it is wished for improving the value of life by diminishing damages that floods may cause, as well as for a proper management of available means, in order to build, maintain and valorise the existing infrastructures and the means of diminishing the flood risk.

The prefect is the president of the County Committee for Emergency Situations.

According to Law No. 481 as of November 8, 2004, on civil protection, “The Prefect has the following main responsibilities:



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Approving operative and preparedness plans on civil protection and the planning of exercises and of other activities unfolded at the level of the territorial and administrative division;
- Keeping track of civil protection measures to be followed at the level of the territorial and administrative division;
- Deciding, according to law, the calling of an alert condition, the activation or use, according to case, of intervention formalities;
- Approving the territorial risk diagram issued by the Inspectorate for Emergency Situations;
- Ensuring conditions for the good development and integration of activities of intervention teams from other counties or of international teams, according to case, arrived in the territorial and administrative division, for the purpose of limiting and setting aside disaster effects;
- Submitting to the County Council or the General Council of Bucharest Municipality, according to case, the proposals for supplementing the population warning and notification system, the sheltering fund, the material base and other measures for people protection, or the protection of material goods, cultural values or environment;
- Exercising control in implementing measures in civil protection situations.”

The management of emergency situations generated by floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions is carried out by means of preventive and operative measures for intervention and rehabilitation, consisting of identifying, recording and assessing the types of risks and their determining factors, notifying interested agents, limiting, setting aside or fighting negative effects produced by risk factor manifestation.

The measures for limiting, setting aside or fighting the effects of types of risk, provided by Art. 5, represent an obligation for bodies of the national and local public administration with responsibilities in this field and for all legal entities and individuals, except for disabled persons, elder people, pregnant women and children.

Owners, by any right, of dams and other hydro-technical constructions whose failure or destruction might endanger the population and its material possessions, social facilities and productive units or it can cause prejudices to the environment, are under the obligation to maintain, repair and exploit them properly, to equip these works with measuring and control devices necessary for tracking their behaviour in time, to install warning - alerting systems for people in areas located downstream the dam, to ensure, in case of an imminent hazard, the alerting of the population from the risk area created following own activities unfolded, by informing the Local and/ or County Committee of this, according to case, and the County Operational Centre and to organize the surveillance, intervention and



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



rehabilitation activity according to regulations approved by water management permits, defence plans against floods, ice and accidents at hydro-technical constructions, action plans in case of accidents at dams and plans for the prevention and fighting against accidental pollution.

Types of risks generating emergency situations:

- *Floods*, following natural overflows of watercourses caused by the increase of flow capacities coming from precipitation and/ or sudden melting of snow or blockage caused by undersized discharge openings of bridges and footbridges, blockage produced by ice or floating items (waste and wood material), landfalls, drifts and snow avalanches, as well as floods by discharge from mountainsides;

- *Floods caused by incidents, accidents or failures at hydro-technical constructions;*

- *Floods caused by the increase of the underground water level;*

- *Floods caused by marine storms;*

- *Hydrologic drought* (shortage of source water due to an extended drought);

The following are directly or indirectly exposed to these types of risk:

- **Human life and people's** possessions, as well as animal life;

- Social, cultural, administrative and patrimony facilities;

- Productive units (commercial companies, industrial platforms, electric stations, agricultural- animal farms, fish facilities, harbours and others);

- Dams and other hydro-technical works representing a downstream source of risk, in case of accidents taking place;

- Means of road, railway and maritime communication, gas and electrical supply networks, water supply and sewage systems and sources, treatment stations, telecommunication networks and others;

- Natural environment (water and terrestrial ecosystems, forests, agricultural lands, urban areas of localities and others).

The management of emergency situations is carried out by:

- a) *Prevention and preparedness measures* for interventions;

- b) *Urgent operative measures of intervention after the occurrence of hazardous phenomena with serious consequences;*

- c) *Measures of subsequent intervention for recovery and rehabilitation.*

The defence condition generated by floods starts on the moment of noticing the occurrence of the hazardous phenomenon (exceeding critical thresholds) or when the likelihood of occurrence is set out by means of forecast.



Colour codes are assigned to these thresholds, as follows:

- <b>YELLOW CODE</b> , in case the anticipated hydrologic phenomena can be temporarily hazardous for certain activities;
▫ <b>ORANGE CODE</b> , in case the hydrologic phenomena estimated to be hazardous have a high intensity degree and can cause significant social and economic damages;
▫ <b>RED CODE</b> , in case the hydrologic phenomena estimated to be hazardous can have disastrous effects, with a potential threat on lives and possessions.

In case of a source water shortage, caused by an extended drought - hydrologic drought, the following thresholds are set out:

<b>NORMAL PHASE</b> - when the source flow capacity is higher or equal to the warning flow capacity, but can ensure water requirements of use
<b>WARNING PHASE</b> - when the source flow capacity decreases, but can satisfy the minimum flow capacity necessary to use;
<b>RESTRICTION PHASE</b> - when the source flow capacity is lower than the minimum flow capacity needed for use.

The procedure for coding hydrologic warnings and alerts issued in case of hazardous hydrologic phenomena occurrence, at national or regional level.

In cases when forecasts show exceeding of defence levels for Danube or national rivers, as well as important discharges from mountainsides, streams, temporary hollows, rivulets, the National Institute of Hydrology and Water Management issues a hydrologic warning or a hydrologic alert, according to case, in which it summarizes the phenomenon, its intensity, its possible effects, the area that can be affected, the likely moment of its occurrence and the term, by mentioning the likelihood of hazardous phenomena occurrence.

The hydrologic warning is issued when the possibility of exceeding defence levels or the possibility of other hazardous hydrologic phenomena (important discharges from mountainsides, streams, temporary hollows and rivulets) is anticipated, based on weather forecast.

The hydrologic alert is issued when an imminent exceeding of defence levels and/ or the occurrence of other hazardous hydrologic phenomena (important discharge from mountainsides, streams, temporary hollows, and rivulets) is/ are anticipated, based on weather forecast and river condition.

For indicating the intensity of the phenomenon generating high floods specific to an area or a river sector, the following colour codes will be used:



YELLOW: risk for high floods or fast increases of water level, not leading to significant damages, but requiring an increasing attention in case of carrying out seasonal activities and/ or activities exposed to floods;

ORANGE: risk for high floods generating important overflows, likely to have a significant impact on community life and **people's** safety and possessions.

Setting out defence thresholds as follows:

YELLOW: corresponds to the warning situation:

The warning situation means a special situation and does not necessarily represent any hazard.

The consequences of reaching the warning situation are:

- Increasing the number of observations and measurements to be made for keeping track of the phenomenon and for the forecast of its evolution;
- Checking the constructions with a defence role and keeping track of ensuring the conditions for high water discharge;
- Informing of the possibility for an accidental pollution to take place.

ORANGE: corresponds to a flood situation:

The alert situation is characterized by an evolution of phenomenon to a possible hazard (for example: further increase of water levels, increase of flow capacities infiltrated through retention hydro-technical constructions and of carrying materials from their structure, increase of precipitation intensity and of wind speed, confirmed accidental pollutions that need interventions and others). Calling for an alert condition leads to entering the operative situation of the committees for emergency situations.

The activities carried out are both activities meant to take control of the phenomenon, and activities preparing for the case a hazardous situation takes place.

RED: corresponds to a hazardous situation:

A hazardous situation starts when the hazard becomes imminent and it is necessary to take some exceptional measures for limiting the effects of floods (evacuating people, animals, material possessions, special measures in exploiting hydro-technical constructions with a role of defence against floods, traffic restrictions on certain roads and bridges, as well as on navigable means), as well as for preventing accidental pollutions with serious effects on the ecosystem (changing parameters of water quality, destruction of fauna and fish populations, environment, and others, or that exceed the field of competence).

The specific measures for defence against floods are:

- Warning area measures, set out at hydrometrical stations and at pluviometry posts located upstream of endangered facilities, according to case, for precipitations, levels or flow capacities;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Defence local measures, set out close to facilities, under the form of levels or flow capacity.

The above defined specific measures of defence in case of floods are:

For watercourse areas that are dammed up:

- Level of phase 1 of defence - when the water level reaches the foot of the exterior bank of the dam on a third of its length;
- Level of phase 2 of defence - when the water level reaches half of the height between the level of phase 1 and the level of phase 3 of defence;
- Level of phase 3 of defence - when the water level reaches 0.5 - 1.5 m under the known maximum water levels or under the maximum level for which that dam has been designed or when exceeding a critical point.

For watercourse areas that are not dammed up:

- Warning level - the level at which the flooding risk is possible after a relative short time, in which defence or evacuation actions can be organized;
- Flooding level - level at which the flooding of the first facility starts;
- Hazard level - level at which special measures of evacuating people and possessions, restrictions for using bridges and roads, as well as special measures in exploiting hydro-technical constructions are necessary.

## Bibliography:

*Government Emergency Ordinance No. 21 as of April 15, 2004 regarding the National Emergency Management System;*

*Law No. 15 as of February, 2005 for approving the Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System;*

*Emergency Ordinance No. 1 as of January 29, 2014 regarding certain measures in the field of the management of emergency situations, as well as for amending and supplementing the Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System*





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



### *Topic 3: Risk Assessment of Natural Disasters and Other Accidents*

#### Management of Emergency Situations

The emergency situation is characterized by its amplitude which represents the extent of the area its destructive effects take place, under which human life, the operation **of democratic state's institutions, the values and interests of the community** are threatened. Furthermore, the emergency situation is also characterized by its intensity that can be defined as the pace which destructive phenomena evolve with and the degree of normality disturbance. The previously mentioned elements have determined the law giver to regulate the management of the emergency situation.

From a legal perspective, the management of the emergency situation represents the set of activities developed and procedures used by decision makers, institutions and public service departments authorized to identify and monitor risk sources, to assess information and analyse the situation, to issue forecast, to set out variants of actions and to implement them for the purpose of resetting normality.

The management of emergency situations represents identifying, recording and assessing risks/ types of risks and their determining factors, notifying interested agents, warning the population, limiting, setting aside or fighting risk factors and, last but not the least, negative effects and the impact caused by negative/ exceptional events they can generate. In another train of thoughts, the management of emergency situations means applying policies, procedures and practices that have the identified objectives of analysing, assessing, treating, monitoring and reassessing risks in order to reduce them, so that human communities (citizens) can live, work and satisfy their needs and aspirations in a long lasting social and physical environment. In other words, the management of emergency situations has the main priority to increase the degree of civil safety.

Starting 2004, in Romania, for the purpose of *preventing and managing emergency situations, ensuring and coordinating human, material, financial and other resources needed for resetting normality*, the National Emergency Management System (SNMSU) was initiated (based on O.G. - Government Ordinance - No. 21/ 2004 with subsequent amendments).

It is organized by authorities of the public administration and it includes a network of competent organizations, bodies and structures, organized on competence levels or fields, *with the following structure*:

#### A. Committees for emergency situations:

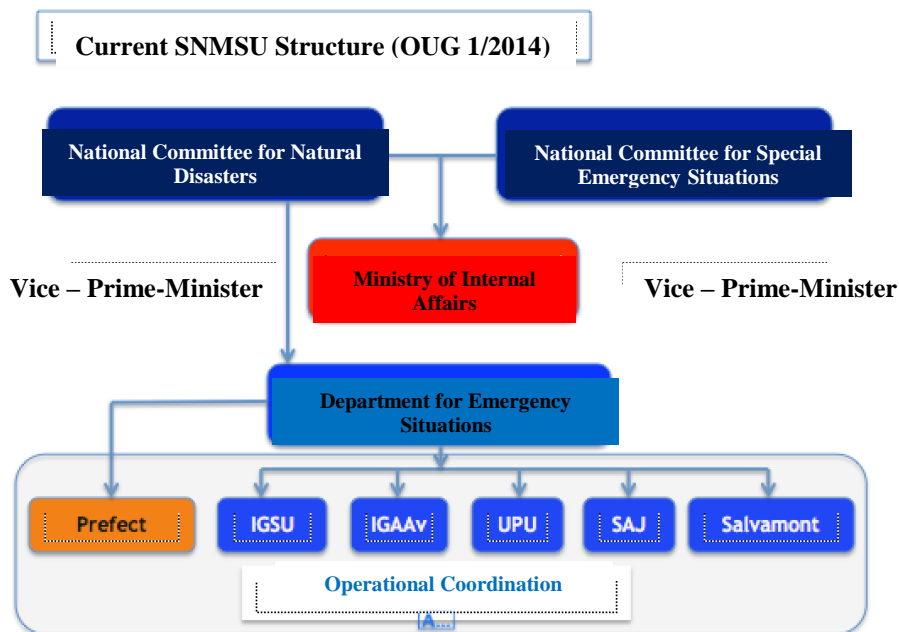
- *National Committees for Special Emergency Situations/ National Committee for Natural Disasters (according to case);*
- *Ministerial committees and those of other central public institutions for emergency situations;*

- County Committees for Emergency Situations, and The Committee of Bucharest Municipality for Emergency Situations;
- Local Committees for Emergency Situations;
- The General Inspectorate for Emergency Situations;
- Professional Emergency Services and Voluntary Emergency Services;
- Operative Centres and Centres for Intervention Coordination and Management;
- Action's commander.

The Committees for Emergency Situations are inter-institutional bodies for the support of the management, ensured by its coordinators. They will organize and operate at national and local level.

The Ministerial Committees and those of other public institutions for emergency situations (consisting of decision makers, experts and specialists from their own department), are built and operate under the coordination of ministers, namely heads of national public institutions.

The diagram regarding the new emergency management system:



SNMSU - National Emergency Management System

IGSU - General Inspectorate for Emergency Situations

IGAAv - General Inspectorate of Aviation

UPU - Emergency Receiving Unit

SAJ - County Ambulance Service



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



#### AT TERRITORIAL AND LOCAL LEVEL:

*The Committee of Bucharest Municipality for Emergency Situations* - consisting of the general mayor, sector mayors, heads of distributed, decentralized and communal management public services, institution managers, autonomous administrations, and commercial companies fulfilling functions for supporting the management of emergency situations, as well as managers of the economic agents that, by type of their activity, represent potential risk factors. The Committee is **appointed following prefect's instructions;**

*County Committees for Emergency Situations* - consisting of: president of the county council, heads of distributed, decentralized or communal management services, and other managers of institutions and commercial companies of county interest, fulfilling support functions in managing emergency situations, as well as managers of economic agents that, by type of their activity, represent risk factors.

**The county council is appointed under prefects' instructions.**

*Local Committees for Emergency Situations* - at the level of municipalities, towns, sectors of Bucharest municipality and of communes - members: vice-mayor, the secretary of the commune, city or municipality, according to case, and representatives of public services and of main institutions and economic agents from the related territorial and administrative division, as well as managers or coordinators of economic agents, subsidiaries, branches or local working facilities, that, by the type of their activity, represent risk factors. The committee is appointed under the management of the mayor and with the approval of the prefect.

#### AT NATIONAL LEVEL:

*The General Inspectorate for Emergency Situations (IGSU)* - specialized body of the Ministry of Internal Affairs, ensures the unitary and permanent coordination of activities for the prevention and management of emergency situations. By means of the National Operational Centre, it ensures the permanent technical secretariat of the National Committee for Natural Disasters (CNCI) and the unitary coordination of interventions for the National Committee for Special Emergency Situations (CNSSU) and fulfils functions of monitoring, assessing, notifying, pre-warning, alerting and operationally and technically coordinating, at national level, structures with responsibilities in the management of emergency situations.

For the coordination and management of actions during the occurrence of emergency situations, at national level, the National Centre of Intervention Coordination and Management is activated, while its structure is designed for supporting the decision, and it is activated following the instructions of the Head of Department for Emergency Situations (MAI - Ministry of Internal Affairs) and that includes specialists and experts, representatives of national structures existing within CNCI/ CNSSU.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



*Operative Centres* - at the level of ministries and of other national public institutions with complex tasks and functions in managing emergency situations - fulfilling the same functions as IGSU (General Inspectorate for Emergency Situations), in fields of competence of ministries and national public institutions at whose level they operate.

#### AT LOCAL LEVEL:

*Professional Emergency Services*, operating as County/ Bucharest Municipality Inspectorates - specialized bodies within the Ministry of Internal Affairs, ensure, at county level and at the level of Bucharest Municipality, the unitary and permanent management of activities for the prevention and management of emergency situations. By means of operational centres, it ensures the permanent technical secretariat of the County or Bucharest Municipality Committee and it fulfils functions of monitoring, assessing, notifying, pre-warning, alerting and operationally and technically coordinating emergency situations at county/ Bucharest Municipality level.

At the level of Bucharest Municipality and of counties, at the occurrence of an emergency situations, the Centre of Bucharest Municipality for Intervention Coordination and Management (CMBCCI) is activated, along with the County Centre of Intervention Coordination and Management (CJCCI), designed for the support of the decision of the Committee of Bucharest Municipality for Emergency Situations/ County Committee for Emergency Situations. CJCCI is activated at the proposal of the chief inspector of Bucharest Municipality Inspectorate for Emergency Situations/ of the County Inspectorate for Emergency Situations, with the approval of the prefect. CMBCCI/ CJCCI is the structure including specialists and experts, representatives of the structures existing within CMBSU/ CJSU.

*Operative Centres with Temporary Activity* - constituted when *declaring an alert condition* or when the situation requires it at the level of municipalities, cities and communes; during a regular period of time, they are ensured by persons specifically appointed within the own body of that authority;

*Emergency teams* - constituted during emergency situations at the level of endangered or affected commercial companies that work together with structures of the National System.

*The management of emergency situations operates according to the following principles:*

- Prevention and anticipation;
- Protection and saving the life of the population;
- **Respecting people's liberties and fundamental rights;**
- Taking responsibility for the management of emergency situations;
- Continuing the cooperation at regional, national and international level between similar organizations and bodies;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Activities unfolding for managing emergency situations must be transparent, so that they do not worsen the already existing effects;
- Progress and continuity of the actions of managing emergency situations, from the level of local public institutions authorities to the national public institution level, according to the extent of their intensity and amplitude;
- Efficacy, an active co-working and a subordination from hierarchic perspective of constituents of the National Emergency Management System.

## RISK FOR FLOODS

The management of emergency situations produced by floods is a topic of a, not only national, but especially local amplitude.

From my point of view, an important risk that I would like to approach is the flood risk and the implications of local public authorities, mainly of the Prefect Institutions, in the management of such risk.

Given the importance of managing the flood risk, the National Strategy for the Flood Risk Management has been elaborated. The purpose of this strategy is represented by diminishing the impact floods might have on citizens of the state and on their possessions, by means of a proper management and by policies able to respond to imposed standards, in order to protect the environment.

**“The strategy of flood management builds up the framework document for preparing and adopting some specific measures and actions, covering:**

- Knowing the flood risk;
- Monitoring the phenomenon of floods;
- Informing population;
- Considering the flood risk in all activities related to the activities of developing the territory;
- Adopting preventing measures;
- Preparing for emergency situation;
- **Reconstruction and learning from previous experience.”<sup>5</sup>**

The strategy has 3 objectives: environmental, social and economic. Through the National Strategy for Flood Management, it is wished for improving the value of life by diminishing damages that floods may cause, as well as for a proper management of available means, in order to build, maintain and valorise the existing infrastructures and the means of diminishing the flood risk.

The prefect is the president of the County Committee for Emergency Situations.

**According to Law No. 481 as of November 8, 2004, on civil protection, “The Prefect has the following main responsibilities:**

- Approving operative and preparedness plans on civil protection and the planning of exercises and of other activities unfolded at the level of the territorial and administrative division;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Keeping track of civil protection measures to be followed at the level of the territorial and administrative division;
- Deciding, according to law, the calling of an alert condition, the activation or use, according to case, of intervention formalities;
- Approving the territorial risk diagram issued by the Inspectorate for Emergency Situations;
- Ensuring conditions for the good development and integration of activities of intervention teams from other counties or of international teams, according to case, arrived in the territorial and administrative division, for the purpose of limiting and setting aside disaster effects;
- Submitting to the County Council or the General Council of Bucharest Municipality, according to case, the proposals for supplementing the population warning and notification system, the sheltering fund, the material base and other measures for people protection, or the protection of material goods, cultural values or environment;
- **Exercising control in implementing measures in civil protection situations."**

The management of emergency situations generated by floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions is carried out by means of preventive and operative measures for intervention and rehabilitation, consisting of identifying, recording and assessing the types of risks and their determining factors, notifying interested agents, limiting, setting aside or fighting negative effects produced by risk factor manifestation.

The measures for limiting, setting aside or fighting the effects of types of risk, provided by Art. 5, represent an obligation for bodies of the national and local public administration with responsibilities in this field and for all legal entities and individuals, except for disabled persons, elder people, pregnant women and children.

Owners, by any right, of dams and other hydro-technical constructions whose failure or destruction might endanger the population and its material possessions, social facilities and productive units or it can cause prejudices to the environment, are under the obligation to maintain, repair and exploit them properly, to equip these works with measuring and control devices necessary for tracking their behaviour in time, to install warning - alerting systems for people in areas located downstream the dam, to ensure, in case of an imminent hazard, the alerting of the population from the risk area created following own activities unfolded, by informing the Local and/ or County Committee of this, according to case, and the County Operational Centre and to organize the surveillance, intervention and rehabilitation activity according to regulations approved by water management permits, defence plans against floods, ice and accidents at hydro-technical constructions, action plans in case of accidents at dams and plans for the prevention and fighting against accidental pollution.





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



Types of risks generating emergency situations:

- *Floods*, following natural overflows of watercourses caused by the increase of flow capacities coming from precipitation and/ or sudden melting of snow or blockage caused by undersized discharge openings of bridges and footbridges, blockage produced by ice or floating items (waste and wood material), landfalls, drifts and snow avalanches, as well as floods by discharge from mountainsides;
- *Floods caused by incidents, accidents or failures at hydro-technical constructions;*
- *Floods caused by the increase of the underground water level;*
- *Floods caused by marine storms;*
- *Hydrologic drought* (shortage of source water due to an extended drought);

The following are directly or indirectly exposed to these types of risk:

- **Human life and people's possessions, as well as animal life;**
- Social, cultural, administrative and patrimony facilities;
- Productive units (commercial companies, industrial platforms, electric stations, agricultural- animal farms, fish facilities, harbours and others);
- Dams and other hydro-technical works representing a downstream source of risk, in case of accidents taking place;
- Means of road, railway and maritime communication, gas and electrical supply networks, water supply and sewage systems and sources, treatment stations, telecommunication networks and others;
- Natural environment (water and terrestrial ecosystems, forests, agricultural lands, urban areas of localities and others).

The management of emergency situations is carried out by:

- a) *Prevention and preparedness measures for interventions;*
- b) *Urgent operative measures of intervention after the occurrence of hazardous phenomena with serious consequences;*
- c) *Measures of subsequent intervention for recovery and rehabilitation.*

The defence condition generated by floods starts on the moment of noticing the occurrence of the hazardous phenomenon (exceeding critical thresholds) or when the likelihood of occurrence is set out by means of forecast.



Colour codes are assigned to these thresholds, as follows

- <b>YELLOW CODE</b> , in case the anticipated hydrologic phenomena can be temporarily hazardous for certain activities;
▫ <b>ORANGE CODE</b> , in case the hydrologic phenomena estimated to be hazardous have a high intensity degree and can cause significant social and economic damages;
▫ <b>RED CODE</b> , in case the hydrologic phenomena estimated to be hazardous can have disastrous effects, with a potential threat on lives and possessions.

In case of a source water shortage, caused by an extended drought - hydrologic drought, the following thresholds are set out:

<b>NORMAL PHASE</b> - when the source flow capacity is higher or equal to the warning flow capacity, but can ensure water requirements of use
<b>WARNING PHASE</b> - when the source flow capacity decreases, but can satisfy the minimum flow capacity necessary to use;
<b>RESTRICTION PHASE</b> - when the source flow capacity is lower than the minimum flow capacity needed for use.

The procedure for coding hydrologic warnings and alerts issued in case of hazardous hydrologic phenomena occurrence, at national or regional level.

In cases when forecasts show exceeding of defence levels for Danube or national rivers, as well as important discharges from mountainsides, streams, temporary hollows, rivulets, the National Institute of Hydrology and Water Management issues a hydrologic warning or a hydrologic alert, according to case, in which it summarizes the phenomenon, its intensity, its possible effects, the area that can be affected, the likely moment of its occurrence and the term, by mentioning the likelihood of hazardous phenomena occurrence.

The hydrologic warning is issued when the possibility of exceeding defence levels or the possibility of other hazardous hydrologic phenomena (important discharges from mountainsides, streams, temporary hollows and rivulets) is anticipated, based on weather forecast.

The hydrologic alert is issued when an imminent exceeding of defence levels and/ or the occurrence of other hazardous hydrologic phenomena (important discharge from mountainsides, streams, temporary hollows, and rivulets) is/ are anticipated, based on weather forecast and river condition.

For indicating the intensity of the phenomenon generating high floods specific to an area or a river sector, the following colour codes will be used:



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



YELLOW: risk for high floods or fast increases of water level, not leading to significant damages, but requiring an increasing attention in case of carrying out seasonal activities and/ or activities exposed to floods;

ORANGE: risk for high floods generating important overflows, likely to have a significant impact on community life and **people's** safety and possessions.

Setting out defence thresholds as follows:

YELLOW: corresponds to the warning situation:

The warning situation means a special situation and does not necessarily represent any hazard.

The consequences of reaching the warning situation are:

- Increasing the number of observations and measurements to be made for keeping track of the phenomenon and for the forecast of its evolution;
- Checking the constructions with a defence role and keeping track of ensuring the conditions for high water discharge;
- Informing of the possibility for an accidental pollution to take place.

ORANGE: corresponds to a flood situation:

The alert situation is characterized by an evolution of phenomenon to a possible hazard (for example: further increase of water levels, increase of flow capacities infiltrated through retention hydro-technical constructions and of carrying materials from their structure, increase of precipitation intensity and of wind speed, confirmed accidental pollutions that need interventions and others). Calling for an alert condition leads to entering the operative situation of the committees for emergency situations.

The activities carried out are both activities meant to take control of the phenomenon, and activities preparing for the case a hazardous situation takes place.

RED: corresponds to a hazardous situation:

A hazardous situation starts when the hazard becomes imminent and it is necessary to take some exceptional measures for limiting the effects of floods (evacuating people, animals, material possessions, special measures in exploiting hydro-technical constructions with a role of defence against floods, traffic restrictions on certain roads and bridges, as well as on navigable means), as well as for preventing accidental pollutions with serious effects on the ecosystem (changing parameters of water quality, destruction of fauna and fish populations, environment, and others, or that exceed the field of competence).

The specific measures for defence against floods are:

- Warning area measures, set out at hydrometrical stations and at pluviometry posts located upstream of endangered facilities, according to case, for precipitations, levels or flow capacities;
- Defence local measures, set out close to facilities, under the form of levels or flow capacity.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



The above defined specific measures of defence in case of floods are:

For watercourse areas that are dammed up:

- Level of phase 1 of defence - when the water level reaches the foot of the exterior bank of the dam on a third of its length;
- Level of phase 2 of defence - when the water level reaches half of the height between the level of phase 1 and the level of phase 3 of defence;
- Level of phase 3 of defence - when the water level reaches 0.5 - 1.5 m under the known maximum water levels or under the maximum level for which that dam has been designed or when exceeding a critical point.

For watercourse areas that are not dammed up:

- Warning level - the level at which the flooding risk is possible after a relative short time, in which defence or evacuation actions can be organized;
- Flooding level - level at which the flooding of the first facility starts;
- Hazard level - level at which special measures of evacuating people and possessions, restrictions for using bridges and roads, as well as special measures in exploiting hydro-technical constructions are necessary.

### Bibliography:

*Government Emergency Ordinance No. 21 as of April 15, 2004 regarding the National Emergency Management System;*

*Law No. 15 as of February, 2005 for approving the Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System;*

*Emergency Ordinance No. 1 as of January 29, 2014 regarding certain measures in the field of the management of emergency situations, as well as for amending and supplementing the Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System*



## Topic 4: Protection and Rescue Plans

Emergency situations are various and, usually, unexpected. Therefore, the plans for preventing the effects of emergency situations and for intervention in such situations are difficult and hard to accomplish. The difficulty consists in the variety of situations, conditions and encouraging or discouraging factors. The difficulty in conceiving, drafting, implementing and applying such plans also includes the intervention of various casual factors, and the impossibility to anticipate all events, emergency situations imply and create.

If such plans are too concise, then prevention and intervention will randomly take place, and the results themselves will also be random. If they are too detailed, then prevention and intervention will also suffer, because, when we refer to emergencies, especially in extreme risk conditions, it is very difficult for a plan to cover all details.

### CONTENTS OF A PLAN

For defence against floods, ice and accidental pollutions of municipality, city and commune committees for emergency situations:

A. - Municipality, city and commune committees for emergency situations draft plans of defence against floods, ice and accidental pollutions, with the following content:

1. *Title page* with a list of signatures;
2. *Short memorandum* for locality presentation (with focus on water resources);
3. **Mayor's directive** for the constitution of the committee for emergency situations;
4. *Nominal constituency* of the municipality, town or commune committee, also specifying the division they belong to, position, address, (fixed and mobile) home and business phone numbers, e-mail addresses;
5. *Regulation for the organization and operation* of the Local Committee for Emergency Situations;
6. *Phone and fax numbers of the permanent service and e-mail addresses* (town halls, police, post offices, etc.) where warnings, forecasts, decisions, directives and information can be sent;
7. *Operative and decisional information flow diagram* for defence against floods and hazardous weather phenomena;
8. *Coding of weather notifications and warnings* and hydrological warnings and alerts;
9. *List including specific data for the defence* of floodable facilities (type table) that would cover:
  - Number;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- SIRUTA (Information System of Territorial and Administrative Division Register) code;
- Name of villages belonging to the commune;
- Watercourse (all watercourses within the area of the locality - rivers, local rivulets, temporary hollows, streams), existing dam whose damage can lead to locality flooding, areas affected by excessive humidity;
- Name of facilities within the floodable area (for each risk source and for each village in part): no. of houses, no. of social facilities, administrative headquarters, economic facilities, means of communication, water, gas, electricity networks, phone networks, agricultural lands, forests, pollution sources;
- Flooding causes (overflow, discharges from mountainsides, dam failure, excessive humidity);
- Phone numbers, fax, e-mail address of the town hall, police department, civil protection, school, etc.;
- Location of the local hydrometric station;
- Local defence measures (CA - yellow code; CI - orange code; CP - red code; defence phases at dams, defence phases at ice);
- Location of hydrometric station or warning pluviometry post;
- Warning defence measures (CA - yellow code; CI - orange code; CP - red code; critical thresholds at dams, critical thresholds at precipitation);
- The time of spread for the high water wave from the warning hydrometric station to facilities or the average time of hazardous precipitation concentration from the pluviometry post to facilities;
- Hydro-technical works with a role of defence against floods existing on every watercourse (name, technical features, critical points - bank erosions, areas under the designed level, areas with missing protection barriers, areas with crossing works, endemic areas for infiltrations and griffins);
- Likelihood of flooding: standardized (designed), with related and real flow capacity (currently existing - if determined by recent studies);
- Down the page, reference will be made to the significance of specific defence measures and colour codes for hydrologic notifications and warnings;
- The list is signed by the president of the Local Committee for Emergency Situations;

#### 10. *Preventive and operative measures to be taken at local level:*

- Measures for population warning and alerting when receiving weather and hydrologic warnings, taken by town halls, police, local committee - responsibilities for activating warning systems and for population warning in villages belonging to the commune;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Measures for reaching the WARNING LEVEL (CA), Phase I of defence at dams, Phase I of defence at ice, warning thresholds for precipitation - Yellow Code;
- Measures for reaching the FLOOD LEVEL (CI), Phase II of defence at dams, Phase II of defence at ice, worsening thresholds for precipitation - Orange Code;
- Measures for reaching the HAZARD LEVEL (CP), Phase III of defence at dams, Phase III of defence at ice, hazard thresholds for precipitation - Red Code;
- Measures when exiting the EMERGENCY CONDITION;
- Constituency of the Voluntary Service for Emergency Situations;
- Persons in charge of defence actions (appointing persons responsible for population evacuation and ensuring temporary accommodation places, appointing the personnel ensuring permanent services at the town hall during the unfolding of hazardous hydro-meteorology phenomena, appointing the person in charge of issuing daily “Operative Reports”, that are sent to the Operational Centre of the Inspectorate for Emergency Situations and (the Operational Centre of the Water Management System));
- List of bridges and footbridges with undersized discharge openings for which permanent surveillance is ensured during high waters;

11. *Constituency of the Voluntary Service for Emergency Situations* and distribution on floodable areas;

12. *List with means of intervention*, appointing the local units to ensure them and their distribution on floodable areas;

13. *List with the minimum stock of existing defence means and materials*, whose inventory is decided based on the Framework - Norm, with the technical assistance of water management units, only for necessary types according to the area where the locality is positioned, to the degree of area development, to the type of existing works and to the specificity of operative intervention actions;

14. *Site plan of the locality*, at the scale of 1:25,000, 1:10,000 or 1:5,000 (according to the plan included in the General Urbanism Plan), with the location of the facilities likely to be affected, marking the floodable areas both from watercourse overflows and discharges from mountainsides, the location of the hydro - technical constructions with a role of defence against floods with their critical points and indicating areas for controlled flooding (according to case), means of communication, areas with undersized bridges and footbridges and other critical areas, as well as preventive evacuation and accommodation areas for population, animals and possessions;

15. *A transversal type profile through the river bed and dam* (according to case) where DEFENCE LEVELS and Defence Phases at dams will be specified;

16. *Plans of defence against floods of institutions and economic agents* that are important in the floodable area, of isolated facilities, as well as of other facilities likely to pollute;

17. *Plans of preventing and fighting against accidental pollutions at water sources likely to pollute of the territorial and administrative division.*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



18. *Measure plan in case of hydrological drought*, as well as water restriction and use plan in critical times from water users likely to be affected, or that imply a high pollution potential.

B. - For isolated facilities, such as construction sites, gravel pits, drills and oil storage areas, other facilities likely to pollute - separation ponds, waste storage areas, defence plans will be issued, according to the model above, adjusted to their features and they will be sent to the Local Committee for Emergency Situations, **in the area of which the facility is located (see file “Flood Plans of Institutions and Economic Agents”)**. For dams of C and D category impoundments located in the area of the locality, that do not meet the conditions necessary for drafting a warning and alerting plan, the following will be mentioned: owner, likely floodable facilities in case of accidents at the dam, the person in charge of the technical surveillance on behalf of the Water Management System (SGA).

C. - For localities downstream of the large dams, the defence plan against floods will include elements that are strictly necessary, extracted from the Warning and Alerting Plan related to the dam: minimum time of failure wave spreading to the locality, the maximum limit of the failure wave - facilities covered by the floodable area, maximum height of the nappe, as well as evacuation areas in case of an accident at the dam.

D. - The defence plans of Local Committees for Emergency Situations are checked by the Water Management Systems and acknowledged by the Technical Support Groups for managing emergency situations generated by floods, hydrological drought, accidents at hydro-technical constructions and accidental pollutions within County Committees for emergency situations and are approved by the president of the County Committee - County Prefect. The defence plan is issued and submitted for acknowledgement and approval in 3 written and electronic copies.

E. - In addition to drafting local plans, it is necessary to also have drafted lists of the personnel appointed by the mayor for performing different activities (to be included in the content of the plan and to be displayed at the town hall), such as:

- The commission for the acknowledgement and assessment of the damages caused on the territory of the municipality/ town/ commune;
- Appointing of persons in charge of evacuating population and ensuring temporary accommodation;
- Appointing of the personnel ensuring permanent services within the town hall during the development of hazardous hydro-meteorological phenomena;
- Appointing of persons responsible for drafting (daily) Operative Reports and Synthesis Reports, to be submitted to the Operational Centre of the



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



Inspectorate for Emergency Situations (and the Operative Centre of the Water Management System) - see also ROF (Organization and Operation Regulation) to check the appointments;

- Display of the Significance of the colour codes for hydro-meteorological warnings at all town halls (to be found under File 21 - Posting of town halls).

### Bibliography:

*ORDER No. 192 as of August 2, 2012, for approving the Regulation on managing emergency situations generated by floods, hazardous weather phenomena, accidents in hydro technical constructions, accidental pollutions on watercourses and sea pollutions in the coastal area;*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Module 2: Preparedness Measures

### *Topic 1: Concept and Importance of Emergency Preparedness with Regard to Flooding*

#### 1. General Aspects

When discussing about natural risks, we refer to situations whose coefficients of condition can have a variable behaviour, starting from a normality condition and being able to reach a hazard condition, while their causes might be based on weather phenomena with a high level of hazard or geologic phenomena that can have destructive effects. In the last years, we have been able to notice an increase of manifestations in the category of natural risks, mainly referring to floods and landfalls, events that have led not only to material damages, but also **citizens' life disturbance**. A good management of these risks can lead to a decrease of effects that can be caused by them.

Flood represents covering of the land with standing or running water that, by its size and term, can cause human victims and material destructions, disturbing the good development of the social and economic activities in the affected area. Floods represent the most frequent and spread on Earth hazard, with many human life losses and large material damages.

Floods occurred in many countries and their consequences have led to a new approach, considering the increase of the social responsibility, namely the management of flood risks; in this approach, the awareness and involvement of human communities play an essential role in avoiding human life losses and in reducing damages.

The international practice has proved that the occurrence of floods cannot be avoided, but they can be managed, while their effects can be reduced by means of a methodical process that leads to a set of measures and actions meant to contribute to diminishing the risk associated with such phenomena. Flood management is facilitated by the fact that their place of development is predictable and a previous warning is often possible, and it is usually possible to also determine who and what will be affected by floods.

Flood risk management means applying some policies, procedures and practices with the objectives of identifying risks, analysing and assessing them, treating, monitoring and assessing risks in order to reduce them, so that human communities, all citizens, can live, work and satisfy their needs and aspirations in a long term physical and social environment.

Flood risk is characterized by its nature and development likelihood, exposure degree of receivers (number of people and possessions), flood



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



susceptibility of receivers and their value, by default resulting that actions have to be taken on its characteristics, to reduce the risk.

The essential problem in the management of risk for floods is that of the risk accepted by population and decision-makers, as it is known that there is no full protection against floods (zero risk), such as there is no unity on the acceptable risk. Consequently, the acceptable risk must be the result of a balance between the risk and the benefits associated with an activity, following the reduction of flood risk or a governmental regulation.

Diminishing damages or human life losses following floods does not only depend on response actions taken during floods, actions that are sometimes separately approached, under the name of management of emergency situations. Diminishing flood consequences is the result of a complex combination, between measures and actions, prior to phenomenon development, those of management during the flood unfolding and those performed after the flood (reconstruction and learned lessons following the phenomenon). Consequently, at international level, a more detailed term of flood management is used, including both flood risk management and the management of emergency situations generated by floods.

In order for the efforts of the government, competent authorities and agencies and community to be coordinated and to have the effect of a community that is prepared to face the flood phenomenon, flood management must be approached in an integrated manner.

#### 1. The main activities of flood management consist in:

Preventive activities (prevention, protection and preparedness). These actions focus on preventing/ diminishing the potential damages generated by floods through:

- Avoiding the construction of houses and social, cultural and/ or economic facilities in potential floodable areas, by describing in the urbanism documents the data regarding previous flood effects; adjusting future developments to flood risk conditions; promoting some proper practices for using lands and agricultural and forest lands;
- Taking structural protection measures, including in the area of bridges and footbridges;
- Taking non-structural measures (the control of using minor river beds, issuing catchment area plans for reducing flood risk and measure programs; introducing insurance systems, etc.);
- A detailed identification, geographic delimitation of natural flood risk areas in the territorial and administrative division, including these areas in the general urbanism plans and provision in urbanism regulations for specific measures regarding preventing and diminishing the flood risk, developing constructions and using of lands;
- Implementing forecast, warning and alerting systems for flood cases;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Maintaining existing infrastructures for protection against floods and river beds of watercourses;
- Carrying out works for protection against river beds scouring in the area of existing bridges and footbridges;
- Communicating with people and instructing them on flood risks and their way of acting in case of emergency situations.

Activities of operative management (management of emergency situations) that are carried out during flood phenomenon:

- Identifying the possibility for likely high waters and floods to develop;
- Anticipating the evolution and spread of high waters along watercourses;
- Warning authorities and the population about the extent, seriousness and time of floods to occur;
- Organizing and taking response actions of authorities and population for emergency situations;
- (Material, financial, human) resource supply at county level for an operative intervention;
- Activating operational institutions, calling out resources, etc.

Activities carried out after the flood phenomenon:

- Supporting in satisfying immediate needs of the population affected by disaster and returning to a normal life;
- Reconstructing damaged buildings, infrastructures and those belonging to the protection system against floods;
- Revising flood management activities in order to improve the process for an intervention planning so as to be able to face future events in the affected area, as well as in other areas.

## 2. Setting out defence thresholds

The defence condition generated by floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions is initiated when the occurrence of a hazardous phenomenon (exceeding of defence thresholds) is noticed or when the likelihood of occurrence is set out by forecast.

The specific measures of defence against floods are:

- a) Area warning measures, set out at hydrometric stations and at pluviometry posts located upstream of endangered facilities, according to case, for precipitation, levels or flow capacity;
- b) Local defence measures, set out close to facilities, as levels or flow capacities.

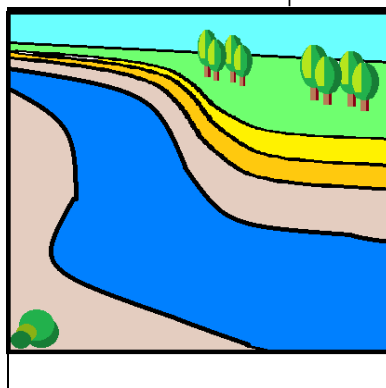
Warning hydrometric stations and pluviometry posts are part of the national hydrology and meteorology network and must be placed at an adequate distance to



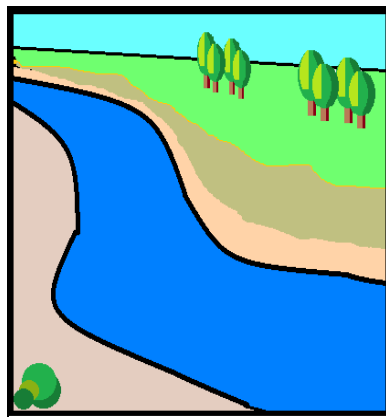
the warned facility, in order for the necessary measures, set out by defence plans, to be taken as needed.

Specific defence measures in case of floods:

A. For dammed up areas of watercourses :

	YELLOW CODE	- when the water level reaches the foot of the exterior bank of the dam on a third of its length;
	ORANGE CODE	- when the water level reaches half of the height between the level of phase 1 and the level of phase 3 of defence;
	RED CODE	- when the water level reaches 0.5 - 1.5 m under the known maximum water levels or under the maximum level for which that dam has been designed or when exceeding a critical point.

B. For areas of watercourses that are not dammed up:

	YELLOW CODE	- the level at which the flooding risk is possible after a relative short time, with an increased attention needed in case activities exposed to floods take place ;
	ORANGE CODE	- the level at which important overflows take place and they can lead to flooding of houses and social-economic facilities;
	RED CODE	- the level at which special measures of evacuating people and possessions, restrictions for using bridges and roads, as well as special measures in exploiting hydro-technical constructions are necessary.

For impoundments, phases I, II and III of defence are set out according to the level of lake water and the affluent flow capacity and are calculated by the engineering designer in the variation between the Normal Retention Level, hereinafter called NNR, and Overflow Top Level.

**For dams' behaviour, critical thresholds are set out by the engineering designer for each facility according to:**

- a) The level of lake water, when it exceeds the overflow top level;
  - Reaching some limit values in construction behaviour.

Limit values in construction behaviour are:

- Warning threshold - values of some parameters are close to or even exceed the normal called area, without any changes in the general condition of construction stability;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Alert threshold - hazardous changes of behaviour parameters with an evolution towards starting forms of bending;
- Hazard threshold - the dam bears some changes possibly leading to a serious damage or break of the structure.

In case of flood risks by ice aggregation and water overflow, the following specific measures are taken:

- Phase I - when the ice detach and floating ice runs on the watercourse and a small congestion occurs;
- Phase II - when floating ice crowd and water levels grow upstream;
- Phase III - when floating ice is blocked and builds up ice dams leading to damages by overflowing upstream or by moving the floating ice downstream.

### Bibliography:

*ORDER No. 192 as of August 2, 2012 for approving the Regulation on managing emergency situations generated by floods, hazardous weather phenomena, accidents in hydro-technical constructions, accidental pollutions on watercourses and sea pollutions in the coastal area;*

*H.G.R. (Romanian Government Decision) No. 1854 as of December 22, 2005 for approving the National Strategy for Flood Risk Management.*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## *Topic 2: Content of Risk Assessment of Natural Disasters and Other Accidents*

### 1. Organization of the Information System

Weather and hydrologic information system consists in noticing, measuring, recording and processing of weather and hydrologic data, issuing forecasts, warnings and alerts, as well as sending them to agents involved in the management of emergency situations generated by specific risks, according to the information flow diagram defined in the defence plans, in order to take the necessary decisions and measures.

In the areas laid-out with hydro-technical works, the information system also includes data and measures related to the exploitation manoeuvres that have the effect of changing the natural course of discharge.

Any manoeuvre to the hydro-mechanic equipment of the hydro-technical works with a role of defence against floods, belonging to other owners than the **National “Romania Waters” Administration, will be carried out only after obtaining** the approval and under the coordination of the water supervisory control offices of the Water Administrations.

The delivery of this information is an obligation of the hydro-technical work exploitation bodies, independent of the owner, and takes place in compliance with the information flow diagram, approved through the related defence plans.

The content and significance of the weather and hydrologic warning messages in case of hazardous weather and hydrologic phenomena taking place at national or regional level are decided under Order of the minister of administration and internal affairs and of the minister of the environment and water management No. 823/ 1427/ 2006 for approving the procedure for coding weather notifications and warnings and hydrological warnings and alerts.

Owners of hydro-technical constructions are under the obligation to ensure the installation and exploitation of meteorological, hydrologic or hydrometric devices, with the approval of Water Administrations, necessary for knowing and tracking the local specific defence measures and ensuring their correspondence to the area measures.

In order to ensure the delivery of information, forecasts and warnings from the meteorological and hydrological units to the ministry, County and Local Committees and to institutions appointed under norms or operative defence plans, means of telecommunication are set out to be used for this purpose.

Within counties, permanent services will be ensured by the Operational Centres within County Inspectorate of Bucharest Municipality for Emergency



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



Situations and the Operative Centres within Water Management Systems, while in municipalities, cities and communes, by the mayor, and at endangered social and economic facilities, by their coordinators.

In order to ensure the decisional and operative information flow between County and Local Committees, the means of telecommunication from police departments, military units and other available telecommunication means can also be used.

In order to ensure an operative intervention in emergency situations generated by incidents, accidents or failures at dams, the units holding such constructions draft action plans in case of accidents at dams, according to Annex No. 7 under ORDER No. 192 as of August 2, 2012.

In case of accidental pollutions on the Danube and cross-bordering rivers, the information system is organized and operates according to the International Operation Manual for Main International Alerting Centre (PIAC), while, in the case of accidental pollutions on internal rivers, the information system is organized according to SAPA-ROM alerting system and provisions of the county plans for defence against floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions.

In case of pollutions with hydrocarbons of the Black Sea, the information system is ensured and operates according to the National Plan for Preparedness, Response and Cooperation in case of sea pollution with hydrocarbons, approved by Government Decision No. 1593/ 2002, with subsequent amendments and additions.

## 2. Organizing, Preparing and Provision for Intervention Forces, Means and Materials

Individuals and legal entities who own or use lands or facilities in areas that can be affected by destructive actions of waters or by accidents at hydro-technical constructions are under the obligation to participate in defence actions and to ensure the proper maintenance and exploitation of the existing defence works.

Local committees, economic operators who hold facilities that can be affected by floods and hazardous weather phenomena, owners of hydro-technical works, as well as economic operators, likely to pollute, are under the obligation to organize and ensure the defence of such facilities with their own forces and means, previously provided in defence plans, and adjusted to clear conditions that might occur.

Coordinators, individuals and legal entities that own or use lands or facilities in areas that can be affected by destructive actions of waters or accidents at hydro- technical constructions are under the obligations to constitute appointed intervention groups, equipped with intervention means and materials according to the Framework - Norm of equipping with means and materials of defence against floods, ice and fighting against accidental pollutions, Annex No. 12 of ORDER No.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



192 as of August 2, 2012. In case of Local Committees for Emergency Situations, the activities regarding defence actions and ensuring the proper maintenance and exploitation of existing defence works are carried out by means of Voluntary Services, and in case of economic operators by Private Services for Emergency Situations.

The head of the Voluntary Services for Emergency Situations fulfils the function of flood agent at the level of the territorial and administrative division. The responsibilities of the flood agent are regulated by Government Decision No. 846/ 2010 for approving the National Strategy for Flood Risk Management on a long and medium term.

Voluntary and Private Services for Emergency Situations will be trained by experts within the County Inspectorate for Emergency Situations and the Technical Support Group for managing emergency situations generated by floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions, according to risk categories, for precisely knowing their responsibilities in different emergency situations.

The preparedness and training of Voluntary/ Private Services for Emergency Situations are carried out based on annual and monthly preparedness plans drafted on topics and exercises specific to the risk for floods and accidental pollutions.

County/ Bucharest Municipality Committees for Emergency Situations are under the obligations to form intervention forces and means for supporting Local Committees, in case their intervention capacity is exceeded according to law.

County/ Bucharest Municipality Committees for Emergency Situations together with the Ministry Committee will organize simulations for floods, failures at hydro- technical constructions and accidental pollutions on watercourses every year, for checking the way in which the information flow for these types of risks **operates, they will develop applicative exercises for checking group's** preparedness, operation of warning and alerting systems and the way in which intervention means and materials are used, as well as the training of the personnel involved in managing emergency situations generated by specific types of risk.

### 3. Operative Intervention Measures in Emergency Situations

The operative intervention measures are taken unitarily, based on plans of defence against floods, ice, accidents at hydro-technical constructions and accidental pollutions that are drafted per counties, localities and by water users likely to pollute, as well as at the level of catchment areas.

In case of forecasting the reach-out of critical thresholds or their untimely reach-out, according to case, the Local Committees for Emergency Situations take the following measures:



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



a) They ensure permanent services in town halls with trained personnel in order to receive notifications, forecasts and hydro-meteorological warnings, decisions of the County/ Bucharest Municipality Committee;

b) They draft and send operative reports according to Annex no. 8 under ORDER No. 192 as of August 2, 2012;

c) They use all existing means for ensuring priority warning and/ or alerting of the population and the facilities located in the areas with risks for floods resulting from watercourse overflows, discharges from mountainsides and accidents at hydro-technical constructions, such as they are marked in local defence plans, as well as the population located in the areas with risk for hazardous weather phenomena and accidental pollutions to take place.

d) They start the operative defence actions in endangered areas, according to provisions of the approved defence plans, mainly consisting of a permanent surveillance of risk areas; directing intervention forces and means, over-increasing and consolidating dams and banks, according to anticipated maximum levels; evacuating population, animals and possessions, according to the Evacuation Plan for Emergency Situations;

e) They take measures to avoid or eliminate a blockage with floating items and ice, especially in the area of bridges and footbridges, water collection points, water discharge from the urban area of the locality.

f) They ensure the participation of Voluntary Services to operative actions performed by experts of the units owning works with a role of defence against floods;

g) They locate overflowed waters, as well as those resulting from infiltrations and discharges from mountainsides and direct them to river beds, gravitationally or by pumping;

h) They provide for additional water supply sources to population during critical times.

#### 4. Rehabilitation Measures

After floods, hazardous weather phenomena, hydrologic drought or accidents at hydro-technical constructions and accidental pollutions, in order to reset normality, Local, County/ Bucharest Municipality Committees and specialized economic operators take, according to case, one or more of the following measures:

a) Replacing into operation the installations for water supply, industrial and domestic waste water discharge that have been affected, as well as discharging waters resulting from floods or standing on agricultural lands, by digging some discharge channels and by installing mobile pumping equipment;

b) Applying the necessary sanitary and epidemic measures;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



c) Setting out the physical and value damages caused by floods, hydrologic drought and accidental pollutions and the necessary measures for recovery of the affected objectives;

d) Recovery of the means of communication and of bridges, and water pumping installations;

e) Recovery of the telecommunication and electricity transfer lines;

f) Repairing and placing in operation of damaged or destroyed water, steam, gas, oil pipes;

g) Replacing in operation of affected social and economic facilities;

h) Offering support to population in recovery and repair of damages or destroyed personal property facilities;

i) Demolishing temporary hydro-technical defence works that block the regular development of activities and the recovery of materials that can still be used, the recovery of damaged groundworks, and the repair of damages at hydro- technical works.

The proposals for construction recovery, others than hydro-technical, that are seriously damaged by high waters, are made based on **“Protocols regarding the ascertainment and assessment of damages produced by hazardous hydro-meteorological phenomena”, issued by mixed committees of experts in the field, appointed based on the prefect’s order, according to Annex No. 11 under ORDER No. 192 as of August 2, 2012.**

At the end of each flood, hydrologic drought, accidents at hydro-technical constructions and accidental pollutions, County/ Bucharest Municipality Committees draft synthesis reports according to the content set out within Annex No. 9 under ORDER No. 192 as of August 2, 2012 for approving the Regulation regarding the management of emergency situations generated by floods, hazardous weather phenomena, accidents at hydro technical constructions, accidental pollutions on watercourses and sea pollutions in the coastal area.

## Bibliography:

*ORDER No. 192 as of August 2, 2012, for approving the Regulation on managing emergency situations generated by floods, hazardous weather phenomena, accidents in hydro technical constructions, accidental pollutions on watercourses and sea pollutions in the coastal area;*

**Mayor’s Manual**



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Topic 3: Communication in Emergency Situations

### 1. Communication with Mass Media

In an emergency situation, the relation between the emergency management structure and mass media represents:

- a) **A projection of the management structure in the present, in which “the image shock” depends on more factors:**
  - What is the starting image of the organization;
  - What events will be discussed and what is their seriousness potential in relation to the values and interest of the public opinion;
  - What is the context encouraging the promotion of the emergency situation.
- b) *A media presentation, distorted by multiple interventions, characterized by the following factors:*
  - What is the share and idleness of clichés;
  - What is the game of the involved (not always good willing) players;
  - How surprise and emotion act on reflection in mass media.
- c) *A battle of opinions in which the following fight:*
  - Shock of arguments (why such a thing happened);
  - Shock of players (who is responsible, who are the victims);
  - Shock of mass media (who will have priority, who is interested in such a topic).

Solving emergency situations involves therefore a problem of media communication that adds to the difficulties related to the management of unexpected and undesired phenomena; this problem is closely related to the specific behaviour of media institutions and journalists when they have to report an emergency situation.

**During an emergency situation, the “hungry” mass media takes over and distributes** any kind of information, so that it is hard to control messages reaching mass media. The result is an amount of contradicting messages (coming from official and/ or unofficial sources, frequently based on rumours), that lead to the situation in which each journalist and even each member of the public field build their own version about that emergency situation. There is only one solution to this challenge: supporting journalists in their research activity, which leads to gaining trust and even to media cooperation. This becomes therefore an important factor in limiting the consequences of the emergency situation. In the management of an emergency situation, gaining trust and media cooperation is a vital thing, especially in supporting the efforts for avoiding effects at local level. If the communication strategy directly addressed to affected citizens is not coherent with what mass media sends out, then panic reoccurrence is inevitable, in this case, and the effort of intervention teams to face the situation becomes significantly harder.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



This being the challenge, what means can we use to gain media trust and cooperation? How can we help journalists in their research work? Things should start with the observation that, in an emergency situation, what we call mass media is actually classified in three different categories: local mass media, national mass media and international mass media, and by means of them, the related public opinion. The need for obtaining the essential information (who, what, when, how, with what consequences) is indeed the same for all journalists, but each tries then to personalize their material, with specific needs for information and interpretation. Therefore, it is recommendable that these needs are anticipated and prevented. It would be ideal that the information researcher behaviour of journalists is also turned into information processor's behaviour.

1. Beyond the essential information that will be sent to the entire media (for example, official statement from press conference, or the point of view sent during briefings), questions reflecting different interests must be answered, according to media level (local, national, international) and to the way in which journalism is made. Therefore, materials need to be prepared in order to satisfy the different reporting, research and interpretation needs of journalists;
2. Once the types of needs of media from different levels are identified, a communication strategy needs to be prepared and adjusted to the requirements of this public;
3. A series of media communication rules that any communicator should follow needs to be prepared;
4. In order to offer credibility to the information sent to media, more message carriers should exist from different hierarchy levels with whom they would interact. For that matter, the importance of message carriers' **credibility** is recognized in the specialized literature. It is what we call message legitimization and it is recommendable, in establishing message carriers, to be very careful **with "who to whom" speaks, so to say**. Contrary to the mostly spread opinion, mass media is not the worst enemy, but can be the most important ally. If mass media publishes embarrassing information, they do not necessarily do such thing to harm, but to report news. If something that can be turned into negative news happens, it will be said. A good planning can help at anticipating potential problems before they occur and to act confidently when mass media starts publishing. Mass media are an important target group because they can really become a communication channel by which messages are sent rapidly and practically without any cost.

The support offered by mass media mainly depends on the existence of a cooperation with them since the normality period of time. If there were any conflicts with journalists or the management structure has the image of a structure that does not cooperate and is not transparent, it will be difficult enough to build a cooperation with mass media representatives during the emergency management.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



On the other side, if time is assigned for building a good relation with mass media as part of preparing to face an emergency situation, the communication department will be in a better position to positively collaborate with news reporters. This implies appointing some periodical meetings with those in mass media and understanding the specific needs and style of work.

*Problems that can be created during the management of an emergency situation:*

- In case of an emergency situation, mass media representatives can come in an overwhelming number (especially following a massive disaster); such a high number cannot help, but can make resources become fewer (hotels, rented cars, phones) and create management problems at the place of events;
- Journalists can create an enormous pressure on officials through their questions - how many are injured, how many victims are there, what are the loss estimations, what are the costs, who is responsible; usually these are not immediate concerns of officials, who are preoccupied with future threats (more than with counting victims), with offering assistance (more than with estimating costs), with help, more than with finding guilty persons;
- They can represent an interference at message level; even if national interests of another country are not affected, media may impose such an interpretation of facts;
- The international interest can be overwhelming, paralysing the activity of ministries;
- Many of the international mass-media representatives can be very experienced and very well informed. They might know more about crises or emergency situations (are specialized on such events) than those trying to solve one.

*Useful items for the preparedness period of time*

- An existing list of contact with the most important local, national and international media organizations;
- Ensuring the technical infrastructure and fast connection for being able to report from the place of events;
- Certain publications have standard terms of information delivery, and those need to be followed;
- Existing formats for news and press releases, as well as for personnel internal information;
- An existing **internal register in which reporter's name, media institution name,**



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



reported information, when and who must be contacted are recorded. This thing is desired in an electronic database format;

- Contacting communication experts and their consulting regarding actions taken.

One should remember that the most important problem the relation with mass media raises during the management of an emergency situation is that the way, in which **management team's actions are covered and interpreted**, definitely influences the way in which action is taken!

## 2. Ways of Communication with Mass Media

An active co-work with mass-media:

- Gives the possibility to be proactive and not reactive;
- Gives the possibility to be relatively in control of the message;
- Gives the possibility to correct wrong information.

Not talking to mass media can create the impression that the situation is not controlled and can make those responsible for emergency management look insensitive and careless.

### *Communication Strategies and Techniques Used*

- Organizing two press conferences in a term of 3 - 10 hours after the emergency situation started;
- Briefings as many times as needed;
- Submission of press folders;
- Facilitating the obtaining of statements and interviews from persons interesting for journalists;
- Facilitating the obtaining of public interest documents for the purpose of journalist documentation;
- Accompanying journalists on the field of operations for the research activity.

### *Message Carriers*

- Institutional leaders (prefect, mayor, etc.);
- Technicians (members of the emergency management structure);
- Activists (members of intervention teams);
- Volunteers, citizens.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



### Press Conference

- The press conference (organized according to the interest shown by mass media) must be held in a place and at a time convenient for mass media for reporting;
- Informing mass media of this conference, by mentioning the date, place, time and a short content with the agenda of the press conference;
- Preparing media folders in a format accessible to each media type (written, radio or TV);
- Not delaying over the time informed, as everyone has deadlines to meet;
- Presenting the arguments and the facts generating the need for organizing such press conference and asking for the questions to be asked to each speaker after finishing the speech;
- Moderating the question & answer session so that the question is addressed to the person authorized to respond and ending the conference when announced.

If considered that a press conference is not the best possible solution, information is sent as fast as possible by using formats for press release or news. Name and contact data are mentioned, along with the approximate time for next additions. They must be sent maximum four hours after the first press release and continued every four hours if obtaining new information. Moreover, emergency phone lines should be kept available and the organization website is filled in with new information.

### Bibliography:

**Firemen's Report No. 1/2012-** *Communication in the management of emergency situations generated by floods*, authors: Sub-lieutenant Marian OPREA, lieutenant-colonel, university lecturer, doctor in engineering Manuel SERBAN - "Alexandru Ioan Cuza" Police Academy - Faculty of Firemen, (discharged) major general, doctor in engineering Aurel TUDOR

**Firemen's Report No. 2/ 2014** *Communication with mass-media in emergency situations*, author: colonel university lecturer, doctor in engineering Florin Neacsu, "Al.I. Cuza" Police Academy, Faculty of Firemen





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Topic 4: Protection and Rescue Plans

### 1. Communication with Mass Media

In an emergency situation, the relation between the emergency management structure and mass media represents:

- a) *A projection of the management structure in the present, in which “the image shock” depends on more factors:*
  - What is the starting image of the organization;
  - What events will be discussed and what is their seriousness potential in relation to the values and interest of the public opinion;
  - What is the context encouraging the promotion of the emergency situation.
- b) *A media presentation, distorted by multiple interventions, characterized by the following factors:*
  - What is the share and idleness of clichés;
  - What is the game of the involved (not always good willing) players;
  - How surprise and emotion act on reflection in mass media.
- c) *A battle of opinions in which the following fight:*
  - Shock of arguments (why such a thing happened);
  - Shock of players (who is responsible, who are the victims);
  - Shock of mass media (who will have priority, who is interested in such a topic).

Solving emergency situations involves therefore a problem of media communication that adds to the difficulties related to the management of unexpected and undesired phenomena; this problem is closely related to the specific behaviour of media institutions and journalists when they have to report an emergency situation.

During an emergency situation, the “hungry” mass media takes over and distributes any kind of information, so that it is hard to control messages reaching mass media. The result is an amount of contradicting messages (coming from official and/ or unofficial sources, frequently based on rumours), that lead to the situation in which each journalist and even each member of the public field build their own version about that emergency situation. There is only one solution to this challenge: supporting journalists in their research activity, which leads to gaining trust and even to media cooperation. This becomes therefore an important factor in limiting the consequences of the emergency situation.

In the management of an emergency situation, gaining trust and media cooperation is a vital thing, especially in supporting the efforts for avoiding effects at local level. If the communication strategy directly addressed to affected citizens is not coherent with what mass media sends out, then panic reoccurrence is inevitable, in this case, and the effort of intervention teams to face the situation becomes significantly harder.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



This being the challenge, what means can we use to gain media trust and cooperation? How can we help journalists in their research work? Things should start with the observation that, in an emergency situation, what we call mass media is actually classified in three different categories: local mass media, national mass media and international mass media, and by means of them, the related public opinion. The need for obtaining the essential information (who, what, when, how, with what consequences) is indeed the same for all journalists, but each tries then to personalize their material, with specific needs for information and interpretation. Therefore, it is recommendable that these needs are anticipated and prevented. It would be ideal that the information researcher behaviour of journalists is also turned into information processor's behaviour.

5. Beyond the essential information that will be sent to the entire media (for example, official statement from press conference, or the point of view sent during briefings), questions reflecting different interests must be answered, according to media level (local, national, international) and to the way in which journalism is made. Therefore, materials need to be prepared in order to satisfy the different reporting, research and interpretation needs of journalists;
6. Once the types of needs of media from different levels are identified, a communication strategy needs to be prepared and adjusted to the requirements of this public;
7. A series of media communication rules that any communicator should follow needs to be prepared;
8. In order to offer credibility to the information sent to media, more message carriers should exist from different hierarchy levels with whom they would interact. **For that matter, the importance of message carriers' credibility is recognized in the specialized literature.** It is what we call message legitimation and it is recommendable, in establishing message carriers, to be **very careful with "who to whom" speaks, so** to say. Contrary to the mostly spread opinion, mass media is not the worst enemy, but can be the most important ally. If mass media publishes embarrassing information, they do not necessarily do such thing to harm, but to report news. If something that can be turned into negative news happens, it will be said. A good planning can help at anticipating potential problems before they occur and to act confidently when mass media starts publishing. Mass media are an important target group because they can really become a communication channel by which messages are sent rapidly and practically without any cost.

The support offered by mass media mainly depends on the existence of a cooperation with them since the normality period of time. If there were any conflicts with journalists or the management structure has the image of a structure that does not cooperate and is not transparent, it will be difficult enough to build a cooperation with mass media representatives during the emergency management.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



On the other side, if time is assigned for building a good relation with mass media as part of preparing to face an emergency situation, the communication department will be in a better position to positively collaborate with news reporters. This implies appointing some periodical meetings with those in mass media and understanding the specific needs and style of work.

*Problems that can be created during the management of an emergency situation:*

- In case of an emergency situation, mass media representatives can come in an overwhelming number (especially following a massive disaster); such a high number cannot help, but can make resources become fewer (hotels, rented cars, phones) and create management problems at the place of events;
- Journalists can create an enormous pressure on officials through their questions - how many are injured, how many victims are there, what are the loss estimations, what are the costs, who is responsible; usually these are not immediate concerns of officials, who are preoccupied with future threats (more than with counting victims), with offering assistance (more than with estimating costs), with help, more than with finding guilty persons;
- They can represent an interference at message level; even if national interests of another country are not affected, media may impose such an interpretation of facts;
- The international interest can be overwhelming, paralysing the activity of ministries;
- Many of the international mass-media representatives can be very experienced and very well informed. They might know more about crises or emergency situations (are specialized on such events) than those trying to solve one.

*Useful items for the preparedness period of time*

- An existing list of contact with the most important local, national and international media organizations;
- Ensuring the technical infrastructure and fast connection for being able to report from the place of events;
- Certain publications have standard terms of information delivery, and those need to be followed;
- Existing formats for news and press releases, as well as for personnel internal information;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- **An existing internal register in which reporter's name, media institution name, reported information, when and who must be contacted are recorded.** This thing is desired in an electronic database format;
- Contacting communication experts and their consulting regarding actions taken.

One should remember that the most important problem the relation with mass media raises during the management of an emergency situation is that the way, in **which management team's actions are covered and interpreted**, definitely influences the way in which action is taken!

## 2. Ways of Communication with Mass Media

An active co-work with mass-media:

- Gives the possibility to be proactive and not reactive;
- Gives the possibility to be relatively in control of the message;
- Gives the possibility to correct wrong information.

Not talking to mass media can create the impression that the situation is not controlled and can make those responsible for emergency management look insensitive and careless.

### *Communication Strategies and Techniques Used*

- Organizing two press conferences in a term of 3 - 10 hours after the emergency situation started;
- Briefings as many times as needed;
- Submission of press folders;
- Facilitating the obtaining of statements and interviews from persons interesting for journalists;
- Facilitating the obtaining of public interest documents for the purpose of journalist documentation;
- Accompanying journalists on the field of operations for the research activity.

### *Message Carriers*

- Institutional leaders (prefect, mayor, etc.);
- Technicians (members of the emergency management structure);
- Activists (members of intervention teams);
- Volunteers, citizens.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



### Press Conference

- The press conference (organized according to the interest shown by mass media) must be held in a place and at a time convenient for mass media for reporting;
- Informing mass media of this conference, by mentioning the date, place, time and a short content with the agenda of the press conference;
- Preparing media folders in a format accessible to each media type (written, radio or TV);
- Not delaying over the time informed, as everyone has deadlines to meet;
- Presenting the arguments and the facts generating the need for organizing such press conference and asking for the questions to be asked to each speaker after finishing the speech;
- Moderating the question & answer session so that the question is addressed to the person authorized to respond and ending the conference when announced.

If considered that a press conference is not the best possible solution, information is sent as fast as possible by using formats for press release or news. Name and contact data are mentioned, along with the approximate time for next additions. They must be sent maximum four hours after the first press release and continued every four hours if obtaining new information. Moreover, emergency phone lines should be kept available and the organization website is filled in with new information.

### Bibliography:

**Firemen's Report No. 1/2012-** *Communication in the management of emergency situations generated by floods*, authors: Sub-lieutenant Marian OPREA, lieutenant-colonel, university lecturer, doctor in engineering Manuel SERBAN - "**Alexandru Ioan Cuza**" Police Academy - Faculty of Firemen, (discharged) major general, doctor in engineering Aurel TUDOR

**Firemen's Report No. 2/ 2014** *Communication with mass-media in emergency situations*, author: colonel university lecturer, doctor in engineering Florin Neacsu, "**Al.I. Cuza**" Police Academy, Faculty of Firemen



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Module 3: How to Mobilize the Community in Case of Emergency Situations

### *Topic 1: Role of Local Governments in Emergency Situations - Legal Basis*

From a legal perspective, the management of the emergency situation represents the set of activities developed and procedures used by decision makers, institutions and public services departments authorized to identify and monitor risk sources, to assess information and analyse the situation, to issue forecasts, to set out variants of actions and to implement them for the purpose of resetting normality.

Starting 2004, in Romania, for the purpose of preventing and managing emergency situations, ensuring and coordinating human, material, financial and other resources needed for resetting normality, the National Emergency Management System (SNMSU) was initiated (based on O.G. - Government Ordinance - No. 21/ 2004 with subsequent amendments).

At local level (municipality, towns and communes), Local Committees for Emergency Situations (CLSU) operate - as part of the National Emergency Management System, for preventing and managing emergency situations, ensuring and coordinating human, material, financial and other resources, necessary for resetting normality.

Local committees are constituted and operate according to law, under the direct management of the mayor of the territorial and administrative division in whose area it was constituted, in his capacity as president.

Furthermore, they also include: a *vice-president* (vice mayor), and *members*: the secretary of the commune, town, sector or municipality, according to case; representatives of public services and of main institutions and economic operators from that territorial and administrative division, as well as managers or coordinators of economic operators, branches, subsidiaries or local work points, that, by the type of their activity, represent risk factors potentially generating emergency situations; consultants.

**Consultants are decided by mayor's directive among the experts and specialists from his/ her own division or subordinated institutions and structures.** Meetings of the committees for emergency situations take place with the participation of most members or appointed replacing persons. Decisions of the committees for emergency situations are adopted with the vote of two thirds of the number of present members, except for implementing the evacuation plan that is **carried out based on the decision of the committee's president.**





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



The temporary operative structures of the local committees for emergency situation are ensured by the operative centres with temporary activity.

**They are constituted by mayor's directive for the purpose of fulfilling specific functions *during an alerting condition, in case of emergency situations*, as well as during *exercises, applications and training* for preparing the response in such situations.**

The operative centres consist of personnel of own division of the local public administration authorities and have specific responsibilities set out by own regulations, in relation to the emergency situations managed and support functions fulfilled.

While fulfilling work responsibilities, the personnel of the operative centres is in charge of the exercise of the public authority.

The Local Committees for Emergency Situations have the following responsibilities:

According to O.U.G. No. 21/2004 regarding the National Emergency Management System:

- They inform, by means of the county/ Bucharest Municipality operational centre, of the conditions potentially generating emergency situations and the imminence of their threat;
- They assess emergency situations produced on the territorial and administrative division, set out specific measures and actions for their management and keep track of their fulfilment;
- They declare, **with prefect's approval, the alert condition on the territory of the territorial and administrative division;**
- They analyse and acknowledge the local plan for the provision for human, material and financial resources necessary for managing the emergency situation;
- They inform the county committee and local council of the activity developed;
- They fulfil any other tasks and responsibilities set out by law or competent bodies and organizations.

According to Law No. 481/2004 regarding civil protection:

- They approve the civil protection organization at the level of the territorial and administrative division, they analyse, every year and anytime needed, the activity performed and adopt measures for its improvement;
- They approve annual and future perspective plans for the provision for human, material and financial resources meant for preventing and managing emergency situations;



- They participate, according to law, in ensuring the financing of civil protection measures and actions, as well as of emergency services and structures with legal responsibilities in this field;
- They set out, under law conditions, special fees on civil protection;
- They constitute, under law conditions and with the acknowledgement of the General Inspectorate for Emergency Situations, training and assessment centres for the personnel in voluntary emergency services;
- They manage, store, maintain and ensure the preservation of civil protection equipment and materials by subordinated specialized services;
- They provide for spaces necessary for the operation of corresponding inspectorates for emergency situations, their guard and security and those of the operational centres, as well as the spaces for storing intervention materials.

According to Decision No. 846/ 2010 for approving the National Strategy of Flood Risk Management on a medium and long term:

- They assess the emergency situations occurred on their administrative territory, they set out specific measures and actions that need to be taken and track the implementation of these measures;
- They analyse and approve the local plan for the provision for human, material and financial resources needed;
- They organize permanent services at the town hall in order to receive forecasts and hydro-meteorological warnings, decisions of the county committee and for sending information regarding the evolution of hazardous phenomena, their effects, measures taken and additional measures necessary;
- They use all existing means for the priority warning of population and facilities in the areas of risk for floods resulted from overflows of watercourses, discharges from mountainsides and accidents at hydro-technical constructions, such as they are marked in the local defence plans, as well as of the population in the areas of risk for occurrence of hazardous weather phenomena and accidental pollution;
- They activate operative defence actions in endangered areas, according to provisions of the approved defence plans, consisting of:
  - Permanent surveillance of risk areas;
  - Guiding intervention forces and means;
  - Over increasing and consolidating dams and banks, according to forecasted maximum levels;
  - Preventive evacuation of people and animals and keeping safe important possessions, especially those that cannot be lifted at superior levels or anchored;
- They take measures for avoiding or eliminating any blockage with floating items and ice, especially in the areas of road and railway bridges, water ponds, or for water drainage from inside houses;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- They ensure the participation of intervention forces constituted from locals in the operative actions performed by experts of the units owning works with a role of defence against floods;
- They locate overflowed waters, as well as those resulting from infiltrations and discharges from mountainsides and guide them in river beds, gravitationally or by pumping;
- They provide for additional sources for water supply to population during such events, etc.
- They create/ ensure sufficient material stocks at the level of the local public administration authorities.

The Operative Centres with a Temporary Activity have the following main responsibilities:

- They centralize and operatively submit to the Operational Centre of the County Inspectorate for Emergency Situations data and information regarding the occurrence and evolution of the conditions potentially generating emergency situations;
- They monitor emergency situations and inform the County Inspectorate and the other operational and operative centres interested;
- They keep track of the implementation of regulations regarding the management of emergency situations and of intervention and cooperation plans specific to types of risks;
- They ensure the operative submission of decisions, directives and orders, as well as keeping communication connections with operational and operative centres involved in the management of emergency situations, with the integrated supervisory control offices for emergency calls and with supervisory control offices of the intervention services and forces for this purpose;
- They centralize the requests of resources necessary for fulfilling support functions during emergency situations and make proposals for their provision;
- They manage databases regarding emergency situations;
- They fulfil any other tasks and responsibilities regarding the management of emergency situations, provided by law and the framework - regulation.

According to provisions of Government Ordinance No. 88/ 2001 with subsequent amendments, the structures specialized in the defence against fires and civil protection, subordinated to the authorities of national and local public administration are Community Professional and Voluntary Public Services for Emergency Situations.

The Professional Services for Emergency Situations are constituted in counties and Bucharest Municipality as public services deconcentrated under the subordination of the General Inspectorate for Emergency Situations.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



The Voluntary Services for Emergency Situations are constituted as public services decentralized under the subordination of local councils of municipalities, towns and communes and operate under the coordination of the mayor, at local level.

Emergency Services and the General Inspectorate for Emergency Situations are part of the national security system protection forces and have the following main purposes:

- *Defence of life, possessions and environment against disasters;*
- *Taking protection and intervention measures in case of floods.*

For organizing, providing for, operation of and fulfilling legal responsibilities by the voluntary services for emergency situations, authorities of the national and local administration *are under the obligation to provide, separately, in projects of own budgets, for the financial resources needed* (OG 88/2001, Art. 19).

According to provisions of OMAI (Ordinance of Ministry of Administration and Internal Affairs) 96/ 2016, according to constituency, the voluntary services and the private services are classified as follows:

- a) *Category I (C1)* - consisting of a head of service, prevention division or prevention experts and at least one specialized team;
- b) *Category II (C2)* - consisting of a head of service, prevention division and one or more intervention teams, consisting of at least two intervention groups including fire extinction truck with water and foam and specialized teams.

The voluntary services and the private services of type C2 are equipped with intervention trucks and equipment, according to the risks they need to manage in their competence sector.

At the level of municipalities, towns, communes, public institutions and economic operators covered by the civil protection classification, the specialized personnel with responsibilities in the field of civil protection belong to this category.

The authorities of the local public administration ensure the setting out and integration of civil protection measures in the economic and social development plans and programs, drafted at local level and keep track of their performance.

The prevention measures and actions of the civil protection plans are planned and executed with priority by all authorities of the local public administration, according to their competences.

*The authorities of the local public administration take full responsibility for ensuring the conditions of surveillance of the population affected by the emergency situations followed.*

Conditions are ensured by emergency services, public services of commune management, institutions and economic services, including by using, under law conditions, possessions of the state reserve and services and goods available from Romanian non-governmental organizations or local communities and population of the areas that were not affected, foreign or international states and organizations.



The mayor has the following main responsibilities:

A) According to Law No. 481/2004 regarding civil protection:

- Proposing the civil protection organizational structure to the local council;
- Implementing the decisions of the local council in the field of civil protection;
- Approving operative plans and those of preparedness and planning of specialized exercises;
- Proposing funds necessary for taking civil protection measures;
- Participating in exercises, applications and activities of preparedness regarding civil protection;
- Coordinating the activity of voluntary emergency services;
- Approving plans of cooperation with neighbouring localities and non-governmental organisms;
- Deciding measures and controlling the way collective sheltering spaces are maintained by their administrator;
- Keeping track of the implementation, maintenance and operation of connections and means of notification and alerting of civil protection situations;
- Being responsible for population alerting, protections and preparedness for civil protection situations;
- Requesting technical assistance and support for managing civil protection situations;
- Exercising control on the implementation of civil protection measures at local level;
- Ensuring the assessment and centralizing of support and claim requests in civil protection situations, as well as distributions of those received;
- Directly coordinating population evacuation from areas affected by civil protection situations;
- Setting out measures necessary for ensuring food, accommodation and energy and water supply to the evacuated population;
- Deciding measures for ensuring the public order in the affected area;
- Cooperating with mayors of bordering localities or sectors, according to case, in issues of common interest;
- Managing, storing, maintaining and technically preserving the civil protection equipment and materials, by subordinated specialized services.

B) According to Order No. 192 as of August 2, 2012 for managing emergency situations generated by floods, hazardous weather phenomenon, accidents at hydro-technical constructions and accidental pollutions:

- Ensuring personnel and conditions necessary for constituting the permanent service and checking the way this service operates;





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- Ensuring necessary means and establishing responsibilities for warning and alerting population from areas of risk for floods, hazardous weather phenomena, accidents at hydro-technical constructions and accidental pollutions;
- Requiring to flood agents the periodical organization of certain actions of **population's awareness of the flood risk and measures necessary to be taken by** each citizen for diminishing damages;
- Ensuring, by means of flood agents, the drafting of local plans of defence against floods, ice and accidental pollution, the display of extracts of these plans, which confidential information have been excluded from, on the internet page of the institution and at town halls;
- Ensuring, by means of flood agents, the centralizing of data regarding the consequences of hazardous hydro-meteorological phenomena and the drafting and submission of the reports according to provisions of Annexes No. 8 and 9 to Order No. 192 as of August 2, 2012;
- Ensuring, by means of local councils, the funds necessary for constituting and supplementing stocks of materials and means of defence against floods, ice and fighting against accidental pollutions at the level of town halls, for the maintenance and repair of hydro-technical constructions from own administration and the maintenance of river beds in the area of localities;
- Ensuring the proper executive and maintenance of ditches and rainwater drainage channels, setting aside of wood material and waste from river beds and discharge openings of bridges and footbridges;
- Requesting flood agents to display in public places the significance of colour codes for weather and hydrological warnings, as well as the significance of population acoustic alerting signals;
- Ensuring, by means of the Voluntary Services for Emergency Situations, the permanent surveillance, during high waters, of undersized bridge and footbridge openings in the area of the locality, for flood prevention;
- Organizing, annually or whenever needed, sessions of training for the members of the Local Committee on their responsibilities for warning/ alerting the population from villages belonging to communes;
- Ensuring the funds necessary for the provisions of the Voluntary Services for Emergency Situations with materials and means specific to the intervention at floods, ice concentration and accidents at hydro-technical constructions;
- Ensuring the drafting of Calamity Protocols for the addition of drinkable water sources for population during hydrological drought;
- Keeping track of drafting risk maps for locality flooding resulting from both overflows of watercourses and discharges from mountainsides and their inclusion in the General Urbanism Plans and complying with the construction regime in floodable areas, according to provisions of Law No. 575/ 2001





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



regarding the approval of the Plan for setting the national territory - Section V - Natural risk area

Although they are not part of the National Emergency Management System, Local Councils are under the obligation (HG 846/ 2010) to take the following measures and actions, after floods:

- Community mobilization to actions regarding activities of setting aside the effects of floods, the recovery of houses and facilities affected by floods;
- Community mobilization to actions of food and clothing supply and their distribution, as well as for accommodation in temporary houses.
- Actions for resetting basic services and food, clothing supply, ensuring temporary houses and hygiene;
- Ensuring conditions for sanitary assistance;
- Coordination of normal activity reconstruction and restauration;
- Organization of financial support activities;
- Management of responses to population calls;
- Revision of operative defence plans for emergency situations;
- Drafting of certain studies on economic, social and environmental damages caused by floods.

### Bibliography:

*Government Emergency Ordinance No. 21 as of April 15, 2004 regarding the National Emergency Management System;*

*Law No. 15 as of February 28, 2005 for approving the Government Emergency Ordinance No. 21/ 2004 regarding the National Emergency Management System;*

*Law No. 481 as of November 8, 2004 regarding civil protection reissued on the grounds of Art. II of Law No. 212/ 2006;*

*Government Ordinance No. 88/ 2001 regarding the constitution, organization and operation of community public services for emergency situations;*

*Government Decision No. 846 as of August 11, 2010 for the approval of the National Strategy for Flood Risk Management on a medium and long term*

*Government Decision No. 557 as of August 3, 2016 regarding the management of types of risk;*

*Order No. 192 as of August 2, 2012 for approving the Regulation on managing emergency situations generated by floods, hazardous weather phenomena, and accidents in hydro technical constructions, accidental pollutions on watercourses and sea pollutions in the coastal area.*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## *Topic 2: Alerting and Action Plans*

In the current context, most of world states grant an increased attention to civil protection problems, especially population and material **possessions'** protection during war or in disaster situations.

Sending notification messages about the imminence of development or the development of certain emergency situations by the authorities of the national and/ or local public administration, for warning and/ or the alerting population, institutions and economic operators according to the evolution of the risk factor, are the first protection measures taken for the purpose of managing emergency situations.

Performing this first set of activities leads to the prevention, setting aside of **the authorities and population's surprise, as well as** the elimination/ reduction of risk effects on life, environment, important material and cultural values.

The organization and provision for the notification, warning, pre-alerting and alerting activity in civil protection situations, according to OMAI No. 1259/ 2006 are responsibilities of the following entities:

- Committees for emergency situations organized at the level of authorities of the local and national public administration;
- General Inspectorate for Emergency Situations, Inspectorates for County and Bucharest Municipality Emergency Situations.

For this purpose, in order for the organization of notification and alerting activities to be efficiently performed and at the right time, the General Inspectorate and the County Inspectorates for Emergency Situations draft the Notification and Alerting Plan of IGSU, and County Notification and Alerting Plans.

At the level of localities, local committees for emergency situations and economic operators that are a risk source draft the Diagram for organizing **population's warning and alerting**.

This diagram together with the diagram for arranging of warning - alerting equipment and coverage areas, the significance of alert signals, the report with warning and alerting equipment available in the responsibility area, the alerting chain and bringing own personnel to the local council or to economic operator headquarters, according to case, build up **the file of population's** notification, warning and alerting in civil protection situations, drafted at the level of each local committee and risk source operator.

The population is prevented against air attack or disasters, and citizens and material possessions are protected by a set of measures consisting of:

NOTIFICATION - the activity of communicating authorized information about the imminence of occurrence or the occurrence of disasters and/ or armed conflicts



to authorities of the national or local public administration, according to case, for the purpose of avoiding the surprise and of taking protection measures.

It is ensured by the General Inspectorate for Emergency Situations and by County/ Bucharest Municipality Inspectorates for Emergency Situations, based on data received from the General Staff of Air Forces, the General Staff of Marine Forces, the large units and their subordinated units, as well as from other notification sources.

The following messages are sent and received about air attack hazards: **“air pre-alert”, “air alert”, “alert stopping”**.

Based on the information received from structures with responsibilities in monitoring and assessing hazards and specific risks (according to HGR No. 557/2016), the General Inspectorate for Emergency Situations informs, by means of the National Operational Centre:

- *The Operative Centres with Permanent Activity* of ministries and national public institutions with responsibilities in the management of emergency situations;
- *County/ Bucharest Municipality Operational Centres* within County Inspectorates for Emergency Situations.

The County Inspectorates for Emergency Situations, by means of the county/ Bucharest Municipality Operational Centres, based on the received notification, communicates notification messages to:

- *County committee, local committees for emergency situations;*
- *Subordinated units and subunits;*
- *Territorial units belonging to the Ministry of National Defence;*
- *County Inspectorate of Police;*
- *County Inspectorate of Gendarmerie;*
- *County Inspectorate for Border Police.*

Moreover, along with notification messages sent by Professional Emergency Services, *warnings, forecasts and notifications* issued by structures involved in the management of emergency situations are communicated.

*Notification messages can also be sent to economic operators that represent a risk source* (dams belonging to SGA, Hidroelectrica, chemical factories, etc.), in case, by their activity (failures, technological accidents, etc.), they endanger population, material possessions and environment.

*The equipment used for sending notification messages are:*

- F1001 type notification and alerting device;
- Emission-reception stations, as well as radio receivers with ultrashort waves within radio network no. 22 of unilateral notification on fixed frequencies;
- Fixed phones and faxes;



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- SMS - STS messages;
- Mobile phones and applications of mobile phone operators (Vodafone, Orange).

For creating an efficient information flow between structures monitoring risk factors and those with responsibilities in the management of emergency situations, based on requirements of OMAI No. 1259/ 2006, as well as for adopting optimal measures and solutions for making the activity of notification message communication efficient, the National Operational Centre and the County/ Bucharest Municipality Operational Centres also carry out sessions of training for the communication of notification messages with ministry, county or local committees for emergency situations, according to case, and economic operators that represent a risk source in the competence area.

**WARNING** - communicating to population the necessary information about the imminence of occurrence or the occurrence of disasters.

When receiving the notification message, the president of the local committee for emergency situations, following the analysis of the situation, decides on the need for warning the population from the territorial and administrative area, as well as the public institutions and the economic operators.

The population warning messages contain information regarding the possibility of occurrence/ manifestation of an event in the following period of time, the area/ areas likely to be affected. Furthermore, the population will also be informed of the measures to be taken and the way they should behave in case the risk factor takes place.

Population warning is the activity preceding the activation of the alerting equipment. The population warning by the authorities of the local public administration leads to diminishing the panic and fear feeling among people, in case the event takes place. Organizing population warning is regulated at the level of each local committee for emergency situation. Equipment through which warning messages can be sent are:

- Electronic siren,
- Radio-amplifier stations,
- Advertising panels,
- Couriers,
- Municipal police;
- Radio and TV posts, according to agreements concluded.

Such equipment is included in the locality warning and alerting diagram.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



Pre-alerting represents the activity of communicating to the authorities of the local and national public administration the messages/ signals/ information about the possibility of a disaster or air attacks to take place.

The pre-alerting is carried out by the General Inspectorate and the professional emergency services, according to case, based on information received from the General Staff and from specialized structures within the armed force categories, based on cooperation plans drafted for this purpose, as well as from structures monitoring risk sources.

ALERTING - about the hazard of disaster or air attacks; it has the purpose of passing immediately and in an organized manner to applying protection and intervention measures.

It is performed through acoustic and optical signals sent by alerting means and communications sent by radio and TV transmission studios and stations. Alert signals are: **“air alert”, “chemical (radioactive) alert” and “natural calamity”.**

If the parameters of the risk factor determine the inevitable activation of an emergency situation, the population is alerted, following a decision made by the president of the committee for emergency situations.

The population is alerted by sending acoustic and optical signals by alerting means. In the moment population receives alerting signals, they are aware of the fact that the manifestation of the risk factor is imminent and they have to follow instructions, previously received by warning.

Economic operators that are a risk source are under the obligation to provide for the alerting means and to alert the population in the risk area created following own developed activities.

In case of a risk generated by failures, technological accidents, etc. at economic operators that are a risk source, they will immediately alert population in the area of impact by activating sirens in their own supervisory control offices, by subsequently informing of this the county operational centres.

In case the economic operator that is a risk source has not ensured the alerting means for preventing population in the areas likely to be affected by their activity, alerting is carried out by existing means and systems, at the level of the locality in the impact area.



### NOTIFICATION SIGNALS IN CASE OF AN ALERT

Civil Protection Situations	Time	Significance
Air Alarm	15 modulated sounds (impulses) with a certain time and timeframes of 4 seconds	Informing population of the occurrence of the an immediate hazard hitting the facility (locality)
Chemical Alarm	5 sounds (impulses) each for 16 seconds With breaks of 10 seconds between them	Occurrence of signs or discovery of radioactive, chemical or biological contamination
Natural Calamity	3 sounds (impulses) each for 32 seconds With breaks of 15 seconds between them	Informing population of the hazard producing natural disasters
Alert Stopping	Continuous sound, with the same intensity and Lasting 3 minutes	Informing population of the hazard ending

Coding of information, notifications and warnings issued in case of hazardous hydrological and weather phenomena take place at national or regional level (According to the Common Order of MMP (Ministry of Environment and Forests)/ MAI (Ministry of Administration and Internal Affairs) No. 3403 as of September 10, 2012, respectively No. 245/ October 18, 2012 for approving the procedure for coding weather and hydrological information, notifications and warnings!)





EUROPEAN UNION



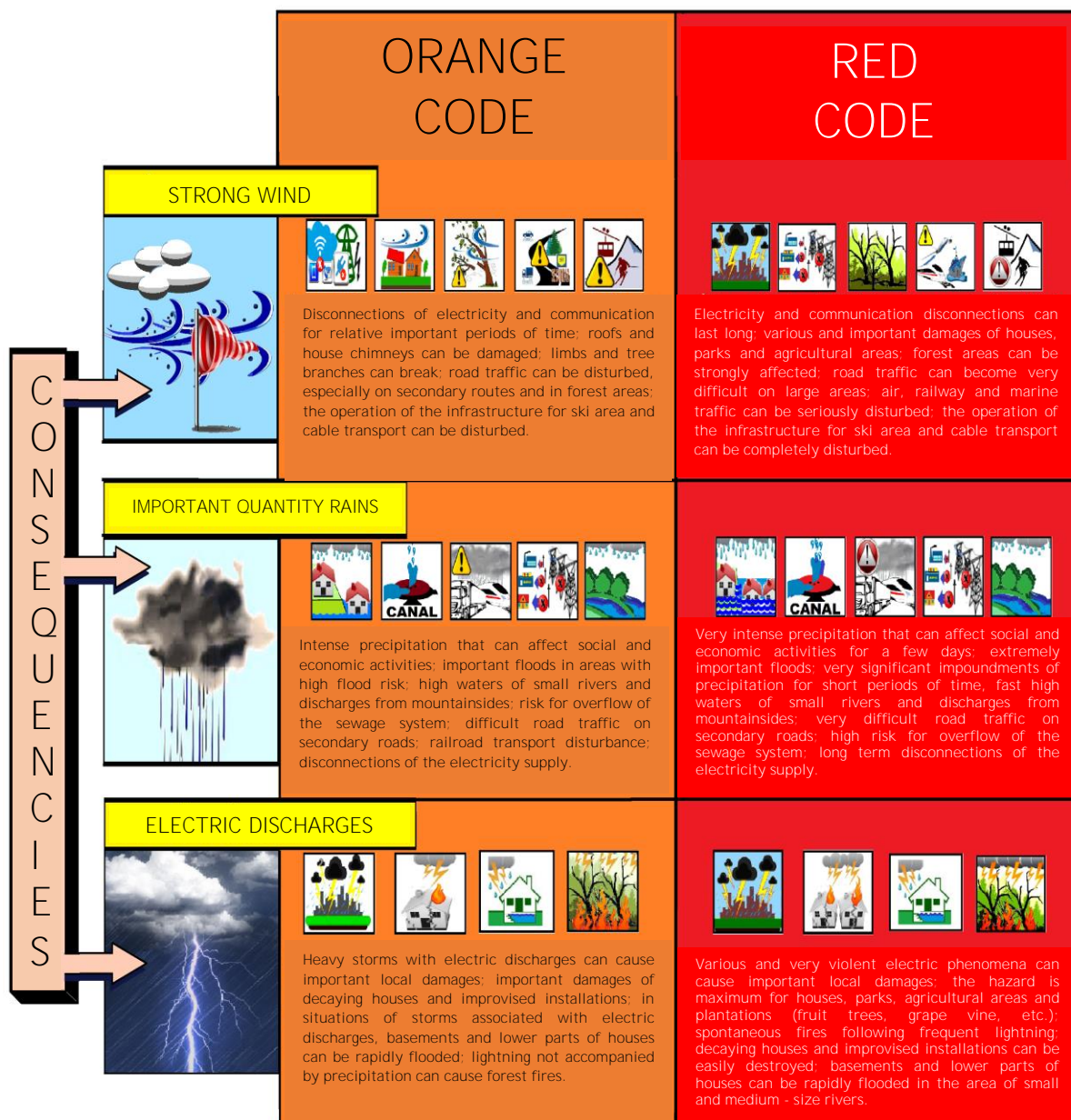
ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013





EUROPEAN UNION



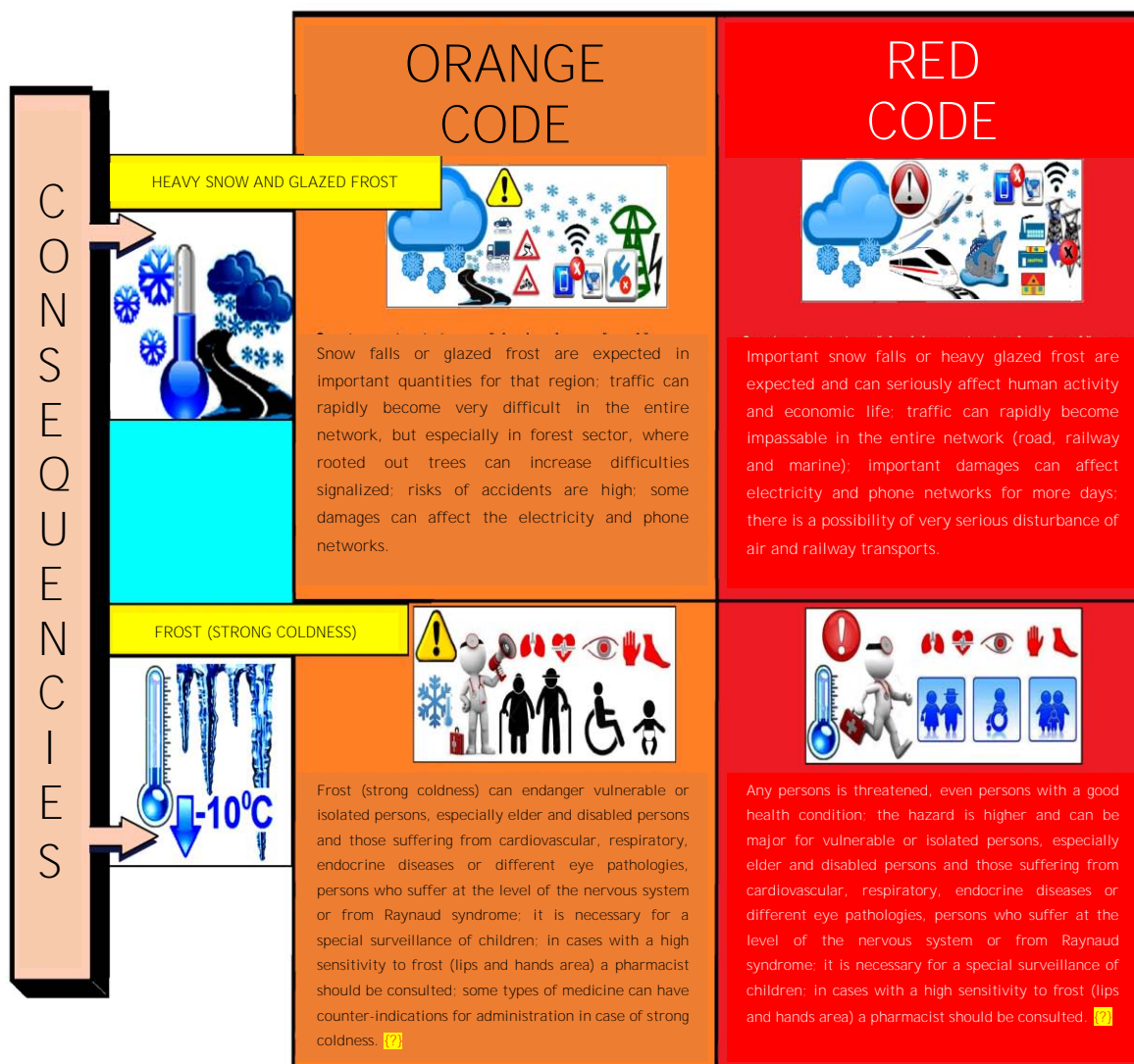
ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## Bibliography:

Law No. 481 as of November 8, 2004 regarding civil protection reissued on the grounds of Art. II of Law No. 212/ 2006;

Order No. 1259/ 2006 for approving the Norms on organizing and ensuring the activity of information, notification, warning, pre-alerting and alerting in civil protection situations.

Common order of MAI and MM No. 823/ 1427/ 2006 for the approval of procedures for coding weather notifications and warnings and hydrological notifications and alerts



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



### *Topic 3: The measures and procedures of citizens in emergency situations conditions*

#### RULES TO FOLLOW IN CASE OF: FLOOD:



##### BEFORE FLOOD TAKES PLACE:

- ✧ Require information from the town hall regarding floodable areas of the locality.
- ✧ Do not build your house in floodable areas.
- ✧ Ensure basements with waterproof walls in order to avoid water breaking in.
- ✧ Build barriers to stop water breaking in the house in case of floods.
- ✧ Clean ditches and drainage channels, to allow rainwater discharge.
- ✧ Do not randomly throw domestic waste and vegetal residue in running water beds.
- ✧ Prepare the backpack for emergency situations.
- ✧ Participate in simulation exercises organized by the professional services for emergency situations and local authorities.

##### IN CASE FLOOD TAKES PLACE:

Follow the recommendations sent by authorities on radio or TV.

- ✧ If evacuation is needed, move immediately to a close and high area, mentioned by authorities; if surprised by high waters, climb to the superior parts of the house or the roof, until the arrival of a saving team.
- ✧ In case you consider you have time, move important objects to superior floors.
- ✧ Disconnect the general electricity switch. Disconnect electric devices. Do not touch electric equipment if you are wet or you are standing in water.
- ✧ Disconnect water and gas supply installations.
- ✧ Lock the doors of the house and protect windows from being broken by strong winds, water waves or objects brought by water waves.
- ✧ Evacuate animals and valuable possessions in hidden places previously chosen.
- ✧ If you have to leave the house, follow as much as possible the following rules:



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- *Do not walk through water waves: you can lose your balance by walking through water waves of circa 15 cm high.*
- *Do not move by car in the flooded area: in case of flood, at circa 20 cm high water, water can get inside the vehicle and cause control loss. At circa 40 cm high water, the vehicle floats. At 60 cm high, most vehicles are carried by water.*

#### AFTER FLOOD TAKES PLACE:

- ✧ Listen to the information of local authorities regarding drinkable water supply of the locality.
- ✧ Avoid areas where there still is water: water can be polluted with petrol, Diesel or sewage system residues; moreover, it can be electrically charged by high voltage lines or electric cables fallen to the ground.
- ✧ Avoid water waves.
- ✧ Be informed of the areas where waters have withdrawn: roads or bridges could have decreased their resistance and could break under **cars' weight**.
- ✧ Do not get close to areas where electric cables have fallen and inform authorities on this.
- ✧ Return home, only if authorities have allowed such thing.
- ✧ Be careful when entering buildings that have been flooded: their resistance could be affected, especially at the level of foundation.
- ✧ Use electricity, water, gas installations only after the approval of specialized operators.
- ✧ Clean and disinfect all objects that have been in contact with water: there is a risk of serious disease following lack of hygiene and affected sewage systems.

#### EARTHQUAKE:



#### BEFORE AN EARTHQUAKE TAKES PLACE:

- ✧ Execute repair and maintenance works at buildings needing such thing.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- 🏠 Do not make changes to buildings, for extending or diminishing some spaces that affect their resistance structure.
- 🏠 Do not install heavy equipment (antennas, ventilation/ acclimatization systems, etc.) on structural or non-structural elements of the building, if they affect the resistance structure.
- 🏠 Prepare your backpack for emergency situations: a backpack for emergency situations contains objects that will help you survive for 3-5 days, in case you need to leave the house.

---

🏠 Watch your house and try to imagine what could happen in every rooms if an earthquake took place.

---

By means of this list, you can check the safety level of your house in case of an earthquake:

ASPECT TO CHECK	YES	NO
Do I know where to turn off the water, electricity and gas supply from?	<input type="checkbox"/>	<input type="checkbox"/>
Is the stove heating system correctly and solidly installed?	<input type="checkbox"/>	<input type="checkbox"/>
Are water heating installations and other heavy domestic devices that, by dropping, could break gas or water pipes, well fixed?	<input type="checkbox"/>	<input type="checkbox"/>
Are heavy furniture and shelves well fixed against falling?	<input type="checkbox"/>	<input type="checkbox"/>
Are mirrors and other objects, hanging on walls, fixed against falling?	<input type="checkbox"/>	<input type="checkbox"/>





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



Are beds and armchairs away from stoves and windows?

☐ ☐

Are walls next to beds free of pictures or other decorative objects?

☐ ☐

Are there any antiskid systems under TVs, computers and other devices that could slip during earthquakes?

☐ ☐

- 🏠 If you are in a hotel, read the instructions in the room. Identify safe places for sheltering in case of earthquake (for example: under a solid table).

#### DURING AN EARTHQUAKE:

- 🏠 It is not important where you are in case of an earthquake. Shelter immediately in a safe place and stay calm until the earthquake stops.
- IF YOU ARE INSIDE A BUILDING
  - 🏠 Stay where you are, do not try to get out or to go on the balcony.
  - 🏠 Shelter under a table, a desk or a piece of solid furniture and hold it strongly.
  - 🏠 If you are on the hallway, huddle up near an interior wall.
  - 🏠 Protect your head and face.
  - 🏠 Get away from windows, glasses, mirrors, book shelves, high furniture, and lighting devices.
  - 🏠 If you are in a wheeled chair, block the wheels and protect your head and back head.
  - 🏠 If you are in a public place (for example: store), shelter in places as far as possible either from windows or sectors with heavy objects. Do not get outside where you might get hurt.
  - 🏠 Do not use the elevator. If you are in an elevator during the earthquake, push the emergency button. When the elevator stops, get out of the elevator as fast as possible and shelter in a safe place.

ATTENTION! During an earthquake, objects can fall or slip, ceiling coating can fall and glasses can break.

- IF YOU ARE OUTSIDE A BUILDING
  - 🏠 Shelter in a safe place, away from windows, buildings, bridges, electric cables or poles. Stay at least 10 m away from broken and fallen electric cables.
- IF YOU ARE ON THE MOUNTAIN
  - 🏠 Pay attention around and look for a safe place to shelter. On unstable slopes, there are potential stone or tree falls or landfalls.

#### AFTER THE EARTHQUAKE STOPS:

- 🏠 Try firstly to stay calm. Calm down scared persons and children.





EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



- 🧑 Check if you are hurt and then look for persons around. In case you see hurt people, give the first aid, only if you know.
- 🧑 If, following the earthquake, you have been caught under ruins or inside buildings, at certain times, if possible, you need to hit, with a solid object, the compact part of the place you are blocked in, to send signals that can be identified and localized by a special search-rescue device.
- 🧑 Do not use phones, unless for informing of an emergency.
- 🧑 Put on resistant shoes and clothes to avoid being hurt by fallen objects, especially glass.
- 🧑 Check if the house has suffered any damage. Check the condition of the gas installation only with water and soap emulsion. In case you notice gas emissions, put away fire sources and open the window.
- 🧑 If the current water supply is still available, fill up the tub and other recipients, for cases in which water subsequently stops.



EUROPEAN UNION



ROMANIAN  
GOVERNMENT















SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



**REQUIRE INFORMATION FROM THE LOCAL ADMINISTRATION REGARDING  
THE TYPES OF RISK SPECIFIC TO THE LOCALITY YOU LIVE/ ARE IN.**

TYPE OF RISK	YES	NO	TYPE OF RISK	YES	NO	TYPE OF RISK	YES	NO
<b>FIRE</b>			<b>LANDFALL</b>			<b>HAZARDOUS SUBSTANCE ACCIDENT</b>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>STORM</b>			<b>LOW TEMPERATURE</b>			<b>NUCLEAR ACCIDENT</b>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>FLOOD</b>			<b>HEAT</b>			<b>UNEXPLODED AMMUNITION</b>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>EARTHQUAKE</b>			<b>TECHNOLOGICAL ACCIDENT</b>			<b>DISEASE / EPIZOOTIC OUTBREAKS</b>		
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

**PERMANENTLY REQUIRE INFORMATION!  
USE, FOR THIS PURPOSE, THE DISPLAY POINTS OF THE LOCAL PUBLIC  
ADMINISTRATION AND PUBLIC INSTITUTIONS.**

**Bibliography:**

*Citizen's Guide -IGSU-Service for Preventive and Statistic Information*



EUROPEAN UNION



ROMANIAN  
GOVERNMENT



SERBIAN GOVERNMENT



Structural Instruments  
2007 - 2013



## *Topic 4: Best Practices **Examples and “Lessons Learned”***