

"PROPOSAL"

**HUMAN
PROTECTION AND RESCUE DEVELOPMENT PROGRAM I
MATERIAL GOODS FROM NATURAL AND OTHER DISASTERS IN THE CITY
OF GRAČANICA 2023 - 2027**



GRAČANICA, December 2022

Based on Article 29, paragraph 1, item 2 and Article 174, paragraph 1, item 4 of the Law on Protection and Rescue people and material goods from natural and other disasters ("Official Gazette of FBiH", number: 39/03, 22/06 and 43/10), Article 16 of the Law on Fire Protection and Fire Fighting ("Official Gazette FBiH", number: 64/09), Article 60 of the Law on Protection and Rescue of People and Material Property from Natural and Other Disasters in Tuzla Canton ("Official Gazette of Tuzla Canton", Number: 10/08 and 8/15), Article 27 of the Law on Fire Protection and Fire Fighting in the Tuzla Canton ("Official Gazette of the Tuzla Canton", No. 1/12 and 3/16), Articles 4 and 122 of the Decision on the Organization and Functioning of the Protection and Rescue of People and Property from natural and other disasters for the Građanica municipality ("Official Gazette of the Municipality Građanica", number: 3/07), on the proposal of the Mayor of the City of Građanica, City Council of Građanica . at the session held on _____2023. years, brings

DECISION ON THE ADOPTION OF THE DEVELOPMENT PROGRAM FOR THE PROTECTION AND RESCUE OF PEOPLE I MATERIAL GOODS FROM NATURAL AND OTHER DISASTERS OF THE CITY GRAĐANICA FOR THE PERIOD 2023 - 2027

I

The Development Program for the protection and rescue of people and material goods from natural and other disasters of the City of Građanica for the period 2023-2027 is approved.

II

The development program for the protection and rescue of people and material goods from natural and other disasters of the City of Građanica for the period 2023-2027 is an integral part of it.

III

This decision enters into force on the day of its adoption and will be published in the "Official Gazette of the City". Građanica".

BOSNIA AND HERZEGOVINA
Federation of Bosnia and Herzegovina
Tuzla Canton CITY
OF GRAĐANICA CITY
COUNCIL Number: 01-23-/
Građanica:

PRESIDENT
CITY COUNCIL

Mirzet Topčagić

BOSNIA AND HERZEGOVINA

Federation of Bosnia and Herzegovina

Tuzla canton

CITY OF GRAĀANICA

MAYOR

Number: 02-40-2636 /22

Date, 23.08.2022. years

Based on Article 29, paragraph 1, item 2 and Article 174, paragraph 1, item 4 of the Law on Protection and saving people and material goods from natural and other disasters ("Official Gazette of FBiH", number: 39/03, 22/06 and 43/10), Article 16 of the Law on Fire Protection and Firefighting ("Official Gazette FBiH Gazette", number: 64/09), Article 60 of the Law on the Protection and Rescue of People and Property from Natural and Other Disasters in Tuzla Canton ("Official Gazette of Tuzla Canton", number: 10/08 and 8/15), Article 27 of the Law on Fire Protection and Firefighting in the Tuzla Canton ("Official Gazette of the Tuzla Canton", number: 1/12 and 3/16), Articles 4 and 122 of the Decision on the Organization and Functioning of the Protection and Rescue of People and Material goods from natural and other disasters for the area of GraĀanica municipality ("Official Gazette of the Municipality GraĀanica", number: 3/07) and Article 10. Statutory decisions on the organization of the City of GraĀanica in accordance with the Law on the City of GraĀanica ("Official Gazette of the City of GraĀanica", number: 1/19), the Mayor of the City of GraĀanica, makes

SOLUTION

on the appointment of a working group for the development of the Program for the Development of Protection and Rescue from Natural and Other Disasters of the City of GraĀanica for the period 2023-2027. year

I

To the Working Group for the development of the Program for the Development of Protection and Rescue from Natural and Other Disasters of the City of GraĀanica for the period 2023-2027. year, are named:

1. Mustafa Bajij, President, Assistant to the Mayor, Civil Protection Service,
2. Tukulj Dženana, Assistant to the Mayor, Office for the Affairs of the Mayor and the City Council

3. Alma Buljbasic, Assistant to the Mayor, Service for Social Activities, Veterans' Disability Protection and Joint Affairs,
4. Aida HodĀij, Assistant to the Mayor for property . Spatial planning, geodetic and legal affairs,
5. Nihad SinanoviĀ, Assistant to the Mayor, Service for Entrepreneurship, Local Development and finance,
6. Muhibija MemiĀ, Assistant to the Mayor - Chief Inspector, Service for Inspection Affairs - Inspectorate

7. HadĀij Jasmin - director of the JZU Doma zdravlja,
8. TeofiloviĀ Zoran - Head of PU GraĀanica,
9. SpahiĀ Zaim - director of JP "Veterinarska stanica" GraĀanica,
10. Husnija ImamoviĀ - Secretary of the GraĀanica City Red Cross Organization
11. Memic Senad – director. "JP Komus" GraĀanica, GraĀanica
12. HamidoviĀ Senad - director. JP "Vodovod i kanalizacija" GraĀanica

The work of the technical secretary will be performed by Senad KuliĀ from the Civil Protection Service.

II

The task of the working group from point I of this Decision is to, based on the Threat Assessment of natural and other accidents in the area of the City of Građanica, the Law on the Protection and Rescue of People and material assets from natural and other disasters ("Official Gazette of the FBiH", number: 39/03, 22/06 and 43/10), the Law on Fire Protection and Fire Fighting ("Official Gazette of the FBiH", number: 64/09), Law on protection and rescue of people and material goods from natural and other disasters in Tuzla Canton ("Official Gazette of Tuzla Canton", number: 10/08 and 8/15), Law on Fire Protection and Fire Fighting in Tuzla Canton ("Official Gazette the newspaper of Tuzla Canton", number: 1/12 and 3/16) and the Decision on the organization and functioning of the protection and rescue of people and material goods from natural and other disasters for the area of Građanica municipality ("Official Gazette of Građanica Municipality", number: 3/07) , made a proposal for the Development Program of Protection and Rescue from Natural and Other Disasters of the City of Građanica for the period 2023- the year 2027.

III

Professional and administrative work for the needs of the working group is performed by the Civil Service protection of the City of Građanica and coordinates all activities of the Working Group.

IV

The president, members and technical secretary of the Working Group are entitled to compensation. in height determined by the Mayor in a special decision.

IN

The decision enters into force on the day of adoption, and will be published in the "Official Gazette City of Građanica".

Delivered:

Submitted to:

1. Appointed in the working group
 2. Service for civil protection
 3. Records 4.
- a/a

MAYOR

Nusret Helić, sr

INTRODUCTION

This Program for the development of protection and rescue of people and material goods from natural and other disasters (hereinafter: Development Program) the objectives, policy and strategy of protection and rescue of people and material goods from natural and other disasters in the area of the City of Građanica for the period from 2023 to 2027 are determined.

The development program is a framework and basic planning document which, in the process of development and construction of the protection and rescue system in the area of the City of Građanica, will determine the directions for the development of protection and rescue through the implementation of concrete plans and projects in this area, as well as the harmonization of the functioning of the protection and rescue system on in the city area between the carriers of this system.

Protection and rescue of people and material goods from natural and other disasters includes: programming, planning, organizing, training and enabling, implementation, supervision and financing of measures and activities for protection and rescue from natural and other disasters with the aim of preventing dangers, reducing the number of accidents and victims, and elimination and mitigation of harmful effects and consequences of natural and other disasters.

In the framework of this Development Program, issues related to the programming of the development of fire protection and fire fighting in the city area have also been determined, because these areas form a single entity as determined in Articles 2 and 27 of the Act on Fire Protection and Fire Fighting of the Republic of Croatia.

During the creation of the Development Program, alignment was made with the valid Development Plan for the protection and rescue of people and material goods from natural and other accidents and protection from fire and firefighting in the Federation of Bosnia and Herzegovina and the Tuzla Canton.

The protection and rescue development program deals with the following issues:

1. CITY PROTECTION AND RESCUE DEVELOPMENT POLICY

1. Policy of development of protection and rescue of the City of Građanica;
2. Conclusions from the municipality/city vulnerability assessment;
3. Data on the state of organization of civil protection and the achieved degree of protection and rescue from certain natural and other disasters;
4. Preventive protection and rescue measures to be implemented;
5. Basic goals, tasks and way of achieving protection and rescue with guidelines for organizing forces and means of civil protection, i.e. protection and rescue forces,
6. Basics for creating a training and qualification program in protection and rescue;
7. Guidelines for research and development activities of importance for protection and rescue;
8. Overview of expected costs with funding sources.

Development of systems for the protection and rescue of people and material goods from natural and other disasters accident and implementation of protection and rescue measures are of general interest for the City of Građanica.

In the event of a natural or other disaster, everyone is obliged to help in accordance with their ability possibilities and abilities.

Development of systems for the protection and saving of people's lives and health and their rescue, care and treatment is determined as a priority and obligation of all rescues in relation to all other protective and rescue activities.

1. CITY PROTECTION AND RESCUE DEVELOPMENT POLICY

Development policy for the protection and rescue of people and material assets of the City of Građanica (hereinafter: Development Policy) is based on the fact that Bosnia and Herzegovina is a complex country in which the state apparatus is organized at several levels (State, Entity of the Federation of BiH, Entity of the Republika Srpska in BiH, Brčko District, cantons, local communities), which has led to the reduction of the city's competence regarding the use, preservation and protection of all kinds of natural and other resources.

The development policy for the protection and rescue of people and material goods from natural and other accidents and protection from fire and firefighting in the City of Gražanica (hereinafter: Development Policy) defines the policy, vision, goals, basic principles and determinations and the area of development, as well as strategic directions development of protection and rescue in the City of Gražanica.

In the Development Strategy of the City of Gražanica 2023–2027. year, which is in the drafting phase of the Capital Investment Program of the City of Gražanica 2021-2025. year, are the same as the key strategic planning documents of the City of Gražanica, which include the segment of protecting and rescuing people and material goods from natural and other disasters in the area of the city of Gražanica, so that the Development Program for the Protection and Rescue of People and Material Goods from of natural and other disasters in the city of Gražanica for 2023-2027. aligns the year with the same.

1.1. VISION OF THE DEVELOPMENT OF PROTECTION AND RESCUE

An efficient system of protection and rescue and protection against fire and fire fighting has been built to reduce the risk of natural or other accidents and their consequences through management and interaction with the competent services and other authorities and services for the administration of the City of Gražanica, with the aim of increasing the safety of citizens in the City of Gražanica.

The starting point for creating the Development Program is an analysis of the current situation and key problems of the protection and rescue system, which also refers to fire protection and firefighting as part of that system. In this way, the future goals of the development of protection and rescue, fire protection and firefighting would be planned, connecting the present and the future in the direction of achieving the set goals.

Relying on the existing development of administrative, operational and professional bodies, protection and rescue services, civil protection units and other structures of protection and rescue, fire protection and fire fighting, as well as the help of the protection and rescue forces of the Tuzla Canton, the Federal Administration of Civil Protection and other protection forces and rescue, it is necessary to fully functionally integrate the most important elements of the protection and rescue system in the administrative bodies, especially in fire and fire protection, demining, landslide protection, flood protection and water and underwater rescue, hygienic-epidemiological services, health team within the medical assistance service at the PJU Dom zdravlja Gražanica, Veterinary services within the JP Veterinary station, Services for communal affairs within the JP Komus Gražanica, Services and units for fire protection and fire fighting, JP Vodovod and sewerage Gražanica, City Red Cross Gražanica, and the capacities of the Cantonal and Federal Administration of Civil Protection, the Armed Forces of Bosnia and Herzegovina, the Police Administrations and other legal entities of importance for protection and rescue, in order to remove the existing disconnection and move more seriously in the direction of protection and rescue in achieving preparedness/readiness for successful response to risks (dangers) from natural and other disasters.

DEVELOPMENT VISION:

Establish a system of protection and rescue and protection against fire and fire fighting in the City of Gražanica that will protect and save the life and health of people and material goods from natural and other disasters, with a strongly developed and efficient area of prevention, i.e. management and reduction of risks from natural and other disasters, as well as developed capacities to respond to natural and other disasters, which also implies developed capacities for efficient management of actions to protect and rescue people and material goods.

1.2. GOALS OF DEVELOPMENT

They include measures and activities to protect and save people and material goods and reduce human mortality, the number of people affected by natural and other disasters, direct economic losses, damage to infrastructure, as well as the availability of early warning systems.

Respecting the lessons learned, our own and others, and especially the experiences of the past difficult period, occurrences, events and trends that have or may have an impact on the organization and functioning of the system for the protection and rescue of people and material goods for the future period

Development Program for 2023-2027. the following strategic goals are carried out this year:

Strategic goal 1. Construction and strengthening of the protection and rescue system

1.1. Financing of emergency measures for the protection and rescue of people and material goods to prevent the spread of danger and eliminate the consequences of natural and other disasters

1.1.1. Financing of emergency measures for the protection and rescue of people and material goods and preventing the spread of the danger of natural disasters and their consequences

1.1.2. Expenditures for emergency intervention measures for the rehabilitation of landslides

1.1.3. Compensation for work and costs of going to the field of the commission for assessing damage from natural and other disasters

1.2. Equipping civil protection structures

1.2.1. Procurement of equipment and material and technical means (apartment inventory)

1.2.2. Expenditure on clothing and uniforms

1.2.3. Expenditures for joint procurement (KUCZ TK, City of Građanica and JP "Spređa" dd

Tuzla) System for informing and alerting citizens in the area of TK - for the use of the City of Građanica

1.2.4. Expenditures for ongoing maintenance and servicing of CZ equipment and resources

1.2.5. Equipment for CZ and investment reconstruction

1.2.6. Insulation works on the roof of the extended warehouse and garage for fire engines i
equipment and procurement of carpentry

1.2.7. Expenditures for co-financing the purchase of a used CADY all-terrain vehicle for the needs
Services ZIS-Veterinary Service

1.2.8. Expenditures for the co-financing of the purchase of a used CADY all-terrain vehicle for the needs of the Service for
Water Supply in JP Vodovod i Kanalizacija Građanica

1.2.9. Expenditures for co-financing the purchase of a vehicle for transporting the injured - an ambulance
for the needs of the ZIS - Medical Assistance service

1.2.10. Expenditures for co-financing the procurement of construction machinery - Backhoe for the needs of the Ministry of
Social Affairs - for communal work (for cleanliness, sanitation of the terrain and protection of the environment)

1.2.11. Expenditures for the acquisition of MTS, acquisition and maintenance of the system for alerting the population and
equipping the CZ center

1.2.12. Subsidizing the purchase of equipment necessary for the implementation of personal and collective
protection of citizens

1.3. Implementation of preventive protection and rescue measures 1.3.1.

Co-financing of marking and demining of suspected mine surfaces in the area of the city of Građanica

1.3.2. Watercourse cleaning - public works

1.3.3. Co-financing by OOCK in the organization of elementary school students' competition in the field of PMP, mine warning and DDK

1.3.4. Co-financing the costs of pest control and/or disinfection and/or disinsection

1.4. Training and exercises of civil protection structures in the country and abroad

1.5. Expenditures for financing unplanned costs in the implementation of protection and rescue measures

Strategic goal 2. Strengthening fire protection and fire fighting and protection and rescue services as part of a unified system of protection and rescue

2.1. Equipping firefighting units and facilities, investment construction and maintenance

2.1.1 Procurement of minimum technical equipment and resources for the needs of PVJ

2.1.2. Acquisition of a used fire engine with an upgrade - a fire tank with a capacity of up to 8,000 l of water, up to 1,000 l of foam with an upgrade of equipment and resources

2.1.3. Expenses for the purchase of a used fire truck for rescue from heights, an automatic ladder up to 25 m long or a hydraulic articulated platform up to 25 m long.

2.1.4. Procurement of the missing set of technical tools for technical interventions

2.1.5. Expenditures for the purchase of an all-terrain vehicle for forest fires 4x4 with a high-pressure pump and a tank of up to 600 liters of water

2.1.6. Expenditures for personal and joint clothing and footwear and equipment for firefighters in PVJ

2.1.7. Expenditures for ongoing maintenance of PVJ assets

2.1.8. Extension of the fire station and provision of energy efficiency (warming and replacement of carpentry)

2.2. Exercise and training of firefighting units

2.3. Improvement of the preventive protection system

2.4. Education of the population

Strategic goal 3. Improvement of inter-institutional cooperation, cooperation with civil society and the business sector will be achieved through the following activities:

3.1. Improving the cooperation of institutions at all levels from the local community, cantons, Entities in FBiH and RS and BiH in the sectors of water, demining, land protection, environmental protection, protection and rescue, and spatial planning with the aim of reducing the risk of natural and other disasters

3.2. Cooperation with the Armed Forces of Bosnia and Herzegovina

3.3. Collaboration with civil protection structures of neighboring municipalities and cities, cantons, the Federation of Bosnia and Herzegovina, the RS and Brčko District, and the institutions of Bosnia and Herzegovina (Ministry of Security, etc.)

3.4. Improving cooperation with civil society - NGOs

3.5. Improving cooperation with the business sector

The results of the strategic goals set in this way are reflected in a significant reduction of the risk of natural and other accidents and loss of life, livelihood and health, as well as economic, physical, social, cultural and ecological assets of citizens, companies, communities and the country.

In order to achieve the expected outcome, one should strive to achieve: Prevent new ones and reduce them existing risks of natural and other disasters through the implementation of integrated and

comprehensive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce the risk of exposure and vulnerability, and increase readiness for response and recovery, thereby strengthening resilience.

The Civil Protection Service of the City of Građanica is responsible for the activities related to the preparation of the Development Program.

The administration services of the City of Građanica and other bodies of the City of Građanica participate in the drafting of the Development Program in matters from the area for which they were established, and within the framework of their regular activities they carry out the tasks, which are determined for their areas in that document, and are responsible for the state of protection and rescue in their areas.

The development program will be implemented through the strategic plans of the Civil Protection Service and the plans of the City Administration Service, i.e. through the implementation of the valid City Development Strategy Građanica for the period 2023-2027. year (hereinafter: City Development Strategy), of the Valid Capital Investment Program of the City of Građanica 2021-2025. (hereinafter: Capital Investment Program) and other planning documents.

The Civil Protection Service, together with the city's administration services, will monitor and coordinate the realization of these activities in accordance with the valid authorities, and will regularly inform the competent authorities of the City and propose new measures and tasks.

All forms of protection and rescue, including protection against fire and fire fighting, must be carried out in accordance with valid legal regulations, assumed obligations, i.e. the principles of international humanitarian law and international law on the protection of people, animals, cultural property and the environment from the dangerous effects of natural and other disasters, and the danger of accidents caused by fire from these effects.

The current Program for the Development of Protection and Rescue of People and Property from Natural and Other Disasters in the Federation of Bosnia and Herzegovina from 2021-2028 ("Official Gazette of the Federation of Bosnia and Herzegovina", number: 98/21) prescribes basic provisions in the field of protection and rescue and protection from fires and fire fighting, namely:

- 1) Every target has the right to protection and rescue and protection from fire, if his life, health and property are threatened as a result.
- 2) In the case of natural and other accidents and fires, the protection and saving of human lives has priority over all other protective and rescue activities.
- 3) Every natural and legal person has the right and obligation to implement protection against natural and other accidents and fire protection independently and together with others.
- 4) In the event of a natural or other disaster, everyone is obliged to help within the scope of their capabilities and abilities. Everyone must come to the aid of a person whose life is in danger, as long as it does not endanger his life or health. If he cannot help, he should immediately notify the operational center of civil protection or the corresponding civil protection administration in the canton and the civil protection service of the LGU, or arrange for help in another way.
- 5) In the event of a fire, every citizen of full age is obliged to put out the initial fire within the scope of his capabilities and abilities, unless he endangers his life and health by doing so, which refers to providing assistance to another person whose life is in danger as a result of the fire.
- 6) Every adult citizen, if unable to help save a life or extinguish the initial fire, is obliged to immediately inform the competent operational center of civil protection, i.e. seek help from the competent professional fire department.
- 7) All activities related to protection and rescue and fire protection are of a humanitarian and non-political nature.
- 8) The Federation of Bosnia and Herzegovina, cantons and local self-government units organize protection against natural and other disasters and fire protection as a unique system of protection and rescue in the Federation of Bosnia and Herzegovina.

- 9) Cantons and local self-government units are directly responsible for the implementation of protection and rescue and the implementation of fire protection in their area, and the unified functioning and protection in the entire territory of the Federation of BiH is ensured by the Federation of BiH.
- 10) Preventive measures must take precedence over all forms of planned protection from natural and other accidents and fire protection.
- 11) Citizens must have access to information about dangers, protection and the possibilities of their participation in deciding on the way to achieve protection against natural and other disasters.
- 12) Citizens must have access to information about the risks and dangers of fire, preventive protection measures, and methods and means of extinguishing an initial fire.
- 13) As a rule, you should protect yourself from known risks.
- 14) Organized forces of protection and rescue in war are obliged to help in the implementation humanitarian principles determined by the Geneva Conventions.
- 15) Data on risks and dangers, plans, measures and activities for protection and rescue and fire protection are public.
- 16) Every adult citizen must inform the nearest operational center of civil protection, the police, the appropriate service or the administration of civil protection about any danger or natural or other accident immediately upon seeing it or learning about it.
- 17) In accordance with the Law on Protection and Rescue, every natural and legal person is responsible for carrying out protection and rescue in case of natural and other accidents.
- 18) In accordance with the Fire Protection Act, every owner or user of buildings and premises and the manager of a residential building is responsible for fire protection in these buildings, premises and facilities.
- 19) Persons responsible for organizing fire protection are obliged to promptly carry out all the measures foreseen to protect their buildings/facilities and employees from the possible occurrence of fire through the implementation of preventive fire protection measures, as well as training in the field of fire protection, in the manner prescribed in the provisions of the Fire Protection Act.
- 20) LGUs through operational centers of civil protection and means of public information are obliged to inform the population about dangers, methods of protection and familiarize them with protection and rescue plans, fire protection plans and rules of behavior in case of natural and other accidents and fires.
- 21) Individuals and legal entities are obliged to promptly implement all proposed measures to protect their facilities and employees against the eventual occurrence of a natural or other accident through the implementation of protection and rescue measures prescribed in the provisions of the Law on Protection and Rescue, as well as property insurance with competent insurance companies. They can ask other physical and legal persons for possible help in repairing the damage caused, only if they have carried out previous activities.
- 22) The organization and implementation of preventive fire protection measures and the need to develop measures of preparedness and readiness in response to fire occurrences are based on assessments of the risk of fire and fire protection plans in LGUs and cantons, as well as the material, personnel and other possibilities at their disposal LGU, ie canton.
- 23) The preparation of the protection and rescue system is based on the adaptation of the organization to material and human possibilities, especially in local self-government units and cantons, as well as the development of critical infrastructure and the degree of sensitivity to certain types of hazards.
- 24) LGUs, in the event of a natural disaster or fire, first use their forces and resources for protection and rescue and fire protection. In the case when, due to the large scale of the accident and the intensity of the fire, the LGU's strength and resources are not sufficient, the threatened LGU asks for help from the neighboring LGUs. If their help is not enough, the canton, the Federation of Bosnia and Herzegovina and Bosnia and Herzegovina assigns help to the affected LGU unit in accordance with the possibilities and prescribed procedures for requesting/providing help in extinguishing fires.

- 25) The air force (helicopters) as well as other forces at the disposal of the Armed Forces of Bosnia and Herzegovina can be used for the protection and rescue and fire extinguishing of open spaces in the area of LGUs and cantons in the Federation of BiH, when the available civilian resources are not sufficient for quick and efficient execution protection and rescue action and firefighting in accordance with the provisions of the Law on Defense of Bosnia and Herzegovina ("Official Gazette of Bosnia and Herzegovina", number: 88/05) and by-laws (Standard Operating Procedures and others) related to the issue of providing assistance to civil authorities.
- 26) The use of forces and means in the event of a natural or other disaster must be sufficient and economical in proportion to the threat, or the consequences of a natural or other disaster.
- 27) The execution of protection and rescue actions is based on the mandatory implementation of the decisions of the competent civil protection headquarters. If by any chance it is reasonable that the decision refers to the commission of a criminal offense or a violation of international humanitarian law, no one is obligated and may not implement such a decision.
- 28) Every authorized member of civil protection, commander, head of service, or group leader and rescuer must know who his superior is.
- 29) In order to prevent or at least mitigate the consequences of natural and other accidents and the consequences of fires, one should react quickly and act effectively. Therefore, protection and rescue forces as well as basic and supplementary firefighting forces must be organized, equipped and trained so that in the event of a natural or other accident or fire they can respond as soon as possible.
- 30) Forces and resources for protection and rescue are organized depending on the threat assessment and coordinated needs at the LGU, cantonal, federal and state levels.
- 31) Protection and rescue services are organized to perform those protection and rescue tasks for which capacities have not been developed within the regular activities of the ministry and other administrative bodies in LGU services, institutions, institutes, institutions, public companies, existing voluntary or professional rescue services.
- 32) Civil protection units and firefighting units are organized by spatial and functional principle, and can combine both principles.
- 33) When organizing and implementing protection and rescue and fire protection, in principle, existing conceptual material and other resources are used, but also the recognized capacities of professional organizations, citizens' associations and civil society organizations.
- 34) Members of the protection and rescue forces and members of the basic and supplementary firefighting forces have the right to protection at work, for which their founders are responsible. The authorities that directly command specific units, services and all other forces in an operational situation take care of the implementation of the prescribed measures for protection and health at work.
- 35) Solutions and procedures from protection and rescue plans and fire protection plans must be simple, clear and understandable and previously simulated through forms of training to check validity and urgency, with which all members of their implementation must be familiar.
- 36) Using a preventive approach implies making preparations for the implementation of protection and rescue measures and fire protection measures, which play an irreplaceable role. Expensive and effective measures must not be an excuse or a reason for delaying their implementation by planning authorities in cases where there is a danger of great or irreparable damage.
- 37) The provisions of the Law on Obligations ("Official Gazette of RBiH", number: 2/92) shall apply to any natural or legal person who intentionally or through negligence caused endangerment, which resulted in the costs of additional implementation of measures, i.e. which caused subsequent damage. , 13/93 and 13/94 and "Official Gazette of the Federation of Bosnia and Herzegovina", no. 29/03 and 42/11).
- 38) As a rule, you should protect yourself from known risks.
- 39) The state and all levels of government, as a rule, only care about aid, that is, social protection to those individuals who cannot provide it for themselves.

- 40) Assistance in the event of a natural or other accident is, as a rule, free of charge.
- 41) Bosnia and Herzegovina and the Federation of Bosnia and Herzegovina ensure the participation of protection and rescue forces in international humanitarian rescue operations, which requires the adoption of unique standards and procedures in the field of organization, implementation, equipment and training of forces, international data exchange, informing other countries about dangers, signing appropriate contracts and agreements.

2. CONCLUSIONS FROM THE THREAT ASSESSMENT OF THE CITY OF GRAJANICA

The conclusions established in the updated Risk Assessment of the City of Grajanica from natural and other disasters represent the starting point and basic directions and direction for the adoption of the Development Program for the Protection and Rescue of People and Material Assets from Natural and Other Disasters in the City of Grajanica for the next period, as well as updating the Protection Plan and rescues from natural and other disasters in the City of Grajanica.

The assessed state of threat in the area of the City of Grajanica includes natural and other disasters that may threaten the area of the City of Grajanica, which is a significant step towards establishing the readiness of the social community for the prevention, occurrence, mitigation and remediation of the consequences of natural and other disasters in the area of the City of Grajanica.

2.1. Proposal of a protection and rescue organization (ZiS) with indicators of forces and material-technical means and equipment that should be planned and provided for the implementation of the proposed organization with a special focus on the following question:

Forces and resources for protection and rescue should be organized in accordance with the provisions of the Federal and Cantonal Law on the Protection and Rescue of People and Material Assets from Natural and Other Disasters and the Decision on the Organization and Functioning of the Protection and Rescue of People and Material Assets from Natural and Other Disasters and Protection from fires for the area of the city of Grajanica, which implies an optimal approach when determining part of the forces and means for these purposes within the structures of civil protection, and part within the framework of other legal entities and natural persons.

2.2. Types of natural and other disasters that are included in the threat assessment and the areas of their impact with possible consequences for people and material goods

Natural and other accidents may occur in two or more local communities, that is, natural, technical-technological and other accidents may occur in the entire area of the city, which may endanger the life and health of a large number of people and cause material damage of a larger scale.

Natural disasters are events that are caused by the action of a natural force that cannot be influenced by the human factor, such as: earthquake, flood, heavy snow and snowdrifts, storm or hurricane wind, hail, cloudburst, landslide, drought, cold, and mass phenomena human, animal and plant diseases;

Technical-technological accidents are events that got out of control during the performance of a certain activity or management of certain means for work and work with dangerous substances, oil and its products and energy gases during their production, processing, use, storage, transshipment, transportation or removal, which the consequences endanger people and material goods;

Other accidents include major accidents in road, rail, air or sea transport, fire, mining accidents, dam collapse, atomic, nuclear or other man-made accidents, war, state of emergency or other forms of mass casualties and destruction of material goods.

In addition to the aforementioned accidents, the territory of Bosnia and Herzegovina was also exposed to the effects of the Chernobyl nuclear accident on April 26, 1986, and due to the proximity of the Krško nuclear plant in

Slovenia and numerous nuclear plants in Central Europe, is located in the zone of exceptional risk of nuclear accidents.

Contamination of the territory of the City of Građanica with mines and unexploded ordnance (UXO) represents one of the greatest dangers for the population, especially in areas where combat operations were conducted, i.e. where the lines of separation were.

In addition to the losses and injuries caused to people, these dangers directly slowed down and prevented reconstruction and reconstruction, organization and normalization of life and work, as well as the faster return of refugees and displaced persons and produced an unstable security environment.

In industrial production in the area of the Tuzla Canton (the cities of Lukavac and Tuzla) - in certain branches, substances are used that in the production process are not followed by appropriate health and environmental protection technology, and represent a direct danger both for employees and for the wider area, where and the area of the city of Građanica.

In addition, complex natural conditions and climate change have increased the risk of natural or other disasters. The post-war period is a period in which areas of the city are more intensively exposed to risks from natural or other disasters. The basic indicators for this are: the planning process; outdated and outdated plans; destroyed and unrestored infrastructure systems; and especially meteorological, hydrological and seismological observation and communication systems, which impaired the efficiency of the technical-technological system of timely detection, monitoring, forecasting and earlier announcement of natural disasters, which further increased the risk; lack of documentation (higher degree of damage and destruction); increased sensitivity of physical structures to risk in view of their war destruction and the destruction of the accident protection system, lack of financial resources, technical lack of equipment of existing institutions; low level of awareness of dangers, low level of specialist education of people in different sectors related to protection against natural and other disasters.

The certain possibility that the estimated natural and other disasters suddenly, powerfully and destructively manifest in the city area and in a short interval causing great losses of people, animals and cultural and material goods, requires the consistent implementation of preparations for the execution of rescue, evacuation, disposal, aid interventions, urban search and rescue, organization of logistics, etc.

For this reason, it is necessary or necessary to plan the capacities of hotels, sports centers, schools, etc., for the needs of evacuation and care of the endangered population, quarantine for injured and diseased livestock along with medical triage and care.

2.2.1. NATURAL DISASTERS

2.2.1.1. Earthquakes

Possible causes, i.e. the risk of a natural disaster:

Destructive earthquakes that periodically threaten certain parts of the country, not only expose human lives and material goods to constant potential danger, but also threaten the entire human activity and its normal development in these areas.

Seismological monitoring is the responsibility of FHMZ and the most important thing is to provide quality and reliable transmission of data from seismological stations to the Operational Communication Center of BiH - 112, and then to the operational centers of CZ-121, all for the purpose of informing the population in a timely manner.

Bosnia and Herzegovina has adopted European regulations related to design and construction of earthquake-resistant constructions (Eurocode - 8), but it is necessary to apply them in practice.

Given that the Study of Climatological, Hydrological and Seismological Characteristics of the Tuzla Canton from the Federal Meteorological Institute shows that the area of the city of Građanica has not been exposed to devastating earthquakes of higher intensity that could

cause greater material damage and cause human casualties, it is difficult to accurately and comprehensively evaluate possible movements in the earth's crust in the area of the city of Građanica.

Regardless of the above, it is necessary to ensure the creation of maps (epicenter of earthquake, seismic hazard, risk, maximum intensities) seismological seismotectonic and other necessary parameters for spatial planning and seismic design and construction, all with the aim of prevention and protection of people and material goods from this natural accidents and disasters.

Technical regulations for the design of buildings make it possible to implement individual protection of each building against the destructive effects of earthquakes during the realization of urban plans, which must also be fully implemented in the coming period, when creating spatial, basic and detailed urban plans and projects that form the basis of the development of urban areas.

The Richter scale is used to measure the released energy, and various scales are used to measure the intensity of earthquakes on the earth's surface, the most widespread being: the MCS scale and the MSK-64 scale.

Frequency of occurrence

Analyzing data on earthquakes that occurred in the past in the territory of Bosnia and Herzegovina (since 1905), we see that the area of the city of Građanica was not exposed to devastating earthquakes.

The intensity of earthquakes in the past period

Destructive earthquakes that periodically threaten certain parts of the country, not only expose human lives and material goods to constant potential danger, but also threaten the entire human activity and its normal development in these areas.

According to the data of the Federal Meteorological Institute - Department of Seismology, in the last 110 years, a total of 33 earthquakes were registered, which had an impact on the TK area.

The strongest earthquake, with a magnitude in the hypocenter of 5.1 degrees on the Richter scale, and an intensity in the epicenter of 7.0 degrees on the Mercalli scale, with the epicenter in Dobošnica, was registered on October 29, 1974. years.

In this period, 16 earthquakes with magnitudes between 5 and 6 and 7 earthquakes were registered between 6 and 7 degrees on the Mercalli scale.

The duration of the earthquake

Earthquakes can be of extended duration, characterized by a main shock of longer duration, then the main seismic activity stops. Subsequently, significantly weaker earthquakes are possible. Shock-type earthquakes, according to their duration, are characterized by a short and weaker intensity of the earthquake in the first phase, which is followed, over a longer period of time, by earthquakes of significantly weaker intensity. Also, there are short-term earthquakes.

The longer duration of the earthquake, of great intensity in the epicenter, expressed in degrees of the Mercalli scale, causes catastrophic consequences for all objects on the surface of the earth, with a large number of dead and injured people.

An area that may be threatened by an earthquake

According to the data of the Seismological Institute of Bosnia and Herzegovina Sarajevo, earthquakes are possible in the area of TK happen, that is, the effect of an earthquake can be felt in the area of all municipalities/cities of TK.

Possible consequences of the earthquake on people and material goods

An earthquake as a natural phenomenon, which, depending on its intensity in the epicenter, measured in degrees of the Mercalli scale, causes a smaller or larger movement of the ground, which results in 14

demolition and damage of most construction and other buildings, devices and other assets, and also, very often, depending on the intensity of the earthquake at the epicenter, there are also dead and wounded people.

For a large part of TK (mainly marginal), in the next 100 years, it is estimated that no earthquakes with an intensity higher than 6 degrees of the Mercalli scale are expected, with the fact that the climate changes that are happening in the world are also unavoidable in BiH, so preventive and anti-seismic measures are needed measures to constantly plan the protection of the population from possibly stronger earthquakes. The area around Lukavac is somewhat more threatened, with a maximum expected intensity of 6.5 to 7 degrees on the Mercalli scale.

North and northeast of Lukavac, earthquake intensities of 7 to 7.5 degrees on the Mercalli scale can be expected, and it is also the most threatened area of TK.

Taking into account the degree of urbanization of TK, the number of floors of the buildings, the nature of the represented industry (chemical industry and mining), as well as the knowledge about non-compliance with the "aseismic" construction of buildings, it can be said that TK is quite a seismically endangered area.

The problem is complicated by the subsidence of the terrain in the area of the urban part of Tuzla, as a result of the uncontrolled exploitation of the sone deposit over a long period of time, as well as numerous industrial complexes near the most dangerous tectonic fault, in the area of the town of Lukavac.

Seismological monitoring is the responsibility of FHMZ and the most important thing is to provide quality and reliable transmission of data from seismological stations to the Operational Communication Center of BiH - 112, and then to operational centers CZ-121, all for the purpose of informing the population in a timely manner.

It is also necessary to develop and implement a population education program behavior before, during and after an earthquake. Special attention should be paid education of children of preschool and school age as well as older persons who belong to the most vulnerable categories.

Analyzing data on earthquakes that occurred in the past in the territory of Bosnia and Herzegovina (since 1905), we see that the area of the city of Građanica was not exposed to destructive earthquakes. Technical regulations for the design of buildings make it possible to implement individual protection of each building against the destructive effects of earthquakes during the realization of urban plans, which must also be fully implemented in the coming period, when creating spatial, basic and detailed urban plans and projects that form the basis of the development of urban areas.

Bosnia and Herzegovina has adopted European regulations related to design and construction of earthquake-resistant constructions (Eurocode - 8), but it is necessary to apply them in practice.

2.2.1.2. Floods

Protection and rescue on water and under water is a measure that contains elements of the implementation of protection and rescue of people and material goods in the areas around rivers (Spreja, Sokoluša, Drijenja, Rašljevačka, Lukavička, Stjepopoljska, Džakulska, Doborovačka, Kosova, Mirijanski potok, etc.) which can be threatened by floods, which can be caused by damage or demolition of high dams (HA Modrac), embankments or other water protection structures, as well as from the danger of torrential and underground water.

Protection on water and under water includes: construction, maintenance and rehabilitation of damaged structures for flood protection, monitoring and reconnaissance of the condition of watercourses, structures and terrain, planning and carrying out the evacuation of the population and material goods from endangered areas, planning and transportation and river crossings, lakes, supplying the flood-affected population with the necessary food and other resources for survival and participating in the remediation of the consequences caused by floods.

Owners of swimming pools, beaches and similar facilities are obliged to pay their own expenses in providing services provide appropriate rescue services for rescuing drowning swimmers.

The administrative bodies of the canton responsible for water management and economic companies in the field of water management are responsible for detecting and determining the dangers and organizing the implementation of protection and rescue from floods caused by the damage or demolition of high dams, embankments or other water protection structures, as well as dangers from torrential and underground waters of category II that cause flooding.

Protection and rescue are carried out by: citizens in the framework of self-protection, legal entities whose main activity is that, or that activity is related to rivers and lakes, as well as sports and other associations that engage in water or underwater sports and protection and rescue services, which are equipped and trained for this type of protection and rescue, civil protection units for protection and rescue on and under water, and administrative bodies and city/municipal administration services responsible for water management.

Possible causes of floods

The causes of floods in the area of the city of Građanica are diverse, so that floods can occur due to the outpouring of large amounts of water from natural and artificial watercourses and hydroaccumulations, water overflowing over defensive embankments and dams, breaching of embankments, i.e. the collapse of dams on hydroaccumulations and other hydro-construction facilities, then due to high levels of underground and large amounts of surface water, as well as due to the appearance of torrential and mountain waters after heavy local downpours. Heavy and long-lasting rainfall and sudden melting of snow cause intensive inflow of large amounts of water into watercourses, which cannot fully accept them, causing water to overflow from the watercourse bed and lead to floods. Floods most often occur along unregulated and unregulated watercourses. A special problem is unregulated watercourses, the beds of which are overgrown with various vegetation and covered with silt, stones and coal dust (typical of the Spređa, Mirijanska, Rašjevačka, Sokoluša, Drijenja, Stjepopoljska, Lukavička, Džakulska, Dobarovačka, Pribavski potok rivers). However, floods also occur along regulated watercourses due to the fact that large amounts of various waste materials are deposited in them, and various structures are illegally built along the watercourses, as well as across them, which all together affect the reduction of the flow profile of the watercourse, which in ultimately leads to flooding.

Uncontrolled deforestation in the catchment area also contributes to the occurrence of floods watercourses, which affects the erosion of the surface layer of the land and reduces its ability to absorb larger amounts of water, which results in faster water flow into the watercourses, which creates preconditions for the occurrence of floods. The causes of floods are also a high level of underground and surface water, a poor drainage network in these areas, unregulated and unorganized canals for receiving and draining surface and underground water, undeveloped main and auxiliary defensive embankments along larger watercourses in plain areas, and torrential and mountain waters with a great destructive effect, which occur after strong local downpours.

Floods also occur downstream of the "Modrac" hydro reservoirs (HA), in the area of the towns of Lukavac and Građanica and the municipality of Dobož Istok, and due to the release of large amounts of water over the spillway at the "Modrac" dam (all over 40 m³/s). , as a result of maintaining water reserves for supplying the cities of Tuzla and Lukavac with drinking and industrial water, the smooth operation of the hydroelectric power plant and the inflow of large amounts of water into the HA, during prolonged and heavy rainfall or due to sudden melting of snow.

Frequency of occurrence of floods

In the last 10 years, floods have occurred every year in the area of the city of Građanica smaller or larger scale, several times a year, in the area of almost all local communities in the Spređa river valley.

In January 2000, due to the increase in air temperature, there was a sudden melting of the snow, which caused large-scale floods in the area of the town of Građanica.

In June and July 2001, floods of catastrophic proportions affected the territory of all 13 municipalities/cities of TK.

During April, May, June, August, October and November 2002, floods of medium intensity affected all 13 municipalities/cities of TK.

During April, June and July 2004, relatively large floods affected the area of the town of Građanica.

A noticeable increase in air temperature in March 2005 caused a sudden melting of snow in the entire area of TK, which caused a sudden rise in the water level of all watercourses. The river Spređa (category I watercourse) overflowed its banks in the area of the town of Građanica and flooded considerable areas of agricultural and other land.

Heavy rainfall and sudden melting of snow during March 2006 caused rivers to overflow their banks and flood agricultural land in the area of the town of Građanica.

Heavy rainfall in June 2006 caused a sudden rise in the water levels of all watercourses in the city and the spilling of the Spređa River.

The consequence of the mentioned rainfall was the flooding of about 100 ha of land in the Spređa river valley.

In March, May, June, October, November and December 2007, as a result of heavy rainfall, rivers and streams overflowed their beds and flooded large areas of agricultural and other land, which was especially pronounced in the Spređa river valley. .

Heavy, multi-day rainfall in March 2009 caused an increase in the level of all watercourses in the area of TK. The overflowing of rivers and streams also caused flooding in the area of the city/municipality of Građanica, where the river Spređa flooded about 400 hectares of agricultural land.

Heavy rainfall for several days, in June and July 2010, in the area of all municipalities/cities of TK, caused a sudden rise in water levels in all watercourses, as well as in HA Modrac. Next to the river Spređa, in almost all local communities of the municipality/city, on two occasions there were overflows of smaller - torrential and larger watercourses (Rašljevačka river, Miriđanski potok, Basiđi potok, Pribavski potok, Sokoluša, Drijenđa, Stjepopoljska river, Lukaviđka river, Džakulska river, Doborovađka river, Vranoviđka river), which caused, in a very short period of time, floods of catastrophic proportions, registered in almost all local communities.

At the same time, and especially after the relative calm of the flood situation, numerous landslides were activated in the area of all local communities.

For several days, traffic was interrupted due to flooding on the roads: M-4 Dobođ Tuzla, Orahovica-Srebrenik, Građanica-Srebrenik, Građanica-Srnice and more important local roads.

As a result of long-term rainfall that intensified from May 14 to 23, in the entire area of the municipality/city of Građanica, there was a sudden rise in the water level in the watercourses, and then there was an overflow of water from the riverbed and floods that endangered the population and damaged residential, business and infrastructure facilities, as well as agricultural areas.

In the afternoon hours of 13.04.2014. rains began, which continued with undiminished intensity during the night and the following days, and already in the morning hours of 14.05. the spilling of the Spređa River began (it had just receded from the previous rains), and in the afternoon the fight to defend against the spilling of the Sokoluša River beyond the regulated flow in the city of Građanica and the efforts to use some interventional-emergency measures 17

are channeling surface water in order to save several buildings in the Koriya Han settlement in Grajanica, which was threatened by a landslide.

Since the precipitation did not stop all day, 15.05. in the afternoon, problems already started with the swollen river Sokoluša, which threatened to overflow and flood several residential and commercial buildings downstream from the mouth of the Drijenja. At the same time, more intensive overflowing and flooding of the Spreja River began in local communities that gravitate to the river, and local watercourses in all local communities turned into torrential watercourses of great strength, carrying trees and other material, threatening to destroy bridges and crossings, damaged road communications and flooded residential and other buildings. Calls for help came from the local communities of Pribava, Donja Orahovica and from the city, as water began to enter the buildings around the soccer fields in Orahovica and Pribava, and the defense of the Riječka settlement near the Fire House and in Lejlekuša Street was also organized.

On May 24, 2014. The swollen Rašljevska river once again flooded the Donja Orahovica municipality, much more severely than in the previous disaster. 61 residential and 4 business buildings in the settlements of Rijeka and Kariji were flooded, the supply route of the local water supply was interrupted in 3 places, with a total length of about 80 m, on profiles Ø 110 mm and 6/4", and 3 bridges on road D were damaged. Orahovica-Rašljeva, through Rijeka, which is why the road had to be closed, and facilities had to be disinfected again.

In the last 10 years in the area of Grajanica, smaller or larger floods occurred every year, several times a year, in the area of almost all local communities in the valley of the river Spreja, which is shown in the following table:

TABLE OF FLOODING IN THE SPREJE RIVER VALLEY FOR THE PERIOD 2010 - 2020

Year /datum	The Biggest Release of the area Prevents of the water metering station bridge behind Karanovac (cm)	the highest water level. HA (thousand)	(m3 /s)	Flooding in progress years	Biggest Note flooded water. land in (ha)	Damage to the field. land	
03.06. 2010.	520	201,14	244,06	7x	320		
07.05. 2012.	320	199,56	74,6	2x	30		
15.03. 2013.	350	199,45	75,1	2x	60		
16.05. 2014.	620	203,42	812	5x	550		
06.03. 2015.	378	199,84	60,20	4x	80		
23.03. 2016.	404	199,61	76,20	1x	150		
09.03. 2017.	417	200,32	101,40	6x	200		
09.03. 2018.	380	199,74	69,88	1x	150		
02.06. 2019.	460	199,72	58,20	3x	250		
25.06. 2020.	425	200,74	164,30	1x	230		

Overview of damage caused by flooding in the period 2001 - 2020

R. br.	DAMAGE DESCRIPTION	2001.	2005.	2006. (March in June)	2010.	2014. (Maj - Sept.)	2016.	2017.	2018.	2019.	2020.	IN TOTAL: (KM)
1.	Damage to the field, crops and soil	3.816.200	248.400	512.100	934.490	8.592.230	182.830	190.340	247.800	858.500	924.850	16.507.740
2.	Damage to the infrastructure.	29.300				79.800	66.720	9.000	84.486	307.863	68.730	645.899
3.	Damage to industrial m facilities				744.420	25.742.243			25.500			26.512.163
4.	Washing and disinfection of commercial buildings					60.236				3562		63.798
5.	Damage to residential buildings	1.575.000				3.130.000	18.900	6.500		21.050	28.600	4.780.050
	TOTAL:	5.420.500	248.400	512.100	1.678.910	37.604.509	268.450	205.840	357.786	1.190.975	1.022.180	48.504.650

The intensity of the floods in the past period

In the past period, in the last 10 years, the intensity of floods in the area of the city of Građanica ranged from medium intensity, when a smaller area of agricultural and other land and a smaller number of residential and other buildings were flooded, to floods of catastrophic proportions, which occurred in June 2001, when more than a thousand hectares of agricultural and other land, dozens of residential, auxiliary, business, economic and infrastructure facilities of all kinds were flooded, in the area of all 23 local communities.

In June and July 2010, there were catastrophic floods in almost all parts of the municipality, where, in addition to the overflowing of the Spreja River, there were also smaller - torrential and larger water flows in all local communities, which caused, in a very short period of time, flooding: 282 ha of agricultural land, 170 auxiliary buildings, 155 residential buildings, 8 industrial buildings, and damage or destruction of 4 bridges.

A total of 231 people were evacuated.

Also in May 2014, a natural disaster caused by floods in the area of the municipality Građanica caused:

From May to 31.12.2015. In 2008, damage was recorded to: 1,260 ha of agricultural land and crops, 617 residential buildings, 119 commercial buildings, damaged riverbeds and streams.

The spilling of water from the Spreja River in May and Sokoluša in August caused flooding of the substation and blackout of electricity in the city and most of the local communities.

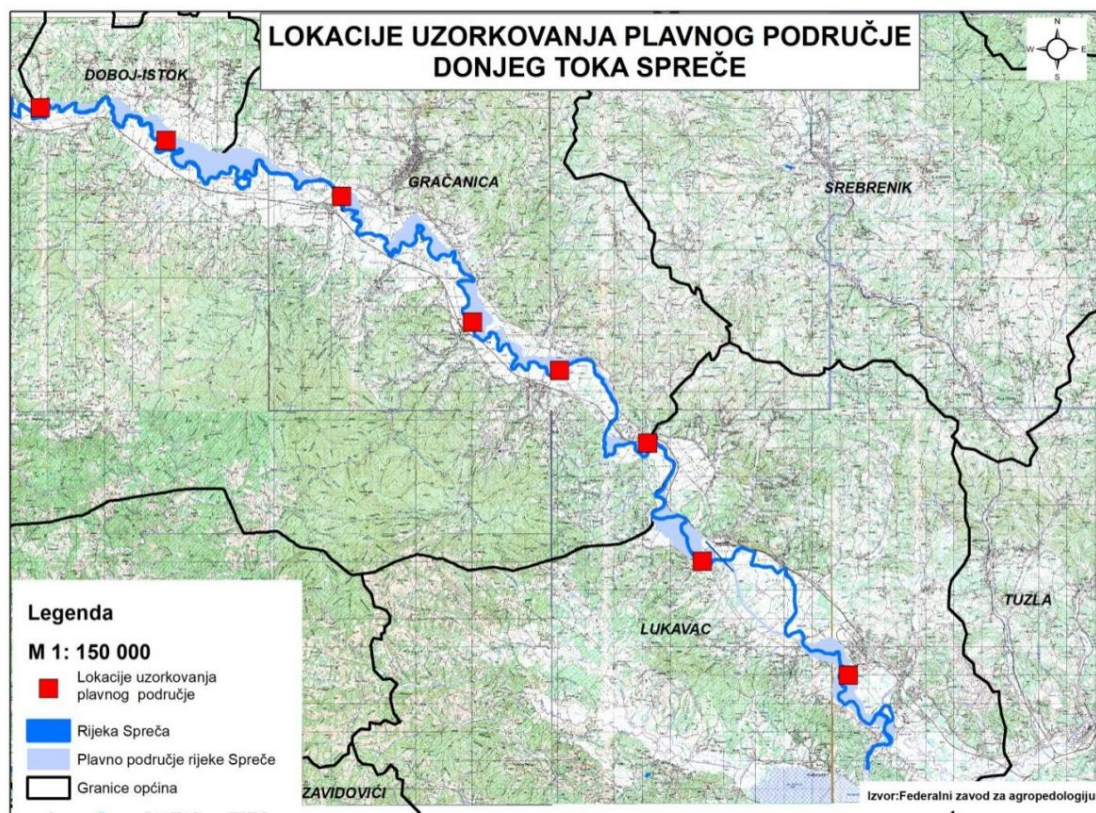
In general, it can be said that floods and torrents are frequent disasters in the area of Građanica municipality (they occur every spring and autumn) and their frequent occurrence is to be expected in the coming period as well, until the beds of the river Spreja and its tributaries in this area are fixed.

In addition to floods in the Spreja river valley, it poses a big problem for the health of citizens increased concentration of heavy metals and saturated aromatic hydrocarbons (PAH). That's right

The Government of the Federation of Bosnia and Herzegovina, at the 15th session held on July 16, 2015. adopted Conclusion V.No.: 940/2015 on accepting information from the Federal Institute for Agropedology on the state of soil and plant pollution in the lower reaches of the Spreja River and tasked the Federal Institute for Agropedology to carry out additional research and propose urgent measures for the prevention and rehabilitation of the polluted area in the lower reaches along the river Spreja.

The basic task of these researches is to determine the degree of contamination of agricultural land and plant material with heavy metals and organic pollutants, and

after that, assess the possibility of agricultural production in certain areas of the lower reaches of the Spreča River.



The focus of the research is focused on the content of organic and inorganic pollutants in the soil with special emphasis on the following elements: Lead (Pb), Cadmium (Cd), Mercury (Hg), Zinc (Zn), Cobalt (Co), Copper (Cu), Manganese (Mn), Arsenic (As), Nickel (Ni), Chromium (Cr), Copper (Cu) and Iron (Fe) and the content of polycyclic aromatic hydrocarbons (PAHs).

Representatives of the Federal Institute for Agropedology and representatives of the Civil Protection Service are 02.06. and 17.06.2015. years after the floods went to the locations in Stjepan Polje, Gračanica, Donja Lohinja, Donja Orahovica and Mirijina, where representatives of the Federal Institute for Agropedology took soil samples and one sample of plant material.

After the first results obtained from soil samples taken on June 2, 2015. year, it was determined that there was a certain degree of pollution with heavy metals and organic pollutants in this area, which is why additional research was carried out on June 17, 2015. years.

Analysis of soil and plant material samples from 4 localities (Municipality of Lukavac in the area of Gnojnica-1, Gnojnice-2 and in the municipality of Gračanica in the area of Mirijina) taken on June 17, 2015. year, enormously high values of PAHs were determined in 2 samples of soil and in one sample of plant material, which exceeded the permitted limit value of 2.00 mg/kg, established on the basis of the Rulebook on determining permitted amounts of harmful and dangerous substances in soil and methods their examination), so it was concluded that adequate measures should be taken and until further notice the use of agricultural land in the lower reaches of the Spreča River in the Municipality of Lukavac in the area of Sižja, Dobošnica and Gnojnica and in the Municipality of Gračanica in the area of Mirijina.

After the soil analysis by the Federal Institute for Agropedology, Information on the state of soil and plant pollution in the lower reaches of the Spreča River was prepared and submitted to the Government of the Federation for consideration. By the conclusion of the Government of the Federation, V. number: 940/2015 of 16.07.2015. year information was accepted with certain responsibilities for undertaking protection measures. In order to take appropriate measures to protect people and animals, the municipality of Gračanica has warned the citizens of the municipality of Gračanica through the means of public information - Radio Gračanica and the Council of the Ministry of Health about the ban on the use of land along the river Spreča located in the Ministry of Health of Mirijina in

agricultural purposes nor to use cereals and vegetable crops from these properties for human and animal consumption. Based on the latest Report of the Federal Institute for Agropedology on the monitoring of the lower course of the Spreja River for the year 2020 and conducted field tests and observations, as well as laboratory analyses, the chemical and physical properties of the soil were determined, which are shown in the following table:

Redni broj	Katastarska općina	Godina uzorkovanja	Pb	Cd	Zn	Co	Cu	Cr	Ni	Hg	As	PAH	Teksturni sastav tla
			mg/kg										
1.	Miričina	2014	25,13	1,47	51,63	47,00	31,73	69,23	599,80	0,28	5,69	1,24	pjeskovita-ilovača
		2015	28,47	2,30	54,81	35,85	30,43	86,80	323,68	2,13	5,45	4,54	
		2016	33,67	0,43	64,83	33,70	32,67	104,10	290,70	1,41	6,97	3,30	
		2017	31,40	0,40	135,50	41,23	25,40	187,00	384,20	0,31	8,52	1,48	
		2018	23,27	0,34	65,67	24,83	20,63	116,40	215,50	0,52	8,25	21,12	
		2019	27,43	0,43	48,53	25,43	31,00	103,70	247,50	1,18	11,11	5,24	
2.	Orahovića Donja	2020	28,93	0,48	60,83	25,73	32,00	73,43	242,00	1,95	11,80	4,38	pjeskovita-ilovača
		2014	17,73	1,03	39,97	23,83	21,30	53,70	312,00	1,00	4,81	7,46	
		2015	24,33	1,40	54,00	23,93	26,93	68,27	265,30	1,18	6,63	7,12	
		2016	16,97	0,22	67,50	25,87	22,70	98,90	266,50	1,42	4,82	18,80	
		2017	24,20	0,40	86,83	29,97	26,77	165,20	252,70	0,46	8,90	3,80	
		2018	20,90	0,26	53,17	35,33	20,67	168,70	280,70	0,22	9,26	2,71	
3.	Donja Lohinja	2019	30,87	0,39	46,10	23,20	27,47	84,80	248,80	3,17	11,07	12,48	praškasta pjeskulja
		2020	18,73	0,36	45,67	27,37	19,83	153,60	337,20	0,73	12,52	6,01	
		2014	19,07	0,97	42,73	30,40	23,17	45,83	198,30	0,60	4,83	0,79	
		2015	22,80	1,57	30,00	29,17	22,07	86,33	222,30	1,55	5,58	7,21	
		2016	17,33	0,27	55,67	35,87	22,40	110,10	336,00	1,06	5,65	5,06	
		2017	24,67	0,40	60,00	33,47	22,40	151,00	331,30	0,59	8,91	7,12	
4.	Stjepan Polje	2018	27,43	0,45	64,67	39,73	32,63	145,60	359,80	0,78	10,87	3,43	ilovača
		2019	25,93	0,49	57,80	40,07	38,93	208,20	414,70	0,16	12,52	0,59	
		2020	20,03	0,33	49,00	29,83	23,80	130,60	401,80	0,35	6,86	0,75	
		2014	22,27	1,03	52,83	35,37	32,67	84,27	475,00	0,14	6,49	0,40	
		2015	24,56	1,50	61,76	44,67	31,52	165,53	384,11	0,09	4,76	0,00	
		2016	35,30	0,39	95,33	35,67	39,27	109,90	351,70	2,65	6,31	8,27	
		2017	32,37	0,32	74,33	42,93	34,00	175,00	364,20	0,18	10,04	0,42	
		2018	25,30	0,35	66,33	42,73	31,70	157,70	309,50	0,17	10,72	0,35	
		2019	30,30	0,33	55,00	29,57	29,93	118,60	195,60	0,11	12,23	0,35	
		2020	37,23	0,28	77,17	32,43	29,87	76,87	156,30	0,09	21,24	0,43	

The table below shows the limit values of metals.

Metal	Transmission coefficient	Threshold soil pH	Normal in plants	Critical for plant growth	Critical for fodder
As	<0,5	4-4,5	<0,1-5	10-20	>50
Cd	0,03-10	6,5	<0,1-1	5-10	0,5-1
Co	0,01-1	5-6	0,01-0,5	10-20	10-50
Cr	<05	4,5-4	<0,1-1	1-2	50-3000
With	0,01-2	4,5	3-185	15-20	30-100
Hg	<05	4	<0,1-0,5	0,5-1	>1
In	0,01-2	5,5	0,1-5	20-30	50-60
Pb	<05	4	1-5	10-20	10-30
Zn	0,03-10	6-5,5	15-150	150-200	300-1000
PAH		0-2			

Unit of measurement: mg/kg.

Data source: Federal Institute for Agropedology of Bosnia and Herzegovina

In the Report on the monitoring of the lower course of the Spreya River for 2020, the Federal Institute for Agropedology also provided the measures that must be implemented in order to rehabilitate the area, i.e. prevention and remediation measures that read:

- Limited production of certain agricultural products is recommended, and cattle grazing etc. on contaminated land is not applied, based on Article 28, paragraph (4) of the Law on Agricultural Land ("Official Gazette of the Federation of BiH" number 52/09).
- It is necessary to prohibit the release of waste materials in advance, and it is recommended to compensate the costs of remediation of contaminated agricultural land and compensation for damage caused to agricultural producers, all in accordance with Articles 25, 26 and 27 of the Law on Agricultural Land ("Official Gazette of the Federation of BiH" number 52/09).
- Decontamination of agricultural land, in accordance with Article 25, paragraph (2) of the Law on Agricultural Land ("Official Gazette of the Federation of Bosnia and Herzegovina" No. 52/09), and according to the proposed measures from the Contaminated Agricultural Land Remediation Program.

An area that may be threatened by floods

Over 70 km² of arable land, 200 residential, and over a hundred commercial buildings are threatened by the floods of the Spreya River, including: 10 wood processing facilities, 2 chicken fattening farms, 1 incubator station, 6 plants for the processing of plastics, 7 metal processing plants, 1 paint shop of reinforced concrete structures, 3 factories for the production of footwear and leather goods, 1 asphalt base, 1 substation, swimming pool complex, terminal "Lido", clothing factory, 1 mill, service for repairing "Avis" vehicles, 3 gas stations, 6 bridges and a significant part of roads and 5 km² of arable land, 100 residential and 70 production and business buildings and 100 km of local roads from flash floods.

Buildings of particular interest to the city of Građanica and Dobož Istok, namely the transformer station owned by Elektroprenos BiH dd Banja Luka, which is located in Sprejanska dolina under the main road bordering the company Širbegovič, are particularly threatened by the consequences of the floods.

In general, it can be said that floods and torrents are frequent disasters in the area of the city of Građanica (they occur every spring and autumn) and their frequent occurrence is to be expected in the coming period as well, until the beds of the river Spreya and its tributaries in this area are fixed.

Floods are possible in the territory of all local communities, and the most threatened are local communities in the Spreya river valley.

Possible consequences of floods on people and material goods

Floods leave the most severe consequences on agricultural land, where agricultural crops are destroyed and damage, or degradation, of agricultural land occurs. Also, there is damage to residential, business and commercial buildings, various water management facilities, watercourse beds, defensive embankments next to rivers, then road communications, especially macadam roads and other infrastructure facilities. It is estimated that in the event of a catastrophic flood, in the area of the city of Građanica, several thousand hectares of agricultural and other land may be flooded, as well as several hundred residential and auxiliary buildings and other construction facilities, several facilities from the field of industry and poultry farming and other economic activities.

Floods cause damage to city and local water facilities for supplying the population with drinking water, and due to the hygienic quality of the water, the population is supplied with drinking water from other sources by tanker trucks. Floods regularly trigger the activation of landslides that damage residential and other construction and infrastructure facilities, especially roads.

The ultimate consequence of flooding is the temporary evacuation of people and material goods from threatened areas. According to past experiences, and taking into account the most unfavorable variant, i.e. floods of catastrophic proportions, in the area of the city

Građanica, it is necessary to temporarily evacuate several hundred households, or about 8,000 people, from the threatened area.

In order to prepare as well as possible for the implementation of operational flood protection measures, it is necessary to improve the system of monitoring, early announcements and forecasts, which implies an increase in the number of hydrological stations and the introduction of hydrological models for flood forecasting.

Currently, the most important step in improving flood protection is the amendment of the Cantonal Flood Protection Operational Plan for Category II watercourses. In this regard, it is necessary to collect data and provide an overview of the current state and construction of flood defense systems and facilities in the area of TK. It is also necessary to perform an analysis of the degree of defense against flooding of individual zones of threatened areas, and accordingly to verify the defense lines as well as the size and number of sectors (representatives of the Ministry of Agriculture, Forestry and Water Management of the Republic of Turkey are the bearers of these activities in cooperation with the competent municipal and city authorities).

The plan should define:

- areas next to reservoirs, watercourses and protective water facilities where they are carried out defense measures,
- water levels at which regular or emergency flood protection begins in certain areas,
- legal and natural persons who are obliged to carry out flood protection on watercourses and accumulations,
- measures that must be taken at the time of danger of high water, u duration of floods and elimination of flood consequences,
- communication and alert system,
- the method of collecting meteorological and hydrological data and the method of informing about the occurrence of floods on watercourses and reservoirs, and the measures taken regarding the course of flood defense,
- management of the Modrac reservoir in the light of climate change,
- cooperation of all actors in the system of implementation of flood protection measures, what is it the special role of line ministries.

In addition to the above, it is necessary to speed up the activities on determining the boundaries of water assets, because this represents a very important step in the entire process of defining water assets and public water assets. Pursuant to the Law on Waters of the Federation of Bosnia and Herzegovina, as well as the related by-laws, it is necessary to draw up studies on the determination of the boundaries of the water property and to pass related decisions for watercourses of category I and II.

At the same time, inspection supervision in the area of building construction should be strengthened in the flooded area of the watercourse, i.e. within the boundaries of the water resource.

2.2.1.3. Snow drifts

Possible causes and frequency of occurrence: In winter, the area of the city is abundant with heavy snowfall, which is most intense in January and February. Periods of intense snowfall can be long, resulting in the formation of a thick snow cover, which fills roads, blocks traffic and excessively burdens the roof structures of industrial, commercial and residential buildings.

Bearing in mind that a large number of workers and students are employed outside the place of residence and that valuable material goods are located in production-business and residential buildings, it can be stated that a short-term blockade of roads or the demolition of roofs would have very serious economic and other consequences.

Intensity of action and duration: The most threatened areas with snowfall and drifts are MZs in the high altitude areas of the city, so out of 25 MZs in the city area, 14 of them are located in hilly and hilly mountainous areas and the same would be the case in the winter period with intense snowfall. could be cut off from the center of the city by rainfall. During the winter period, 70-120 cm of snow can fall in the mentioned areas, which is enough to create major problems in communications, and in some areas lead to their interruption.

The area that may be affected by the accident and possible consequences: The most critical road routes in the winter period are: for the Municipalities of Lukavica, Malešiji, Džakule, Prijeko Brdo, Buk, Rašljeva, Gornja Orahovica, Doborovci, Doborovci Gornji, Vranovići and others. road, high snow drifts in the city area can cause interruptions in electricity, PTT and other installations, as well as damage to the roofs of residential and production-business buildings.

An appeal should be made through local means of information and in other appropriate ways population and legal entities in connection with their legal obligation to, in case of heavy snowfall, removes snow from sidewalks and approaches to residential, commercial and commercial buildings, and in front of schools, health and other important public institutions in municipal/city centers and Ministry of Health.

2.2.1.4. Landslides, subsidence and landslides

Possible causes, frequency of occurrence and intensity of action: The area of the city of Gračanica has a complex geological structure of the soil characterized by weak physical and mechanical properties of the soil, which, in unfavorable hydrological conditions and in periods with prolonged precipitation, manifests itself in the form of soil instability. The area of the town of Gračanica is built predominantly of marly - clayey and sandy sediments of Neogene age. This composition of the soil, as well as the geomorphological properties of the terrain (gentle to steep slopes), together with uncontrolled urbanization, have led to the activation of a large number of landslides, which differ in size as well as in genesis and movement mechanisms.

The state of landslides is further aggravated by the negative influence of the human factor (in 90% in some cases, the cause of landslides is the human factor), which is especially manifested in the following:

- inadequate or no water supply systems,
- surface and pit exploitation of coal and other mineral raw materials,
- inadequate construction-land excavations,
- landfills of waste material and slag,
- uncontrolled forest cutting,
- construction of high-rise and low-rise buildings, without prescribed technical documentation,
- construction of buildings on potentially unstable slopes,
- inadequate regulation of stormwater and waste water drainage, which leads to more intense water supply to the slopes, and this causes the weakening of the physical and mechanical characteristics of the soil, that is, it leads to the sliding of the soil of the slope.

New or reactivated landslides and landslides are registered in the city area almost every month. The largest number of landslides, large-scale and with a strong intensity of action, are activated after heavy and long-lasting rainfall and floods, as well as after a sudden melting of snow.

Area that may be covered by the accident and possible consequences:

In the last 10 years, periods were registered when a large number of old or new landslides were reactivated. In May 2014, over 500 landslides and landslides were recorded, of which about 80 were large-scale landslides (Lukavica, Malešiji, Stjepan Polje, Prijeko Brdo, Džakule, Trnovci, Buk, Doborovci, Gornji Doborovci, Soko, Škahovica, Babići, Piskavica, Gračanica, Gornja Orahovica, Rašljeva, Gornja Lohinja, Mirižina and others.

As a result of the landslide, 84 residential buildings were destroyed, severely damaged and endangered, so that around 300 people were displaced from their homes, over 150 road communications were interrupted, and over 150 auxiliary buildings were destroyed.

Landslides and landslides can occur in the area of all 25 local communities, a the most threatened are: Lukavica, Malešiji, Stjepan Polje, Prijeko Brdo, Džakule, Trnovci, Buk, Doborovci, Gornji Doborovci, Soko, Škahovica, Babiји, Piskavica, Graјanica, Gornja Orahovica, Rašljeva, Gornja Lohinja, Mirijina and others.

One of the main activities in this matter should be the formation of the cadastre landslides and the creation of soil stability maps at the municipal and city levels and theirs reconciliation.

Since in 90% of cases the cause of landslides is the human factor, it is necessary to prevent:

- inadequate construction-land excavations,
- uncontrolled forest cutting,
- inadequate regulation of precipitation and waste water,
- construction of high-rise and low-rise buildings without prescribed technical documentation,
- construction of buildings on potentially unstable slopes.

2.2.1.5. Drought

Possible causes, frequency of occurrence and intensity of action:

Although the city has a moderate-continental climate, which causes frequent and evenly distributed precipitation throughout the year, in recent years there have been increasingly long dry periods with high temperatures, which causes great damage to agricultural crops and fruits, as well as shortages of drinking water.

Duration:

The droughts that have been occurring more and more frequently in the last few years do not have the character of catastrophic droughts, and last from 15 to 30 days.

Area that may be covered by the accident and possible consequences:

Although catastrophic droughts are not common in the area of the city of Graјanica, the amount and value of material resources that would be threatened and their importance for the health and life of people and animals point to the need to realistically see this danger and take certain measures to mitigate or eliminate its effects.

2.2.1.6. storm

Possible causes, frequency of occurrence and intensity of action:

Intensive air traffic takes place in the city area. In conditions of sudden temperature changes, stormy winds occur that cause damage to crops, forests, orchards, electrical and telephone networks, production-business and residential facilities and material goods in them and endanger the health and life of people and animals. Stormy winds have recently become more frequent, of relatively short duration and can affect the entire city area.

Area that may be at risk: Area of the entire city

Possible consequences: Destroyed or damaged crops, roofs of buildings, damage to city parks, orchards

2.2.1.7. Grad

Possible causes of hail: hail is formed as a result of certain disturbances in the atmosphere, when raindrops turn into a solid state, i.e. hail particles from 5 mm in size to pieces the size of a hen's egg.

Frequency of hail: hail appears relatively rarely, i.e. several times during the summer period.

A city the size of a hen's egg is 23.08.2014. hit the local communities of Donja Orahovica, Mirijina and Rašljev.

Intensity of hail: the intensity of hail is reflected in the size of the ice particles and the duration of this atmospheric precipitation, which can range from a few minutes to a maximum of 15 minutes.

Duration of city precipitation: duration of city precipitation, in the city area, according to past events, ranges from a few minutes to a maximum of 15 minutes.

The area that can be threatened by hail: hail precipitation can affect all local communities in the city area, and its action is usually of a local character, with this atmospheric precipitation affecting a relatively small area.

Possible consequences of the action of the city: the consequences of the action of the city can be: in the case of a city of larger dimensions and a longer duration of this atmospheric precipitation, there is damage to the roof covering on residential and economic buildings, the destruction of agricultural crops and orchards on a large scale, then there is damage to motor vehicles and other objects, and in the most severe cases, people may be injured. Particularly large consequences were recorded in the local communities of Donja Orahovica, Rašljeva and Mirijina on August 23. in 2014, which resulted in enormous damage to residential and other buildings and agricultural crops. In these three local communities, there are 1,629 residential, auxiliary and other buildings without roof tiles, for which the need for 1,310,410 pieces of tiles has been stated. In order to intervene as quickly as possible, the Municipal Headquarters of Civil Protection is 24.08.2014. held a session at which a number of conclusions were reached, which aimed at better and more efficient organization of reception, storage and distribution of tiles for damaged buildings.

The largest number of assessments confirm that adequate anti-hail protection can mitigate consequences of the effect of hail clouds of 60-80%. Timely reaction by seeding clouds with condensation nuclei can greatly mitigate the devastating consequences of falling hail.

Therefore, it is necessary to strengthen the technical equipment of the anti-hail defense system, increase the number of launch stations, the training of personnel, develop radar monitoring of storm clouds, and improve prognostic models, which will forecast the instability of the atmosphere and the space where she will answer. Also, various types of anti-hail nets and curtains that the producers themselves install on their plantations can reduce damage, and as a way of fighting against the city we can also mention production insurance with insurance companies.

2.2.1.8. Mraz

Possible causes: frost is a natural phenomenon caused by low temperatures in the spring months, especially in February and March.

Frequency of occurrence: frost occurs every spring, and the damage is most pronounced if periods with higher temperatures occur in January and February.

Intensity of action: Weak to very strong frosts

Duration: Several days

An area that may be at risk: since in the last few years, larger plantations of various fruits have been formed in private ownership throughout the city, frost protection is becoming an indispensable aspect of the overall protection of fruit trees, with the aim of economic production.

Possible consequences: destroyed or damaged spring crops, wheat and orchards, and education and application of frost protection methods will be carried out in the organization of professional staff from agricultural enterprises, institutes and cooperatives, based on the experiences of countries that have a longer tradition in fruit production, and thus and in its protection from frost

Among the preventive measures that can somewhat contribute to protection against the effects of frost and cold, we should mention prognostic models, which will indicate the occurrence of frost in time, which would made it possible to take all necessary measures to protect and save agricultural crops and orchards.

One of these measures is the use of special covers for the protection of crops that let in moisture and light, and protect plants from low temperatures.

Also, by planting orchards and vineyards with a carefully selected variety, in a properly selected position and exposure for a specific area, the risk of frost and low temperatures can be reduced to a minimum. Many producers are not able to implement this and are therefore forced to fight low temperatures and frost with other available solutions (dew, smoke, covering fruit trees, anti-stress preparations).

Damages otherwise can be extremely large.

2.2.1.9. Epidemics and epizootics of infectious diseases

Possible causes, frequency of occurrence and intensity of action: shortcomings in the hygienic and technical protection of catchment sources and water supply networks and the characteristics of the limestone area from which water is supplied to the majority of the population of the city of Građanica enable the occurrence of water epidemics, the presence of polluted river water prevents the occurrence of food poisoning, and chemicals from industrial plants in Lukavac and Tuzla, the occurrence of air pollution (hydrochloric nitric acid). The most frequently registered diseases in the HES of the Građanica Health Center in the last few years are enterocolitis and various food poisonings, and epidemics have been declared in cases of trichinosis and influenza.

Deficiencies in the control of the trade in animals and foodstuffs from them, the way of feeding, watering and housing and taking health-protective measures can cause the appearance of infectious diseases in animals that very often reach epizootic proportions. Taking into account the distribution and abundance of certain animal species, the method of breeding and other circumstances, the following can occur most often and cause the greatest damage: fowl disease, black pimple, brucellosis, Q fever, fluke of ruminants and other diseases.

Intensity, area of action and possible consequences: the hygienic and sanitary living conditions of the population are satisfactory, but due to the poor water supply of almost all municipalities, diseases caused by poor-quality water are possible, especially in conditions of prolonged rainfall and water reduction in dry periods of the year.

Considering that since 2002, the city of Građanica has been a district of the highly contagious anthrax disease, which belongs to the group of zoonoses (transmitted to humans), so in the last 20 years, prevention, vaccination, detection and other protective measures against the said disease have been carried out. the possibility of the reappearance of anthrax in the area of the city of Građanica and its spread among animals (all types of warm-blooded animals) and humans was prevented, and economic damages and human deaths were prevented in 2020. The Veterinary Station vaccinated 1,350 head of cattle out of the planned 1,700 against anthrax. and 1,200 sheep out of the planned 1,500.

Animal breeding and the production of food products of animal origin is the occupation and source of livelihood of a large number of people in the city area, so endangering livestock and the appearance of major damage to it directly endangers the lives and health of people.

In the territory of the town of Građanica, a milk processing company, a large number of butchers and milk purchase stations are registered, and the control of correctness is carried out by the Građanica Veterinary Station and the competent inspection.

In order to provide a quality response in the event of epidemics and epizootics of infectious diseases, it is necessary to strengthen and maintain capacities for early detection, assessment, reporting and reporting, rapid public health response and coordination of all relevant health institution, and taking preventive measures to prevent the spread and reduce the burden diseases (hygienic and sanitary measures, vaccination, therapy).

In addition to this, it is

- necessary to:
- strengthen and maintain basic capacities for an immediate and effective response to public health risks,
 - educate healthcare workers and the population for crisis situations,
 - improve communication with the public health sector, the media and population,
 - create a Plan for crisis situations in the event of a public health problem.

2.2.1.10. Calamities of plant diseases and pests

Possible causes: despite the fact that certain types of harmful insects, fungi, rodents and other pests are present in the city area, it can be concluded that, thanks to the good equipment of the population and other subjects, with means to control these pests and protect plants, under normal conditions of supply there is no danger of serious endangerment of plants and occurrence of catastrophic damage.

An exception is the threat of the plum, "Hungarian" from the hinge, an incurable disease, which is constantly wider and from which the only possible protection is the replacement of this type of plum with resistant varieties.

Frequency of occurrence: plant diseases occur depending on the weather conditions and preventive protection measures taken, so due to their effective application, they occur very rarely in the form of an epidemic

Intensity of action: plant diseases and pests can cause great damage, but due to the application of preventive protection measures, especially in the protection of fruits and vegetables, the damage is decreasing

Duration: During the vegetation period of the plants

The area that may be at risk: the area of the entire city, especially areas of intensive fruit and vegetable cultivation

Possible consequences: Suffering of plantings, crops and other plant species

In cooperation with competent authorities and services for the field of agriculture, forestry and it is necessary to take measures to improve the protection of plant health, namely:

- to strengthen the services that carry out inspection of plants intended for sowing and planting, as well as tasks observation, forecasting, signaling and reporting.
- establishment of phytosanitary registers, better collection of information and keeping the necessary records in order to have reliable data on occurrence, number and spread of harmful organisms in the areas and places of individual production plant species,
- implementing regulations to prevent the introduction and spread of harmful organisms, - performing a risk assessment of harmful organisms,
- raising the awareness of producers about the necessity of implementing agrotechnical preventive measures and the obligation to undertake prescribed or ordered measures.

2.2.2. TECHNICAL - TECHNOLOGICAL ACCIDENTS

2.2.2.1. Demolition or overflow of the dam on the hydroaccumulation

Possible causes: Hydroaccumulation "Modrac" was created by the construction of a reinforced concrete dam on the river Spreža and the submergence of the valley of this river at its narrowest part at an altitude of 200 m in a strait called "Modrac". The reservoir is located 2 km south of the town of Lukavac and about 10 km west of Tuzla. The construction of the dam was completed in 1964, and on the 28

the surface of the artificial lake is 17 km². Due to its construction and technical characteristics, the volume of accumulated water in the lake, as well as the purpose of the water, the "Modrac" dam belongs to the category of high dams. The building height of the dam is 33.35 m, with a dam elevation of 205.5 m and a bottom elevation of 183.50 m.

The length at the crown of the dam is 205.00 m, and the thickness of the dam at the base is 3.00 m. The water accumulated in the lake and the dam are used to supply the industrial area of Tuzla and Lukavac with industrial water, to protect the valley downstream from frequent floods, and for tourism, fishing and recreation. The water was also intended for irrigation of agricultural land, but due to high chemical pollution, this cannot be realized.

In addition to the great benefit that the economy of the wider area derives from the "Modrac" hydroaccumulation, it is also evident that there is a great danger for people and material goods downstream of the dam in the event of its demolition.

Intensity and duration: the greatest damage would be caused by a flood wave whose height would vary depending on the profile of the river valley and would amount to the first most severe variant from 11.5 m at 1 km downstream from the dam to 8.75 m on the profile of Mirijina and 14, 55 in front of the tunnel and which, moving at a speed of 40 m/sec immediately downstream from the dam to 4.4 m/sec at the mouth of Spreja in Bosnia, would reach Dobož in 273 minutes.

The shortest travel time of the front of the flood wave from the dam to certain places in the valley downstream is estimated as:

- Mirijina, 25 km - D.	.....	82 minutes
Orahovica, 31 km - D.	.....	103 minutes
Lohinja, 36 km - Pribava,	.....	120 minutes
41 km	.....	136 minutes
- Grajanica, 47 km		165 minutes
- Stjepan Polje, 52 km	.....	185 minutes.

Analyzing the obtained results, it is possible to draw a conclusion that is very important for the implementation of protection and rescue measures for the population, that along the Spreja river valley in the largest number of settlements, it is possible to very successfully implement the planned protection and rescue measures, if a timely signal is given to alert the population.

However, the final effect would be catastrophic for material goods because they would be affected was completely destroyed by the elements or so damaged as to be unusable.

The area that may be affected by the accident and possible consequences: in the threatened flood zone in the area of the city of Grajanica, there are large areas of high-quality arable land, a railway line in the part of MZ Mirijina, part of the main road Dobož - Tuzla, part of the electricity, telephone and local road network, part production-business and residential buildings in Mirijina, Donja Orahovica, Donja Lohinja, Pribava, Grajanica and Stjepan Polje. The number of inhabited places and the number of potentially endangered residents living in the downstream area indicate the seriousness of a timely assessment of all possible consequences that could occur as a result of the eventual demolition of the dam. In addition to residential buildings, numerous industrial buildings (partially), transformer station 110/35/10 kv, gas stations, chicken farms and incubator station in Stjepan Polje, school buildings located under the Dobož-Tuzla main road, clinics, centers of culture, reading rooms, shops and other facilities.

Of the roads of greater importance, the following are directly threatened by the flood wave along their entire route:

- the Dobož-Tuzla normal gauge railway, 42 km long,
- the main road Dobož-Tuzla with a length of 52 km.

Material goods and people would have harmful effects in the form of the destructive effect of the flood wave, the deposition of huge amounts of sludge and other waste and toxic substances, and the prolonged presence of water and moisture.

Dams on hydroaccumulations need to be regularly and well maintained, and on time the dangers of floods and during the duration of the floods to manage them in an appropriate way.

The monitoring and warning system, for cases of danger of a large tidal wave, should be brought to a functional state as soon as possible. To reduce material damages in can be influenced to a large extent by appropriate spatial planning.

2.2.2.2. Expansions and explosions of gases and dangerous substances

Possible causes of the accident: considering the current economic conditions and the condition of the capacities that have points of contact with gases and dangerous substances, the main cause for the occurrence of accidents of this type can be characterized as outdated facilities, technological deficiencies, insufficient protection measures and the like, as a result of which it can explosions, fires, splashing of dishes and spilling of their contents. As a consequence of this, various types of accidents occur, such as collisions, skidding and overturning of vehicles on road and railway roads, as well as the fall of aircraft or the sinking of vessels.

Frequency of occurrence: The Tuzla Canton, where chemical industry facilities are located, has been known outside the borders of our country since before the war. Large economic giants of the chemical industry, such as "Poliolchem" (HAK 1), Sisecam Soda Lukavac, Global Ispat Koksna Industrija doo Lukavac, "Solana" Tuzla, "Dita" Tuzla, are just some of the entities that can, due to the characteristics of the technological process, be places of potential accidents of a larger scale due to expansions and explosions of gases and dangerous substances, which would manifest themselves to a certain extent in the area of the city of Građanica.

The war period was marked by the halting of production and the preservation of part of this industry and the emptying of the largest part of the capacity in order to minimize or completely neutralize possible accidents due to war operations.

In the post-war period, only a small part of these capacities continued to operate, so the possibility of accidents was significantly reduced. However, due to the dilapidation and poor maintenance of facilities and resources, we note several excess situations due to the leakage of various chemically hazardous substances, but in minimal quantities, which did not have a particular impact on human health and the environment.

In the past, we recorded several accident situations such as:
an accident due to the overflow of chlorine in the area of the former factory of HAK 1, as a result of which several people were poisoned and caused panic among the population, an accident due to the bursting of a pipe and death and poisoning of several people from hydrogen sulphide.

Intensity of action: certainly the locality where a potential accident occurs would be most intensely affected by the action of this technical-technological accident. The intensity of the action will depend on the type of gases and dangerous substances that will develop after the accident, and the intensity of the action can be significantly affected by atmospheric conditions, such as wind, temperature and the like.

Duration: the duration of an accident of this type can be discussed from the aspect of the type and quantity of dangerous gases that are released and pose a threat to the health of the living world and the environment. In the recent and distant past, cases have been recorded, in various parts of the world, that people were directly threatened by toxic substances on a daily basis for a long period of time after such an accident, and that the consequences for health can be tragic.

The area that may be at risk: the expansion and explosion of gases and dangerous substances can be at risk of industrial plants, where the production and use of said substances are carried out, as well as the area in the immediate vicinity of these plants. When the expansion and explosion of gases and dangerous substances occurs during the transport of these substances, all road users are at risk in the area where the accident occurred.

Possible consequences of the accident

It is to be expected that the consequences of an accident of this type could mostly affect the workers employed in the factories where the technological accident occurred and the population located near the place of possible accident.

The environment and the living environment could suffer incalculable damages, the recovery of which would take a considerable period of time.

In order to protect against the expansion and explosion of gases and dangerous substances, it is necessary to ensure professional staff, adequate control, supervision and equipping of all facilities (chemical, pharmaceutical, mining, food and other industries) with technical means for control and notification of fire parameters, stable installations for reducing consequences of explosions, and means of personal and collective protection. It is also necessary to ensure the necessary conditions for the safe handling of hazardous materials in production and circulation, storage, i.e. depositing and destruction of these materials.

2.2.2.3. Radioactive and other pollution of air, water, land and foodstuffs of plant and animal origin

Possible causes of the mentioned technical-technological accident

Radioactive pollution of air, water, land and foodstuffs of plant and animal origin can occur as a consequence of: nuclear warfare in the territory of Bosnia and Herzegovina and Europe and beyond, damage to nuclear power plants, as a result of malfunctions or disruptions in the technological process of nuclear power plants, earthquakes, terrorist diversions and acts of war, the impact of increased natural radioactive radiation (radiation from space, the earth's crust and from natural radionuclides), radioactive radiation from various radioactive waste and other materials, the impact of radiation from various devices that contain radioactive substances and the impact of radioactive dust created after using depleted uranium ammunition.

Contamination of water, air, and land with various types of polluting and harmful substances (gaseous, liquid, and solid) can occur as a result of: pollution emissions from: plants of the chemical, oil, pharmaceutical industry and other industries, energy plants, mines for the exploitation of coal and of other mineral raw materials, traffic motor vehicles, boiler rooms that work on solid, liquid and gaseous fuels and individual fireplaces in households that use stoves on solid fuels.

Contamination of foods of plant and animal origin may occur as a consequence effects of various harmful substances of physico-chemical and microbiological origin. The threat from biological agents is reflected in the presence and toxic action of microbes (bacteria, viruses, rickettsia and protozoa) and toxins-poisonous products of bacterial action. Biological agents cause diseases in humans, animals and plants. Most biological agents are contagious and transmitted from a sick person to a healthy person. There are biological agents that cause illness only in people who have directly ingested them through food or water.

Biological contamination of food and water, in peacetime conditions, is mainly a consequence of unsanitary manipulation of food, starting from raw materials, through transport, processing and traffic, and ending with food consumption.

The State Regulatory Agency for Radiation and Nuclear Safety should bring everything by-laws arising from the Law on Radiation and Nuclear Safety in Bosnia and Herzegovina in order to implement safety against ionizing radiation, and plans for the preparation and response in case of an emergency situation when it comes to nuclear or radiological hazards.

In addition to this, you need:

- determine the competences of institutions at all levels in case of emergency situations which include nuclear and radiological hazards in mitigation measures

vulnerability of people, their lives and health, animal and plant life, and in general environmental protection.

- carry out continuous training of all participants in traffic and transport of goods containing or may contain radioactive substances. -
- existing public institutions (Institute of Public Health TK) and civil protection services equip with the necessary equipment in case of an emergency, and conduct staff training for working with the specified equipment.
- perform control measurements of radioactive radiation in the atmosphere, water and foodstuffs plant and animal quality.

When it comes to pollution of air, water, land and foodstuffs of plant and animal origin, it is necessary to:

- ensure compliance with environmental standards when issuing environmental permits for the operation of industrial, thermal energy and other economic enterprises,
- to carry out continuous monitoring of the quality of water, air, land and plant foods of animal origin,
- establish a cadastre of pollutant and pollutant emissions into the atmosphere according to the current regulations standards, including information on types and amounts of emissions of harmful substances and cross-border transfer of harmful substances,
- educate the population about the need to preserve an ecologically clean environment. -
- strengthen inspection supervision,
- perform flue gas desulfurization at all TET blocks,
- build facilities for the treatment of municipal and industrial wastewater,
- solve the issue of the sanitary landfill in the area of TK.

There are no more serious polluters of air, water, land and foodstuffs in the area of the city of Gražanica, except for 2 quarries in the area of Malešij, waste gases from burnt heating devices and garbage, which is disposed of to a considerable extent in an uncontrolled and unplanned manner.

However, the pollution of water, land, air and foodstuffs is very high because large polluters are located in the area of Lukavac and Tuzla and permanently and intensively, directly or indirectly pollute the wider area, including the Gražanica area. The water of the river Spreja is being particularly intensively polluted, and through it the surrounding arable land and crops, so that the health and life of people and animals in this area are already at risk.

The frequency of occurrence of the mentioned technical-technological accident

In the territory of TK, in the near and distant past, no radioactive contamination was registered air, water, soil, and food of plant and animal origin.

From time to time, food of plant and animal origin is contaminated with various micro-organisms, the consequences of which are individual cases of human poisoning or cases of small-scale food poisoning epidemics in humans.

Air, water and soil pollution with various chemical substances, dust, ash and soot is constantly present in the area of TK, to a greater or lesser extent. This was especially the case in the period before the last war in Bosnia and Herzegovina, when the chemical and other industries were operating at full capacity.

Air pollution by harmful chemical substances is present to a certain degree throughout the year, especially in the winter period, as a result of the presence of pollutants from industrial and energy plants, then exhaust gases from motor vehicles and from individual fireplaces, from households that are heated on solid fuels.

Pollution of watercourses is also occasionally present, as a result of the illegal discharge of harmful chemical substances from production capacities, and particles of coal dust from coal mines, as well as the discharge of municipal waste water into watercourses, without prior purification.

Soil pollution is constantly present, in certain locations, as a result of the disposal of waste material of various types, especially municipal waste ("wild dumps"), as well as technological waste, i.e. waste materials and plants of the chemical and other industries.

The intensity of the mentioned technical-technological accident

When it comes to pollution of air, water, soil and foodstuffs of plant and animal origin, which are present in the territory of TK, it should be noted that there is occasionally a relatively high intensity air pollution with harmful chemical substances (sulfur dioxide, hydrogen sulfide, carbon monoxide, carbon dioxide, nitrogen oxides (NO_x), hydrocarbons and ozone), as well as air pollution with dust, ash and soot, when the concentrations of the mentioned substances in the air range from warning to critical values.

The biggest air polluter in the TK area, especially in urban areas, are traffic motor vehicles, and from industrial and thermal energy plants, the Tuzla Power Plant.

The intensity of water pollution in watercourses and hydroaccumulations (HA), in the area of TK, occasionally reaches a relatively high level, especially in the summer period when the level of watercourses and HA reaches the minimum level.

The Tuzla thermal power plant discharges into the Jala river large quantities of waste water from the hydraulic transport system of slag and ash to the landfill, as well as process and surface waste water. The total amount of suspended matter that is discharged into the recipient river Jala through the mentioned waste water is 105 t/year, and the total amount of organic matter is 60 t/year.

The intensity of soil pollution, in the area of TK, on certain areas, where communal, technological and other waste materials are dumped in an uncontrolled manner, reaches a relatively high intensity.

The radioactivity of radionuclides (radium, thorium, potassium and cesium) from the slag and ash landfill of the Tuzla Thermal Power Plant, according to measurements from March 1997, does not exceed the maximum permissible values prescribed by law.

Duration of the mentioned technical-technological accident

The duration of air contamination with polluting substances, when their concentration in the air is below or at the maximum level of recommended air quality values, in municipalities/cities where chemical, energy and other industrial plants are located, as well as in municipalities/cities where motor vehicle traffic is more intense, is quite large, i.e. it can be said that such a condition is constantly present, and the duration of air contamination with polluting substances, when their concentration in the air is above the recommended values, is very short, i.e. a maximum of one day.

The duration of contamination of watercourses with polluting substances, bearing in mind the cases that have occurred in the last 10 years in the area of TK, is relatively short and lasts a few hours. At HA "Modrac" there is a constant state of water pollution, in certain locations and in a certain period of time.

The duration of soil contamination at the locations of "wild" landfills where communal and other solid waste materials are illegally dumped, as well as at locations where technological waste is illegally dumped, is, it can be said, permanent, except for the occasional removal of "wild" landfills, which, unfortunately, form again.

The duration of contamination of foods of plant and animal origin with various pollutants is relatively short because the contaminated foods are removed from circulation or use immediately after the contamination is detected.

The area that may be threatened by the mentioned technical-technological accident

So far, in the territory of TK, there have been no registered cases of radioactive contamination of air, water, land and foodstuffs of plant and animal origin.

Air contamination with various pollutants is present in the area of municipalities/cities where chemical and other industry and energy plants are located: Tuzla, Lukavac, Srebrenik and Živinice, as well as in all other municipalities/cities (urban areas), where there is intensive motor vehicle traffic, except for the municipalities: Sapna, Teočaj, Ćelija, Doboš Istok and Kladanj, where motor vehicle traffic is less intense. In all municipalities/cities, in certain areas, solid fuel stoves are used, to a greater or lesser extent, for heating residential buildings, in the winter period, which causes, to a certain degree, air pollution.

Contamination of watercourses, of greater intensity, is present in areas located downstream of chemical, processing and other industry facilities, as well as energy. Watercourses are also exposed to pollution in the areas of cities and larger urban settlements, where municipal and other city wastewaters are discharged into watercourses without prior purification.

Municipal waste water purification devices exist only in Srebrenik, Gradačac and Živinice.

Contamination of land with municipal solid and other waste material, as well as technological waste, is present in the area of all municipalities/cities of TK where there are "wild" landfills of solid municipal and other waste.

Contamination of foodstuffs of plant and animal origin, of lesser or greater intensity, is occasionally registered in the territory of all municipalities/cities of the Republic of Croatia, and the cause is most often the presence, in the aforementioned foodstuffs, of various harmful bacteria.

Possible consequences of the mentioned technical-technological accident

The consequences of air pollution with harmful chemical substances, dust, ash and soot, especially when the concentrations of these substances in the air reach values that are close to the recommended or, in a more severe case, when these values are close to critical, are reflected in the form of people falling ill with various diseases, in particular, diseases of respiratory organs and cardiovascular diseases.

The population most at risk is located near chemical industry facilities (GI Koksna industrija Lukavac, Sisecam soda Lukavac, "Poliolchem" Tuzla, "Dita" Tuzla and Salt Factory, Tuzla), as well as industrial facilities: Cement Factory Lukavac, "Konjuh", Živinice, "Ingram" Srebrenik and Thermal Power Plant Tuzla.

The health of the population in cities is also at risk, where the air is polluted by harmful substances from the exhaust gases of motor vehicles, as well as due to the content of harmful substances from flue gases from solid fuel stoves (sulfur dioxide, carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons, ozone, soot, settling dust and other pollutants), which are used for heating residential buildings in the winter period.

Air polluted by harmful chemical and other substances also affects the degradation of plant life, especially in the area of municipalities/cities that are exposed to polluted air of greater intensity and for a longer period of time.

The consequences of the pollution of watercourses and HA are reflected, depending on the intensity and duration of the pollution, in the partial or complete destruction of plant and animal life in them and the impossibility of using the aforementioned water resources for various needs of the population, such as bathing in the summer period, feeding livestock, fishing and another.

Polluted watercourses also cause pollution of the coastal land with harmful substances, which has a negative impact on the cultivation of agricultural and field crops.

Contamination of sources of drinking water, from which water is supplied to local water supply systems and individual water facilities, can lead, in case of insufficient hygiene control

drinking water, and people falling ill from various infectious diseases of the digestive organs, and in the most severe cases, outbreaks of infectious diseases on a smaller or larger scale can occur.

Contamination of land with municipal and other solid waste material, and especially technological waste, can lead to groundwater pollution, which can have far-reaching negative consequences. Contamination of land with the mentioned waste material affects the deterioration of the general hygienic and sanitary condition of the natural and living environment, which can affect the increase in the number of people suffering from various infectious diseases, and can also lead to transmission of infectious diseases from animals to humans, which is very often present at "wild" landfills.

Contamination of food of plant and animal origin can result in people who have consumed contaminated food falling ill from various infectious diseases.

Air pollution is not high, except for the immediate vicinity of the quarry in Malešijci Municipality and the town of Gračanica in winter. More serious air pollution can be expected in the event of a major breakdown of industrial plants in Lukavac and Tuzla, because the Spreča Valley as a geographical unit is a natural collector through which the inexhaustible air flow takes place.

The pollution of the water of the river Spreča and the surrounding land already has the characteristics of a natural disaster that should be fought against comprehensively and in the long term in order to reduce or prevent harmful effects on people and animals, and in the case of major breakdowns of industrial plants, the consequences would be very severe, and taking protective measures and rescue difficult and complicated.

Through the polluted air, the water of the river Spreča and other watercourses of the surrounding land and air, food and drinking water are contaminated, which directly endangers the health and life of people and animals. In addition to this method of pollution, foodstuffs and drinking water are also polluted through unprofessional protection of plants and animals and excessive use of mineral fertilizers.

2.2.3. OTHER ACCIDENTS

2.2.3.1. Major accidents in road, rail and air traffic

Possible causes:

3 important roads pass through the area of the city: the main road M-4 Doboj-Tuzla, with a length of 19.35 km (from Stjepan Polje to Mirijina), the regional road R-460 Gračanica-Srnice-Gradačac, with a length of 18.40 km (From M -4 via Gračanica, Bukva and Doborovci towards Srnice to the border of the city area), regional road R-461 road Gračanica-Srebrenik, 3 km long (from R-460 on Bukva towards Srebrenik to the border of the city area), regional road R-461a road D. Orahovica-Srebrenik, with a length of 8.20 km (From junction M-4 in Donja Orahovica via Gornja Orahovica to the city area towards Srebrenik) and regional road R-465b, from Klokočnica to Lukavica Rijeka with a length of 3.37 km and a network of local and uncategorized roads that connect all inhabited places with the city center - Gračanica.

From the local roads according to the degree of danger, we will single out: Gračanica-Malešijci-Lukavica (about 22 km), Doborovci-Džakule-Prijeko Brdo (about 8 km).

Both road directions pass through hilly parts of the territory, and there are possible major landslides as well as snow drifts in the winter period, which can cause traffic accidents with a large number of injuries, because a large number of students and workers travel from these MZs every day.

Traffic accidents are also possible on the main road, because it passes through populated areas: Stjepan Polje, Gračanica, Pribava, Lohinja, Donja Orahovica and Mirijina, where a large number of schools and other facilities are located along the road itself, and the signaling on the road is insufficient. The risk of an accident increases in winter conditions, when it is difficult to clear snow and ice from the road (at low temperatures), as well as a large number of dangerous goods transported on this road.

The construction of sidewalks for pedestrians through populated areas next to the main road has greatly reduced pedestrian injuries in these areas.

Frequency of occurrence and intensity of action:

Traffic accidents occur occasionally in the city, accidents with individual fatal consequences are more common, while traffic accidents with multiple participants are rare. In the last few years, a large number of people have died on the Dobož-Tuzla highway in the populated towns of Stjepan Polje, Pribava, Građanica, Lohinja, Donja Orahovica and Mirižina.

Duration: traffic accidents on our roads are of short duration

The area that may be at risk: Tuzla-Dobož main road, Regional roads D. Orahovica-Srebrenik, Građanica-Srebrenik, Građanica-Srnice, Klokotnica-Lukavica Rijeka.

Possible consequences: injuries and deaths of road users and material damage to vehicles.

In order to reduce the number of traffic accidents on the roads of the city of Građanica, it is necessary to ensure:

- implementation of legal and by-laws, regulations, as well as strategic, programmatic and planning documents,
- an information-technical database with the aim of creating an expedient, adequate and responsible traffic risk management system. - orientation to preventive measures, by establishing procedures, in accordance with the real needs and requirements, management of dangerous places - adequate assessment i planning control inspections of critical places and sections of roads/road facilities.

The safety of railway traffic, in addition to the human factor, is the most important conditioned by the level of security of level crossings and stations with signaling and safety devices.

By including all interested parties in the process of improving security, the competent Ministries and Ju Directorate of Regional Roads TK and JP Roads of the Federation of BiH need . in traffic to achieve:

- systematic monitoring and implementation of legally prescribed measures, including repressive ones measures,
- media campaigns promoting protection measures for the particularly vulnerable category,
- formation and training of emergency services for adequate response,
- introduction of traffic education in all educational institutions.

2.2.3.2. Big fires

Possible causes and frequency of occurrence:

From the aspect of fire sensitivity and fire protection, the city area is characterized by the existence of large forest complexes (65.6 km²), large areas under crops (132.7 km²), as well as developed and diverse industrial and craft activities (industrial zone of the city) and high density facilities in all settlements in the city area.

Forest complexes are sensitive to fires, because they are also used as vacation spots, and the high air temperatures that prevail in the summer months also contribute to fire sensitivity. Large forest fires in 2000 in conditions of high temperatures caused enormous material damage to forests and young plantations in the region of Skipovac and Vis, due to the insufficient passability of forest roads and the lack of adequate forces and means for extinguishing.

The characteristic of industrial and craft activities is a great diversity: wood industry, textile, leather, graphics, processing and electroplating of plastics in which large quantities of flammable substances are used. All this, along with a large number of gas stations (18) and smaller plants for processing wood and plastics, represents a high fire risk, but in the last 10 years or so, there have been no large-scale fires in either industrial or residential buildings.

The highest density of residential buildings is in the city of Gračanica and in the Municipalities: Pribava, D. Orahovica, Mirižina, Malešiji and Džakule, but due to the small number of floors, fire sensitivity is lower (the highest number of floors - 7 floors in Gračanica). Also, the fire danger in the city of Gračanica was additionally reduced by the application of the city's regulatory plan for the construction of buildings and the existence of the system of external hydrant network and internal hydrant network in residential buildings. Most of the residential and industrial buildings in the city area have been built is made of solid materials (brick, concrete), and a good network of roads in all populated places enables access to all buildings in cases of need for fire protection.

Every inhabited place has a water supply infrastructure, but the amount of water in the summer months decreases significantly, and it is necessary to determine alternative sources of water for the needs of firefighting.

Therefore, huge material goods and a large number of people are threatened by the fire found themselves in the area affected by the fire due to work or residence.

Frequency of occurrence: In the spring when cleaning and burning waste and in the summer months at high temperatures.

Intensity of action: Fires in the open air are usually of high intensity, while according to the indicators so far, fires on buildings are of lower intensity.

Duration: Forest fires are usually a few days, and residential fires a few hours

Area that may be at risk: Forest complexes (Šamunica, G. Lohinja) and residential and business facilities in populated areas

Possible consequences: Minor and major damage to forests and buildings

The proposal of measures to improve the situation in the field of fire protection and firefighting is summarized to the adoption of new and/or amendments to existing regulations, which would create legal ones assumptions that this area should be well organized, i.e. that the problem of its area should be solved first of all financing.

This will enable the establishment of new and an increase in the number of existing fire stations units, procurement of firefighting vehicles, equipment and material and technical means.

In addition to the above, it is necessary to take all preventive measures such as:

- creation of a register/cadastre of hazardous facilities and premises, - control, supervision and equipment of all hazardous facilities and facilities (chemical, petrochemical, pharmaceutical, wood processing, mining, food and other industries),
- proper handling of fire-hazardous substances in production and traffic, storage, i.e. their depositing and destruction,
- inspection supervision, - population education, etc.

2.2.3.3. Accidents from UXO and MES

Possible causes and frequency of occurrence:

The war left behind large quantities of unexploded ordnance (UXO), mines and weapons, and who knows how long it will take until we make our country safe and remove from our homes war trophies, ammunition and other mine-explosive devices that pose a possible danger, as well as the lack of financial resources for carrying out the demining of suspected landmines.

The number of unexploded ordnance collected in the last five years continues to decrease, which reduces the danger to people's lives and health due to intentional or unintentional use. Regardless of these facts, this still present danger places before the competent authorities and institutions that deal with this issue the obligation of even more active work on collecting these funds and warning the population of their dangers, and promoting the voluntary surrender and reporting of such funds to the competent authorities.

According to BH MAC reports, the Tuzla office as of 08.12. 2021 (Data source BH MAC, Minsk situation 08.12.2021), the total suspected area of mines at 3.51% of the total area of the city in the area of the city of Građanica is 7,466,890 m² (according to data from the BH MAC, the area of the town of Građanica is 212.2 km²).

According to BH MAC standards, suspected landmines are classified into three categories:

CATEGORY I: 789,730 m ²	that is, 10.57% of the total suspicious area
II CATEGORY: 2,092,170 m ²	that is, 28.01% of the total suspicious area
III KATEGORIJA: 4.584.990 m ²	that is, 61.42% of the total suspicious area

The risk areas are mainly located between the former dividing lines of the Republic of Bosnia and Herzegovina and the Republic of Serbia: Trebavski (hilly-mountainous) part from Lukavica in the west to Prijeki Brdo, including the elevations of Javor, Vis, Sijedi Krš, the forest complex of Šamunica.

In the post-war period, 11 people were killed by these means, and 9 people were seriously wounded and 7 people were lightly wounded.

The area that may be affected by the accident: Risk areas are mainly located between the former dividing lines of the AR BiH and the V RS: Trebavski (hilly-mountainous) part from Lukavica in the west to Prijeki Brdo in the east, including the elevations of Javor, Vis, Sijedi Krš, the forest complex of Šamunica and others.

As of November 2022, the total demined area in the city of Građanica (from 1996 to the end of 2022) is 2,140,344.7 m²

The biggest result of mine countermeasures in the city area is the completely cleared right bank of the river Spreja from Mirijina to Stjepan Polje.

Frequency of occurrence:

As a result of landmines from 1996 until today, a total of 11 people died, 16 were seriously and lightly wounded, which indicates the constant danger and threat of citizens from hidden killers in this area and beyond.

The last mine accident in the area of the town of Građanica took place on May 23, 2018. in the locality of the forest in Gornji Skipovac, the hamlet of Topalovići, where a large number of sheep owned by HE and HM from Malešij died.

Duration: Individual UXO and minefields represent a constant danger to population, especially for children and youth.

Area that may be at risk:

Individual UXO and MES throughout the city and registered and unregistered minefields in war separation line zones and elsewhere

Possible consequences: Death and serious injuries to people.

Continuation and, if possible, acceleration of the process of demining and removal of UXO in the territory of the state of BiH is one of the most priority tasks in the field of protection and rescue of people and material goods. Ensuring stable and continuous funding for mine countermeasures activity in BiH is one of the basic prerequisites for the implementation of strategic programs adopted at the state level.

The strategic document of the Ministry of Civil Affairs of Bosnia and Herzegovina "Strategy of mine action in BiH for the period 2009 - 2019" adopted by the Council of Ministers of Bosnia and Herzegovina has not been implemented. A new document "Mine Action Strategy of Bosnia and Herzegovina for the period 2018-2025" was adopted. ("Official Gazette of Bosnia and Herzegovina", number: 70/19 in which the basic goal is the complete elimination of the suspected area of category I and II, and the priority category III will be "eliminated" through the prevention of movement bans.

Taking into account the demining results achieved to date, it is hard to believe that the deadline will be met. Necessary obligations lie ahead of the authorities, such as the passing and adoption of a new law on mine action in BiH, so that the state begins to provide the necessary funds from the sources of BiH, from the budget of the institutions of BiH, the budget other levels of government in BiH (cantons, cities and municipalities), a possible loan or by finding additional donor sources, and that in addition to the existing operational capacities for operations of humanitarian demining will try to bring this work to an end for the benefit of the whole community.

Until then, the essence of preventive protection boils down to creating awareness among ordinary citizens that we live surrounded by dangerous explosive devices and that any noticed unknown object or device should be immediately reported to the nearest police station or civil protection service, which will further act to remove that device as quickly as possible. removed and prevented any unwanted consequences. The marking of contaminated zones and the renewal of existing markings is the continuous work of the BiH Mine Removal Center, which aims to warn and prevent unwanted consequences for people and material goods.

2.3. Assessments, orientations and suggestions about the possible organization of protection and rescue that would be optimal, with elaboration of the proposed organization for each phase separately

Protection and rescue are carried out by citizens, authorities, companies and other legal entities, protection and rescue services, headquarters, units and commissioners of civil protection, within the framework of their rights and duties, and on the principles of cooperation, solidarity and reciprocity of all participants in prevention, elimination or mitigating the consequences of natural or other disasters.

Protecting and saving people's lives and health has priority over all other protective and rescue activities.

In the event of a natural or other accident, everyone is obliged to help in accordance with their own possibilities and abilities.

Protection and rescue services will be formed in public institutions and companies whose regular activities are of immediate importance for protection and rescue. At the proposal of the Civil Protection Service of the City, the Mayor designates the legal entities and associations of citizens in which the protection and rescue services will be formed, which will operate in the area of the city.

Protection and rescue services perform protection and rescue operations in matters arising from the basic activity of the legal entity. The service performs these tasks by implementing preventive and operational protection and rescue measures

The Municipality/City will provide:

- timely adoption of a decision on the organization and functioning of protection and rescue of the municipality/city and ensures its implementation,
- adoption of the program of protection and rescue from natural and other disasters of the municipality/city,
- planning and determining sources of funding for the execution of protection and rescue operations under the jurisdiction of the municipality/city,
- organization of monitoring and warning services in the municipality/city,

- adoption of acts on the establishment of the municipal/city headquarters of civil protection and the civil protection service,
- adoption of a plan for protection and rescue from natural and other disasters of the municipality/city,
- declaring a state of natural and other calamities and passing an order for the use of forces and means of civil protection, administrative services, companies and other legal entities from the territory of the municipality/city for the prevention, mitigation and elimination of harmful consequences of natural and other calamities,

- execution of other protection and rescue tasks in accordance with the law and other regulations and general acts.

Municipal/city administration services:

City services of the Unified city administration body of the City of Građanica within the framework of their rights and duties established by law, the statute of the municipality/city, the Rulebook on the internal organization of the Unified city administration body of the City of Građanica and other regulations, in the area of protection and rescue of people and material goods from natural and other disasters, execute and ensure the execution of laws, other regulations and general acts, take care of the organization and implementation of protection measures in the area for which they were established and are responsible for the state of that protection, monitor the state of protection and propose measures for the development and improvement of protection, exercise supervision over implementation of laws, protection plans and implementation of preventive protection measures in legal entities and other tasks that are under their jurisdiction by law and other regulations.

Service for entrepreneurship, local development and finance

The Service for Entrepreneurship, Local Development and Finance performs administrative and professional tasks from competences of the City related to economic development and finances, namely:

- Executes and ensures the execution of laws and other related regulations and general acts on entrepreneurship, local development, finance,
- Prepares draft regulations and other general and individual acts within its scope,
- Decides on administrative matters in the field of self-employment, agriculture, water management and other administrative matters under the jurisdiction of the Service,
- Preparation of analyses, information, reports in the field of economy, local development, finance and inspection,
- Creation and implementation of the City Development Strategy,
- Prepares the draft and proposal of the budget, as well as the execution report,
- Controls the regularity and legality of the use of budget funds,
- Bookkeeping and accounting jobs,
- Treasury operations,

Service for urban planning, spatial planning, geodetic and property legal affairs

The service for spatial planning, geodetic and property legal work is carried out administrative and professional tasks from the competence of the City that refer to:

- Implementation of laws and other regulations and general acts in the field of urban planning, spatial planning, construction, construction land, cadastre and property-legal area and housing-communal area,

- Implements the procedure prescribed by law for the adoption of development and implementation plans, their amendments and additions and implements them,
- Providing information to citizens about the possibility of construction in certain locations in accordance with the adopted plans (excerpts from the plans),
- Preparation of city decisions in the field of urban planning, construction, cadastre, etc property-legal relations,
- Decides on administrative matters from the scope of work of the Service and issues certificates on

- which keep official records,
- Land policy and development plans for construction land,
- Preparation of proposals for conceptual solutions for the aesthetic design of buildings, green and public surface,
- Gives project tasks and prepares tender documentation from the competence of the Service,
- Prepares programs, analyses, reports and other matters within the competence of the Service,
- Keeps records of construction land,
- Determines the urban planning and technical conditions for the development of urban approvals and performs a review of the implementation technical documentation,
- Creates plans and projects for the development of communal infrastructure (rehabilitation, reconstruction, modernization),
- Performs the tasks of surveying, establishing and renewing the real estate cadastre, the cadastre of communal devices, mapping the territory of the City, maintaining the technical archive of original maps and plans and land surveys,
- Preparation of decisions on determination of general interest,
- Calculates rent, fee for arrangement and use of construction land,
- Leads administrative procedures in the area of construction land, property law and residential and communal areas,
- Participates in creating the work program of the Mayor and the City Council,
- Coordination of work with other services and organizations from their scope,
- Participates in the work of commissions appointed by the Mayor and the Council,
- Establishment and maintenance of GIS (Geoinformation system) in the field of spatial planning and land cadastre,
- Provides organized performance of individual communal consumption (production and delivery of water, purification and removal of waste water, production and delivery of heat, removal and depositing of communal waste, funeral and chimney sweeping activities),
- Ensuring and supervising the cleaning and maintenance of public, green and other areas, arranging and equipping public green and recreational areas, drainage of storm water, maintenance of communal equipment,
- Carrying out professional operational work related to the construction and maintenance of roads i buildings above the roads,
- Planning, organizing and supervising the work of the winter service,
- Jobs related to the traffic regulation solution,
- Works related to landslides and energy efficiency,
- Work on the control of monthly consumption and annual plans for the maintenance and construction of public lighting,
- Monitoring the functioning of public lighting and traffic lights,
- Managing the cadastre of built public lighting,
- Monitoring and supervision of the work of public companies in the communal area and the environment,
- Organizing the protection and improvement of the quality of the environment,
- Jobs in the field of residential relations, house rules, maintenance of residential buildings and emergency interventions,
- Preparation of tender documentation in the public procurement procedure within its jurisdiction,
- Energy efficiency jobs,

- Work on drafting city decisions and other acts resulting from the Law on Roads, the Law on Communal Activities, etc. from these areas,
- Performs other duties as ordered by the Mayor.

The Department for Urban Planning, Spatial Planning, Geodetic and Property Legal Affairs, in accordance with legal regulations and scientific and technical achievements in the field of urban planning and construction, implements preventive measures to reduce the risk of collapse, landslides and landslides - creating cadastres of landslides, fires, environmental pollution and other hazards, participates in the work of the commission for the inventory and assessment of damages from natural and other disasters, submits the required additional data to the Civil Protection Service and the City Headquarters of Civil Protection, makes the necessary decisions for the facilities designated for the accommodation and disposal of evacuated people and material goods from threatened areas, and does other work at the request of the Mayor and the City Headquarters of Civil Protection.

Service for administration, social activities, veterans-disabled protection and community affairs

Service for administration, social activities, veterans' disability protection and common performs administrative and professional tasks within the competence of the City, which relate to:

- Execution and ensuring the execution of laws, other regulations and general acts in the field of preschool, school education, health and social protection, science, culture and sports, non-governmental organizations, areas of administration, tourism, veterans and disabled protection, displaced persons and joint affairs,
- Prepares drafts of regulations and other acts from its scope of work, prepares analyses report information materials from their scope
- Decides on administrative matters within its scope of work,
- Monitoring, application and enforcement of the Law on Freedom of Access to Information
- IT jobs for the unique city administration body,
- Issuing certificates on the facts for which records are kept,
- Jobs at the counter - service center,
- Business related to voter lists,
- Supervises the work of public institutions established by the City Council,
- Civil registry jobs,
- Joint tasks for the Mayor, services and the City Council,
- Coordination with other services from the Service's scope of work,
- He participates in the work of commissions appointed by the Mayor, keeps records from his scope of work,
- Participates in creating the work program of the Mayor and the City Council,
- Preparation of tender documentation in the public procurement procedure within its competence,
- Archive jobs,
- Performs other duties as ordered by the Mayor

The Service for Administration, Veterans-Disabled Protection and General Affairs and the Service for Budget, Finance and Local Development carry out activities for the protection and rescue of people and material goods: care of the population, evacuation, removal of the population and material goods, PMP, protection and rescue on water and under water, protection of plants and plant products, protection of livestock and foodstuffs of animal origin, sanitation of terrain, protection and rescue from ruins, RHB protection, fire protection, environmental protection and other measures ordered by the City Headquarters of Civil Protection and the Mayor in accordance with by law and general acts of the City.

Service for civil protection

The Civil Protection Service performs administrative, professional and other tasks of protection, rescue and fire fighting within the jurisdiction of the City:

- Organizes, prepares and carries out protection and rescue in the area of the City,
- Creates a threat assessment for the City area,
- Preparing a program for the development of protection and rescue from natural and other disasters,
- Proposes a plan for protection and rescue from natural and other disasters,
- Monitors the state of preparations for protection and rescue and proposes measures for improvement, organization and training of civil protection,
- Organizes, conducts and monitors the realization of citizens' training on the implementation of personal and mutual training protection,
- Organizes and coordinates the implementation of protection measures and rescue, and organizes and implements fire protection and fire fighting activities,
- Organizes the city's operational center of civil protection and ensures its work,
- Staffs civil protection headquarters, rescue services and civil protection units and ensures their equipping with MTS, and organizes, conducts and monitors the implementation of their training,

- Prepares regulations in the area of protection and rescue from the competence of the City,
- Coordinates tasks in the field of demining and UXO removal,
- Undertakes appropriate measures and activities to organize and implement protection from fire and fire fighting in the area of the City,
- performs professional and other tasks related to the organization of the professional fire departments,
- Proposes the City's fire protection plan and ensures its implementation with participation Administration services,
- Cooperates with the civil protection services of neighboring municipalities and cities in issues of common interest for fire protection and fire fighting,
- Performs maintenance and testing of fire extinguishers,
- Preparation of tender documentation in the public procurement procedure within its jurisdiction,
- Coordinates all activities within the competence of the service in the area of local communities through the bodies of local communities,

Internal Audit Service The Internal

Audit Service performs normative legal, study analytical, professional operational and other tasks related to:

- Systematic review and assessment of risk management and internal controls, - Assessment of the adequacy and efficiency of the financial management and control system in terms of: - Risk identifications, risk assessments and risk management by the Mayor.

- Completing tasks and achieving defined goals and programs.
- Economical, efficient and effective use of resources.
- Assessments of compliance with established policies, procedures, laws and regulations. -

Saving funds from losses, as a result of all types of irregularities.

- Assessment of the integrity and credibility of information, accounts and data, including and internal and external reporting processes.
- Preparation of strategic, annual and individual internal audit plans.
- Testing, testing and evaluation of data and information.

- Monitoring the implementation of internal audit recommendations by the budget manager user.
- Performing tasks of a consulting nature related to internal audit, which are not included in the annual internal audit plan ("*Ad hoc* audits" authorized by the Mayor).
- Carrying out normative legal tasks in the field of internal audit.
- Preparation of internal audit reports and information for the needs of the Mayor i of the manager of the audited budget beneficiary.
- Records and storage of documentation related to internal audit.
- Cooperation with the Office for the Audit of Institutions in the Federation of Bosnia and Herzegovina, - Preparation of requests for the budget.
- Participation in the development of the work program of the Mayor, the City Council and services, - Participation in the work of commissions appointed by the Mayor and the City Council, - Monitoring of regulations and other acts within the competence of the Department's work, - Performs other tasks on the order of the Mayor, the Mayor's assistant, as well as other jobs that are included in his scope of work by a special act.

The following tasks are carried out within the scope of the Office for the Affairs of the Mayor and the City Council :

- Coordination of the work of all services within the single city administration body,
- Professional and administrative tasks for the needs of the Mayor,
- Management of human resources, personal affairs and education affairs of all body workers;
- Professional and nomotechnical processing of all documents related to personnel affairs;
- Providing expert opinions and harmonization with the Constitution and the law of preliminary drafts, drafts and proposals of regulations of general acts adopted by the Mayor under the jurisdiction of the office;
- Carrying out nomotechnical processing of decisions and other regulations, which he makes Mayor from the jurisdiction of the office;
- Drafting of all general and individual and administrative acts, programs, analyses, opinions, reports and information from the competence of the service;
- Drafting of all general and individual and administrative acts, opinions, reports and information for which it is
The mayor is authorized by a special regulation and decision of the City Council to pass
- City development works,
- Public notification of the activities of the Mayor, Council, city services and public relations (PR),
- Monitoring, preparation of projects and applying for funds for their realization from domestic and foreign sources,
- Jobs related to sports,
- Ensuring the functioning of the Sports Hall,
- Translation jobs,
- Technical tasks for the functioning of the Mayor's office
- Ensures conditions for the work of the City Council and its working bodies,
- Prepares drafts and proposals and monitors the implementation of decisions and other regulations, as well as individual acts under the jurisdiction of the City Council,
- Prepares draft contracts in the conclusion of which the City Council participates,

- Cooperates with the Mayor's services during the preparation of draft decisions i other acts adopted by the City Council in order to ensure methodological unity in make,
- Follows the regulations and indicates to the City Council the measures that should be taken within its jurisdiction,
- Monitors phenomena of interest for the realization of constitutionality and legality and handles them professionally issues that should be incorporated into city regulations,
- Monitors the implementation of the City Statute and the Rules of Procedure of the City Council,
- Provides professional assistance to city councilors in the performance of their functions,
- Prepares the work program of the City Council and monitors its implementation,
- Establishes, creates, maintains and maintains records within the jurisdiction of the City Council,
- Prepares and organizes sessions of the City Council and its working bodies,
- Prepares analyses, reports, information and other professional materials from the jurisdiction City Council,
- Obtains information and opinions related to citizens' petitions from competent services for right, public institutions and companies,
- Ensures cooperation with ombudsmen and other bodies for the protection of human rights,
- Edited and published by the Official Gazette of the City of Gražanica,
- Preparation of tender documentation in the public procurement procedure within its competence,
- Performs administrative-technical and operational-technical tasks for the City Council and its working bodies,
- Performs other tasks in accordance with the law, other regulations and by order of the Mayor

Service for Inspection Affairs - Inspectorate

Companies and other legal entities:

Companies and other legal entities (hereinafter: legal entities) that perform activities in the fields of: healthcare, veterinary medicine, housing and communal affairs, water management, forestry, agriculture, chemical and petrochemical industry, mining, construction, transport, supply, catering, firefighting, hydrometeorology, seismology, ecology and other fields in which activities of importance for the protection and rescue of people are carried out and

material goods from natural and other disasters are obliged to organize and carry out protection and rescue operations in accordance with the law and other regulations and general acts of competent authorities.

Legal entities carry out appropriate preparations, adopt and elaborate protection and rescue plans for their activities in protection and rescue, plan and provide material and technical means for the implementation of protection and rescue measures and organize civil protection units and commissioners, equip these units and commissioners with the necessary equipment and means and train them for their participation in protection and rescue, and during the conduct of actions to protect and rescue people and material goods, they are obliged to implement the decisions of the competent civil protection headquarters, which manages the actions of protection and rescue.

Companies and other legal entities will engage:

JZU Dom zdravlja Gražanica

As part of its core activity, the Gražanica Health Center provides health services to the population of the City of Gražanica in the domain of primary health care and part of specialist-consultative health care.

Primary health care is organized in the Health Center with 12 clinics in the central building and 11 field clinics distributed in local communities, 22 teams

family medicine, emergency medical care, PJU "Gradska apoteka" Gražanica - Central pharmacy with 8 business units located in local communities (Data from the report of PJU "Gradska apoteka" for the year 2021), and 11 private pharmacies.

Total number of workers employed in the Health Center as of 12/31/2021. year is 222 (206 on indefinite and 16 on fixed working hours), of which 73 employees - health workers with VSS, of which 59 doctors of medicine (25 specialists, 25 doctors of general practice medicine and 9 doctor of medicine on specialization), 7 doctors of dentistry (3 specialists, 2 doctors of general practice dentistry and 2 doctors of dentistry on specialization), 1 engineer of medical radiology, 2 B.Sc. laboratory diagnostics engineer, 3 graduate nurses/technicians, 1 graduate physiotherapist, 6 employees from the Higher Secondary School of Health, 99 employees of health workers with SSS and 44 non-medical workers. The source of the data is the Report on the work of the Public Health Institution of the Gražanica Health Center for the year 2021, which was adopted by the Gražanica City Council at the session held on April 28, 2022. years.

JZU Dom zdravlja Gražanica-Hygiene and Epidemiological Service (HES)

At the city level, public health activities are carried out through the hygiene and epidemiological service of the Health Center. The basic activities of public health are related to the preservation and improvement of health by planning and implementing measures to control infectious and non-infectious diseases, ensuring the healthiness of food, water, air and objects of general use, monitoring the environment, promoting health, preventing diseases, and conducting regular health-statistical surveys. .

According to the HES report, the main epidemiological problem in 2021 was the COVID-19 epidemic, which continued with greater severity with more patients and higher mortality than the year before. The epidemic took place in two waves, the first lasted from March to May, the second far more severe wave lasted from September to December. There was also the emergence of a new mutated strain of SARS-COV2 called the delta strain, originally discovered in India, with higher infectivity and virulence compared to the original strain, which was the reason for the greater severity of the epidemic. Thus, in 2021, 1,680 patients with COVID-19 were registered.

In 2021, the vaccination against COVID-19 started, which started in March with a very limited number of vaccines. In 2021, about 35% of the adult population of our city was vaccinated.

Other infectious diseases were within the multi-year average.

PUBLIC HEALTH FACILITY

GENERAL HOSPITAL Dr. "Mustafa Beganović" GRAŽANICA

A general hospital is a state-owned public health institution, classified under hospital activity under code 86.10. Public health institution General Hospital "Dr. Mustafa Beganović"-

JZU General Hospital «dr. Mustafa Beganović» Gražanica, was founded in 2000, by Decision of the Municipal Council of Gražanica number: 01-023-7-10/00 of 24.03.2000. for performing hospital activities in accordance with Articles 70 and 71 of the Law on Health Care ("Official Gazette of the Federation of Bosnia and Herzegovina", No. 29/97 of 13 December 1997).

According to the new Law on Health Care, the founding rights over the General Hospital were taken over by the Canton of Tuzla on June 15, 2015. years. With the decision to take over the founding rights of the Public Health Institution General Hospital "Dr. Mustafa Beganović" Gračanica.

The gravity area of the General Hospital is: the City of Gražanica, the Municipality of Dobož Istok and parts of the municipalities/cities of Gradačac, Srebrenik and Lukavac.

The activity of the General Hospital is the provision of specialist-consultative and hospital health care services at the secondary level, namely: diagnostics, treatment, medical rehabilitation, patient health care, and providing accommodation and food for patients. Within its activities

The general hospital has the following hospital departments:

1. Department of Internal Medicine
3. Department of Surgery
4. Department for anesthesia, resuscitation and intensive care,
5. Department of Pediatrics
6. Department of Gynecology, Obstetrics and Neonatology
7. Department of Neurology
8. Department of Urology
8. Dialysis center
9. Hospital pharmacy,
10. Transfusion Department
11. Microbiological laboratory
12. Emergency block
12. Radiological and ultrasound diagnostics
13. Biochemical and hematological laboratory

The Hospital has the following organizational units for performing non-medical work:

1. Service for economic and financial affairs
2. Service for legal affairs and human resources
3. Service for technical affairs

At the Hemodialysis Center, 8,055 dialysis sessions were performed monthly, and 95,114 dialysis sessions were performed annually. Patients from Građanica, Gradačac, Srebrenik, Dobož Istok and Lukavac gravitate to this Center, which works in 3 shifts.

The total number of employees in this health facility is 183, of which 135 are of medical workers (19 specialist doctors, 12 doctors of general practice, 20 nurses with a bachelor's degree, 1 MEDICAL WORKER with a bachelor's degree and 83 nurses with a bachelor's degree), and 48 non-medical workers.

In 2021, a total of 82,044 patients were treated at JZU General Hospital.

The general hospital carries out its activities in a building with a usable area of 3,350 m². Existing the space for most of the services does not comply with valid standards and norms and does not allow for quality work. Currently, the biggest problem is the lack of space in the Department of Pediatrics which is located on only 40 m² in the Department of Surgery.

According to the standards, the hospital should have at least 15 beds and 577 m² of beds room.

Since the equipment in the Građanica General Hospital was quite outdated, in the last few years great efforts were made by the management of the General Hospital to acquire new, necessary, modern medical equipment.

That's how it is in the period 01.01.2020. – 31.12.2020. – 30.09.2022. acquired a lot of new necessary medical equipment. Also in this period, a lot of work was done on the additional expansion of health care activities by introducing new specialist-consultative outpatient clinics and departments (special outpatient clinic for urology and department of urology). All of this will contribute to the improvement of better quality and more comprehensive health care for patients in our gravity area and beyond. All the mentioned activities were carried out with the financial support of the FBiH Government - the Federal Ministry of Health, the Government of TK - the Ministry of Health of the TK, the Association of Businessmen of the City of Građanica, numerous donations and our own funds.

Here we will list some of the newly acquired equipment in this period: the hemodialysis center was practically renewed with new devices (13 new hemodialysis machines) and a new reverse osmosis system for the needs of the hemodialysis center. Several ultrasound machines, patient monitors - monitors for monitoring patients' vital functions, EKG machines, several machines for the needs of the hematology-biochemistry and microbiology laboratory, video

endoscopic system – gastroscopes, X-ray machine, cystoscopy machine, respirator – stationary and transport, central steam sterilizer, completed central oxygen distribution at the level of the General Hospital and other necessary equipment. Also, in the coming period, new acquisitions of necessary equipment are planned, and capacity expansion is still planned, all according to priority and planned activities for the next period.

All this will provide the opportunity for all members of the social community with the integration and cooperation of all levels of health care (primary, secondary, tertiary), with a multidisciplinary approach to achieve optimal health and social well-being, as well as through reaching the maximum level of expertise and quality in the services provided and maximum dedication to user requirements.

Also by team work and continuous education of the medical staff, with the maximum use of available resources and implementation of planned activities aligned with the health policy and needs of the population, with the application of modern medical - of clinical technologies to provide a comprehensive and high-quality health service both in the field of diagnostics, as well as in outpatient - polyclinic and inpatient treatment of patients.

JP Veterinarska stanica doo Grajanica

It was founded in 1946. From 21.03.2011. operates as a Public Undertaking where the Municipality of Grajanica is the majority owner. The public enterprise Veterinary Station implements veterinary and health measures to prevent and spread infectious diseases of animals. It operates in veterinary clinics in Grajanica, while two veterinary clinics were closed in 2020 due to unprofitability (Dobrovci and Lukavica).

The veterinary station, through the Veterinary Pharmacy in Grajanica, sells medicines, preparations, equipment and other goods for the needs of citizens who are engaged in livestock, poultry and other types of animal protection, as well as citizens who care for and keep pets. veterinary pharmacy in Grajanica. It employs a total of 8 employees (4 DVM, 3 veterinary technicians and 1 hygienist).

Also, since 2010, the JP Veterinary Station has provided a shelter for dogs in an area of 990 m² (of which 150 m² is closed space for treatment, vaccination and accommodation of dogs). The veterinary services provided by the JP veterinary station are vaccination and prevention, diagnostics, treatment, artificial insemination and prevention, marking of large livestock, supervision of poultry facilities and other services.

In Grajanica, there is also an organized private veterinary practice - outpatient clinic and agricultural pharmacy.

JP „ Water supply and sewerage" Grajanica

Water supply and sewerage management is entrusted to JP "Vodovod i kanalizacija" d.o.o. Grajanica with 59.81967% of state capital managed by the City Grajanica and 40.18033% share-private capital owned.

The main activity of JP "Vodovod i Kanalizacija" is in the performance of activities of special social interest, which ensure the living and working conditions of citizens, businesses and other entities in the city area and provide the following services:

- Production and distribution of water;
- Drainage of waste water;
- Removal of stormwater from urban areas through city sewers i

maintenance and cleaning of street drains, side inlets and channels for storm water.

Jobs in the company are organized through sectors, departments. The organization of the company should follow after solving the sewerage maintenance and taking over the maintenance of village waterworks.

Providing the population with drinking water has priority over other types of water use, given the fact that the needs for technological water are solved more easily and mostly with water of lower quality. Supplying the population with drinking water has not been comprehensively resolved.

There is an irrational partial approach to solving water supply (at the local community and municipality level).

The population's water supply in Gražanica and Pribava municipalities is solved by the city's water supply system from natural water sources (three in Sokol, one in Škahovica) and four well sources (Sklop II and Sklop III from Kamenolom, Hadžija voda and Soljanuš) with a total average capacity of 55 l/second.

JP „KOMUS" Gračanica

The activity of municipal waste disposal was assigned to JP "Komus" by the Decision on communal activities and communal order ("Official Gazette of Gražanica Municipality", number: 05/07) which was adopted by the Municipality of Gražanica, in accordance with the Law on Communal Activities of Tuzla Canton ("Official Gazette of Tuzla Canton", number: 11/05).

According to the above decision, JP "Komus" performs the following activities in addition to its core activity (municipal waste disposal): cleaning and maintenance, maintenance of public spaces, maintenance of public parking spaces and public garages, unless otherwise regulated, maintenance of cemeteries, unless differently arranged, market places and markets, decoration and provision of activities in cooperation with the public institution "Veterinary station" Gražanica.

JP "Komus" Gražanica is in 21 local communities, with a total area of 193.24 m² organized waste removal, which covered 88% of the city's territory, i.e. 43,490 inhabitants (data from the Report of JP "Komus" for the year 2021).

JP "Komus" also manages the public landfill and is responsible for its organization, maintenance and proper disposal of waste, in accordance with current regulations. The relevant laws and regulations in the field of environment in the Federation of BiH consist of implementing regulations and rules and a set of environmental laws in the FBiH, namely: Law on Environmental Protection, Law on Air Protection, Law on Waste Management, Law on Nature Protection, Law on Gender Protection, Law on the Environmental Protection Fund and others.

Local communities will:

- In exercising rights and duties in the area of protection and rescue, local communities:
- organizes and trains citizens to carry out tasks and protection and rescue measures;
 - plans and organizes protection and rescue measures;
 - organizes and ensures the reception and care of evacuated citizens and material goods;
 - organizes and maintains order during natural and other disasters;
 - provides information to citizens about the dangers of natural and other disasters, - the consequences and measures taken to protect and eliminate the consequences;
 - adopts a proposal for acts on the establishment of headquarters, commissioners and units of civil protection; passes the Assessment of Threats from Natural and Other Disasters and the Protection and Rescue Plan from Natural and Other Disasters;
 - undertakes protection and rescue measures for the prevention, mitigation and elimination of harmful consequences of natural and other disasters for people and material goods in the area of the local community;
- performs other protection and rescue tasks in accordance with the Law, other regulations and general acts.

In organizing, planning and realizing protection and rescue, the local community will, through the Civil Protection Headquarters of the local community and businesses in the area of the local community, join forces and resources for protection against natural and other disasters in the area of the local community in matters of common interest.

The local community in the statute or other general act regulates the way of organizing and achieving protection against natural and other disasters in the territory of the local community, determines the competence of local community authorities, as well as the way of engaging citizens in protection and rescue.

Formation and mode of operation of the headquarters of the CZ local community

The headquarters of the CZ can be formed in larger local communities for which it is estimated that its formation is necessary and that such an obligation has been determined in the assessment of the threat to the municipality/city. The CZ headquarters is formed by the Mayor on the proposal of the City's civil protection service.

The CZ headquarters, which is formed in the local community, is responsible for managing protection actions and rescue in the area of the local community for which it was founded.

In managing protection and rescue actions, the headquarters of the CZ local community has the powers specified in Article 108 of the Law on the Protection and Rescue of People and Material Assets from Natural and Other Disasters ("Official Gazette of the Federation of Bosnia and Herzegovina", number: 39/03, 22/06 and 43/10), namely:

1) decides on the use of forces and means of civil protection for the protection and rescue of endangered and injured people and material goods and distributes those forces to those areas that are threatened;

2) order the implementation of appropriate protection and rescue measures and determine the forces and means that will implement these measures;

3) direct, coordinate and manage the protection and rescue actions of all participants engaged in protection and rescue in their area;

4) solve all issues that arise during the implementation of protection and rescue activities in connection with engaged forces and means of civil protection and the implementation of protection and rescue measures and self-protection of citizens.

The powers established in that legal provision are exercised by the headquarters of the CZ local community through the performance of operational functions in the situations established in Article 16 of the Rulebook on the manner of operation and functioning of headquarters and commissioners of civil protection ("Official Gazette of the Federation of BiH", number: 77/06 and 5/07).

The operational function of the CZ headquarters of the local community is carried out in a way that the management of protection and rescue actions is achieved in relation to the engagement of citizens, house councils, the secretary of the local community, as well as the implementation of the orders of the City Headquarters of Civil Protection related to the activities of the headquarters of the local community.

As part of the preparations for the performance of the operational function, the headquarters of the CZ local community periodically, as necessary, holds headquarters sessions that are planned, prepared and organized by the Civil Protection Service of the City.

At the sessions, the headquarters of the CZ local community considers all issues within its jurisdiction and trains on the way of its work during the implementation of the operational function (the way of collecting data from the threatened area, the way of passing orders and the way of implementing the orders passed), as well as the way of implementing the orders of the City Headquarters civil protection related to the headquarters of CZ local communities.

The headquarters of the CZ local community performs its operational function from the moment of activation and the beginning of the function of managing protection and rescue actions in the territory of the local community, until the moment when the City Headquarters of Civil Protection orders the cessation of work of the headquarters of the CZ local community.

The activation of the headquarters of the CZ local community is carried out in the situation referred to in Article 16 of the Rulebook on the manner of operation and functioning of the headquarters and commissioners of civil protection ("Official Gazette of the Federation of Bosnia and Herzegovina", number: 77/06, 5/07 and 32/14).

Management of protection and rescue operations is carried out by the headquarters of the CZ local community in the area of the local community with direct cooperation and according to the instructions or orders of the City Headquarters of Civil Protection.

The leadership of the local community civil protection headquarters is achieved by ordering the undertaking of protection and rescue measures that are determined for the local community in the Municipal/City Protection and Rescue Plan, and according to the needs that exist in the area of the local community.

Citizens will:

- participate in civil protection, surveillance and alarm services, fulfill the obligation to provide material resources and train for personal and mutual protection and for the implementation of protection and rescue measures,
- be assigned to headquarters, protection and rescue services, units and civilian commissioners protection,
- provide information important for protection and rescue that they learn or notice and immediately deliver it to the nearest operational center of civil protection or the Police Station, or the Civil Protection Service,
- to provide information necessary for keeping records in the field of protection and rescue, as well as to report within eight days from the date of the change all changes related to residence, apartment address, name, establishment and termination of employment, acquisition of professional qualification and other data important for protection and rescue,
- perform training obligations (men aged 15-60, or women aged 15-55 of life if they are capable of training),
- men and women over the age of 15 to voluntarily participate in civil protection,
- give vehicles, machines, equipment and other material resources, land, facilities, devices and energy sources necessary for protection and rescue from natural and other disasters for temporary use by civil protection,
- to respond to the call of the Civil Protection Headquarters, i.e. the Civil Protection Service at the place and time specified in the call and other tasks and tasks in accordance with the law, under legal and other acts.

OS BiH in protection and rescue:

In conditions where the forces and means of civil protection saving people and material goods from natural and other disasters are not sufficient for effective protection, a request is submitted to the Federal Ministry of Defense for the use of the rescue army through the commander of the Federal Headquarters of Civil Protection.

The engagement of the Armed Forces of Bosnia and Herzegovina to provide assistance to civil authorities in responding to natural or other disasters is carried out in accordance with: the Law on Defense of Bosnia and Herzegovina, the Framework Law on the Protection and Rescue of People and Material Assets from Natural and Other Disasters in Bosnia and Herzegovina and the Law on the Participation of Members of the Armed Forces BiH, police officers, civil servants and other employees in peace support operations and other activities abroad, the Agreement on cooperation between the Ministry of Defense of Bosnia and Herzegovina and the Ministry of Security of Bosnia and Herzegovina in the field of responding to natural or other disasters and standard operating procedures.

The Law on the Defense of Bosnia and Herzegovina ("Official Gazette of Bosnia and Herzegovina", number 88/05) in chapter V. (Natural and other disasters and accidents) establishes the competence of the Minister of Defense to order the engagement of the Armed Forces of Bosnia and Herzegovina (at the request of the relevant civil authorities of Bosnia and Herzegovina or entities about which he reports to the BiH Parliamentary Assembly).

According to the provisions of Article 37 of the Federal Law on Protection and Rescue in conditions when the forces and means of civil protection are not sufficient for the efficient rescue of people and material goods from natural and other disasters, the commander of the Federal Staff of Civil Protection can submit a request to the Ministry of Defense of Bosnia and Herzegovina for the use of Armed strength of BiH on

tasks of protection and rescue in the endangered area, which is carried out in accordance with the Law on Defense of Bosnia and Herzegovina ("Official Gazette of Bosnia and Herzegovina", number 88/05).

The Armed Forces of Bosnia and Herzegovina can engage in providing assistance to civil authorities in responding to natural or other disasters only when the available civilian resources are exhausted or the civil authorities do not have the necessary or sufficient resources to respond to a natural or other disaster.

In order to engage the Armed Forces of Bosnia and Herzegovina in the tasks of protecting and rescuing people and material goods from natural and other disasters in the territory of the Federation of Bosnia and Herzegovina, the following conditions must be met: - that a

natural disaster has occurred in a certain area of the Federation of Bosnia and Herzegovina, or
other major accident,

- that the forces and means of civil protection and other forces and means engaged in the protection and rescue of endangered people and material goods are not sufficient to ensure effective protection and rescue in the endangered area and
- that the engagement of the Armed Forces of Bosnia and Herzegovina will reduce the consequences of natural or other accidents.

Only the commander of the Federal Civil Protection Staff or, in his absence, the Chief of the Federal Civil Protection Staff, is authorized to submit a request for the engagement of the Armed Forces of Bosnia and Herzegovina for protection and rescue tasks. If the Federal Headquarters of Civil Protection is not in a leadership role, the request for engagement of the Armed Forces can be submitted by the director of the Federal Administration of Civil Protection.

This request is submitted when it is determined that the stated conditions have been met. Requests are submitted according to operational procedures and procedures for approving military assistance to civil authorities in the event of natural disasters and accidents.

The initiative to engage the Armed Forces of Bosnia and Herzegovina can be submitted by the director of the Federal Administration of Civil Protection or the commander of the Cantonal Headquarters of Civil Protection in whose territory a natural or other disaster occurred, when it is judged that the assistance of the Armed Forces of Bosnia and Herzegovina is really necessary.

Beforehand, it is necessary to take all measures so that civil protection forces and means, citizens and forces and means of legal entities are engaged in protection and rescue.

If these measures are not sufficient to ensure the effective rescue of endangered and injured people and material goods, the conditions are met for submitting an initiative to the commander of the Federal Civil Protection Staff to send a request to the Minister of Defense for the engagement of certain military resources in protection and rescue actions in the territory of the Federation of Bosnia and Herzegovina.

Prevention (avoidance of negative impacts, dangers and disasters) as a development area of protection and rescue and protection against fire and firefighting is the central point of activities of planning holders (institutions of public authorities, legal entities and citizens) in the preparation of the social community to respond to the challenges of natural and other disasters. Examples of this are dams or embankments or cleaning of waterways that eliminate flood risks, land use regulations that do not allow any settlements in high-risk zones, and seismic and engineering design that ensures the survival and function of critical structures in the event of an eventual process. Very often it is not possible to completely avoid losses, and the task becomes a mitigation activity.

The goal of prevention from natural and other accidents in the scope of work and responsibility of all planning agents is to prevent, disable and reduce risks and sources of danger, and to prevent and mitigate the consequences for life and health of people and material goods from these accidents.

Phase of preventive protection

Depending on the type of natural and other disasters that may occur in the area of the city of Građanica, those preventive protection and rescue measures will be implemented that can be used to prevent the occurrence or mitigate the intensity of natural and other disasters.

This is especially important in the prevention of natural and other accidents that may occur cause catastrophic consequences for the health and lives of people as well as for material goods. Preventive measures must have a central place and priority over all other forms of organized and planned protection against natural and other disasters, as well as the fact that the citizens of the city of Građanica are timely informed about all dangers and risks and the possibilities of protection, as well as the necessity of their participation in protection and rescue in accordance with the rules of behavior in case of natural and other accidents.

The implementation of preventive measures, in accordance with the conclusions of the Threat Assessment, is particularly important in the

areas of: - legislation,

- protection of human health (epidemics), -

planning of spatial development, construction and urbanism (drafting of spatial planning documents, spatial plan, spatial plan of special areas characteristics, protection against earthquakes, collapses, landslides, landslides and subsidence), - protection of the environment,

forests and water, plants and plant products (waste management, plant diseases and pests, protection of natural and cultural-historical heritage from fires, floods, dam overflows) on reservoirs, anti-hail protection, storm and frost), - energy, mining and industry (mining accidents, explosions of gases and dangerous substances, industrial and other accidents), - fire protection and fire fighting (forest fire protection, protection from technical

technological explosions, etc.), -

protection of animals and foodstuffs of animal origin (epizootics, zoonoses), - radiation, chemical and biological protection (radiation and other pollution of air, water

coming),

- traffic and communication in road, rail, air and water traffic.

In addition, the implementation of preventive protection and rescue measures is particularly important for reducing the risk of mines and unexploded ordnance, as well as for reducing the risk of high snow and large snow drifts.

The effects of natural and other disasters produce direct and indirect consequences for the life and health of people, material goods and the environment (social community), stopping one does not mean that others will not continue to have a harmful effect. Harmful impacts of hazards often cannot be completely prevented, but their extent or severity can be significantly reduced or limited by various activities.

Mitigation measures include engineering techniques and hazard-resistant construction, as well as improving environmental policies and public awareness. The development orientation in this area mainly includes professional measures aimed at reducing the impact forces, the destructive effect of natural or other disasters on people and material goods.

The area of mitigation essentially represents the continuation of enhanced prevention through the application of specific measures and activities, which are divided into: structural and non-structural measures.

Structural and non-structural measures: -

Structural measures are all physical constructions intended to reduce or avoid the possible effects of hazards, or the application of engineering techniques to obtain durable structures or systems resistant to hazards.

- Non-structural measures are all measures that do not include physical construction, and that use knowledge, practice or agreement on the topic of risk and impact reduction, especially in the form of policies and laws, public awareness, training and education.

Structural mitigation measures are directly in the function of effective protection and rescue people and material goods and protection against fire and firefighting and are developed on the basis of:

- appropriate spatial planning, - assessment of physical forces that may arise from potential natural hazards accident,
- planning and analysis of measures to resist such physical forces, - building with appropriate control and supervision.

Common non-structural mitigation measures are: - development of the legal framework, - financial incentives aimed at promoting structural measures or mitigation, - technical assistance, benefits for property and personal insurance, tax benefits, etc., - training and education, - construction and development of administrative and professional institution, - installing a system for operational centers of civil protection, - public awareness.

The aforementioned preventive measures contribute to the quality of the construction of buildings that will be resistant to the forces caused by natural disasters, which will enable: - the construction of buildings that will be resistant to the physical forces caused by natural disasters (earthquakes, floods, snow drifts, strong winds, landslides, etc.), - strengthening of existing buildings to make them more resistant to the physical forces of nature accident.

Public and private investments in disaster risk prevention and reduction through structural and non-structural measures are of crucial importance for improving the economic, social, scientific and cultural resilience of individuals, communities, countries and their assets, as well as the environment.

These investments can be drivers of innovation, growth and job creation. Such measures are cost-effective and crucial in saving lives, preventing and reducing losses, and ensuring effective recovery and rehabilitation.

In relation to the problems of managing natural and other disasters in all phases, the area of development of preparedness/readiness of the state or social community is mutually conditioned by achieving a state better than the previous one or found in relation to the problems of managing natural and other disasters in all phases.

The phases of management in natural and other disasters should in principle be identified with the development areas of protection and rescue in order to ensure the efficiency of the protection and rescue system. The requirement to achieve preparedness/readiness as a development area of protection and rescue enables City planning officials, civil society organizations, citizens' associations and individuals to act quickly and efficiently in responding to the challenges of natural and other disasters. The development of the preparedness area is based on a planning approach that connects all aspects of the legal areas of work of the planning authorities, especially the Government, ministries and other administrative bodies in achieving assumptions for management in situations of natural and other disasters.

Institutions of the legal system are legally, according to the definition, responsible for preserving the stability and vitality of the state government in conditions of natural and other disasters, by establishing civil protection headquarters as operational-expert authorities for management duties in natural and other disasters and creating the necessary assumptions for their work, which it implies human and material and technical resources, purpose-built and equipped spatial capacities.

Natural and other disasters, regardless of the degree of development of the protection and rescue system, almost regularly surprise the planners and are always more complicated than predicted in the threat assessments. The development direction of preparedness/preparedness should be focused on the most sensitive components, namely:

- 1) Organization and planning, which contain a clear and comprehensive policy in protection and rescue, appropriate, high-quality and sustainable regulations on natural and other

accidents and quality doctrinal documents on protection and rescue measures, training and development, clear and functional organizational structure of forces, management structure in situations of natural and other disasters, reliable assessments for activity and preparedness in situations of natural and other disasters, framework for planning, especially for emergency response such as evacuation of the population or their temporary relocation to safe areas;

- 2) Capacities/resources, by which we mean facilities and systems for warning and operational management of protection and rescue actions, accurate and up-to-date specification of capacities/resources to be used (equipment, funds and reserves, logistics centers and others),
- 3) Coordination as a process of increasing the degree of preparedness in conducting protection and rescue actions against natural and other disasters through warning, danger and precaution in the management of natural and other disasters,
- 4) Readiness and preparedness of operational centers of civil protection in a situation of natural or other accidents,
- 5) Training and raising public awareness of risks, dangers and accidents, psychological and other compensatory measures of the pressure effects of natural and other disasters, 6) Raising public awareness of the risk of fire, fire hazards, obligations regarding the implementation of preventive fire protection measures and extinguishing initial fire, etc.

Preparedness and preparedness are, in a practical sense, a unique development area of the protection and rescue system, mutually dependent and connected, the operations of the development area of response to natural and other disasters depend on their quality.

Readiness is the practical state of current capacities and the ability of planning authorities, institutions, management bodies in protection and rescue, civil society organizations, citizen associations and individuals to quickly and efficiently respond to all challenges of natural and other disasters.

Therefore, it is very important to prepare the necessary capacities/resources (plans, forces, means, equipment, connections and communications, etc.) for the realization of the content of protection and rescue measures, depending on the estimated need, which will not be ready for the execution of the tasks if, personnel are not trained and qualified in the performance of their specific duties and are not capable of handling means and equipment, and civil protection headquarters are not trained and qualified in the management of protection and rescue actions.

Since readiness is not an end in itself, nor is it sufficient without the readiness that is achieved in terms of development, special attention should be paid to the following elements: -

- training, improvement and training, - installation of an early warning system, - establishment of an information system of importance for protection and rescue and protection from fire,
- the construction of specialized communication systems to support process management in voice and data transmission,
- establishing databases of importance for protection and rescue, - ensuring dedicated reserves, in relation to the needs of the risk reduction phase preceding a natural or other disaster, - reserves for mitigating the consequences, in relation to the needs of the recovery phase after a natural or other disaster, - exercises simulations, - checks of protection and rescue plans, - strengthening awareness of the importance of prevention through the system of education and upbringing, scientific research and technological development, training in the work process, and through means of public information,
- forwarding up-to-date technical information related to certain hazards, etc.

The aforementioned elements are preparedness activities because they are practically the organization of existing general capacities/resources or information that would meet the needs of management in situations of natural and other disasters.

Under normal conditions, these resources meet other regular needs. Preparedness programs define the adaptation of these functions to make them applicable for use in natural and other disaster situations.

Depending on the type of natural and other disaster, it is necessary to implement preventive measures of general importance, which should be implemented on the basis of specific plans and programs and on a long-term basis. This is especially important in the prevention of natural and other disasters that can cause catastrophic consequences for the health and lives of people as well as for material goods.

Protection and rescue measures are organized actions and procedures of a preventive and operational nature that are prepared and implemented by administrative bodies and other authorities and legal entities.

Protection and rescue operators plan and prepare:

Protection and rescue measures and procedures in the event of immediate danger from natural and other disasters,

Protection and rescue measures and procedures during natural and other disasters i

Measures and procedures for mitigating and eliminating the consequences of natural and other disasters.

Rescue phase

In this phase, the following measures are implemented:

- Evacuation of people and material goods,
- Taking care of the endangered and victims,
- Protection and rescue from radiological, chemical and biological agents,
- Protection and rescue from demolition,
- Protection and rescue on and under water,
- Fire protection and rescue,
- Protection against unexploded ordnance,
- First medical aid,
- Protection and rescue of animals and foodstuffs of animal origin,
- Environmental protection,
- Protection and rescue in mines.
- Protection of plants and plant products.

Civil protection structures carry out all the above measures for the protection and rescue of people and material goods from natural and other disasters in cooperation with companies, public enterprises and services, and other entities whose activities are important for protection and rescue in the area of the City, and certain measures and with city services, such as: evacuation of people and material goods, taking care of the endangered and victims, protection and rescue on and under water, protection and rescue of animals and foodstuffs of animal origin, protection of the surroundings and protection of plants and plant products.

The essence of the community's overall preparations for protection and rescue is to achieve the ability to respond (reaction, intervention) to the challenges of natural and other disasters. In fact, it is the central development area of the protection and rescue system, which is conditioned and determined by the achievement of the quality of the development of the area of prevention with mitigation, especially preparedness. For these reasons, this program specifically addresses this area.

Response measures (intervention aid measures) are those measures that are taken immediately before (after the alarm) or after the impact of a natural and other disaster and are aimed at saving people's lives and health, protecting property and assessing the immediate damage caused at the beginning of a natural and other disaster. Response measures/intervention aid measures are carried out in extremely difficult conditions imposed by the force of destruction, are difficult to implement, require large

human sacrifices, secured capacities/resources, prior planning and programming, organization, training and training of forces and operationally expert bodies for managing the process.

An effective response to natural and other disasters reduces the number of victims, eases difficulties and suffering, and ensures the return of the basic conditions necessary for life and the functioning of the system of the state community.

Based on the above, the main types of response/intervention measures to help in situations of natural and other disasters are: - launching

an intervention system, - analysis and assessment of the situation, -

saving lives, health and the environment, -

rescuing people in ruins, on water, under water and second, - triage,

medical assistance, hospitalization, medical evacuation and care for victims, - extinguishing fires and stopping the release of dangerous substances, - evacuation

of persons from the affected area, - organization

of accommodation for victims (emergency house repairs, accommodation in tents, schools, hotels, sports halls, etc.),

- organization of feeding victims of natural or other disasters and members of rescue units and services, distribution of food items, basic foodstuffs and clothing, assessment of reserves and damage to the food fund,

- preparation of entrance and exit roads, clearing of key roads, preparation of the helipad, etc.

(enable circular traffic within the affected area), - establishment of communications and connections (radio and TV, telephone, mobile and information

connections), - supply of drinking water and

electricity, - organization of continuous health and hygiene-epidemiological operations, -

informing the public and working with the media (information management), -

organization of enhanced measures to protect property and personal security, public order and peace in the threatened

area, - construction operations to remove unstable elements of damaged buildings which pose a danger to people or other buildings,

- monitoring the situation of the population affected by a natural or other disaster, finding missing persons and reuniting families, - maintaining the morale of

the population.

The mentioned types of effective response/intervention measures to help in conducting protection and rescue actions

require: - comprehensive information on preparedness/readiness (political orientations, carriers planning, organization, resources and training),

- timely and appropriate activation of the response system (plans, preparedness, activation, etc.), -

capable coordination of response operations (conducting protection and rescue actions), - alternative communications and

connections, - overview of the condition (mapping) of the affected area,

analysis and assessment, - quality and responsible

information management, - planned evacuation.

In response operations (intervention measures to help) serious problems regularly appear in several sectors, to which special attention should be paid during the period of preparation

for protection and rescue within the area of prevention, preparedness/readiness

that:

- absence or mismatch of plans or conceptual and logistical resources centers,

- functionally undeveloped preparedness/readiness, -

legal, organizational and technical deficiencies in warning of dangers,

- degree of organization, coordination, development and ability to activate individual elements or the entire response system,
- physical, psychological, social security and economic consequences of effects and pressure natural or other accidents,
- difficulties in assessing and recording damages and conceptualizing needs assessment,
- incorrect and/or incomplete information from the survey on the state of the population in the affected area area, -
- connecting people (in the affected area), - poor information management, - inappropriate items that are delivered and counted as aid, - weak coordination of actors during the response (intervention aid measures), - missing and insufficient public awareness, acceptance of international aid.

Phase of elimination of consequences

Recovery is a procedure that enables the achievement of appropriate levels of functioning after a natural or other accident to the state before the accident or in some cases to a state better than the one before the accident. From the point of view of protection and rescue, it should be borne in mind that the recovery process can be prolonged for several years, to which the planning and programming of overall consolidation and stabilization must be adapted.

The orientation of the development area of recovery is to achieve the stabilization of the situation in the area affected by a natural or other disaster, which is the most important in relation to the direct operational function of the system of protection and saving of life, human health and material goods.

Recovery, as a rule, depends on the success of the response to natural and other disasters just as effective prevention, mitigation and preparedness depend on the lessons learned after the response and recovery.

Special attention in terms of recovery should be paid to the analysis of the situation after a natural or other disaster with the aim of: -

- remediation of the situation, - rehabilitation of persons affected by the effect of a natural or other disaster, - determination of preventive and priority measures that will be incorporated into the development and other plans of the community, in order to a certain risk has been reduced in the long term, i.e. prevented or mitigated the impact of natural hazards or accidents on people and material goods, - determination of priority reconstruction of buildings and other infrastructure, and revitalization of forests, forest and agricultural land, as well as the environment. - damage analysis and assessment of needs, priorities and required reaction time in provision to help vulnerable persons and material goods,
- rehabilitation of key services (health, communal, epidemiological-hygienic, construction, transport, electricity distribution, etc.), - urgent repair of houses, residential buildings and other infrastructure, - temporary accommodation of vulnerable population, delivery of food items and basic necessities of life, - the operation of clearing buildings, other infrastructure and the environment.

Depending on the natural and other calamity that has befallen a certain area, in the phase of elimination of the consequences of the natural and other calamity, all measures are taken that contribute to normalization of the situation in the threatened area as quickly as possible, that is, the creation of basic conditions for normal life and work.

In this phase of protection and rescue, the City's administration bodies have the important task of providing, in accordance with the possibilities from the budget, financial resources for the repair of damage caused by natural and other disasters, and above all for the repair of housing and the most important infrastructural facilities, on which the establishment of normal life in the the affected area.

Also, at this stage, the joint engagement of civil protection structures, City administration bodies and legal and private entities is important in ensuring an efficient and well-organized 58

transport of evacuated persons to their homes, where the necessary means of transport and the appropriate number of persons trained for these jobs should be hired.

Engaging the City's administration in initiating and undertaking actions to collect financial and other assistance from the higher levels of government in Bosnia and Herzegovina, international and domestic humanitarian organizations, in order to provide assistance to the affected population, as well as to rehabilitate damaged and destroyed buildings.

In this phase, the assessment of the material damages caused is also carried out by the municipal/city expert commissions, which perform these tasks in accordance with the prescribed methodology, in order to make the assessment in a uniform manner.

2.5. Proposal of the civil protection forces that are optimal for the implementation of the planned protection and rescue measures, as well as a proposal on the type and amount of material and technical resources that must be provided for the implementation of the proposed protection and rescue measures

The Law on Protection and Rescue of People and Material Assets regulates the structure of civil protection as a basic, organized, expert-operational segment in the protection and rescue system for the implementation of protection and rescue measures through:

- a) administration of civil protection of the Federation of Bosnia and Herzegovina and cantons, and civil protection services in LGUs,
- b) civil protection headquarters,
- c) protection and rescue services,
- d) civil protection units (general purpose and specialized purpose),
- e) damage assessment commissions.

In accordance with the provisions of the Act on Protection and Rescue, civil protection organizations include:

- 1) personal and mutual protection of citizens;
- 2) protection and rescue measures;
- 3) civil protection headquarters;
- 4) commissioners of civil protection;
- 5) protection and rescue services;
- 6) civil protection units;
- 7) management and use of forces and means of civil protection

The organization of civil protection also includes FUCZ, KUCZ and civil protection services of LGUs whose position, powers and responsibilities are regulated by this and other laws, other regulations and general acts.

In addition to the previously mentioned civil protection structures, the Law on Protection and Rescue in the protection and rescue system, the obligations and needs of organizing, preparing and implementing measures for the protection and rescue of people and material goods for all authorities of the Federation of BiH, cantons, LGUs, as well as legal and other entities have been determined.

Type and need of forces

All civil protection structures implement the planned protection and rescue measures: the Civil Protection Service, the City Civil Protection Headquarters, civil protection headquarters in the Ministry of Health, companies and other legal entities where the formation of civil protection headquarters is provided for by law, civil protection commissioners, civil protection units general and specialized purpose protection and protection and rescue services that are formed in legal entities whose activities are important for the protection and rescue of people and material goods.

City headquarters of the CZ of the City of Građanica

The City Headquarters of Civil Protection (GŠCZ) was formed on the territory of the City and is staffed with: Commander of the GŠCZ, Chief of the GŠCZ and 14 members of the GŠCZ.

CZ headquarters in local communities

In the area of the City of Građanica, 1 CZ headquarters was formed in the local community of Lendići, while no civil protection headquarters were formed in the other 22 MZs.

Note: CZ headquarters in local communities were not formed in 22 local communities.

In the following period, the formation of staffs and the appointment of commissioners in all local communities in the area of the City of Građanica should be started.

Civil protection units

Civil protection units were formed, namely:

2 general purpose units: in 2 legal entities (Moda plast (16), Halidex (12)),
and a general purpose unit in the City of Građanica (20).

Protection and rescue services

4 services were formed in the area of the City:

- Service for medical assistance at the PJU Dom zdravlja Građanica (17),
- Department for veterinary assistance in JP "Veterinarska stanica" Građanica (15),
- Service for sanitation, cleanliness and communal services in JP "Komus" Građanica (32) i
- Fire Protection Service (16),
- Service for water supply in JP "Water supply and sanitation"

Commissioners of civil protection

Commissioners of the CZ in the Ministry of Health, public institutions and companies were educated in the City **Gracanica and filled with:** 128 in the Ministry of Health and 34 in public institutions and companies.

Commission for the Assessment of Damages from Natural and Other Disasters

In accordance with the provisions of the current Regulation on the assessment of damages from natural and other accidents at the level of the City of Građanica, the City Commission for the assessment of damages from natural and other accidents in the area of the City of Građanica was formed and appointed: president, secretary and 4 members of the commission.

At the TK level, the Cantonal Administration of Civil Protection and the Cantonal Headquarters of Civil Protection were formed, as an operational-expert body of civil protection at the TK level. The Cantonal Commission for damage assessment was also formed.

Civil protection staffs have been formed in some companies, and employees of companies, public companies, and other legal entities, of importance for protection and rescue, can be engaged through mobilization, in accordance with the needs for carrying out protection and rescue actions.

Engagement of citizens is done through personal and mutual protection on a voluntary basis.

It is necessary as soon as possible to start appointing civil protection commissioners in areas where this has not been done, as well as a general purpose civil protection unit, and start uniforming, equipping, training and equipping them so that the mentioned forces are available in case of natural and other disasters.

Administrative bodies, administrative services, institutions and legal entities are obliged to form general purpose units, at least the size of departments, in accordance with the regulation from Article 133 of the Federal Law on Protection and Rescue. Those units in the municipality/city are formed by the municipal head or the mayor, and in administrative bodies, institutions and legal entities by the heads of those bodies or legal entities.

Specialized civil protection units are formed in accordance with the needs of municipalities/cities and cantons.

Such units have been formed at the level of the Federation of Bosnia and Herzegovina to eliminate the threat of mines and unexploded ordnance, which also do this in the area of the Tuzla Canton. In other areas of protection and rescue, there is no justified need for the formation of such units in the area of Tuzla Canton.

Coordination of activities in the area of demining and removal of UXO is carried out by the Cantonal Administration of Civil Protection in cooperation with the Federal Administration of Civil Protection and municipal/city civil protection services through the Federal Civil Protection Team for Demining and Removal of UXO ("A" and "B" Team).

The collection, acceptance, transportation and destruction of unexploded ordnance, based on individual reports from citizens, as well as within the action of collecting UXO from the population, is performed by the "A" team of civil protection.

Demining of vital buildings and agricultural areas is performed by the "B" team of civil protection. Also, members of the Civil Protection Team participate in actions to rescue and extract victims from minefields, which is known as "Quick Response".

Operational activities, i.e. finding, transporting, storing and destroying UXO and MES are carried out by professionally trained persons. First of all, they are members of the Civil Protection Team ("A" Team), who are professionally trained and materially and technically equipped to respond to any task.

Inspection and cleaning of vital facilities and all other contaminated surfaces from residual mines, mine explosives and unexploded ordnance is the subject of the work of the "B" team of civil protection, as well as the teams of the Armed Forces of Bosnia and Herzegovina, and other domestic and foreign companies that are trained and authorized for these tasks. .

In the case of diversionary activities, the Ministry of Interior TK takes over the responsibility.

In conditions when the forces and resources of the City of Građanica engaged in protection and rescue tasks are not able to remove dangers, the help of higher levels of government will be requested, primarily from the Cantonal Administration and the Cantonal Headquarters of Civil Protection TK for the engagement of:

Cantonal Protection and Rescue Services (9) and that :

- Mountain rescue service (GSS Srebrenik) (15),
- Service for biological and chemical protection (Institute of Public Health) (19),
- Service for rescue from ruins ("Cestotehnik" doo) (14),
- Service for protection on water and under water (RK "Vidara") (10),
- Fire Protection Service (MAT Tuzla) (11),
- Service for information and media support (RTV TK) (4),
- Logistics Service (HO MFS "Emmaus" Dobojski Istok) (10),
- Service for reconnaissance and observation from the air (Aero club Tuzla) (4),
- Rescue service within the scope of CK activities (Red Cross TK) (14).

In addition to the above, if necessary, assistance will be requested from neighboring municipalities and cities, the Federal Administration of Civil Protection and the Federal Headquarters of Civil Protection, the Protection and Rescue Forces from the Entities of the Republika Srpska, the Ministry of Security of the BiH Armed Forces of Bosnia and Herzegovina.

Type and quantity of MTS required to implement the proposed measures protection and rescue

In order to implement the planned protection and rescue measures, in addition to the above, it is necessary to form general purpose units of at least the size of platoon in municipalities/cities with up to 10,000 inhabitants, and larger municipalities/cities one platoon for every next 20,000 inhabitants.

Administrative bodies, administrative services, institutions and legal entities are obliged to form general purpose units, at least the size of departments, in accordance with the regulation from Article 133 of the Federal Law on Protection and Rescue. Those units in the municipality/city are formed by the municipal head/mayor, and in administrative bodies, institutions and legal entities, the managers of those bodies, i.e. legal entities.

The type and quantity of MTS civil protection structures, which are required for the implementation of the proposed protection and rescue measures, are determined by the prescribed framework material formations for all civil protection structures.

All structures of civil protection (Municipal/city services, Cantonal administration, municipal/city and civil protection headquarters in MoZ, Cantonal headquarters and general and specialized units) should be equipped with appropriate material and technical means and equipment, in accordance with the currently valid framework material formations, but unfortunately, the current state of equipment of all civil protection structures in municipalities/cities and at the level of TK is extremely bad, i.e. it does not meet the minimum needs for taking appropriate measures in protection and rescue actions, in case of natural and other disasters.

Almost all necessary material and technical means and equipment, for the protection and rescue of people and material goods, in the event of a natural or other disaster, is provided through the mobilization of the same from business companies, public companies, municipal/city services, public institutions, other legal entities and citizens who have the appropriate material and technical means and equipment, which is listed in the Municipal/ City Civil Protection Services.

For the proposed protection and rescue measures, they are also used, depending on the intensity of the natural and other disaster and depending on the size of the area affected by the natural and other disaster, except for the MTS of civil protection and the corresponding MTS of business companies, public enterprises, public services, utility companies, municipal services, cantonal administrative bodies, citizens and other legal entities that have appropriate MTS

Also, in accordance with the applicable legal regulations, other funds and equipment from the list of MTS and other equipment available to the respective legal entities in the municipality, as well as citizens, will be mobilized. The listed MTS and equipment can, according to the Federal Law on Protection and rescue, to mobilize from the mentioned entities, in the event of a natural or other disaster, with appropriate financial compensation and in the manner prescribed by the Federal Law on Protection and Rescue.

2.6. Protection and rescue measures, forces and resources of companies and other legal entities from Article 32 of the Law on Protection and Rescue and obligations of companies and other legal entities for the preventive protection phase, the rescue phase and the elimination phase

Companies and other legal entities from Article 32, paragraph 1 of the Federal Law on Protection and Rescue, which perform activities in the fields of: healthcare, veterinary medicine, housing and communal affairs, water management, forestry, agriculture, chemical and petrochemical industry, mining, construction, transport, supply, catering, firefighting, hydrometeorology, seismology, ecology and other areas of importance for protection and rescue, are obliged to organize and carry out protection and rescue operations.

In carrying out their work, companies and legal entities carry out appropriate preparations, adopt and develop protection and rescue plans for their activities in protection and rescue, plan and provide the material and technical means for the implementation of protection and rescue measures and the organization of units and commissioners of civil protection, equip these units and commissioners with the necessary equipment and resources and train them for their participation in protection and rescue and in the course of conducting actions they are obliged to implement the decisions of the competent headquarters of civil protection of protection, which manages protection and rescue actions in the area where the facilities of legal entities are located.

When legal entities, in the course of performing their regular activities, determine the existence of a certain danger from a natural, technological, ecological or other disaster, they are obliged to immediately submit information about such danger to the nearest CZ Operations Center or CZ Service or the nearest Police Department.

Legal entities engaged in this type of activity, which by its nature can endanger the life and health of people or the environment in a certain area (hydro storage and similar), are obliged to establish and maintain a notification and alarm system in the area that may be threatened by that activity for the purpose of timely evacuation population from that area.

Phase of preventive protection

As part of preventive protection, companies and other legal entities will:

Make appropriate preparations and adopt protection and rescue plans for your activities,

To regularly train employees and those assigned to civil protection structures,

To equip employees with mts,

Protection and rescue from radiological, chemical and biological agents.

Fire protection and rescue.

Protection and rescue of animals and foodstuffs of animal origin.

Environmental protection.

Protection of plants and plant products.

Rescue phase (only for some subjects)

Companies and legal entities from Article 32, paragraph 1 of the Federal Law on Protection and Rescue, from the fields of: health, veterinary medicine, housing and communal affairs, water management, forestry, agriculture, chemical and petrochemical industry, mining, construction, transport, supply, catering, firefighting, hydrometeorology,

seismology, ecology and other areas of importance for protection and rescue, will perform the following protection and rescue measures in this phase:

Evacuation.

Caring for the vulnerable and victims.

Protection and rescue from radiological, chemical and biological agents.

Protection and rescue from demolition.

Protection and rescue on and under water.

Fire protection and rescue.

First medical aid.

Protection and rescue of animals and foodstuffs of animal origin.

Environmental protection.

Protection and rescue in mines.

Protection of plants and plant products.

Phase of elimination of consequences

Legal entities from the aforementioned article of the law, from the fields of: healthcare, veterinary medicine, housing and communal affairs, water management, agriculture, construction, transport and other areas of importance for protection and rescue will, in this phase, perform the following protection and rescue measures:

- Disinfection and extermination of residential and other facilities, as well as facilities for supplying the population with drinking water.
- Returning residents from temporary accommodation facilities to their residential facilities.

- Clearing possible ruins.

- Sanitation of the field.

- The most necessary repairs of residential and other construction facilities, as well as infrastructure facilities.

- Rehabilitation of damaged water management facilities, riverbeds and facilities for supplying the population with drinking water.

- Rehabilitation of the devastated natural environment (forests, parks, etc.).

2.7. Indicators on the necessary financial resources and possible sources of financing

Sources of funding for protection and rescue for all levels of government are provided in the budgets of all levels of government, which are generally insufficient to finance all protection and rescue needs. The executive authorities at all levels, through their budgets, mainly finance the regular work of the civil protection authorities and their work programs in their entirety at all levels.

Protection against natural and other disasters in the City area is financed from:

- city budget,
- assets of legal entities,
- insurance,
- voluntary contributions,
- international aid,
- other sources established by law, as well as help from competent Cantonal and Federal authorities organs.

Until now, no estimates of the necessary financial resources have been made for the acquisition of the necessary MTS and other equipment for equipping all civil protection structures, for the purposes of undertaking actions to protect and save people and material goods from natural and other disasters, but it is certain that, for these needs, considerable funds are needed, bearing in mind that all civil protection structures have minimal MTS and equipment for protection and rescue, and the existing equipment is completely outdated, worn out, and partly damaged.

It is necessary, as soon as possible, to update and fill the protection and rescue structures (headquarters, commissioners, general and specialized civil protection units, protection and rescue services at the city level and equip them with all the necessary MTS and equipment that is essential for effective action in a situation where protection and rescue actions are undertaken, in case of natural and other disasters.

In companies and other legal entities from Article 32, paragraph. 1. of the Federal Law on Protection and Rescue, there are certain MTS and equipment for undertaking protection and rescue actions, but even in these legal entities it would be necessary to draw up procurement plans for specialized MTS and equipment for protection and rescue operations, for which these entities would should also provide the necessary financial resources.

The main source of funding for the procurement of MTS and equipment, as well as other needs of civil protection structures, are financial resources obtained on the basis of the legal obligation to set aside, by all companies and citizens who are self-employed, the amount of 0.5% of the paid net salary of employees in an employment relationship and all persons engaged under a work contract and under a contract for the performance of temporary and occasional jobs, realized in accordance with the provisions of para. 1 to 3 of Article 180 of the Federal Law on Protection and Rescue are kept on a separate transaction account of the Federation, canton and municipality/city budgets. Of the recorded funds, 15% belong to the Federation and are used exclusively for the purposes referred to in Article 182, points 2 to 7; 25% to the canton and are used exclusively for the purposes referred to in Article 183, items 2 to 8; and 60% to the municipality/city where these funds were generated and are used exclusively for the purposes referred to in Article 184, items 2 to 7.

of the Law.

Funds from the special compensation should be planned through protection and rescue programs and annual plans for the use of special compensation funds, which would be implemented in the approximate ratio:

- at least up to 30% for equipping civil protection structures;
- up to 20% for prevention;
- up to 40% for damage repair;
- up to 5% for the training of civil protection structures (commissioners, services, administrations, headquarters, protection and rescue services, civil protection units and the population);
- up to 5% for the costs of participation in the implementation of protection and rescue measures during natural and other disasters;

The sources of financing for the procurement of the mentioned MTS and equipment should also be the budgets of municipalities/cities and the budget of the TK, then the funds of the Federal Administration of Civil Protection, which are provided from the appropriate sources of the European Union, for these purposes. Sources of financing should also be companies and other legal entities of importance for protection and rescue, i.e. legal entities whose MTS and equipment may be threatened by natural and other disasters.

Competent entities from municipalities/cities, TK and civil protection authorities, at all levels of organization, should undertake actions in order to secure donor funds (financial resources, MTS and equipment) for the needs of protection and rescue.

Legal entities from their own resources finance the costs related to the preparation and equipment of headquarters, trustees and civil protection units that they establish for the purpose of protecting and rescuing their own personnel, property and other material goods from the dangers and effects of natural and other disasters.

2.8. Deadlines, i.e. the time for securing the procurement of planned funds and equipment for the education of civil protection forces and other needs for the implementation of the established measures of the Ministry of Defense

Bearing in mind the current financial situation in society, the deadlines for the procurement of the mentioned MTS and equipment, for the needs of equipping all civil protection structures, as well as for the education of the members of those structures, should be set in realistic time frames, when it comes to the procurement of optimal quantities MTS and equipment, but care should be taken that the most necessary MTS and equipment should be acquired as soon as possible and funds should be provided for education and training of members of civil protection structures and citizens for undertaking protection and rescue measures.

2.9. Plan for the possibility of providing mutual assistance to neighboring municipalities/cities

In accordance with the Agreement on Cooperation in the Implementation of Civil Protection Tasks, mutual cooperation in providing assistance and protecting and rescuing people and material, cultural and other assets from the dangers and consequences of natural disasters, technological, ecological and other disasters and dangers of a large scale unknown inter-entity lines of demarcation, especially in:

- planning and implementation of proactive protection measures against floods, earthquakes, fires, radiological hazards, infectious diseases, technological and other accidents and dangers,
- informing each other about the dangers, occurrence and consequences of natural and other accidents,
- mutual assistance in protecting, rescuing and removing the consequences of natural and other disasters,
- education and training of members, staffs, services and units of civil protection and other protection and rescue operators through informative meetings, courses, seminars and other types of training, and organizing and conducting joint exercises for protection and rescue.

Cooperation with the Republika Srpska is carried out in accordance with the provisions of the Agreement on Cooperation in the Implementation of Civil Protection Tasks ("Official Gazette of the Federation of BiH", number: 36/01), which was concluded between the Federal Administration of Civil Protection and the Republican Administration of Civil Protection of the Republic of Srpska.

The agreement was created on the basis of the need to coordinate activities and provide mutual assistance in accomplishing civil protection tasks.

International cooperation in the field of civil protection with the civil protection authorities of other countries will be achieved with the help and support of the competent ministries and the Council of Ministers of Bosnia and Herzegovina, and on the issues of this cooperation, they will inform each other in advance and harmonize positions by consensus.

In the implementation of the Memorandum of Understanding for the creation of a sustainable part for the removal of unexploded ordnance in the Federation of Bosnia and Herzegovina and the Memorandum on 65

exchange for the creation of a sustainable department for the removal of unexploded ordnance in the Republika Srpska of Bosnia and Herzegovina, the parties will cooperate and agree on assistance to each other, especially mutual assistance in operations to rescue victims from minefields ("Operation "Quick Response").

2.10. Plan for engagement of non-governmental organizations and associations of citizens whose activity is in the function of protection and rescue and a proposal for providing assistance to these associations for training and equipping them to perform protection and rescue tasks

Non-governmental and civil society organizations have a special role in raising awareness of the importance of protecting and rescuing people and material goods from natural and other accidents and dangers, complementing and participating in the implementation of protection and rescue measures.

Several non-governmental organizations and associations exist and operate in the area of the City of Građanica citizens and foundations whose activity is extremely important in the protection and rescue system.

According to the Vulnerability Assessment, we single out: City organization of the Red Cross/Cross of Građanica, Humanitarian and non-governmental organizations (Merhamet, Karitas, Crveni plumjesec, etc.), as well as citizens' associations: Radio amateurs Građanica and Radio amateurs Stjepan Polje, fishermen, hunters, ecologists, engineers, technicians and farmers, etc. In performing their duties, organizations and associations of citizens cooperate with the Civil Protection Service and act according to the order of the City Civil Protection Headquarters.

Civil society is a broad term that includes non-governmental organizations and broad groups of the population without legal registration of their activities, i.e. formal and informal groups of citizens and associations.

In the area of the city of Građanica, 107 associations of various activities are registered, including of which the most numerous are sports.

Of this number, 60 are active associations, and they are registered for activities: 27 for sports, some for culture, youth, ecology, tourism, 2 for education, 5 humanitarian organizations, 5 organizations of the disabled, 2 professional associations, 12 other organizations.

Among the professional associations, we highlight the Association of Employers and Self-Employed Entrepreneurs and the Association of Agricultural Engineers and Technicians, the Plastics and Tool Makers Cluster of BiH with headquarters in the municipality of Građanica.

In order to establish and improve mutual partnership relations, the local community signed an Agreement between the Municipal Council, the Mayor and the NGO with the NGO.

The Municipal/City Council also adopted the criteria for the distribution of money funds from the field of sports and physical education and culture.

The local community, together with the NGO, adopted the Strategy of Partnership with Citizens.

The signatory countries of these acts promote and develop mutual partnership relations, introduce good practice in that area and develop a democratic way of making decisions and creating a public political analysis of the state of the non-governmental sector, indicating the need for their networking, as well as equipment and training of insufficiently qualified staff.

2.11. The possibility of engaging funds and equipment of business companies and other legal entities, as well as citizens that can be engaged for the needs of protection and rescue

Appropriate MTS and equipment of companies and other legal entities, as well as citizens, who have appropriate means and equipment for the needs of protection and rescue, are engaged, if necessary, depending on the intensity of natural and other disasters, and especially during the declaration of the state natural and other accidents in the area of municipalities/cities, when the Municipal/City Headquarters of Civil Protection assumes the role of leadership and command in protection and rescue actions.

In a situation where the structures of civil protection in the municipality/city practically do not have any MTS and equipment, the engagement of MTS and equipment, primarily economic and other

entities, who have the same funds, is the only way to provide MTS and equipment for undertaking protection and rescue actions during natural and other disasters and when there is an imminent danger of a natural or other disaster.

In current practice, there is a problem of providing financial compensation, in accordance with the Federal Law on Protection and Rescue, for used MTS and equipment, during natural and other disasters, especially when it comes to the need to engage MTS and equipment in the property citizens.

The mentioned MTS and the equipment of companies, other legal entities and citizens, which can be used for protection and rescue operations, are on record in all municipal/city civil protection services.

2.12. The possibility of cooperation with neighboring countries in the field of protection and rescue and the way of cooperation
2.13. The method of engagement of the armed forces of Bosnia and Herzegovina for protection and rescue and the manner and scope of their engagement

In conditions when the forces and means of civil protection are not sufficient for the effective rescue of people and material goods from natural and other disasters, the commander of the Federal Staff of Civil Protection can submit a request to the Ministry of Defense of the Federation of Bosnia and Herzegovina for the use of the Armed Forces of Bosnia and Herzegovina for protection and rescue tasks in a threatened area, which is done in accordance with the Law on Defense of Bosnia and Herzegovina ("Official Gazette of Bosnia and Herzegovina", number: 88/05) and the Standard Operating Procedures of Engagement OS BiH on providing assistance to civil authorities in responding to a natural or other disaster.

For the area of the municipality/city, the Commander of the OpŠCZ/GŠCZ submits a request for assistance to the KŠCZ, that is, the FŠCZ, through the administrations for civil protection of the canton, that is, the Federation.

ACCIDENT NOTICE*

Attachment 1.

1. To:	
2. Operational center: a.	
[First and last name]	
b. [Organization] c.	
[Phone] d.	
[Fax] e.	
[Email]	
3. From:	
4. Operational center: a.	
[Name and surname]	
b. [Organization] c.	
[Phone] d.	
[Fax] e.	
[Email]	
5. Subject:	Accident notification
Link:	
6. Date/time of the message: 7.	[DTG - GMT]
Description of the	
accident: a. [Date and	[DTG - GMT]
time] b. [Location in coordinates,	
VGS 84] c.	
[Size of affected area] d.	
[Estimated	
number of affected	
population] e. [Initial damage	
reports]	
f. [Activities undertaken and	
resources engaged]	
Mr. [Meteorological conditions]	
h. [General assessment of needs]	
i. [Assessment of the	
situation in the next 24, 48 and 72 hours]	

THE APPLICANT
Head of the organ

* To be completed by the competent civil authority. The methodology for filling out the form is analogous to filling out the Request for Assistance form of the Armed Forces of Bosnia and Herzegovina.

Attachment 2.

REQUEST FOR ASSISTANCE FROM THE ARMED FORCES OF BOSNIA AND HERZEGOVINA*

1. For:	
2. Operational center: a.	
[Name and surname] b.	
[Organization]	
vs. [Telefon]	
d. [Fax]	
And. [E-mail]	
3. From:	
4. Operational center: a.	
[Name and surname] b.	
[Organization]	
vs. [Telefon]	
d. [Fax]	
And. [E-mail]	
5. Subject:	
6. Date/time of the message:	
7. Description of the accident:	
a. [Date and time]	
b. [Location in coordinates, VGS 84]	
c. [Size of hit areas]	
d. [Estimated no affected population]	
e. [Initial damage reports]	
Mr. [Undertaken activities i committed resources]	
Mr. [Meteorological conditions]	
h. [Assessment of the situation in next 24, 48 and 72 hours]	
8. Requested help in order of priority:	
Priority 1.:	
a. [Operational Contact Person in Affected Area]	
b. [Responsible civil authority/military authority - contact point]	
c. [Contact numbers]	

9. Coordination:	
Closer instructions in the task	
a. [Meeting place of the transport team to the accident site]	
b. [Place of entry into the affected area]	
c. [Place of exit from affected area]	
d. [Terenski uslovi] e. [Ostalo]	

THE APPLICANT

Head of the organ

2.14. Plan for carrying out and method of recording damage assessment from natural and other disasters

The plan for carrying out and recording the assessment of damages from natural and other accidents is carried out in accordance with Decree on a unified methodology for assessing damages from natural and other disasters

("Official Gazette of the Federation of Bosnia and Herzegovina", number: 75/04, 38/06, 52/09, 56/09 and 36/14).

The assessment of damage is carried out in order to determine the type and size of damage to material goods, and is expressed in the monetary value required to bring the damaged or destroyed material goods to the condition before the occurrence of a natural or other accident, i.e. in the value required to restore the material goods acquire or rehabilitate goods.

The assessment of damage is done in all cases in which the damage is caused by natural or other causes accident, regardless of whether the competent authority declared a state of natural or other accident.

The assessment of damage from natural and other disasters is carried out directly on the ground by expert commissions made up of appropriate experts in the narrowest specialty, depending on the type of natural and other disaster and the specifics of the facilities and other assets affected by the natural and other disaster.

The City Commission for the Determination and Assessment of Damages from Natural and Other Disasters has the task of: forming expert commissions for damage assessment in the city, determining the area where these commissions will assess the damage, the deadline by which the assessment must be completed, and ensuring proper application The Regulation on a unified methodology for assessing damages from natural and other disasters ("Official Gazette of the Federation of Bosnia and Herzegovina", number: 75/04, 38/06, 52/09, 56/09 and 36/14), consolidates the work of all expert commissions and provides them with the necessary assistance and supervises the work of these commissions, prepares a summary report on the assessment of damage in the city area and submits it to the Mayor for consideration, after that, upon approval, the Mayor submits the final report on the estimated damage to the City Council for consideration. The adopted report on the estimated damage through the Tuzla Cantonal Administration of Civil Protection is submitted to the Cantonal Commission for the Determination and Assessment of Damages from Natural and Other Disasters, which submits it to the Government of the Canton for consideration and adoption.

If the damage exceeds the city's capabilities, the Mayor, in cooperation with the City Civil Protection Headquarters and the Damage Assessment Commission, prepares a request for the allocation of one-time financial assistance for emergency interventions, which is sent to the Government of the Canton through the Cantonal Administration of Civil Protection. In addition to the aforementioned request, the Mayor submits the request of the city for search

help to eliminate the resulting consequences, which is submitted to the Government of TK for resolution, through the KUCZ Tuzla, which immediately submits the request to the Cantonal Commission for the competent procedure.

2.15. The plan, organization and method of collecting data on the occurrence of natural and other disasters and the method of informing the public, as well as the method of organizing the monitoring and warning system in the city area for which the risk assessment is being prepared

Informing citizens, electronic and print media about all important aspects related to natural and other disasters, by GŠCZ and the Civil Protection Service, in a situation where a natural and other disaster has occurred, and especially when a state of natural and other disaster has been declared on in the city area, is carried out regularly, timely and completely.

This is important, because informing the aforementioned entities about the type, intensity and area affected by natural and other disasters is of particular importance for the timely engagement of all entities in actions to protect and rescue people and material goods from natural and other disasters.

In this way, the basic legal obligation is fulfilled for citizens to be timely, credible and fully informed about the type and intensity of natural and other disasters that have affected a certain area, which creates preconditions for citizens to be ready to take all necessary protection and rescue measures from natural and other disasters. accidents, and especially measures of self-protection and mutual protection of citizens.

The City Civil Protection Headquarters will inform the public about the protection and rescue measures taken from the consequences of natural and other disasters in accordance with legal and by-law regulations and corresponding decisions and other valid regulations.

The field of communication is extremely important for the proper implementation of the Protection and Rescue Plan against natural and other disasters, and as such it should be precisely defined and prioritized goals and tasks.

The public must be objectively and timely informed about the accident, its consequences, as well as the measures taken to protect and rescue and prevent the consequences of natural and other accidents. Timely, accurate and objective information enables timely undertaking of protection and rescue measures, which can be of crucial importance for avoiding danger and endangerment of people and material goods. This is the main reason why the area of communication and information within the City Headquarters of Civil Protection must be planned as a permanent process in which as many relevant participants as possible will be involved.

Specifically, to inform the public about the protection and rescue measures taken and the possible consequences, dangers and unforeseen situations in the city area Gracanica will participate:

- Operational center of civil protection
- Media (local media and correspondents, as well as other media from the Canton area that can have influence and reach the public in the area of our city)
- Information service within the competent administrative body
- Commissioners and staffs of civil protection
- Other bodies, companies, as well as other types of information

Operational centers of municipalities/cities collect and exchange information with authorities, services and legal entities from Article 157, paragraph (1) point 3) of the Federal Law on Protection and Rescue, authorities and legal entities and other owners of functional connection systems from the area of the municipality.

The competent operational center also collects information through constant monitoring regular informative TV and radio programs.

The system of collecting data on the occurrence of natural and other disasters, in municipalities, cities and at the level of TK, should be organized, trained and further developed in accordance with the provisions of the Federal Law on Protection and Rescue.

In situations of danger from natural and other disasters, it is necessary to use the power of the media. Their role and assistance in warning, mobilizing and mitigating the consequences of natural and other disasters can be of crucial importance. In the case of the city of Građanica, the most important role is played by the local radio station - Radio Građanica, especially when it comes to mobilization, continuous reporting from the field, and the notification system during protection and rescue operations.

Also, local media houses, correspondents and other media in situations of natural and other disasters can serve as a channel of communication with other media whose reach is much wider and which can help in a kind of alarming of the general public and as a way of appealing for an increased level of aid to the threatened area.

The tasks of the City Headquarters of Civil Protection in the field of communication and information are as follows:
Inform citizens, competent authorities, and the Cantonal and Federal Headquarters of Civil Protection about the measures taken and the consequences caused by natural and other disasters
Cooperation with competent city bodies in the field of information with the aim of presenting the right information to the public

It is necessary for announcements to be timely, objective, accurate, oriented to the factual situation and without the tendency to spread panic among citizens. Also, with the aim of the most effective functioning and use of the area of communication and information in the situation of natural and other disasters, it is necessary to continuously communicate with the public through the media or in other, at the given moment, acceptable ways, in order to achieve the right effect and send to the public a picture of the real situation on the field.

The system of communication and informing the public within the City Headquarters of Civil Protection is managed exclusively by the commander of the GŠCZ. The head and other members of the GŠCZ can appear in the media only in agreement and by order of the commander of the GŠCZ.

In order for the information system within the protection and rescue system to function properly and to justify the role of liaison with the public, it is necessary for all members to contribute by timely forwarding information that they consider to be in the interest of the public to the person responsible for these tasks, so that the same were informed on time through established communication channels.

In accordance with the Plan for the functioning of the surveillance and warning system in the city of Građanica, a system of organizing the operational centers of civil protection and the method of collecting data on the occurrence of natural and other disasters and the method of distributing them has been elaborated.

The Civil Protection Operations Center collects and processes data on all types of danger, alerts and warns citizens, transmits the orders of the City Headquarters of Civil Protection, announces the end of the danger, and receives, prepares and sends reports on the measures taken, the mobilization carried out and other measures and activities to the competent authorities, neighboring operational centers of civil protection, as well as operational centers of civil protection of cantons and the Federation.

In the OiU system in the area of the city of Građanica, organizations and services are connected by automatic telephone connections: fire brigade, health, communal affairs, waterworks, Telecom, Veterinary station, Forestry, Police station, Mayor, administrative bodies and services for the administration of the city of Građanica, City Civil Protection Headquarters, Radio Građanica, local communities and the population, and by radio connection with observation stations and Cantonal and City operational centers of civil protection of the Tuzla Canton.

When it comes to the capacities of connection holders, the following situation can be stated:

- automatic TT connections have been developed in all populated places and the capacities of these connections can meet the needs of the municipality,

- the radio devices of the owners of the connections are in better condition, given that recently increasingly attaches importance to the maintenance of the same, as well as the modernization and acquisition of new devices, so that radio connections can be successfully established.

The operation center of civil protection performs its tasks with devices and equipment that can respond to the tasks, so that it can ensure the normal operation of the operation center (procurement, installation of electronic sirens, connection of all sirens and activation from one place, etc.).

The operational center of civil protection works on weekdays from 7:30 a.m. to 4:00 p.m. with one employee, and at the end of working hours, calls to the operational center are redirected to the 24-hour Cantonal Operational Center TK. In case of immediate danger and natural and other disasters, by the decision of the Mayor, employees are deployed who will enable continuous work of 24 hours in the Operational Center of Civil Protection.

6 electric sirens are used for public warning (currently 2 sirens are out of order in Fortuna and Sahat Kula), while the centralized warning system is out of order due to a malfunction at the desk in the Operational Center of Civil Protection, so the sirens are checked manually by activating the sirens individually from the face places. The procurement process for 3 electronic sirens (sound signal and speech transmission), with the possibility of remote control, ie from the Civil Protection Operations Center, is underway. In addition to electric sirens for public warning, available manual sirens in local communities, as well as loudspeakers at mosques, would be used.

An important role in informing and alarming the population in the city can be played by the local radio station, as well as the cantonal television whose signal can be received in the city area.

Due to problems related to the activation of sirens by the alerting system, the speed of alerting the majority of the population has been reduced so that due to the need for individual signal transmission, it is possible to alert approximately 50% of the territory where approximately 70% of the population lives in 5-10 minutes.

By acquiring the necessary high-quality communication devices, it will be possible to connect with observation stations, local communities and services of regular activities, as well as for connections with operations and cooperation, timely transmission of information, as well as warning signals. In addition to the acquisition of communication means, further modernization of the operational centers of civil protection with computer equipment would enable faster processing of data and the quality of their presentation.

Greater media presentation of the importance of notifying operational centers of civil protection by citizens, as well as authorities and organizations and communities about perceived dangers and other events and issues related to their tasks can make a special contribution to improving the functioning of the OiU system in the city area.

The method of informing the public about the issue of natural and other disasters

Informing citizens, electronic and print media about all important aspects related to natural and other disasters, by GŠCZ in a situation where a natural and other disaster has occurred, and especially when a state of natural and other disaster has been declared in the area of the city, is carried out regularly, timely and completely.

This is important, because informing the aforementioned entities about the type, intensity and area affected by natural and other disasters is of particular importance for the timely engagement of all entities in actions to protect and rescue people and material goods from natural and other disasters.

The city headquarters of civil protection, through the commander, chief or member of the information headquarters, carries out preventive and operational measures of protection and rescue, which are related to information and mass education of the population in the area of the city, namely:

a) In the phase of preventive action:

- monitors and informs the population about all activities of the City Headquarters of Civil Protection and Civil protection services in the field of protection and rescue and other activities that are carried out as preventive measures for the protection and rescue of people and material goods,
- prepares and broadcasts a program of educational content for the population in the field of protection and rescue.

b) In the rescue phase:

- informs the population about the way to take measures to prevent the occurrence harmful consequences for people and material goods,
- monitors the operation of protection and rescue structures on the ground during natural and other disasters accidents,
- provides information and media support to the City Headquarters of Civil Protection and the Service for civil protection in the management of protection and rescue actions,
- preparing a press conference.

c) In the phase of elimination of consequences:

- informs the population about measures to reduce the adverse effect of the accident.

In this way, the basic legal obligation is fulfilled for citizens to be timely, credible and fully informed about the type and intensity of natural and other disasters that have affected a certain area, which creates preconditions for citizens to be ready to take all necessary protection and rescue measures from natural and other disasters. accidents, and especially measures of self-protection and mutual protection of citizens.

CONCLUSION

Methodology for creating a fire risk assessment ("Official Gazette of the FBiH", number: 8/11), the parameters whose professional processing is the basis for further determination of measures to minimize the risk of fire in a certain environment, and with optimal investment of both financial resources and human potential, are determined.

The task of the working group was to collect high-quality, usable data from all spheres of life in the city of Građanica, respecting the prescribed framework, to perform an expert analysis of the collected data, and to take into account the specifics that arose during the development of the city when drawing conclusions.

In addition, it was necessary to take into account the specific moments determined by the geographical location, microclimate and elements of the development plan of the City as an urban environment.

In all of this, the moment of application of modern knowledge in the field of fire protection was respected in order not to repeat the mistakes of the past, when modern technologies were protected in an inappropriate way.

It must be emphasized that, based on the analysis of the collected data, the working group came to the conclusion that the current state of fire protection in the area of the city of Građanica can be assessed as satisfactory, but it is still necessary to take the proposed measures, both in terms of preventive action, as well as personnel and technical filling for the purpose of repressive protection.

Expert processing based on the presentation of the current situation determined that in certain segments of the city there is an increased risk of fire, which can be significantly reduced by preventive measures, specifically mentioned in the proposal of measures that would reduce the risk of fire to a minimum, that is, limit the spread of the fire and enable timely and high-quality firefighting intervention.

The working group believes that the presented indicators and proposed solutions for reducing the risk of fire occurrence and spread from this assessment are appropriate for the current state of development of the city of Građanica, so it represents a solid basis for the creation of a high-quality Fire Protection Plan for the area of the city of Građanica.

Legal entities that are classified in categories I and II of fire risk are required to make their risk assessments and fire protection plans and submit them to the Civil Protection Service, and their fire protection plans will form an integral part of the Fire Protection Plan of the city of Gražanica.

For the purpose of quality monitoring, it is necessary to permanently monitor the state of danger and the level of fire protection, and to transmit information of all subjects whose actions affect the danger. In this way, the assessment will be continuously revised and the fire protection plan adjusted in accordance with the development of the city of Gražanica.

Causes of fires during the last 10 years

For the purpose of quality monitoring, it is necessary to permanently monitor the state of danger and the level of fire protection, and to transmit information of all subjects whose actions affect the danger. In this way, the assessment will be continuously revised and the fire protection plan adjusted in accordance with the development of the city of Gražanica.

From the aspect of fire risk and fire protection, the city area is characterized by the existence of large forest complexes (65.6 km²), large areas under crops (approx. 132.7 km²), as well as developed and diverse industrial and craft activities (industrial zone of the city), as and a greater number of shopping centers, and a high density of buildings in most settlements, especially in the urban part of the city and suburban local communities.

The fire risk in industry and crafts is high due to the use of a large number of flammable substances (wood industry, leather, footwear and textile industry, graphic industry, processing and electroplating of plastics, etc.).

All this, in addition to a large number of gas stations (17), shops with larger stocks paint, varnish, etc. represents a high fire risk.

However, despite such a high fire risk, the fact that no large-scale fires have occurred in the last 10 years is encouraging, which leads to the conclusion that the protection measures prescribed by law are being applied to a certain extent.

Overview of fires by type in the period 2010-2021. year

Year Type obj.	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Industrial facilities	1		3		11			2		3		6	45
Craft objects	1		2		3					1			13
Residential buildings	11		16		12			13		17		26	206
Economic facilities	7		7		9			6		7		6	82
Forest and low vegetation	5		37		57			11		6		26	305
Means of transport	5				2			1		8		2	55

Garbage containers	7	6	6	4	5	16	6	7	2	5	5	3	72
Technical interventions		7	7	5	10	8	8	9	12	9	13	10	98
Forage	3	3	4	8	5		3	2	5	3		1	37
Garbage dumps	3	5	5	6	2	4	2	4	3	5	3	4	46
Public facilities	1								1	1			3
Other interventions		2	2	3	5	3	1		5	3	2	4	30
In total (in the city area)	44	88 118		59	69	97	52 112		73	99	84	97	992
Municipality Get the East			4	4	2	8	2						20

From the above presentation of the number and type of fires in the last 10 years, it can be seen that the largest number of fires were recorded on residential buildings (most often on chimneys) and on low vegetation and forest areas. The fact that there were no large-scale fires is encouraging, which indicates the timely undertaking of preventive and operational fire protection measures by the responsible persons.

Fires in open space cause the most damage to forests and forest land. Forest complexes are very sensitive to fires, because, in addition to their basic purpose, they are also used as places for rest and excursions. The high air temperatures that often prevail in the summer months, as well as the irresponsible attitude of the users of these picnic areas, also contribute to the fire hazard of forest areas.

Forest crops of conifers and crops along roads and those near settlements are especially threatened. The danger of fire also arises in the time when dry spring winds prevail, in the period of cleaning and preparation of agricultural areas for cultivation, and then, in the summer period with high day and night temperatures. Fire is fatal for forest areas, because it can completely destroy the forest and the life in it, even the microorganisms in the surface layer of the soil, so the damage caused in this way is irreparable, especially from the aspect of soil erosion and ecosystem preservation in forests.

Forests and forest land at the level of the Tuzla Canton are managed by the Public Enterprise "Sume Tuzla Kanton" dd Kladanj, which every year adopts its Forest Protection Plan against fire and delivers one copy to the civil protection services of municipalities and cities in the Tuzla Canton. The plan contains the organization of the protection of forests and forest land from fire, at the company level and by work units, the persons in charge of fire protection (headquarters at the company level and by departments), the material and technical means for extinguishing fires at the company's disposal, as well as preventive measures protection that will be applied in forests and forest land. Clause 9.5. The Fire Protection Plan of the Tuzla Canton ("Official Gazette of the Tuzla Canton", number: 8/17) states that JP "Sume TK" dd Kladanj does not have its own fire department, but for the purposes of extinguishing fires, they engage the fire departments of the municipalities/cities in whose territory fires are taking place.

In the event of a large-scale fire, in accordance with the Plan, all employees of the Company and all available material and technical resources are mobilized, and on-call duties are introduced in the forestry areas as long as there is a need for it. In addition to forests, forest and agricultural land, settlements, both urban and rural, are most at risk from fire.

Fire danger in the city is partially reduced by the application of spatial and technical fire protection measures in the planning and construction of new buildings and by the existence of a system of external hydrant network in urban settlements and internal hydrant network in residential buildings. The majority of residential and industrial buildings in the area of the city administration are built of solid materials with high fire resistance (brick, concrete), and a good network of roads in all populated places allows access to the buildings in cases of need for fire protection.

Every inhabited place has a water supply infrastructure, and recognizing the need, some local communities have recently started planning and building an external hydrant network (as part of the implementation of water supply projects), which will contribute to more effective fire protection and firefighting in those local communities.

Due to the fact that the amount of water in the summer months, in the conditions of a long-term absence of precipitation, is significantly reduced in a large number of settlements, it is necessary to provide alternative sources of water for the needs of firefighting. The construction of a minimum number of external hydrants in all local communities would increase the efficiency of firefighting interventions in the area of these local communities.

The professional fire department is the basic organized force for fire protection and represents one of the most important forces in the protection of people and their property, not only in fire interventions. Taking into account the area of the city, the number of inhabitants, the fire load and the adopted Threat Assessment and Fire Protection Plan for the area of the city of Građanica, the number of firefighters in the Department for Fire Protection and Firefighting-PVJ Građanica is not satisfactory. This shortcoming should be fixed in the coming period, so that the work can be organized in the manner foreseen by the firefighting profession and practice.

The professional fire department of the City of Građanica is the basic force for performance firefighting activities in the area of the City of Građanica.

"The professional firefighting unit of the City of Građanica is a formation of the fire department of up to 20, where it was estimated that there should be 1+3 firefighters per shift (group leader, firefighter-driver and firefighters).

The current staffing of the Department for Fire Protection and Firefighting - professional firefighting unit (formation of the department) is filled with: 1- chief of the unit, 4 chiefs of groups (head of the firefighting action), 8 firemen-drivers, 1 fireman, 1 fireman-serviceman and 1 clerk in service and warehouse.

Also, the equipment and means at the disposal of the unit are mostly outdated, so their functionality and use reduces the readiness and operability of the unit. Almost all the problems of firefighting have their origin in the lack of financial resources.

Legal entities

In accordance with Article 29 of the Law on Fire Protection and Firefighting ("Official Gazette of the FBiH", number 64/09), the obligation to classify buildings into fire risk categories is regulated, as well as the obligation to draft by-laws on criteria and conditions for the classification of buildings into categories of danger from fire.

Owners, users and managers of buildings from the category of fire hazards PU 1 and PU 2 are obliged to undertake and take care of all the prescribed preventive measures for protection against fire and explosions regulated in Articles 9, 10. and 11. Rulebook on conditions, bases and criteria for

classification of buildings into fire hazard categories ("Official Gazette of FBiH", number: 79/11), which will be planned in their Fire Risk Assessments and Fire Protection Plans for businesses and other entities. After the adoption of by-laws, the legal entities that are obliged to establish a fire department or provide fire protection in another way will be determined.

Several companies have accepted this issue with the seriousness it deserves, and they have appointed persons in charge of organizing and implementing protection and rescue (and fire protection), as well as civil protection commissioners, who also play a major role in the protection and rescue system.

In residential buildings, of which there are more and more every day, the situation is similar to that in most businesses when it comes to fire protection. With regard to the consequences caused by the fire, the measures prescribed by the Law would have to be fully complied with in the field of construction of residential buildings through the work of the inspection bodies.

We expect that the preventive work of the competent institutions will improve the situation in the field of fire protection and firefighting in business companies and legal entities where this has not been respected so far, as well as in residential buildings in the city area.

**PROPOSAL OF TECHNICAL AND ORGANIZATIONAL MEASURES WHICH IS
IT IS NECESSARY TO BE CARRIED OUT IN ORDER TO AVOID THE DANGER OF
FORMATION AND SPREAD OF FIRES REDUCED TO THE MINIMUM
POSSIBLE LEVEL**

The level of fire protection in the area of the city of Građanica needs to be continuously considered because it is a "living matter" that must be developed along with the development of economic and other potentials.

1. The issue of fire protection in the city center and buildings built before 1965 should be resolved by issuing permits for the adaptation of existing buildings or the construction of new ones if the total fire load, that is, the zone as a whole, would not increase.

2. In residential buildings higher than 22 meters, in which a hydrant network is installed, it is necessary to take measures to eliminate defects and put it in proper condition so that it can be used for extinguishing fires. Considering that the hydrant network belongs to the common parts of the buildings, it is necessary to strengthen activities to inform the owners, that is, co-owners and managers of buildings about fire hazards and the necessity of regular inspections and elimination of defects in the hydrant network.

3. Approaches to the facilities should be solved by providing permanently passable access roads for emergency vehicles. Ensure access to fire-endangered buildings in such a way as to prevent the parking of a larger number of vehicles than the number of designated parking spaces. Obstacles in pedestrian zones must be designed in such a way that, if necessary, they can be quickly removed by raising or lowering them during the intervention.

4. The regime of behavior in residential premises with the aim of undertaking preventive and repressive fire protection measures shall be regulated by special acts (decision on fire protection or by a decision on house rules or other acts). In addition, elements of fire protection should be incorporated into other plans and decisions of the Mayor and City Council of the City of Građanica.

5. The problem of the existing non-inhabited attic spaces as well as the need to clean them in order to reduce the fire load of the buildings is re-emphasized, and it is proposed to carry out a preventive control tour of these spaces as well as other common parts of the buildings.

Forests and open spaces

6. In order to prevent frequent fires in the open space next to the railway line, it is necessary to treat the railway line at least once a year (no later than the fifth month of the current year) with chemical means for destroying weeds, and destroy the rest of the fuel material by burning.

In forest areas of the second degree of danger, it is necessary to regularly carry out preventive cultivation works:

- plant care,
- timely thinning of vegetation,
- pruning and removal of dry branches,
- maintenance of fire prevention averages and roads,
- maintenance of fire prevention averages with forest road elements,
- cleaning and maintenance of edge zones along public roads and railway tracks,
- cleaning and establishment of safety heights and distances on power lines lines.

In days of high and very high risk of the occurrence and spread of forest fires, it is necessary to introduce an observation and notification service.

Commercial buildings

7. When creating risk assessments and fire protection plans that are located or are planned to be built in the area of the city of Građanica, it is necessary to apply (which is also defined in Article 29 of the Law on Fire Protection and Firefighting "Official Gazette of FBiH", number: 64/ 09), as well as the valid Methodology for the preparation of fire hazard assessment and the Regulation on the content and method of preparation of protection and rescue plans against natural and other disasters and fire protection plans in the territory of the Federation of Bosnia and Herzegovina.

8. To the Professional Fire Department of the City of Građanica, submit Fire Protection Plans and Risk Assessments for high-demand buildings (PU 1) and medium-demand buildings (PU 2) of the fire risk category due to familiarization with fire hazards and protection measures.

Automatic fire alarm system

9. Considering that the quality of firefighting intervention directly depends on the time of arrival at the place of intervention and the start of extinguishing and rescue, and some facilities require the installation of an automatic fire alarm system (public buildings, warehouses, banks, etc.), the working group proposes direct connection of fire alarm users and Professional fire department of the city of Građanica, since lives and property will be better protected in this way.

Firefighting units

10. Continuously monitor the state of technical equipment, primarily the age and correctness of firefighting vehicles, and renew vehicles and equipment that no longer have functional usability or are outdated and unsafe for use. Activities should also be undertaken on quality training of firefighters.

11. The number of operative members of the fire brigade of the city of Građanica is determined by the Fire Protection Plan.

12. To work on the formation of voluntary fire brigades, specialized units for fire protection and fire brigades in legal entities whose task is to extinguish fires on

open space, assistance of the fire department of the city of Gražanica in extinguishing fires of large constructions, implementation of preventive measures, popularization of firefighting, personalization of youth and other activities in accordance with the law.

13. Make it technically impossible to park vehicles in front of entrances and exits from public buildings, high-rise residential buildings. Underground hydrants must be marked in accordance with the Rulebook on technical norms for external and internal fire hydrant networks, so that drivers can see where they are located.

Water supply for extinguishing

During the construction of a new water supply network and the reconstruction of an old one, it must be installed overhead hydrants in places where they do not obstruct traffic.

On narrow roads where access to fire engines is impossible, an overhead hydrant should be placed at the end of the fire engine's approach so that it can supply fire engines with water.

Current condition of PVJ Gražanica vehicles and equipment:

INSPECTION OF FIRE FIGHTING VEHICLES IN PVJ GRAŽANICA

The professional fire department of the City of Gražanica has the following equipment:

Red. number	Name and registration of the vehicle	Year of manufacture	Purpose
1.	RENAULT MASTER FDCVL 5 N-1 Cargo vehicle	2005.	Medically
2.	IVECO165-24 N-2 Cargo vehicle	1986.	Navalno
3.	VOLKSWAGEN CARAVELE M1-Passenger car	1987.	For transporting people
4.	BERLIET FPT770KB N2-Freight vehicle	1979.	Navalno
5.	FAP13/14 N3-All-terrain vehicle	1984.	Accompanying
6.	MERCEDES BENZ LA 911B36 N2-All-terrain vehicle	1974.	For forest fires
7.	BERLIET N2-All-terrain vehicle	1978.	For forest fires
8.	VOLKSWAGEN CADDY LIFE M1-Passenger car VEHICLE	2004.	Komandno
FOR PROTECTION AND RESCUE SERVICES			
1.	MAN N28 TGM 18.330 4X2LL BA03- TRUCK, CLOSED N3-CARGO VEHICLE MAN AG TANK	2008	Water tank with a capacity of 10,000 l of water
2.	Plug-in vehicle SPECIAL - FOR THE TRANSPORTATION OF BOATS	2022	Boat trailer

The area of the city itself, the large fire load, the position of local communities and the lack of a hydrant network in rural settlements in the area of the city of Gražanica necessitate the purchase of a newer naval fire truck with a water tank with a capacity of up to 8,000 liters of water, a foam tank of up to 1,000 liters, a high-pressure pump and other accompanying components.

Due to all of the above, the development of fire protection and fire fighting in the city area
In the coming period, Gražanica should go in the direction of renewing firefighting equipment, increasing the number of employees in PVJ Gražanica, forming a voluntary firefighting society, and more efficiently controlling the fulfillment of legal obligations.

Vision of the development of fire protection and fire fighting in the city until 2027

Based on the assessment of the danger of the city territory from fire, which took into account the fire load of forests and forest land, agricultural land and the variety of industrial, craft, commercial and residential buildings, a large number of gas stations with large quantities of stored various types of petroleum products, oils and lubricants, there is a need to look at this problem in all its magnitude and seriousness and through the set goals in the planning period to try to bring it to a level that will ensure adequate protection for all citizens, businesses and other companies and their property with their own forces and forces organized by the City as the carrier local authorities. Those goals must reflect the reality of the times in which both the state and the local community find themselves (the overall economic situation), as well as the human potential available to achieve those goals.

3. Data on the state of organization of civil protection and the achieved level of protection and rescue from certain natural and other disasters

3.1. The state of organization of civil protection in the area of the City

The state of the current organization of civil protection in the area of the City (Civil Protection Service, City Civil Protection Headquarters, civil protection headquarters in the Ministry of Health, companies and other legal entities where the formation of civil protection headquarters is provided for by law, civil protection commissioners, civil protection units general and specialized purposes and protection and rescue services that were formed in legal entities whose activity is important for the protection and rescue of people and material goods) is given in chapter 2.5. **Development program: "Proposal of civil protection forces that are optimal for the implementation of the planned protection and rescue measures, as well as a proposal on the type and amount of material and technical resources that must be provided for the implementation of the proposed protection and rescue measures".**

In the following period, it is necessary to form, in accordance with the needs and financial and with other possibilities, general and specialized civil protection units in the city, legal entities as well as at the level of the Ministry of Health.

3.2. The state of organization and implementation of protection and rescue from natural and other disasters by authorities, companies, citizens and other legal entities, in accordance with the Law

- The Federal Law on Protection and Rescue specifies that protection and rescue, apart from civil protection structures, is carried out by the following entities: authorities in municipalities and cities (competent municipal/city services and other legal entities), authorities in the canton (competent cantonal ministries, directorates and administration), companies and other legal entities from the fields of: healthcare, veterinary medicine, housing and communal affairs, water management, forestry, construction, transport, supply,

catering, firefighting, hydrometeorology, seismology, ecology, and other areas in which activities of importance for the protection and rescue of people and material assets from natural and other disasters (Article 32 of the Federal Law on Protection and Rescue), protection and rescue services, public companies, Red Cross organizations, and other humanitarian organizations, associations (mountain rescue service, mountaineers, speleologists, alpinists, radio amateurs, divers and others), members of the Armed Forces of BiH and citizens. Legal entities from Article 32 of the Federal Law on Protection and Rescue may form a civil protection headquarters in their composition, in accordance with their assessment, and if the civil protection headquarters has not been formed, the aforementioned legal entities are obliged to, by their general act, determine the body that will manage protection and rescue actions in the legal entity.

- Red Cross/Cross organizations, other humanitarian organizations and the aforementioned associations of importance for protection and rescue are obliged to cooperate with the Civil Protection Service and the City Civil Protection Headquarters in the City and act according to the order of the competent Civil Protection Headquarters in the event of a natural and other accidents.
The aforementioned entities are obliged to determine the tasks, organization of actions and activities in their work programs that ensure the participation of their members, organs and services in protection and rescue.
- Businesses and other legal entities referred to in Article 32 of the Federal Law on Protection and Rescue are obliged to carry out appropriate preparations, adopt and develop protection and rescue plans for their activities in protection and rescue, plan and provide MTS for the implementation of protection and rescue measures and organize, equip and train civil protection units and commissioners, in their composition, for the implementation of protection and rescue measures.
- Faculties and other higher education institutions and legal entities engaged in scientific research are obliged to inform civil protection structures about scientific knowledge of importance for protection and rescue and to submit data and notifications about their research, which are of importance for protection and rescue.
- Legal entities, owners and users of telecommunications and information systems and connections, are obliged to give priority in the use of those systems and connections to the City and Cantonal Civil Protection Operational Center (hereinafter: GOC CZ and KOC CZ) within the Civil Protection Service and Cantonal administrations of civil protection TK, that is, GŠCZ and KŠCZ, when they lead protection and rescue actions in a certain area. Legal entities and citizens have the obligation, in accordance with the Federal Law on Protection and Rescue, to provide MTS and equipment for temporary use, for the needs of civil protection structures, in actions to protect and rescue people and material goods in the event of a natural and another accident.
- Bearing in mind the aforementioned legal provisions on the necessary way of organizing legal entities outside the structures of civil protection, for the purposes of protection and rescue, as well as the way of carrying out protection and rescue by the aforementioned entities, it can be stated that the previous and current situation is in great contrast with stated legal provisions.
- It is necessary to conduct activities with the aim of including in the system of protection and rescue the competent municipal/city services, cantonal ministries, other administrative bodies, public services, public companies, companies and other legal entities whose activities are important for protection and rescue, as the concept of the Federal Law on Protection and Rescue would be realized, which foresees a complete and comprehensive approach to protection and rescue operations, i.e. active participation in these operations of all the mentioned subjects.

- In the subjects, outside the structures of civil protection, which, according to the provisions of the Federal Law on Protection and Rescue, are obliged to perform certain tasks of protection and rescue, it is necessary, in the following period, to define precise tasks in the field of protection and rescue, organize organizational forms and to form specific entities that will deal with the protection and rescue of people and material goods, in case of natural and other disasters.
- In order to ensure a greater and better participation of citizens in protection and rescue, it is necessary to devote much more attention to the training and qualification of citizens for these jobs, and in this connection it is necessary to develop appropriate training plans in the municipalities.

4. Preventive protection and rescue measures to be implemented

Based on the conclusions from the Threat Assessment and the Development Policy, they are imposed as a matter of priority certain preventive measures and protection and rescue activities from key dangers, which we define as program priorities through strategic directions with action plans in these or future development programs.

4.1. NATURAL ACCIDENTS

4.1.1. Earthquakes

The risk assessment has already determined possible human and material consequences good in the event of an earthquake in the City area. Based on the Vulnerability Assessment, it can be concluded that the existing structure of the housing stock and the concentration of buildings in certain areas, illegal construction and landslides, do not provide the possibility of applying effective protection against earthquakes, except for buildings built with modern resistant structural systems.

Phase of preventive protection

In order to prevent people and material goods from this natural and other calamity, it is necessary to undertake the following measures and activities:

- Construction of residential, infrastructural and other construction facilities in accordance with the prescribed technical and other norms for the construction of said facilities.
- Organizing, equipping and training all competent legal and physical entities for the protection and rescue of people and material goods in the event of an earthquake in the area of the City and TK.
- Training and enabling citizens to take measures for self-protection and mutual aid in the event of an earthquake.
- Creation of plans for evacuation, accommodation and treatment of persons from the threatened area earthquake.
- Creation of plans for medical treatment of persons injured as a result of the earthquake.
- Provision, within the state reserves, of adequate amounts of foodstuffs, clothing, footwear and other needs of the population that would be in need of these funds as a result of the earthquake.

Rescue phase

In order to protect people and material goods from this natural and other disaster during the rescue phase, it is necessary to undertake the following measures and activities:

- Protection measures and rescue from demolition.
- Pulling out the injured and dead from under the ruins.
- Engaging all available human resources and material and technical means to the extraction of survivors from under the ruins, and the evacuation and care of the injured and people who were left without their homes.
- Engagement of administrative bodies and other spiritual entities to provide all kinds of assistance from domestic and international organizations and institutions.

As part of the rescue phase, the following measures will be organized:

- Organizing the acceptance and distribution of material and other aid,
- Fire protection and rescue.
- First medical aid,
- Evacuation,
- Caring for the vulnerable and injured,
- Burial of the dead and other protection and rescue measures.
- In the event of an earthquake with catastrophic consequences for people and material goods (in populated areas), and with the aim of protection and rescue, the following protection measures would be implemented: reconnaissance of ruins and rescue of shallowly buried victims, by citizens within the framework of personal and mutual protection, while organized forces do not arrive. Upon the arrival of the organized protection and rescue forces, the search and extraction of buried persons would continue, securing damaged and displaced parts of structures in order to prevent collapse and subsequent demolition. For search and rescue from heavily damaged buildings, in addition to the engaged forces from the city area, assistance will be requested from the competent authorities of the Canton and the Federation with manpower and equipment. First aid to the injured will be provided immediately (First Aid Service and workers of health institutions), and the more seriously injured would be referred to the Health Center and the General Hospital, if they are in operation. If there was serious damage to the buildings of health institutions, temporary clinics would be formed (in tents or undamaged buildings), and the care of the more seriously injured would be carried out in the nearest undamaged ones in neighboring towns. Health facilities and forces for the rehabilitation of the terrain would organize the accommodation of the dead, their identification and preparation for burial. All available protection and rescue forces would be engaged to extract material goods from the ruins that could be used.
- After the search of all the buildings, when there is no longer any possibility that there are any survivors in the ruins, the complete clearing of the ruins, the establishment of communications, and the marking of the buildings on the degree of damage would be undertaken. In the event of a fire in buildings, PVJ Gražanica will be mobile. Due to the intensity of the destruction, there would be damage to the plumbing, electrical and PTT installations, for the repair of which teams from the companies that manage these installations would be hired. City services, the Red Cross and other institutions and companies would be involved in providing living conditions for the evacuated population at the reception sites. Prevention of criminal acts in these conditions, as well as traffic regulation during the rescue, would be carried out by members of the Gražanica Police Department. After the completion of the search and extraction of the buried, the field rehabilitation would be carried out by the Protection and Rescue Services for the field rehabilitation of JP Komus, the teams of the Health Center and the Veterinary Station, as well as the construction teams. All activities related to the organization of assistance, the use of forces and resources, as well as the deployment of various forms of assistance from state, federal and other bodies and humanitarian organizations will be carried out by the City Headquarters of Civil Protection.

Phase of elimination of consequences

In order to protect people and material goods from this natural and other disaster in the phase to eliminate the consequences, it is necessary to undertake the following measures and activities:

- Sanitation of the field.
- Clearing the ruins.

In accordance with the available financial and established priorities, the clearing of road communications to all local communities, water, electrical, PTT and sewage installations, roads, bridges and other infrastructure facilities will be provided in the earthquake-affected area, in order to create basic conditions for the normalization of life after the earthquake. affected area. Development of plans for the construction of construction and infrastructure facilities in an earthquake-prone area.

The return of the temporarily evacuated population to the area affected by the earthquake, after the danger of endangering people's safety has ceased. Assessment of damage caused by the consequences of the earthquake. Engagement of all competent entities to collect financial and other assistance from the wider society and community and from abroad for the rehabilitation of the consequences of the earthquake.

Findings

- In order to reduce the consequences for people and material goods from the occurrence of earthquakes, it is necessary to undertake preventive measures that will be implemented through spatial and urban plans of cantons and municipalities/cities. In addition, it is necessary to apply appropriate laws and implementing regulations on the construction of residential, business, industrial, infrastructure facilities (roads, railways, water supply and sewage networks, etc.).
- Taking into account the specific seismic conditions of the area, the locations where the buildings are built and applying the basic principles of earthquake engineering in the design, to a large extent, it is possible to directly influence the reduction of the consequences of earthquakes. Based on the current situation, it can be concluded that the existing structure of the housing stock and the concentration of buildings in certain areas does not provide the possibility of applying effective protection against earthquakes, except for buildings built with modern resistant structural systems.
- In the event of a large-scale earthquake in the city, it is necessary to undertake appropriate activities related to the rescue of endangered and injured people and material goods, and primarily to organize the search and rescue of those buried in the ruins and their disposal.
- In these activities, it is necessary to engage all available forces and means for protection and rescue, including the protection and rescue forces of the cantons, the Federation and the Armed Forces of Bosnia and Herzegovina, as well as the corresponding forces and means from the Republika Srpska.
- Given that it will be necessary to engage other forces and means in the search and rescue actions for buried persons (tracker dogs, special instruments for detecting buried persons, special machines for removing rubble, etc.), it is necessary to plan through protection and rescue plans to request help from neighboring municipalities/ cities and cantons or the wider social community, including the international community.
- With the aim of preventive protection of people and material goods from this type of natural disaster, it is necessary to create maps (of epicenters of earthquakes, seismic risk, maximum intensities), seismological, seismo-tectonic and others, necessary for spatial planning and seismic design and construction.

4.1.2. Flooding and rescue on and under water

The City area is extremely vulnerable to floods of lesser or greater intensity, greater or of smaller watercourses and what is especially pronounced is the appearance in short periods of time.

In addition to this phenomenon, there is mainly the need to evacuate the population and implement measures on and under water, which implies the need for continuous cooperation and linking the regular activities of all competent protection and rescue agencies.

Phase of preventive protection

The area of the City is extremely threatened by floods of lesser or greater intensity, larger or smaller watercourses, and what is especially pronounced is the occurrence in short intervals of time.

Preventive protection against floods first of all implies the undertaking of necessary activities on the regulation of the riverbed or projects of arrangement and protection against the harmful effects of all watercourses I (Spreja river) and II category (Sokoluše, Drijenje, Rašljevačka, Lukavička, Stjepopoljska, Džakulska, Dobrovačka, Mirijanska and others.) in the city area, and above all those that most often cause floods.

It is also necessary to take all the measures foreseen by the inspection and other competent authorities in order to prevent the disposal of various waste materials in watercourse beds, as a measure to prevent the illegal construction of various buildings above and next to the watercourse bed, which may affect the reduction of the flow profile of the watercourse.

Regular maintenance of the watercourse bed is necessary, which implies the removal of various vegetation and waste material from the watercourse bed.

Preventive flood protection includes the arrangement of watercourses and protection against the harmful effects of category I and II watercourses in the area of the city of Gračanica, as well as the construction and maintenance of defensive embankments next to rivers, the construction and maintenance of adequate water management facilities and systems for the removal and reception of surface and underground water, the construction and maintenance of culverts and canals under and beside roads and similar works.

In order to prepare as well as possible for the implementation of operational flood protection measures, it is necessary is to improve the system of monitoring, early announcements and forecasts, which implies an increase the number of hydrological stations and the introduction of hydrological models for flood forecasting.

Currently, the most important step in the improvement of flood protection is the amendment of the Cantonal Flood Protection Operational Plan. In this regard, it is necessary to collect data and provide an overview of the current state and construction of flood defense systems and facilities in the area of TK. It is also necessary to analyze the level of defense against flooding of individual zones of threatened areas, and accordingly verify the defense lines as well as the size and number of sectors (representatives of the Ministry of Agriculture, Forestry and Water Management are the bearers of these activities in cooperation with the competent municipal and city authorities).

The plan should define:

- areas next to reservoirs, watercourses and protective water facilities where they are carried out defense measures,
- water levels at which regular or emergency flood protection begins in certain areas,

- legal and natural persons who are obliged to carry out flood protection on watercourses and accumulations,
- measures that must be taken at the time of danger of high water, u duration of floods and elimination of flood consequences,
- communication and alert system,
- the method of collecting meteorological and hydrological data and the method of informing about the occurrence of floods on watercourses and reservoirs, and the measures taken regarding the course of flood defense,

- management of the Modrac reservoir in the light of climate change,
- cooperation of all actors in the system of implementation of flood protection measures, what is it the special role of line ministries.

In addition to the above, it is necessary to speed up the activities on determining the boundaries of water assets, because this represents a very important step in the entire process of defining water assets and public water assets. Pursuant to the Law on Waters of the Federation of BiH, as well as the related by-laws, it is necessary to draw up studies on the determination of the boundaries of the water property and to pass related decisions for watercourses of category II.

The Tuzla Canton Protection and Rescue Development Program also includes the problem of flooding of the Spreĳan Valley, namely:

River Spreĳa downstream from the reservoir Modrac

It is proposed to improve the bed of the river Spreĳa in the municipality of Graĳanica, the section from the bridge for Karanovac to the confluence of Sokoluša in Spreĳ according to the completed Main Project, with a length of 1,357.34 m and a value of 1.8 million USD, which is planned through the project "Increasing investment in flood risk reduction in BiH" GFC and UNDP, the Agency for the Water Area of the Sava River and the Public Institution of Water of the RS, as well as the arrangement of watercourses and protection against the harmful effects of the Spreĳa River according to the prepared Elaborate for 9 locations with a total length of 9,426 m with a price of 2,232,946.6 KM price from Elaborate without VAT).

So far, 2,363 m worth of 430,036.07 KM (including VAT) have been completed. The works were financed by the Agency for the Water Area of the Sava River, so we expect the continuation of preventive measures in flood protection in the coming period as well.

It is also proposed to clean the river Spreĳa from garbage and vegetation.

1. It is necessary to include the protection of urban parts of the downstream river in the priorities Prevents.
2. For the protection of the flood area of the Spreĳa river valley downstream from the Modrac reservoir, the advantage is on the side of the variant with the construction of protective embankments, although in this case the economic justification of the realization of this solution is not provided either. At the same time, it should be noted the importance of a correct assessment of the value of expropriation, which significantly burdens the investment of the variant with embankments. Considering the characteristics represented on certain stretches along the watercourse in this area, it is necessary to adapt the technical solution to specific conditions, which clearly points to combinations of both considered variants. Namely, it is about changing urban and agricultural areas that require different levels of flood protection.
3. The absence of spatial plans as well as other planning documentation of the considered area, and the fact that an inter-entity line passes through a significant part of the watercourse, makes it difficult to make a final decision on the choice of variant. Given that the proposed variants encroach on the space on both sides of the inter-entity line, representatives of both entities must be involved in the selection of the technical solution.
4. The necessary corridor for the implementation of the proposed technical solution should be included in the future planning documentation of the considered area, and any other construction should be prevented in it.

Sokoluša River

It is proposed to continue the regulation of the river Sokoluša in Gražanica according to the project documentation, and it deals with the arrangement of the riverbed for waters of the Q1/100 years occurrence level (stone lining in concrete, minor and major riverbed).

It is necessary to carry out the following work on regulation:

- River Sokoluša-Gražanica (length about 1,000 m).

It is proposed to clean the river Sokoluša of garbage and vegetation.

At the same time, inspection supervision in the area of building construction should be strengthened in the flooded area of the watercourse, i.e. within the boundaries of the water resource.

Rescue phase

During the rescue phase, the following protection and rescue measures will be implemented:

- Evacuation of people and material goods from flood-prone areas,
- Caring for vulnerable and injured persons,
- Protection and rescue on and under water,
- First medical aid,
- Environmental protection, etc.

Engagement of all available manpower and material and technical means for immediate flood defense in order to protect people and material goods.

Evacuation of people and material goods from flood-prone areas, which implies the planned, organized and temporary relocation of the population and material goods from areas that are estimated to be affected by natural and other disasters, i.e. from areas affected by natural and other disasters, to areas that are not threatened or less threatened areas of the same, neighboring or other municipality/city, provided that it is not possible to protect people and material goods with other protection and rescue measures.

Evacuation is carried out with the aim of avoiding or reducing mass casualties of the population and the destruction of material goods.

Categories of the population that are subject to partial evacuation are: sick, disabled over 60%, old and exhausted citizens, pregnant women, mothers with children up to seven, i.e. two and more up to ten years old, children and students of primary schools and other persons who are assessed as not having for effective life protection in the endangered area.

The evacuation is ordered by the civil protection headquarters, which plans the evacuation if it is an evacuation from one area of the municipality/city to another, and the civil protection headquarters of the municipality/city, which receives the evacuated population.

In addition to the civil protection headquarters, the residents of Gara are participating in the evacuation within the framework of personal and mutual protection, the city administration services responsible for spatial planning and urbanism, the Service for Administration, Social Activities, Veterans' Disability Protection and Joint Affairs, Traffic, Health and Social Protection, Supply, Housing - communal affairs, education and other services.

During the evacuation, cooperation is achieved with the police, humanitarian organizations and companies that can help in the efficient execution of the evacuation.

The evacuation of material goods is planned and carried out by the protection and rescue operators who dispose of these goods.

Taking care of vulnerable and injured persons from natural and other accidents, as well as exiles and refugees in the event of a state of war or imminent danger of war, urgent activities and measures are undertaken for housing, feeding and ensuring other essential conditions for the life of endangered, victimized, exiled and refugee people .

The headquarters and commissioners of civil protection directly manage the care procedures, temporarily, until the conditions are created in which the competent services for the city administration will be able to take over further care of the care (Service for administration, social activities, veterans' disability protection and joint affairs, Service for spatial planning , geodetic and property legal affairs and other competent services) or until special services are formed for this by decision of the cantonal government.

In accordance with the threat assessment, the preparation and implementation of care for the vulnerable and victims is carried out by the civil protection headquarters that plan the reception and accommodation of the evacuated population and the civil protection headquarters that plan the evacuation or displacement of the population.

Aid and cooperation are provided by humanitarian organizations and citizens in carrying out the tasks of taking care of vulnerable and victimized citizens. The costs of caring for vulnerable, victimized, exiled and refugee persons are paid from the budget of the municipality/city and canton, in whose territory the care is organized, and from the budget of the Federation from the means of solidarity and humanitarian aid and foreign donations.

Owners and users of buildings and premises in public use (homes, schools, hotels, etc.) that are suitable for accommodation, are obliged to temporarily accommodate citizens and material goods from threatened areas, if this is ordered by the competent civil protection headquarters, which manages the actions. protection and rescue in a certain area.

Protection and rescue on water and under water is a measure that includes the implementation of protection and rescue of people and material goods in areas around rivers, lakes and at sea, which may be threatened by floods, which may be caused by damage or demolition of high dams, embankments or other water protection facilities , as well as from the danger of torrential and underground water.

Protection and rescue on water and under water includes: construction, maintenance and rehabilitation of damaged structures for flood protection, observation and reconnaissance of the state of watercourses, structures and terrain, planning and carrying out the evacuation of the population and material goods, supplying the flood-endangered population with the necessary food and other resources for the sake of survival and participation in the remediation of the consequences caused by floods.

Owners of swimming pools, beaches and similar facilities in the provision of services are obliged, at their own expense, to provide adequate rescue services for rescuing drowning bathers.

The administrative bodies of the canton responsible for water management and economic companies in the field of water management are responsible for detecting and determining the dangers and organizing the implementation of protection and rescue from floods caused by the damage or demolition of high dams, embankments or other water protection structures, as well as the dangers of torrential and underground water that cause floods .

In the flood defense plans, which are adopted under a special law, the measures and procedures provided for in the aforementioned text are determined.

Protection and rescue on water and under water are carried out by: citizens within the framework of personal and mutual protection, legal entities whose main activity is or is related to the sea, rivers or lakes, as well as sports and other associations that engage in water sports or under water and protection and rescue services, which are equipped and trained for this type of protection and rescue, civil protection units for protection and rescue on water and under water, and administrative bodies and administrative services responsible for water management.

The phase of eliminating the consequences, that is, the phase after the end of a natural or other disaster

Sanitation of the field.

Environmental Protection.

In accordance with the available financial resources and established priorities, the following will be carried out: rehabilitation of residential, business, commercial and water management and water supply facilities, roads,

water, electrical and PTT installations and other infrastructural and other damaged facilities, in order to create conditions for the normalization of the situation and the return of temporarily evacuated persons.

Organization and implementation of the return of temporarily evacuated persons to their housing facilities.

Assessment of damages caused by floods.

In the phase after the end of a natural or other disaster, the Service compiles a report on the number of the dead, injured and sick and submits it to the City Headquarters of Civil Protection.

In addition, in the phase of elimination of the consequences, the Service performs the following tasks and tasks within its jurisdiction, which relate to:

- taking measures to engage expert health care teams to eliminate the consequences;
- taking care of the injured to the nearest health facilities and identification of dead and deceased people;
- carrying out disinfection, disinsection and pest control in the affected area;
- carrying out continuous control of the health status of people in the affected area in order to prevent the occurrence of infectious diseases.

Findings:

- Administrative measures to ensure compliance with the prescribed management and use of buildings and spaces as a whole, which have an impact on the occurrence of floods. At the same time, take special care of the situation in the wider catchment area for watercourses of categories I and II (controlled felling of forests and afforestation, land use and cultivation methods, establishment of appropriate conditions related to the water regime during the construction of any facilities, consistent application of all foreseen measures, works, procedures in the construction of buildings, etc.).
- When building new or reconstructing previously constructed flood protection facilities, efforts should be made to improve the degree of protection and rescue of people and material goods.
- Construction of embankments along the watercourse of the river Spreja and its tributaries
- Continuously plan the regulation or cleaning of watercourses in the entire flooding area (Spreja, Sokoluša, Drijenja, Rašljevska, Lukavička, Džakulska, Stjepopoljska, etc.).
- Competent institutions will undertake activities to adopt preventive and operational flood defense plans, in accordance with the relevant regulations governing this area, and provide financial resources for the implementation of activities.

The following measures will also be taken:

- Preventing the devastation of plant cover, especially intensive and uncontrolled cutting of forests in catchment areas.
- Prevention of uncontrolled and illegal construction of construction and others facilities outside urban areas.
- Preventing the uncontrolled opening of surface mines and landfills of coal mines, quarries and other activities that affect the devastation of land and that turn catchment areas into floodplains.
- Creation of a timely forecast for the occurrence of large floods in populated areas, along large watercourses.
- Provide regular and emergency defense measures within the flood protection plans from floods.

- Correct and supplement the legal regulations within which it is necessary to prescribe the organizational and technical aspects of flood protection in order to regulate the application of modern technical criteria and concepts of flood protection.
- Creation of hydrological-hydraulic models for defining flood lines, characteristic ranks of probability of occurrence of floods in catchment areas of all watercourses. Determining zones according to the degree of danger from flooding.
- Determining the areas where preventive and other measures will be applied as part of the "Living with Floods" strategy, such as construction ban zones, areas for the evacuation of endangered population and material goods, as well as the construction of a system for alerting the population on the ground.

- Development of the main operational and main preventive flood defense plan (for watercourses of category II) for TK, by the competent Ministry of Agriculture, Water Management and Forestry of TK.

- Installing a surveillance and alert system that is necessary in the event the occurrence of large tidal waves,
- Development of plans for the evacuation of residents and more important material and technical means in case of large floods.
- Acquaintance of the population of the threatened area with the degree of danger, critical zones, as well as the manner of behavior during critical situations.
- Construction of facilities for flood protection (embankments, water reservoirs, retention etc similar to).

4.1.3. Environmental Protection

The threat assessment from the field of environmental protection dealt with the possible consequences for people and material goods due to pollution of water, air and land in the area of the city of Građanica.

Environmental protection is a measure that consists in preventing the occurrence of harmful consequences from the destruction and pollution of the environment and eliminating the consequences caused by: technical-technological breakdowns in industry, the release of toxic and harmful chemical and other substances into the environment from industrial and thermal energy plants, motor vehicles and individual burning stoves in households, in quantities that cause emission concentrations in water, air and soil above the maximum permissible values, disposal of municipal, industrial-technological and other solid and liquid waste, effects of weather events on the environment (snowfall, floods, droughts, landslides), as well as other natural disasters.

The organization and execution of work is carried out in accordance with the Law on Environmental Protection, i.e.: legal entities in the field of production and traffic and transportation of hazardous substances are obliged to: plan, organize, prepare, implement activities and measures to prevent the occurrence of harmful consequences for the environment, to undertake rapid activities and measures in protection and rescue in case of accidents and removal of consequences from technological and ecological accidents in environmental protection and alignment with international conventions and regulations of the European Union.

Legal entities are obliged to organize and train expert teams and provide the necessary equipment and means for quick interventions in the Emergency Situations, as well as ensure the timely removal and dislocation of dangerous substances in safe facilities and in suitable locations, i.e. in areas that are not threatened by such danger.

The Government of the Federation, on the proposal of the Federal Ministry of Health, adopts a special plan for protection and rescue from ionizing radiation on the territory of the Federation in accordance with the Law on protection against ionizing radiation and radiation safety. Engagement of all available manpower and material and technical means for immediate defense against floods in order to protect people and material goods.

4.1.4. High snow and snow drifts

The assessment of the threat from high snow and snowdrifts imposed the need to undertake organized and effective protection and rescue measures.

Phase of preventive protection

With the aim of preventive protection of people and material goods from this natural disaster, the following measures and activities should be undertaken in the area of the City:

- organization of winter service, maintenance,
- education and familiarization of citizens and legal entities with the obligation to remove snow i ice in front of their facilities through means of information,
- register legal entities from the citizen list that can be engaged in case of need. -

- Creation of city plans and programs for winter maintenance of local roads and city thoroughfares, as well as plans for winter maintenance of regional and highway roads.

- Equipping and training city services and utility companies for winter road maintenance.

- Procurement and maintenance of necessary machinery and equipment for removing snow from roads, and provision of sufficient quantities of road spreading material.
- Informing, in the most appropriate way, the population and owners of business and other facilities about the need to fulfill the legal obligation to remove snow from the approaches to the said facilities.
- In case of need, apply the Request Procedure "Procedure for requesting assistance and engagement of the Armed Forces of Bosnia and Herzegovina in providing assistance to civil authorities in search and rescue and other types of assistance"
- If necessary, ask for help from the Protection and Rescue Service at higher levels authorities,
- Plan the insurance of aid for the vulnerable population that is cut off from the rest part of the city.

Rescue phase

According to the winter maintenance plan, the city and councils of the Ministry of Health will sign contracts with legal, physical or other persons who are qualified for the maintenance of all local roads in the city during the winter period, while the Directorate for Roads TK will organize the maintenance of regional roads, and the Federal Directorate for roads part of the main road M-4 Dobož-Tuzla. If necessary, additional forces and resources from the company will be engaged. Citizens will be engaged in clearing snow and ice around their buildings and driveways through the means of public information, and in case of need through the Council of the Ministry of Health and the Commissioner of the CZ.

Information about the situation on the ground, the activities that have been carried out and the needs for the normalization of the situation will be carried out by the CZ City Service through the means of public information and the Operational Center of Civil Protection. The competent authorities (FUCZ, KUCZ, Mayor, etc.) will be informed by the CZ Service, i.e. the City Headquarters of Civil Protection if a state of natural disaster has been declared. In the rescue phase, the following protection and rescue measures will be implemented:

- Evacuation
- Caring for the vulnerable and injured
- First aid

Removal of snow and snow drifts from local, regional and main roads, city and suburban roads and local roads, and from approaches to residential, business, public, health, school, industrial and other facilities of wider importance.

Citizens should be engaged in these jobs within the framework of personal and mutual protection, legal entities in addition to competent entities, and members of civil protection structures and citizens.

Delivery of the most necessary foodstuffs and other means for a normal life. citizens who are located in areas that, due to high snow and snow drifts, are cut off from city centers and other settlements.

Phase of elimination of consequences

After the end of the rescue phase, the temporarily evacuated population is returned to the area that was threatened by high snow and snowdrifts. Rehabilitation of damaged buildings, roads, electrical and PTT installations and other infrastructure facilities.

Assessment of damage caused by high snow and snow drifts.

Findings:

- Special attention should be paid to the competent authorities of the municipality/city, canton and the Federation of Bosnia and Herzegovina in a timely manner undertaking all activities related to the engagement of business and other legal entities in the removal of snow and snow drifts from roads and other infrastructure facilities.
- In cases where the regular forces and resources of civil structures are not sufficient to carry out protection and rescue tasks, by order of the civil protection headquarters, additional available forces are engaged in threatened areas, and, if necessary, the engagement of the Armed Forces of Bosnia and Herzegovina is requested in accordance with the Law on the Defense of Bosnia and Herzegovina ("Official Gazette of BiH", number: 88/05) and valid legal procedures for engaging the Armed Forces of BiH.
- With the aim of undertaking organized and effective protection measures, important activities in this area are monitoring and studying the risk of snow drifts and avalanches, which entails visiting and observing, and then notifying the public.

4.1.5. Landslides, subsidence and landslides

The area of the city of Gračanica has a complex geological and morphological structure of the terrain characterized by weak physical and mechanical properties of the soil, which manifests itself in the form of soil instability in unfavorable hydrological conditions and periods with prolonged precipitation.

Landslides and landslides can occur in the area of all 25 local communities, and the most threatened are: Lukavica, Malešiji, Stjepan Polje, Prijeko Brdo, Džakule, Trnovci, Buk, Dobrovci, Gornji Dobrovci, Soko, Škrahovica, Babići, Piskavica, Gračanica, Gornja Orahovica, Rašljeva, Gornja Lohinja, Mirijina and others.

It is characteristic that the majority of local communities are significantly threatened, which represents a serious problem in the preparation of city spatial plans, especially bearing in mind that the issue of landslides is not given sufficient attention and that the legal regulations have not specified the way of action in municipalities/cities, (when it comes to private property that does not have appropriate construction permits or insurance on any basis), as well as at the level of TK, and this fact can have unforeseeable consequences, due to the fact that the destructive action of landslides can have catastrophic consequences for the safety of people and material goods of all kinds.

Phase of preventive protection

- Preparation of cadastre of landslides, on the entire area of the city, based on a unique methodology. Constant monitoring of the landslide cadastre and linking of the landslide cadastre into a unique information system at the city level.
- Creation of an engineering-geological map (1:25,000) for the city area, on which areas with an unstable soil structure are registered.
- Provision of financial resources, in city budgets, for rehabilitation of the most priority landslides, especially those that threaten the most residential and infrastructure facilities. Construction of residential and all other construction facilities, as well as all types of infrastructure facilities in accordance with legal regulations on compliance with prescribed technical and other construction standards.
- Prohibition of the construction of residential, infrastructure and other construction facilities on areas that have been recorded as unstable terrain.
- Construction of appropriate installations for drainage, reception and removal surface, underground and waste waters, especially in populated areas.
- Inspection control to prohibit uncontrolled logging.
- Education of the population and employees of the competent city services on how to recognize the basic signs of landslides and the most basic preventive measures that should be taken to prevent the further spread of landslides.
- Improve the existing legal regulations, adopt the necessary new legal frameworks that will prevent the degree and dynamics of the causes that lead to the process of sliding and landslides,

Rescue phase

In the case of major land subsidence, subsidence or land sliding when damage occurs buildings, burying people and material goods, forces and means for rescuing and evacuating people and material goods should be foreseen. In MZs where the above situation would occur, citizens should be engaged in the framework of self-protection, where the main role would be played by MZ council members with CZ commissioners. It is necessary to provide a place for moving and taking care of people and material goods in the territory of the Ministry of Health and engage the means available to citizens from that area. In the event of a large-scale disaster, when a natural disaster is declared, the GŠCZ would be activated, which would lead the protection and rescue actions, and on that occasion, additional forces and resources would be engaged from the city area, such as: services for providing medical assistance (Dom zdravlja), service for communal affairs, PVJ, construction services and CZ units. For the purposes of relocating and taking care of vulnerable people, the City Service for Spatial Planning, Housing and Communal, Geodetic and Property Legal Affairs would determine the facilities and issue a decision on their use. In the rescue phase, the following protection and rescue measures would be implemented:

- Protection and rescue from demolition,
- Environmental protection,
- Evacuation,
- Caring for the vulnerable and injured,
- First aid.

Adhere to the principle that the rehabilitation of landslides, especially the larger and more complex ones, is carried out exclusively on the basis of appropriate project documentation, which includes: geological, engineering-geological and geomechanical testing of the terrain.

Engagement of all available professional and human resources and material and technical means to undertake intervention remedial measures, when necessary, in emergency cases,

when the situation on the ground requires it, without appropriate project documentation, to intervene on the landslide in order to prevent further spread of the landslide.

Phase of elimination of consequences

Upon completion of the rescue phase, expert teams would be formed to inspect the threatened area and propose measures for temporary and permanent rehabilitation of the landslide. In accordance with the possibilities and the received funds of solidarity, projects for permanent rehabilitation would be carried out (in the appropriate institution) and rehabilitation of the same would be carried out according to priorities. Pending the creation of a permanent remediation at the suggestion of experts in the field of geology, in accordance with financial possibilities and priorities, a temporary remediation would be carried out with the funds of the owner or user of the property.

The following ZiS measures would also be implemented: Land sanitation

In accordance with available financial resources and established priorities, road communications to all MZs, water supply, sewage, electrical and PTT installations would primarily be rehabilitated.

Assessment of the damage caused as a result of the action of the landslide.

Findings:

- The number of landslides especially increased during and after the war due to uncontrolled cutting of forests, exploitation of mineral raw materials, which affected the change of water regime and land regime.
- An important place among the causes of land instability is long-term and abundant rainfall, floods, long-term exploitation of minerals from the interior of the country, etc.
- Activation of landslides is also caused by illegal and unplanned intensification construction in areas that have not been geologically surveyed.
- Continuous monitoring and documentation of illegal and unplanned construction is necessary residential and other buildings, especially in the area of roads (roads and railway), and consistent enforcement of regulations that regulate construction conditions.
- The task of engineering geology is to monitor, study and forecast the development of modern geological processes, landslides, landslides and others.
- It is necessary for the competent authorities to create a cadastre of landslides and potential landslides and landslides in order to monitor the situation and react in a timely manner in the event of the need for their rehabilitation.

The following measures will also be applied:

- Application of building regulations (urban-spatial and technical documentation).
- Technical measures for the construction of buildings in fragile areas.
- Application of regulations on the prohibition of construction of buildings in flooded areas and on areas that are registered as potentially unstable slopes.
- Construction of structures for protection against landslides and taking the necessary measures for the purpose preventing the activation of landslides.
- Eliminating the influence of the negative human factor on the activation of landslides (uncontrolled felling of forests, construction of sewage and water supply installations in accordance with regulations, construction of systems for draining and removal of surface, underground and waste water, execution of land and construction works in accordance with technical norms, uncontrolled exploitation ore and mineral raw materials and others).
- Education of citizens regarding the issue of the occurrence and operation of landslides.
- Application of regulations on technical standards in the construction of water, sewage and other infrastructure facilities.

4.1.6. Drought

Assessing the vulnerability of droughts, which are not frequent, but with greater or lesser intensity, cause damage to material goods and endanger people's safety, and therefore the need for the application of preventive protection and rescue measures was imposed.

Phase of preventive protection

In order to prevent people and material goods from this natural disaster, it is necessary is to undertake the following measures and activities:

- Taking all the necessary preventive measures, before the period in which drought is possible, in order to overcome this natural disaster more easily, especially in agriculture, supplying the population with drinking water and supplying industry with water for technological needs.
- Development of plans and provision of financial resources for the introduction of systems for irrigation of agricultural crops in municipalities/cities with developed agriculture
- Education of the population in order to train them for self-protection in the event of an outbreak drier,
- Establish a unique cadastre of existing and new springs and facilities for water supply in the City of Građanica as a matter of priority through scientific research,
- To additionally equip and train laboratories for hygiene testing water,
- By capturing additional quantities of water from available or prepared sources, improve the supply of the population through the already included public water pipes and their expansion to a larger number of settlements where there was a decrease in the inflow into the reservoir,
- Plan and secure tanks and other means of transporting water in order to supply the most vulnerable categories of the population.

With the HES of the Health Center and the sanitary inspector, make instructions and notifications to citizens about procedures during high temperatures and the rational use of drinking water. To ask JP "Vodovod i Kanalizacija" and the Council of the Ministry of Health to make a plan for an even and rational reduction of drinking water for the dry period. Through means of public information and posters, warn citizens about the possibility of fire outbreaks and procedures during the dry period (related to fires).

Rescue phase

During the dry period, JP "Vodovod i Kanalizacija" and the Council of the Ministry of Health, which manages the waterworks, to ensure the correctness of hydrants and locations for providing water for firefighting, which will be used by citizens, legal entities and organized forces (PVJ, Protection and Rescue Services, etc.) of protection and rescue. For the purposes of extinguishing fires and providing drinking water for the vulnerable population, engagement and assistance will be requested from: JP "Vodovod i kanalizacija" Građanica, JP "Komus" Građanica, KUCZ and FUCZ.

Phase of elimination of consequences

In the phase of removing the consequences, the following protection and rescue measures will be implemented:

- Land sanitation,
- In accordance with the possibilities and priorities, carry out activities to mitigate and rehabilitate damages that occurred as a result of the drought, especially in agriculture, animal husbandry, fruit growing, water management and water supply for the population and industry.

- The City Commission for the Assessment of Damages from Natural and Other Disasters in the City of Građanica will organize activities to record and prepare the Assessment of damage caused by drought in agriculture, animal husbandry, fruit growing, water management and industry.

Findings:

- In order to prevent the dangers of large-scale drought damage that can endanger people and material goods, it is necessary to ensure the reduction of losses in water supply systems, reconstruction and faster flow through the system.
- By introducing new technologies in production processes, reduce the need for additional amounts of water while simultaneously improving the quality of used and released water (large industrial consumers, irrigation).
- By providing additional quantities of water from available or prepared new sources, improve the supply of the population through the already covered public water supply lines and by extending them to a larger number of settlements where there was a decrease in the inflow in tanks.
- To protect and develop existing sources and to find new ones, for additional amounts of water in endangered areas.
- Plan and ensure the transport of water in tanks to meet the needs of the most vulnerable consumers, for which it is necessary to systematically acquire and store a sufficient number of means of transport.
- It is necessary to ensure reserve amounts of water, by building or installing water tanks, etc. For effective fire protection (especially in open areas),
- To propose to agricultural producers and other bodies that, within the framework of legal possibilities, they review the current legal regulations of insurance companies with the aim of amending and supplementing those regulations, in order to enable better implementation of property and personal insurance against natural and other accidents, and thus enable compensation for damage caused by natural disasters and other accidents.

4.1.7. storm

Although the climatic element is very important on the one hand, on the other hand the wind can represent an extreme danger. Stormy winds should be given special attention because of the possible large destruction in a short period of time and the immediate danger to human life.

Unlike other weather disasters, storm winds are specific for the reason that on in a way, the only protection against them is the timely evacuation of the population and of course the early system warnings. For this reason, it is necessary to have a population protection and evacuation system functional and to save as many human lives as possible in the shortest period of time.

Phase of preventive protection

Taking all the necessary preventive measures that can affect protection against stormy winds.

Equipping and training meteorological stations in municipalities/cities for forecasting times.

Rescue phase

- Protection and rescue from demolition,
- First medical aid,
- Land sanitation,
- Environmental Protection,
- Protection and rescue in agriculture and fruit growing.

If certain material damages and human casualties are caused, measures will be taken to remove them and in accordance with the possibilities of providing assistance to the victims.

Members of PVJ Gražanica, JP "Komus", JP "Vodovod i kanalizacija" and workers of "Elektrodistribucija" and other services of the Ministry of Social Affairs would be engaged in the removal of possibly destroyed tree trunks and electric poles, as well as in the cleaning of blocked sewage shafts in the city of Gražanica (they cannot to receive large amounts of water), and removal of brought pieces of large waste from the beds of rivers and streams in order to prevent spills and flooding of buildings. On residential and other buildings that were left without a roof, in accordance with the possibilities, provide temporary coverage, in order to reduce the damage to other parts of the buildings.

Phase of elimination of consequences

Elimination of all the effects of stormy wind in agriculture, fruit growing, forestry, then on electrical and PTT installations, residential, commercial, industrial, auxiliary and other construction facilities.

Assessment of damage caused in agriculture, fruit growing, forestry, electrical and PTT installations, residential, business, industrial, auxiliary and other construction facilities, as a result of the action of stormy wind.

4.1.8. Grad

The largest number of assessments confirm that adequate anti-hail protection can mitigate consequences of the effect of hail clouds of 60-80%. Timely reaction by seeding clouds with condensation nuclei can greatly mitigate the devastating consequences of falling hail.

Therefore, it is necessary to strengthen the technical equipment of the anti-hail defense system, increase the number of launch stations, the training of personnel, develop radar monitoring of storm clouds, and improve prognostic models, which will forecast the instability of the atmosphere in time and the space where she will answer. Also, various types of anti-hail nets and curtains that the producers themselves place on their plantations can reduce damage, and as a way of fighting hail we can also mention production insurance with insurance companies.

Phase of preventive protection

- Development of plans for the construction of hail defense systems, construction and regular maintenance of hail defense systems, especially in areas with developed agriculture and fruit growing.

- Undertaking all necessary protection measures in agriculture and fruit growing, in order to protect against hail.

- Equipping and training meteorological stations, in municipalities/cities, for weather forecast.

- In the area of the city of Gražanica, 6 stations for hail protection were built and equipped in the area of the city of Gražanica (Ratiš, Gornja Orahovica, Soko, Dobrovci, Lendiži and Malešiji) and in the area of the Municipality of Doboj Istok (1 station).

Rescue phase

- Timely activation of the anti-hail defense system, which requires, among other things, appropriate and timely information about the weather forecast for a certain area, so a contract was concluded with the company "Anti-hail prevention RS" from Gradiška, which has the conditions for monitoring and determining the parameters for anti-hail action .

- Environmental Protection.
- First aid.
- Protection in agriculture and fruit growing.
- Protection of people, residential, business, industrial, auxiliary and other constructions facilities and traffic motor vehicles.

Phase of elimination of consequences

Elimination of the consequences of the city's actions in agriculture, fruit growing, residential, business, industrial, auxiliary and other construction facilities and traffic motor vehicles.

Assessment of damage caused in agriculture, fruit growing, residential, business, industrial, auxiliary and other construction facilities and traffic motor vehicles, as a result of the actions of the city.

Findings:

- In order to prevent damage caused by hail clouds, it is necessary to carry out a needs analysis, and then to form hail protection units in areas threatened by hail and equip them with appropriate means and equipment for hail protection (concluded contract with the company "Protivgradna preventiva RS" Gradiška that have conditions for observation and determination of parameters for anti-hail action).

- To propose to agricultural producers and other bodies that, within the framework of legal possibilities, they review the current legal regulations of insurance companies with the aim of amending and supplementing those regulations, in order to enable better implementation of property and personal insurance against natural and other accidents, and thus enable compensation for damage caused by natural disasters and other accidents.

4.1.9. Mraz

Among the preventive measures that can somewhat contribute to protection against the effects of frost and cold, we should mention prognostic models, which will indicate the occurrence of frost in time, which would made it possible to take all necessary measures to protect and save agricultural crops and orchards.

Phase of preventive protection

Taking all the necessary preventive measures that can contribute to protection against the effects of frost and cold, especially in agriculture and fruit growing, as well as in water supply, water management and industry.

Among the preventive measures that can somewhat contribute to protection against the effects of frost and cold, we should mention prognostic models, which will indicate the occurrence of frost in time, which would made it possible to take all necessary measures to protect and save agricultural crops and orchards.

One of these measures is the use of special covers for the protection of crops that let in moisture and light, and protect plants from low temperatures.

Also, by planting orchards and vineyards with a carefully selected variety, in a properly selected position and exposure for a specific area, the risk of frost and low temperatures can be reduced to a minimum. Many producers are not able to implement this and are therefore forced to fight low temperatures and frost with other available solutions (dew, smoke, covering fruit trees, anti-stress preparations).

Damages otherwise can be extremely large.

Rescue phase

Taking all necessary measures for the protection and rescue of agricultural products, orchards, water supply facilities and industrial plants, as well as protection and rescue on watercourses.

Protection and rescue of the fish stock.

Phase of elimination of consequences

Elimination of the effects of frost and cold in agriculture, fruit growing, on water supply facilities and watercourses, water management and industry.

Assessment of damage caused by frost and cold in agriculture, fruit growing, water supply, water management, industry and watercourses.

Findings:

- To propose to agricultural producers and other bodies that, within the framework of legal possibilities, they review the current legal regulations of insurance companies with the aim of amending and supplementing those regulations, in order to enable better implementation of property and personal insurance against natural and other accidents, and thus enable compensation for damage caused by natural disasters and other accidents.

4.1.10. Epidemics and epizootics of infectious diseases

In order to protect the population from the occurrence of epidemics and epizootics of infectious diseases that can threaten the life and health of people in the city, anti-epidemic measures are directed in three directions: destruction, removal or disabling of the source of infection, interruption of the routes and mechanism of transmission of infection at any stage and creating or increasing population resilience. In order to provide a quality response when epidemics and epizootics of infectious diseases occur, it is necessary to strengthen and maintain capacities for early detection, assessment, reporting and reporting, rapid public health response and coordination of all relevant

health institutions and taking preventive measures to prevent the spread of i reduced the burden of disease (hygienic and sanitary measures, vaccination, therapy).

Stages of preventive protection:

- strengthen and maintain basic capacities for immediate and effective response to public health risks,
- educate healthcare workers and the population for crisis situations,
- improve communication with the public health sector, the media and population,
- create a Plan for crisis situations in the event of a public health problem.
- provision of hygienically correct drinking water as well as sanitary protection of springs and facilities for public supply of drinking water,
- removal of waste water, etc. waste materials in a manner and under conditions that ensure protection against water and land pollution, as well as protection against the reproduction of insects and rodents,
- maintenance of sanitary-technical and hygienic conditions in public buildings, means of public transport and in public places.

- ensuring the healthiness of foodstuffs and sanitary-technical and hygienic conditions for their production and circulation,
- performing preventive disinfection, disinsection and pest control in populated areas, on public areas, in means of public transport, facilities for the production and sale of foodstuffs and other public facilities.

- early detection of the source of infection and ways of transmission of infection;
- reporting illnesses;
- isolation, transportation and treatment of sick persons;
- disinfection, disinsection and pest control;
- health education of the population;
- medical supervision of employees and other persons and of telephone operators;
- immunization, seroprophylaxis and chemoprophylaxis;
- quarantine;
- opening of temporary hospitals in case of large-scale epidemics;
- mobilization of health and other institutions and citizens, business and other facilities, means of transport;
- prohibition of sale and destruction of certain foodstuffs;
- prohibition of gatherings in schools, cinemas, theaters, sports halls;
- prohibition of movement in an infected or endangered area;
- prohibition of the circulation of certain goods;
- ban on travel to countries where the epidemic reigns.

Rescue phase

Epidemics and epizootics cause incalculable consequences for the health of people and livestock, so it is necessary to prevent their spread. The bearer of protection and rescue in the event of epidemics of infectious diseases are the organs and services of regular activities: JZU health centers, outpatient clinics, general hospitals, clinical centers, Health Insurance Institute of TK and FBiH, Ministry of Health of TK and the Federation of BiH, Veterinary institutes and stations, organizations of the Red crosses and others.

Effective identification, treatment of livestock and prevention of transmission of these diseases to humans are necessary to prevent epizootics of infectious diseases.

The bearer of protection and rescue are the organs and services of regular activities, i.e. the veterinary service that undertakes: animal health protection, human health protection from infectious diseases that can be transmitted from animals or food of animal origin to humans, detects and diagnoses infectious diseases, implements RHB animal protection and foodstuffs of animal origin, treats injured and diseased livestock, carries out field sanitation, participates in sheltering and evacuation of livestock, and more.

In the event of infectious diseases in humans, HES will be engaged for examination, identification of the disease and referral for treatment. In cooperation with the HES, sanitary, veterinary and communal inspectors will draw up a plan of measures to prevent the spread of infectious diseases, isolate the area where the infection appeared, carry out an inspection and vaccination of the population in that area, ban the movement of goods from the said area (with the help of the police) carry out complete disinfection of the area where the disease appeared, in case there are people who died from an infectious disease, proper burial and sanitation of the area should be carried out. In the event of the occurrence of infectious diseases in animals, the Veterinary Station will be engaged with its forces and resources to examine and determine the disease, HES to examine people who were in contact with sick animals, veterinary, sanitary and communal inspectors for legal

the implementation of all procedures, the police for the purpose of security and implementation of measures of ŽIS and other as necessary. Isolation of the field, disinfection, disinsection and deratization of the field, removal, proper burial or burning of dead animals and examination and vaccination of the remaining animals will be carried out. Make a decision to ban the trade in animals and products of animal origin and monitor whether the decision is properly implemented.

Phase of elimination of consequences

In the phase of eliminating the consequences, all those measures are taken that should contribute to the complete elimination of the causes that led to the epidemic. This includes disinfection, disinsection and pest control, provision of safe water for drinking and food, cleaning and disinfection of wells and other water supply facilities, hygienic disposal of waste, sanitation of water facilities and more.

Findings:

In the case of major epidemics, as well as in the case of natural and other disasters (floods, earthquakes, fires) that can lead to an epidemic, the authorized bodies must mobilize health workers, as well as other citizens, ensure appropriate quantities of the necessary medicines, vaccines and antivirals, medical supplies, means for disinfection, disinsection and deratization, as well as plasma blood products. In addition, you need:

- Strengthening and maintaining capacities for early detection, assessment, reporting and reporting of events, rapid public health response and coordination of all relevant health institutions and taking preventive measures to prevent the spread and reduce the burden of disease (hygiene-sanitary measures, vaccination, therapy),
- Education of health workers for crisis situations (planning, allocation of resources) and education of the population on the prevention of infectious diseases,
- Improve and speed up procedures for the procurement of vaccines and antiviral drugs,
- Improve communication with the media and the population,
- Strengthen and maintain basic capacities for responding to public health risks (strengthening of hospital capacities, education of health workers, strengthening of laboratory diagnostics)
- A plan for protection against infectious diseases (resource planning) is necessary, followed by the organization of medical services (staff, equipment, premises), transport of patients, trained and responsible personnel
- Considering the mode of transmission and ways of spreading the disease, the plans for the control of infectious diseases should also be adapted to groups of infectious diseases
- Communication and coordination of the public health sector, civil protection, police and army (including the media)
- Plan for crisis situations in the event of a public health problem, assessment and care of the sick, (eg isolation, treatment, other types of support) disinfection, disinsection, deratization and decontamination.

Non-governmental structures, which are involved in these cases, are: Red Cross and other humanitarian organizations in cooperation with the City Headquarters of Civil Protection.

Infectious diseases remain a significant health and socioeconomic problem, especially in the circumstances of social transition and a number of determinants that contribute to their occurrence and spread. Response and recovery capacities are limited.

It is important to establish cooperation with veterinary institutions in order to timely exchange relevant information regarding zoonoses, diseases transmitted from animals

on people. The goal of this cooperation is to prevent natural and other accidents in the fastest and most efficient way, to reduce the possibility of the spread of epidemics or to reduce their consequences.

In order to improve measures for early detection and prevention of epizootics, it is necessary to:

1. The emergence of infectious diseases has serious and far-reaching consequences for public and veterinary health, as well as socio-economic consequences, since they affect the production and trade of live animals and products of animal origin, so it is necessary to provide a legal basis and program for disease control. for disease control, provision of resources for continuous implementation of measures, as well as securing financial resources.
2. In order to improve measures for early detection and prevention, it is necessary to ensure:
 - Continuous raising of citizens' awareness of possible risks and prevention measures, as well as procedures for quick response and reporting, as well as ongoing training and education,
 - Create plans for dealing with emergencies and natural and other disasters and establish funds for their implementation, in accordance with the provisions of the legislation in force,
 - Strengthening the capacity of authorized veterinary laboratories,
 - Established better intersectoral communication and cooperation,
 - Provide funding sources for recovery from natural and other disasters
3. It is necessary to ensure the continuation of residue monitoring activities in live animals and products of animal origin in accordance with the legislation in force and
4. Food control and safety

4.1.11. Calamities of plant diseases and pests

Phase of preventive protection

This measure of protection against plant diseases, insects, weeds and other pests is realized by regular application of appropriate fungicides, insecticides and herbicides at certain stages of plant development.

In cooperation with the competent authorities of the Ministry of Agriculture, Forestry and water management, it is necessary to take measures to improve the protection of the health of plants in the area City of Grajanica

These measures are reflected in:

- to strengthen the services that carry out inspection of plants intended for sowing and planting, as well as tasks observation, forecasting, signaling and reporting.
- establishment of phytosanitary registers, better collection of information and keeping the necessary records in order to have reliable data on occurrence, number and spread of harmful organisms in the areas and places of individual production plant species,
- implementing regulations to prevent the introduction and spread of harmful organisms, - performing a risk assessment of harmful organisms,
- raising the awareness of producers about the necessity of implementing agrotechnical preventive measures and the obligation to undertake prescribed or ordered measures.

Constant monitoring of meteorological conditions (temperature, air humidity, amount of precipitation) and other indicators important for the occurrence of plant diseases and pests.

By taking soil samples, conducting hygienic treatment of warehouses, processing rooms and keeping plants through competent services and companies in the field of agriculture. Constant control of devices for plant processing and controlling the use of plant protection agents.

Protection of plants from diseases and pests is carried out individually, on private properties and companies that are engaged in the cultivation of different plant species for human and livestock nutrition, as well as forests. The application of protective agents is mostly unprofessional and excessive, especially in the private sector, which leads to excessive soil and watercourse pollution. Therefore, the protection of plants from diseases and pests should include experts from companies, cooperatives, etc. which through various educational methods (seminars, radio and TV broadcasts, propaganda leaflets, etc.) will influence the correct application of protection means in order to increase the effect of protection and reduce its negative impact on the eco-systems that surround humans. With the timely and professional use of protective agents in certain stages of plant development, diseases can be eliminated that can reduce yield and can be transmitted to other plants. In this way, preventive action can also be taken against various types of pests that attack plants. Disease transmission can also be prevented by controlling plant products on the market.

Rescue phase

In the event of the appearance of some of the plant diseases and pests in the area of the city of Građanica, a preventive measure to save plants and plant products would be implemented with the help of competent professional services.

Upon the occurrence of infectious plant diseases, individual agricultural producers, agricultural companies and competent agricultural inspectors will:

- destruction and burning of infected plants,
- hygienic and sanitary treatment of warehouses and disinfection, disinsection and deratization in order to destroy pests,
- carry out an adequate check of protective means with the mobilization and rational use of personnel and material technical potential for the implementation of measures to protect plants and plant products,

- prohibition of cultivation of certain types of plants, for a certain time and in a certain place, as well as putting contaminated plants and plant products out of circulation and use.
- The largest number of plant diseases cannot be subsequently treated, so the emphasis in protection is placed on preventive protection measures. Agricultural engineers and technicians of ZZ "Građanka", the Association of Agricultural Engineers and Technicians, as well as the owners of private agricultural pharmacies, which purchase and sell protective equipment, will be involved in undertaking these measures. Protection against other plant pests and predators can also be carried out in the phase when they appear in greater numbers on crops, fruits and forests (rodents, grasshoppers, grubs, various insects), but this type of protection will also be carried out under the control of agricultural engineers and technicians, forestry engineers and other similar professions. Remediation of the consequences will be carried out according to the same procedure as in the case of all other natural disasters (formation of expert commissions by the competent authorities - City, Canton, Federation to determine the extent of damages, and their remediation, according to a plan adopted by experts from the area where the damage occurred). Funds for rehabilitation will be provided from the funds of the owners - individual agricultural producers, as well as possible assistance from the competent authorities of the Tuzla Canton and the Federation of Bosnia and Herzegovina.

Phase of elimination of consequences

In this phase of eliminating the consequences of plant diseases and pests, all the professional services, forces and means we have in the area of the city of Građanica and the Tuzla Canton will be engaged, with the aim of eliminating the consequences.

Conclusion:

- According to the threat assessment of the Federation of Bosnia and Herzegovina, the current health status of forests in Bosnia and Herzegovina is assessed as bad, which is the result of many negative influences, objective and subjective in nature. The objective causes are directly or indirectly related to the war (damage to trees by projectiles and mine-explosive means, fires), which in the process of chaining harmful factors led to the overpopulation of some insects and the mass occurrence of diseases. Subjective causes are the result of the disorganization of the state, the absence of a unique concept of forest management, uncontrolled felling (theft) of wood, etc. In order to preserve forests, the most important natural resource in Bosnia and Herzegovina, it is necessary to determine the strategic foundations of forestry development, to pass an umbrella law on forests that will respect international conventions concerning forests, but more than that, it is necessary to change the understanding of forests and to more strongly affirm their general useful functions.
- In forest fires, a large area under forests of different categories burns every year, which is especially pronounced in the summer months and dry periods, which causes great economic damage as well as a reduction in the wood stock.
- Damage caused directly to forests by man is the result of non-implementation of legal and by-laws in this area, which results in failure to establish appropriate forest order, mechanical damage to trees due to careless use of machinery, uncontrolled disposal of waste materials, etc.
- As a result of illegal logging, erosive processes (landslides, landslides) have been recorded, and they are especially pronounced on all terrains with very steep slopes in the entire territory of the Federation of Bosnia and Herzegovina.
- The occurrence of forest drying is also caused by high air pollution and the so-called „I pickle rains“

Those responsible for forest protection are the Federal and Cantonal Ministries of Agriculture, Water Management and Forestry, that is, the Federal/Cantonal Administration for Forestry and the Cantonal Forest Company/Farming, as well as specialized scientific institutions and scientific educational institutions in the field of forestry.

4.2. TECHNICAL - TECHNOLOGICAL ACCIDENTS

4.2.1. Big fires

Fire protection must be organized and implemented by: city administration services and other institutions, legal and natural persons, and citizens in all buildings and spaces where they live and work, including forests, forest and agricultural lands, as well as other natural resources in the city area.

Owners or users of buildings and spaces, managers of residential buildings, as well as owners and users of forests, forest and agricultural land from the aforementioned paragraph, are responsible for fire protection in these buildings and spaces.

Large forest fires

Large-scale forest fires pose a great danger to material goods, and in extreme situations to people. In the case of large-scale forest fires, areas contaminated with UXO and MES are particularly at risk. In the area of TK, JP "Sume TK" dd Kladanj was formed, which manages the forests in the area of TK, (the total area under forests is 79,629.00 ha, of which 10,071.14 ha are mined).

The company has 4 forest farms (ŠG): "Konjuh" Kladanj, "Sprejko" Živinice, "Majevičko" Srebrenik and "Vlaseničko" Kladanj and an organizational unit for private forests.

The forest fire protection plan for the year 2022 of the Public Enterprise "Forests of Tuzla Canton", joint-stock company Kladanj from February 2022, determines the organization of fire protection, preventive and other measures to be taken for forest protection, monitoring and fire alarms, technical equipment and points for extinguishing fires, roads within forest farms, sources of water and catchment, engagement of firefighting units, engagement of intervention units, cooperation on the ground, operational and technical fire extinguishing plan, fire detection and reporting. According to the expert assessment in JP "Šume TK" dd Kladanj, which was done using the method of assessing the impact of the most important parameters on the outbreak of forest fires, it can be concluded that in all 4 forest farms and the Protected Landscape "Konjuh", the risk of forest fires is high. The main causes of forest fires can be identified as: humans, open flames, sparks, natural phenomena (lightning, solar heat), chemical reactions and others. Vegetation, i.e. the presence of tree species and the anthropogenic factor, has the greatest influence.

Phase of preventive protection

Due to the existence of a series of fire hazards, it is necessary to constantly and systematically take measures to completely remove or possibly reduce to a minimum the numerous sources of danger for the outbreak of forest fires.

Only a well-organized fire protection service, as well as a well-developed work plan in terms of preventive action, will greatly reduce the possibility of a possible fire becoming more intense.

Looking at the fire burden of forest treasures in the area of Tuzla Canton in the phase of preventive protection, it is necessary to:

- organize a fire protection service,
- establish headquarters and units for fire protection in all forest farms,
- form on-call services from employees in forest farms that are activated during the summer dry period,
- to form mobile teams whose task is to visit the terrain, scout for any fire that may have occurred, determine the burned area and program for engaging firefighting personnel.

- pay special attention to regular training of workers for initial fire extinguishing.
- to declare all picnic areas in our canton as areas that are significantly threatened by fire, and to accordingly prescribe measures to protect against forest and crop fires,
- prohibit the dumping and burning of garbage near forest treasures,
- the local staff are especially familiar with the facilities that are particularly vulnerable to fire,
- efficiently organize the protection of forests from fire through forest guards and fire watchers at observation points,
- acquire means of communication with the aim of the fastest possible reports,
- regularly clean and maintain passable forest access roads,
- mark the areas with forest treasures with warning signs about the prohibition of lighting fires, dumping garbage and the like,
- especially use the media to warn of the danger of fire,

Rescue phase

A quick response to a reported fire and limiting it to as narrow a space as possible is one of the basic prerequisites for its quick neutralization. This means that the quick detection of the place of origin of the fire significantly simplifies the extinguishing process and requires the engagement of a significantly smaller number of personnel and equipment as well as means for extinguishing. Particular attention should be paid to:

- type, speed of spread and area affected by the fire,

- the possibility of building obstacles and their existence as natural obstacles,
- the possibility of strengthening and weakening of the fire due to the configuration of the terrain,
- the possibility of approaching the edges of the fire and using machinery,
- water supply and the possibility of using water,
- the existence of mines and mine-explosive devices in the area affected by the fire the field.

According to the established factual situation, that is, whether the fire is of a smaller or larger scale, duty teams in the Forestry will be activated, if it is a community forest, and if it is a private property, the forest owners will be immediately engaged.

Also, on the basis of needs assessments, the responsible persons of Forest TK call firefighting units, which are mostly trained and qualified to extinguish small and medium-sized forest fires.

"Šume TK" dd plans to form a firefighting unit in the coming period, which would be the first to respond in the event of a large-scale fire that cannot be extinguished by the company's workers. If it is about larger forest fires, then the State of Natural Disaster is declared and the VJ from the TK area is engaged.

Phase of elimination of consequences

- hygiene of burned surfaces,
- afforestation of burnt areas,
- assessment of the damages caused.

Fires in residential, industrial, business and other buildings

Fire protection and rescue includes: preparation and implementation of preventive measures in all environments, facilities, places and spaces where there is a possibility of fire, organizing and preparing forces for fire extinguishing, organizing observation and warning about fire occurrences, extinguishing and localizing fires and rescuing people and material goods from buildings and areas threatened by fire.

Fire protection and rescue from the aforementioned paragraph is organized and implemented as personal and mutual protection.

Fire protection and rescue is organized and carried out within the framework of residential and commercial buildings and represents a very important and necessary form of organization, and it is especially important to organize and carry out preventive protection that can influence the prevention of fire occurrence, and professional and volunteer firefighting units as and other forms of firefighting organizations perform tasks within their jurisdiction in accordance with the regulations on fire protection and firefighting.

Phase of preventive protection

Due to the existence of a number of fire hazards, it is necessary to constantly and systematically take measures to completely remove or possibly reduce to a minimum the numerous sources of fire hazards in residential, commercial, business and other buildings. Only a well-organized fire protection service, and a well-developed work plan in terms of preventive action, will greatly reduce the possibility of a possible fire growing into a fire of greater intensity.

Considering the fire load of urban zones, and industrial, business and other buildings in the area of the city of Građanica, in the phase of preventive protection it is necessary:

- that all subjects of society and individuals have a minimum of knowledge in this area and that this knowledge is applicable in case of need. Practically, this means that every citizen and company employee should know the dangers of fire, how to use tools and equipment, how to notify and other duties in such circumstances.

- proper spatial planning of the construction and furnishing of buildings, which implies the prediction of such solutions that will ensure sufficient mutual distance between buildings, wide roads, free passages around the entire building and all other necessary assumptions that enable, in the event of a fire, to be able to quickly and efficiently act,

- compliance with construction standards, such as proper construction of buildings, resistant construction materials and equipment, installation of fire protection equipment and the like, the method of burning and the type of firebox, as well as the method of fuel storage.

Preventive fire protection measures as a basic form of preventive protection include compliance with fire protection regulations during the planning and construction of buildings and settlements, namely: appropriate selection of building materials, construction of road communications, construction and proper arrangement of the hydrant network, provision of water for extinguishing fires (water supply network, wells, pools, etc.), mandatory procurement and servicing of PP apparatus, regular training of employees and citizens for extinguishing initial fires and proper storage and use of flammable materials, procurement of handy tools for initial fire extinguishing and training and equipping firefighting units for quick intervention. Preventive fire protection measures in open spaces include the construction of observation posts, cutting and arranging forest complexes, construction and maintenance of roads, development and training of the reporting system, installation of signs prohibiting the use of fire in risky areas and regular notification and warning of citizens about the dangers of fire and their obligations in such situations, through means of public information and posters.

The aforementioned preventive measures will be carried out by: City Service for Urban Planning, Housing and Communal, Geodetic and Property Legal Affairs, Water Supply and Sewerage, PVJ Gražanica, companies and others. legal entities, gas stations and other companies that use hazardous substances in the production process, the City of Gražanica, the CZ Service and facility owners. Preventive measures of "Forest TK" with employees and fire out by: JP protection and rescue structures in the company, forest owners, protection in open space will be carried forestry inspectors, Police Department, City Services and citizens.

Rescue phase

Quick and efficient neutralization of the fire is the essence of the implementation of fire protection, when a fire has occurred in a building.

Every citizen who notices a fire within the framework of personal and mutual protection is obliged to put it out if he can do so without danger to himself and others.

If the citizen is not able to put out the fire, he is obliged to inform the nearest fire department or civil protection operation center or the police station about the fire.

Any timely notification of the location of the fire significantly simplifies the extinguishing process and requires the engagement of a significantly smaller number of personnel and equipment as well as extinguishing means.

In this phase, the following measures should be taken in particular:

Evacuation of the endangered population.

This is one of the basic measures by which the endangered population is taken away from the endangered area or facility in an organized manner. In every fire, it is to be expected that there will be a greater or lesser concentration of toxic and suffocating gases and steam, partial demolition of the building, destruction of passageways, loss of electricity, and the like, and the evacuation of the population is the first and basic rescue measure.

In order for the rescue and evacuation operation to be successful, it is first of all necessary to prevent the creation of panic, use the shortest and safest way out of the facility, illuminate the evacuation routes, and

take the population to a free and safe space, in the shortest possible time. In multi-story residential, business, industrial and other buildings, exit routes for evacuation are of particular importance.

In business and public buildings such as theaters, cinemas, hospitals, exit doors are of particular importance, in addition to exit routes, which must always be easily recognizable and illuminated. In case of major fires in residential, business and industrial buildings, where the evacuation-rescue of people cannot be carried out through the listed existing exits, appropriate firefighting equipment such as fire ladders, hydraulic platforms, chutes, etc. will be used.

Fire extinguishing

Firefighting measures are a very complex and responsible job.

Taking all safety and precautionary measures at the scene of the fire is one of the prerequisites for successful and efficient neutralization of the fire.

Fires in closed rooms develop a high temperature and a large amount of smoke, so people who put out the fire, in such rooms, must use protective means as protection for the respiratory organs, and protective clothing.

Special attention should be paid when there is a possibility of encountering gas and electrical installations.

In the area of the city of Graňanica, during the rescue phase, the following can be engaged: citizens in the framework of personal and mutual protection, forces and resources of legal entities, PVJ Graňanica, the Protection and Rescue Service and other protection and rescue forces.

In cases of small-scale fires, PVJ is engaged with the help of citizens, so in the past experiences it has worked successfully in most cases.

In large-scale fires, when regular forces are unable to localize and extinguish the fire, additional forces and resources are engaged. In its regular activity, the CZ service monitors the situation in the city area and in the event of learning about a large-scale fire, it animates the commander of the GŠCZ to call an emergency headquarters meeting and, based on the facts gathered by the CZ service, proposes to the Mayor to declare a state of natural and other disasters. After declaring a major fire accident, GŠCZ manages protection and rescue actions. In companies, in the event of a fire outbreak, workers are first engaged with their own equipment (which they are required to have according to the law on fire protection), then the professional fire brigade (PVJ), and if necessary, additional forces and equipment (City Specialized Unit CZ, forces and funds from other companies, etc.). Fires in buildings and populated areas have been successfully extinguished by PVJ with the help of citizens, according to past experiences. So we should still count on the mentioned forces, in situations that exceed their capabilities, additional forces and resources will be engaged (professional firefighting units of neighboring municipalities/cities and cantons).

Based on data from the previous period in the area of the city of Graňanica, the most frequent and largest fires occurred in open areas (forest fires and fires in low vegetation).

In the fire rescue phase in the open area, engage the owners with their own forces and resources (Forestry and owners of private forests), then PVJ Graňanica. All the time that the danger of fire lasts, citizens should be invited, given instructions and warnings, through means of public information and posters, asking the Council of the Ministry of Health to engage and organize citizens in firefighting through their members and trustees. In cases where the fires are of a larger scale and the aforementioned forces are not able to localize and extinguish the fire, GŠCZ will engage the Protection and Rescue Services and other available protection and rescue forces, and if necessary, will seek help from neighboring municipalities, Cantons, Entities

Federation and the RS and the Armed Forces of Bosnia and Herzegovina. While the fires last, the forces of the PU Gražanica and the first aid service of the Health Center will be engaged.

Phase of elimination of consequences

- Removal of ruins,
- Rehabilitation of damaged and destroyed buildings in accordance with possibilities,
- Assessment of the damages caused.

4.2.2. Demolition or overflow of the dam on the hydroaccumulation

Dams on hydroaccumulations need to be regularly and well maintained, and on time the dangers of floods and during the duration of the floods to manage them in an appropriate way.

The monitoring and warning system, for cases of danger of a large tidal wave, should be brought to a functional state as soon as possible. To reduce material damages in can be influenced to a large extent by appropriate spatial planning.

Phase of preventive protection

Regular control of the static characteristics of dams at HA, by competent professional institutions.

Regular repair of all dam damage.

Management of the dam facility, at HA, should be carried out in accordance with the Water Management Permit issued by the competent ministry, as well as in accordance with the Dam Facility Management Plan.

Establishing a system of regular security of dam facilities. In the event of high water, i.e. the inflow of large amounts of water into the HA, during heavy and prolonged rainfall, it is necessary to activate the HA Management Plan, in case of high water, in order to prevent unwanted consequences for the dam facility at the HA.

Establishing an appropriate reporting and warning system that would be activated in case of danger, due to the formation of a large flood wave, for the areas downstream of the HA.

In order to be able to successfully implement the planned measures for the protection and rescue of the population in the area of the city of Gražanica in the event of a dam collapse, it is necessary to ensure 24-hour communication between the Operational Center of Civil Protection and the maintenance services at the dam, as well as with The operational center of the civil protection of the City of Lukavac, PU Lukavac, Gražanica, Dobož Istok, Petrovo and Dobož and the CZ Service of the City of Lukavac, Gražanica and Dobož Istok. This communication must function flawlessly, especially during periods of precipitation or snowmelt when there is a large influx of water in the reservoir. To alert the population in populated areas that would be threatened by a flood wave (Mirijina, D. Orahovica, D.

Lohinja, Pribava, Gražanica and Stjepan Polje), in accordance with Article 32, paragraph 5 of the Law on Protection and Rescue, it is necessary for legal entities to establish and maintain a notification and alarm system in the area that may be threatened by that activity for the purpose of timely evacuation of the population with of that area.

This implies the creation of conditions for the operation of the Operational Center of Civil Protection during all 24 hours. It is necessary that every school, as well as all other public institutions, MZs and companies that could be affected by a flood wave, make a plan for the evacuation of people and material goods, as well as places for receiving evacuees.

Rescue phase

- Evacuation of the endangered population and the most necessary material goods.
- Caring for the vulnerable and injured.
- Protection and rescue from demolition.

Protection and rescue on and under water.

First medical aid

Protection and rescue of animals and foodstuffs of animal origin.

Activation of reporting and alerting systems for all areas downstream of brane.

Urgent implementation of the evacuation of people and material goods, in accordance with the appropriate evacuation plans, from the areas threatened by the flood wave, in the event of the demolition of the dam on the HA.

Activating all available manpower and material and technical means for the evacuation of people and material goods.

In case of overflowing of large amounts of water, over the spillway at the dam and the formation of a large tidal wave downstream of the dam, engage all available manpower and material and technical means for immediate flood defense and protection and rescue of people and material goods.

In case of demolition of the dam on the "Modrac" hydro reservoir, all entities that would be threatened by the flood wave will act according to the plan they adopted (excerpt from the City Plan): Upon notification of the danger by JP "Spreĳa", the Civil Protection Operations Center will sound the appropriate with a signal to signal that a natural disaster has occurred, and in the implementation of evacuation and treatment measures (after declaring a state of natural disaster), the zis Services of the City of Graĳanica and other zis forces will be involved (services of the Health Center Graĳanica, PVJ Graĳanica, Gradska department for spatial planning, PU Graĳanica, and the institutions of neighboring municipalities/cities, cantons, the Federation and state bodies of BiH will be alerted through the CZ City Headquarters. Transport and other means of citizens and companies will be used for the evacuation of the vulnerable, and the evacuees will be accommodated in facilities that are specified in the plan and are out of reach of the flood wave.

In MZs that would be affected by the flood wave, citizens will be activated within the framework of personal and mutual protection, Councils, headquarters, units and commissioners of CZ, as well as citizens from areas that are not affected by the flood. Food will be organized in the facilities where the population will be relocated, as well as medical supervision of the evacuees. In cases of need, they will be engaged specialized water and underwater rescue units of neighboring and other municipalities/cities, companies and the Armed Forces of Bosnia and Herzegovina. Allow the evacuees to stay in reception facilities until the end of the danger is declared by the competent authorities.

Phase of elimination of consequences

Sanitation of the field.

Clearing sediments and debris after the passage of a destructive tidal wave.

Rehabilitation of roads, less damaged residential, public, commercial and other construction facilities, electrical, PTT, water and sewage installations and other infrastructure facilities.

Creation of plans for the construction of residential and other construction facilities, roads and the most important infrastructure facilities

Taking all necessary measures in order to normalize the overall life and work in the affected area.

Engagement of all competent entities to collect financial and material aid for rehabilitation of the consequences in the affected area.

Assessment of the damage caused to the affected area.

4.2.3. Radioactive and other pollution of air, water, land and foodstuff

The threat assessment determined possible consequences for people and material goods from RHB agents.

Phase of preventive protection

Taking all measures of inspection supervision and control of the quality of water, air, land and foodstuffs of plant and animal origin.

Installation of a system of control stations for air and water quality monitoring in watercourses.

Taking all preventive and protective measures provided for by law when working with radioactive isotopes, in institutions in the field of health, scientific research and education.

Realization of legally prescribed control measurements of radioactive radiation in the atmosphere, water and foodstuffs of plant and animal origin.

Regular control of the hygienic correctness of drinking water in city and local waterworks, as well as public fountains, wells, springs and other individual water facilities.

Regular inspection supervision and quality control of foodstuffs of plant and animal origin.

Compliance with environmental norms, when issuing environmental consent, for the operation of industrial, thermal energy and other economic enterprises, catering facilities, gas stations, dry cleaners and other craft shops, from the aspect of protection against air, water and land pollution.

Inspection supervision and undertaking the sanctions provided for by law in the case of disposal of waste material at "wild" waste material landfills.

Education of the population about the need to preserve an ecologically clean environment.

Rescue phase

Protection and rescue from radiological, chemical and biological pollution.

Engagement of competent services for RHB protection.

Environmental protection.

Protection of animals and foodstuffs of animal origin.

Protection of plants and plant products.

Engagement of inspection bodies in case of registration of cases of RHB contamination of air, water, soil, and foodstuffs of plant and animal origin, in order to put contaminated foodstuffs of plant and animal origin out of use, and to undertake measures provided for by law to protect the health of the population and the environment.

Engagement of specialized RHB protection units in order to identify the type and degree of RHB contamination of water, air, soil, and foodstuffs of plant and animal origin.

Phase of elimination of consequences

Sanitation of the field.

First medical aid.

Restoration of the fish stock in watercourses after its destruction, as a result of the pollution of watercourses with toxic substances.

Restoration of plant life and forest stock.

Assessment of damage caused by radioactive and other pollution of air, water, land and foodstuffs of plant and animal origin.

Phase of preventive protection

Protection against ionizing radiation is regulated by the Law on protection against ionizing radiation and radiation safety ("Official Gazette of FBiH", number: 15/99). This law determines measures to protect the life and health of people, current and future generations, measures to protect the environment from the harmful effects of ionizing radiation and the necessary radiation safety measures that should be taken when using sources of ionizing radiation. Due to the use of depleted uranium ammunition in the war in BiH (and around the town of Građanica-Ozren, Doboј), it would be necessary to determine the level of radioactive contamination of soil and water sources, in order to take certain measures to protect human and animal health.

Preventive measures for the protection of air, water and land would include the installation of a system for purifying waste gases and water from the plant, both in the area of the city of Građanica and in the area of neighboring cities (Lukavac and Tuzla), in accordance with international standards governing this area. The problem of air pollution in the city of Građanica in the winter period (smoke products from fuel) can be solved with a total solution of heating the city, which is planned for the next 4-5 years. The protection of the soil, as well as the products grown on it, is possible through the implementation of preventive measures for water protection, but also through the cleaning and regulation of watercourses, the planned collection, classification and disposal of waste, as well as the professional and rational application of artificial fertilizers and plant protection agents and inspection supervision over the implementation of all these measures.

Also, it is necessary in all settlements that entities that manage water resources and installations regularly control the hygienic correctness of water, in order to prevent the occurrence of diseases caused by defective water.

Phase of rescue and removal of consequences

Subsequent, i.e. operational measures in the case of air, water, land and food pollution risks would not produce results as in the consistent application of the listed preventive measures, and compliance with all legal regulations governing certain areas. Therefore, in the case of these accidents, it is necessary to insist on the implementation of preventive protection, so that the consequences for people, animals and material goods are as small as possible. If, however, there were environmental accidents that would threaten the life and health of people and animals in a certain area, measures would be applied and procedures depending on the type and extent of accidents: relocation of people and material goods, distribution and use of various protective means, control and normalization of the situation in the supply of water and food to the population, first medical aid, as well as carrying out subsequent treatment of the sick and injured. The implementation of protection and rescue measures in all these accidents will be managed by the CZ City Headquarters, and the City Administration Services, health, veterinary and other health organizations, as well as companies from the fields of agriculture, chemical industry, transport, fire department, as well as state bodies and humanitarian and non-governmental organizations.

EPIISODES OF INCREASED CONCENTRATIONS OF POLLUTANTS AND CONDITIONS FOR DECLARATION OF EPIISODES

Episodes of increased concentrations of pollutants in the area of Tuzla cantons are: preparedness, warning and alarm.

Episodes are declared on the basis of established air quality, i.e. by comparing the data obtained from the cantonal Air Quality Monitoring System with limit values, tolerance values and values of warning thresholds and alarm thresholds from the Rulebook on the manner of monitoring air quality and defining types

polluting substances, limit values and other air quality standards ("Official Gazette of the Federation of BiH No. 1/12).

In the event that episodes of increased concentrations of polluting substances are declared in the area of Tuzla Canton, the declaration is published in electronic and written media, for a duration that depends on the duration of the episode.

PREPARATION EPISODE

If the measured concentrations of at least one pollutant exceeded the values for the preparedness episode listed in Table 1, at least three measuring stations on in the area of the city of Tuzla during the two previous days with at least three measured consecutive hourly values during one day, or at a measuring station located in one of the municipalities of the Tuzla Canton, during the two previous days with at least three measured consecutive hourly values during one day one day and at the same time it is still expected that a stable weather situation will continue in the next 48 hours, which favors an increase in pollution, a preparedness episode is declared for that municipality.

WARNING EPISODE

If the measured concentrations of at least one polluting substance exceeded the values for the warning episode listed in Table 1, at at least three measuring stations in the area of the city of Tuzla during the two previous days with at least three measured consecutive hourly values during one day or at a measuring station that is located in one of the municipalities of the Tuzla Canton during the two previous days with at least three measured consecutive hourly values during one day, and at the same time the continuation of a stable weather situation in the next 48 hours which favors an increase in pollution is still expected, a warning episode is declared for this municipality.

ALARM EPISODE

If the measured concentrations of at least one pollutant exceeded the values for the alarm episode listed in Table 1, at least three measuring stations in the area of the city of Tuzla during the two previous days with at least three measured consecutive hourly values during one day, or at the measuring station which is located in one of the municipalities of the Tuzla Canton, during the two previous days with at least three measured consecutive hourly values during one day and at the same time the continuation of a stable weather situation is still expected in the next 48 hours which favors the increase of pollution, the episode is declared alarms for that municipality.

Forecasting the weather situation must be based on official data from the Federal Hydrometeorological Institute.

Determined air quality values for episodic situations

Polluting matter	Determined 1 h values (in $\mu\text{g}/\text{m}^3$)		
	For the episode Preparedness	and episode Warnings (1 h)	For the episode Alarms (1 h)
	1 h		

Sulfur dioxide (SO ₂)	150	455-2014 440-2015 425-2016 410-2017 395-2018 380-2019 365-2020 350-2021	500
Nitrogen dioxide (NO ₂)	200	270-2014 260-2015 250-2016 240-2017 230-2018 220-2019 210-2020 200-2021	400
Ozon(O ₃)		180	4240

Note: The missing value for ozone (O₃) in table 1 is not prescribed by the Federal Regulations.

Action of the responsible entities after the announcement of the episode

The Ministry regularly monitors air quality from the cantonal air quality monitoring system and reports daily to the Cantonal Operations Center and municipal/city authorities operational centers of civil protection.

Immediately upon fulfillment of the requirements from Article 5 of the plan, the Ministry responsible for air quality monitoring in the area of Tuzla Canton announces the appropriate episode of the plan, based on the data obtained from the cantonal air quality monitoring system and through the municipal/city and cantonal operational centers of civil protection. The cantonal administration, that is, the municipal/city civil protection service to which it refers.

The municipal/city civil protection service, after the declaration of an emergency episode by the Ministry, undertakes measures in accordance with the measures established in Article 7, paragraph (1) of the Plan of intervention measures in cases of exceptional air pollution.

After the announcement of the warning or alarm episodes, the Ministry undertakes its part of the measures established in Article 7, Paragraph (1), points a) and b).

After declaring a warning or alarm episode, the municipal/city civil protection service activates the municipal/city civil protection headquarters, which, in accordance with its competences, undertakes the implementation of the measures established in Article 7, Paragraph (2) and other measures in accordance with the Law on the Protection and Rescue of People and material assets from natural and other disasters (hereinafter: Protection and Rescue Act).

Municipal/city civil protection services report daily to the Cantonal Administration about all measures taken through the Cantonal Civil Protection Operations Center.

The Director of the Cantonal Administration, in accordance with Article 134 of the Law on Protection and Rescue, coordinates and directs cantonal forces and means of civil protection for the implementation of agreed protection and rescue measures to the municipalities/cities that requested assistance.

In the event that two or more municipalities/cities are declared a state of natural disaster due to excessive air pollution, the director of the Cantonal Administration activates the Cantonal Headquarters.

The cantonal headquarters, in accordance with its competences established by the Law on Protection and Rescue, undertakes appropriate protection and rescue measures in accordance with requests for assistance received from municipalities.

If they assess that the implementation of the measures established in Article 7, paragraph (2) in the municipalities/cities does not give the desired result, the Cantonal Headquarters prepares and proposes to the Government of Tuzla Canton to make a decision on the declaration of a state of natural disaster due to excessive air pollution.

After making a decision on the declaration of a state of natural disaster, the Cantonal Headquarters undertakes management and, together with the Ministry and municipal/city headquarters of civil protection, implements the measures established in Article 7, paragraph (2) and other protection and rescue measures that it determines are necessary. When the Ministry, based on the results of measurements from the air quality monitoring system, declares the end of some of the declared episodes and, through the Cantonal and municipal/city centers of civil protection, submits it to the Cantonal administration and municipal/city civil protection services, further activities are undertaken in accordance with the Law about protection and rescue.

Measures in episodic situations to reduce increased concentrations of pollutants:

(3) In the case of declaring an emergency episode, the following measures are taken:

- e) Warning to risk groups of the population to reduce movement.
- f) Appeals to reduce the use of motor vehicles.
- g) A warning that any burning of waste in households is punishable and a call that in case there are suspicions that such illegal actions are being carried out, they will be reported to the competent inspections or communal wardens of municipalities and cantons.
- h) Invitation to legal entities, owners or users of boiler rooms or fire pits, to take all necessary technically feasible measures to reduce emissions into the air, including the cleaning of flue installations.

(4) In case of declaration of episodes of warnings and alarms, the following actions can be taken
measures:

- g) Provision of additional measurements with a mobile measuring station for measuring quality air in critical locations.
- h) Warning at-risk population groups to reduce movement,
- i) Restriction of the movement of motor vehicles in a certain area and temporary restriction of the use of motor vehicles, with the exception of police vehicles, public city transport, emergency intervention vehicles (ambulance vehicles and fire engines), vehicles with diplomatic plates, vehicles of the Ministry of Defense and other vehicles with approval .
- j) Reduction of fuel consumption for room heating while reducing the temperature in rooms that are heated.
- k) Reduction of production and replacement of propellant fuels in industrial and other facilities that use solid fuels and heavier heating oils in the technological process.
- l) Increased control of vehicles and referral to an extraordinary technical inspection of vehicles that visibly emit large amounts of black smoke and soot
- m) Ensure the smooth flow of motor vehicles at the main city intersections.

End of episodes

If during the duration of the declared episode: a trend of decreasing concentrations of polluting substances is established in the previous 24 hours, based on the results from the measuring stations or the official meteorological service forecasts the end or weakening of the defined stable meteorological situation in the next 24 hours, the end of the episode is declared or, a change in state episode.

4.3. OTHER ACCIDENTS

4.3.1. Major accidents in road, rail and air traffic

Phase of preventive protection

In order to reduce the number of road accidents in the city Gražanica should provide:

- implementation of legal and by-laws, regulations, as well as strategic, programmatic and planning documents,
- an information-technical database with the aim of creating an expedient, adequate and responsible traffic risk management system. - orientation to preventive measures, by establishing procedures, in accordance with the real needs and requirements, management of dangerous places - adequate assessment i planning control inspections of critical places and sections of roads/road facilities.

The safety of railway traffic, in addition to the human factor, is the most important conditioned by the level of security of level crossings and stations with signaling and safety devices.

By involving all interested parties in the process of improving safety in traffic it is necessary to achieve:

- systematic monitoring and implementation of legally prescribed measures, including repressive ones measures,
- media campaigns promoting protection measures for the particularly vulnerable category,
- formation and training of emergency services for adequate response,
- introduction of traffic education in all educational institutions.

Since not a single detour has been built in the area of the city of Gražanica, all roads (1 highway, 3 regional and a large number of local and uncategorized roads) pass through populated areas, which increases the possibility of major traffic accidents. Preventive protection measures are: construction of a bypass road, construction of sidewalks through populated areas, arrangement of roads, installation of signs and signaling, increased control of roads by the police, expansion of traffic culture among drivers, citizens and especially students through school lessons, better maintenance of roads and better technical inspections of vehicles, regular winter maintenance of roads (which is dealt with in protection against snow drifts) and the use of winter equipment on vehicles (which is regulated by the Traffic Act).

Public information media play a major role in preventive protection with their regular information about road conditions and weather conditions that affect traffic safety.

Rescue phase

Since there are accidents on the roads in the area of our city in which a small number of vehicles are involved in the rescue phase, the participants in the traffic who are on the spot, the traffic police, the PVJ and the workers of the emergency service who transport the injured to the Health Center or the General Hospital in Gražanica and, if necessary, to the University Clinical Center in Tuzla.

Phase of elimination of consequences

In the phase of removing the consequences, in the event that there is a stoppage in traffic due to a traffic accident, road users, PU workers, citizens who happen to be at the scene and traffic services participate in the clearing of the road.

4.3.2. Accidents from UXO and MES

Protection against unexploded ordnance (hereinafter: UXO) is a measure that consists in finding, detecting, marking, excavating, transferring, loading, transporting, unloading, temporary storage, deactivation and destruction of UXO, in all areas on where those funds are located.

Phase of preventive protection

Citizens, legal entities, state bodies and other institutions are obliged to immediately inform the nearest operational center of civil protection or the nearest police department or civil protection service of the city about discovered UXO, and mark the location of the UXO with a visible sign and, if possible, secure that place until authorized persons arrive.

On a special form, the Civil Protection Service sends the task to KUCZ, which engages the civil protection unit for the removal of mines and UXO of the Federal Administration of Civil Protection in the manner regulated by the Law on Demining in Bosnia and Herzegovina and the Standard Operating Procedures for the Removal and Destruction of UXO, which director of the Federal Administration of Civil Protection.

As a large area of the city of Gračanica is polluted by a large number of mines and UXO, the Civil Protection Service uses radio broadcasts and other educational methods to inform citizens about the dangers of UXO and MES, and the procedures for finding them. This type of education is also carried out in elementary schools in cooperation with the Red Cross of the City of Gračanica. A common form of educating the population is through printed brochures and leaflets printed by various non-governmental and other organizations.

Since the demining process is slow (insufficient financial resources), preventive and permanent marking of risk areas is carried out, in order to prevent people from suffering. All demining and marking activities in accordance with the Law on Demining are carried out by the Center for the Removal of Mines BiH (BH MAC), RU Tuzla and the Demining Teams of the Federal Administration of Civil Protection, which carry out demining operations in the manner established in the Law on Demining in BiH, standards SOP of BiH.

Rescue phase

The rescue of victims in minefields or from individual UXO and MES is carried out by the mine and UXO removal units of the Federal Administration of Civil Protection, which are engaged through the Cantonal Administration of CZ Tuzla, at the invitation of the CZ Service, according to a procedure that requires the involvement of competent police services, as well as the Cantonal Prosecutor's Office, which orders the recovery of victims from risky areas, their identification, referral to health facilities and burial of the victims.

Phase of elimination of consequences

Since the greatest number of casualties from mines and other UXO occur in open space, the phase of removing the consequences is mainly reduced to material and social care for the families of the victims, and providing adequate treatment for the injured.

This type of assistance includes the Center for Social Work, City Services and the Mayor, as well as health and humanitarian and non-governmental organizations.

5. Basic goals, tasks and methods of achieving protection and rescue, with guidelines for organizing forces and means of civil protection, i.e. protection and rescue forces.

The protection and rescue development program in the area of the city of Građanica, in the planned goals and tasks, is closely related to the Strategy for the development of the city of Građanica.

In order to get closer to the vision of protecting and saving the city of Građanica, it is necessary to define goals that will be realized in the coming period. Taking into account the limited resources, in terms of financial and institutional capacities, the following goals and objectives are defined: Respecting the lessons learned, our own and others, and especially the experiences of the past

difficult period, phenomena, events and trends that have or may have an impact on the organization and functioning system of protection and rescue of people and material goods for the future period

Development Program for 2023-2027. the following strategic goals are carried out this year:

Strategic goal 1. Construction and strengthening of the protection and rescue system

1.3. Financing of emergency measures for the protection and rescue of people and material goods to prevent the spread of danger and eliminate the consequences of natural and other disasters

1.1.1. Financing of emergency measures for the protection and rescue of people and material goods and prevention of the spread of danger from natural disasters and their consequences

1.1.2. Expenditures for emergency intervention measures for the rehabilitation of landslides

1.1.3. Compensation for work and costs of going to the field of the commission for assessing damage from natural and other disasters.

1.4. Equipping civil protection structures

1.2.1. Procurement of equipment and material and technical means (apartment inventory)

1.2.2. Expenditure on clothing and uniforms

1.2.3. Expenditures for joint procurement (KUCZ TK, City of Građanica and JP "Spreja" dd Tuzla) System for informing and alerting citizens in the area of TK - for needs of the City of Građanica

1.2.4. Expenditures for ongoing maintenance and servicing of CZ equipment and resources

1.2.5. Equipment for CZ and investment reconstruction

1.2.6. Insulation works on the roof of the extended CZ warehouse and garage for fire engines and equipment and procurement of carpentry

1.2.7. Expenditures for co-financing the purchase of a used CADY all-terrain vehicle for the needs Services ZIS-Veterinary Service

1.2.8. Expenditures for the co-financing of the purchase of a used CADY all-terrain vehicle for the needs of the Service for Water Supply in JP Vodovod i kanalizacija Građanica

1.2.9. Expenditures for co-financing the purchase of a vehicle for transporting the injured - an ambulance for the needs of the ZIS - Medical Assistance service

1.2.10. Expenditures for co-financing the procurement of construction machinery - Backhoe for the needs of the Ministry of Social Affairs - for communal work (for cleanliness, sanitation of the terrain and protection of the environment)

1.2.11. Expenditures for the acquisition of MTS, acquisition and maintenance of the system for alerting the population and equipping the CZ center

1.2.12. Subsidizing the purchase of equipment necessary for the implementation of personal and collective protection of citizens

1.3. Implementation of preventive protection and rescue measures 1.3.1.

Co-financing of marking and demining of suspected mine surfaces in the area of the city of Građanica

1.3.2. Watercourse cleaning - public works

1.3.3. Co-financing by OOCK in the organization of a competition for elementary school students in the field of PMP, warning about the danger of mines and DDK

1.3.4. Co-financing the costs of pest control and/or disinfection and/or disinsection

1.4. Training and exercises of civil protection structures in the country and abroad

1.5. Expenditures for financing unplanned costs in the implementation of protection and rescue measures

Strategic goal 2. Strengthening fire protection and fire fighting and protection and rescue services as part of a unified system of protection and rescue

2.1. Equipping firefighting units and facilities, investment construction and maintenance

2.1.1 Procurement of minimum technical equipment and resources for the needs of PVJ

2.1.2. Acquisition of a used fire engine with an upgrade - a fire tank with a capacity of up to 8,000 l of water, up to 1,000 l of foam with an upgrade of equipment and resources

2.1.3. Expenses for the purchase of a used fire truck for rescue from heights, an automatic ladder up to 25 m long or a hydraulic articulated platform up to 25 m long.

2.1.4. Procurement of the missing set of technical tools for technical interventions

2.1.5. Expenditures for the purchase of an all-terrain vehicle for forest fires 4x4 with a high-pressure pump and a tank of up to 600 liters of water

2.1.6. Expenditures for personal and joint clothing and footwear and equipment for firefighters in PVJ

2.1.7. Expenditures for ongoing maintenance of PVJ assets

2.1.8. Extension of the fire station and provision of energy efficiency (warming and replacement of carpentry)

2.2. Exercise and training of firefighting units

2.3. Improvement of the preventive protection system

2.4. Education of the population

Strategic goal 3. Improvement of inter-institutional cooperation, cooperation with civil society and the business sector will be achieved through the following activities:

3.1. Improving the cooperation of institutions at all levels from the local community, cantons, Entities in FBiH and RS and BiH in the sectors of water, demining, land protection, environmental protection, protection and rescue, and spatial planning with the aim of reducing the risk of natural and other disasters

3.2. Cooperation with the Armed Forces of Bosnia and Herzegovina

3.3. Collaboration with civil protection structures of neighboring municipalities and cities, cantons, the Federation of Bosnia and Herzegovina, the RS and Brčko District, and the institutions of Bosnia and Herzegovina (Ministry of Security, etc.)

3.4. Improving cooperation with civil society - NGOs

3.5. Improving cooperation with the business sector

6. Basics for creating a training and qualification program in protection and rescue

This document regulates: goals and purpose, planning, organization, implementation and verification of the degree of training and competence for protection and rescue and protection against fire and firefighting, as well as material, technical and financial assurance of the process of carrying out training and training of protection and rescue structures.

The training and development of members of civil protection and the population is carried out in accordance with the curriculum adopted by the director of the Federal Administration of Civil Protection.

a) Training and training of civil protection units

With the specialized purpose units, after their formation, material and personnel replenishment, plan and carry out (at the most convenient time) training at least once a year.

The training of general purpose civil protection units should be planned and carried out with the application of a practical work method with an emphasis on practicing procedures and behavior in conditions of immediate danger, natural and other accidents and exercises. Reduce the theoretical part of the lesson to the most necessary explanations and giving information about the topic or subject with which the members of the unit become familiar. Training should, in principle, be planned in the settlements where the units are organized.

Special attention should be paid to the preparation of unit commanders and managers of protection and rescue services and other persons who conduct training by organizing specialist courses at least once every two years.

Complete material provision (obvious teaching, lecturer's expertise and well-chosen work method, financial resources) is the basic assumption for the success of the training, so in the preparation for the training and in its execution, these essential conditions and assumptions must be provided.

b) Training of civil protection headquarters

The training of the civil protection headquarters should be carried out after their formation and personnel and material replenishment. The content of the training and exercises of the staffs should be set so that the issues of mobilization and the implementation of measures on the engagement of units and services for protection and rescue are processed.

In addition to the exercise and training of the staffs, as expert-operational bodies, plan to have individual members of the City Civil Protection Staff attend the training of the units. In addition to the known forms of work that are applied in the training of units and staffs (lectures, exercises, etc.), foresee participation in joint exercises that are organized at the municipal/city, cantonal or federal level, as well as international exercises.

c) Training of the population

Training of citizens for personal and mutual protection should, in principle, be done through means of mass information (radio and TV) with the use of the most suitable form of transmitting educational content (radio and TV clips, announcements, open broadcasts, etc.). If necessary, other forms of mass information should be applied through: printing of leaflets, instructions, brochures, etc., as well as training according to the curricula brought by the director of the Federal Administration of Civil Protection.

7. Guidelines for research and development activities of importance for protection and salvage

The research and development component in the field of protection and rescue, as a specific field of scientific work, for the sake of interdisciplinarity of this field, study and explanation of conditions and phenomena, a comprehensive synthetic approach to research activity should be carried out through the following activities:

- regular monitoring, study and analysis of the development of fundamental and applied scientific fields, and the degree of development of scientific knowledge in certain branches of science (mining, geology, architecture, construction, mechanical engineering, electrical engineering, informatics, etc.) which in any way, more or less, treat, primary or secondary, protection and rescue. Such monitoring should be focused on the most important scientific fields that enable a comprehensive treatment of protection and rescue by engaging and animating scientific personnel from those scientific fields in the institutions where they work.

- the team, collective, work of such expert scientific workers and the incorporation of their current scientific knowledge into preventive protection will result in greater safety of people and material goods from natural and other large-scale disasters.

- institutions whose regular activity is protection and rescue, in the part of the given authorities of competent authorities, which already have certain personnel and professional potentials, should take part of their obligations in terms of intensifying theoretical research and constant systematization of experiences and achievements in their fields, as well as practical application of that knowledge in the field of protection and rescue. They should primarily direct their activities in the direction of research and improvement of preventive protection against natural and other large-scale disasters, as well as the integration of research work as a whole and the development of all activities that contribute to the improvement of protection and rescue.

- professional - scientific approach to the methodology of research and determination of the conditions and causes of the occurrence of natural and other large-scale disasters is the only correct path that, with a high degree of certainty, can provide meritorious data and conclusions on the basis of which an accurate judgment can be drawn about the causes and conditions of the occurrence of unwanted occurrence, as well as the influence of objective and subjective factors on their occurrence. Since the consequences of natural and other large-scale accidents are very severe, it is necessary to know and be able to use all known data in order to accurately determine the real causes of natural and other large-scale accidents.

The ultimate goal of such research, in addition to providing material, professional evidence to the competent authorities about the real causes of the occurrence of a natural or other large-scale accident, should be to create a basis for drawing conclusions on the basis of which activities to prevent the recurrence of similar situations, preventive action, would be based.

- in order to connect all the forces that are, from any aspect, involved in the issue of protection and rescue as efficiently and functionally as possible, it is necessary, through the necessary number of expert consultations and seminars, to become familiar with achievements in this field, to become familiar with global politics and issues protection and rescue and exchange experiences within specific activities and thematic areas. Strive to ensure that as many members of individual civil protection structures as possible pass a sufficient number of educational seminars, consultations, fairs and practical exercises.

Inter-institutional cooperation

In its work, the city service for civil protection, in organizing and implementing protection and rescue from natural and other disasters, cooperates with many institutions and institutions, governmental and non-governmental sector, domestic and foreign institutions, all with the aim of preserving the lives and health of people and the safety of people and protection of material assets from natural and other disasters, which is the primary goal of all measures and procedures undertaken in this area. Among the institutions, we will single out cooperation with:

Federal and Cantonal Administration of Civil Protection:

Cooperation with the Federal Administration of Civil Protection in Sarajevo and the Cantonal Administration of Civil Protection in Tuzla takes place regularly and is reflected in the coordination on all issues within the jurisdiction, especially through requests for help to eliminate the consequences of a natural disaster, as well as running for office. projects of demining, technical reconnaissance and permanent marking, as well as in requests for the engagement of teams for taking over and destroying UXO and MES and demining, which are under the jurisdiction of the Federal and Cantonal Administration of Civil Protection, through participation in various meetings, workshops and seminars that organized by the Cantonal Administration, and the implementation of recovery projects.

Cooperation with the "A" TUN team of the Federal Administration of Civil Protection takes place on the acquisition and destruction of UXO and MES, and this cooperation can be evaluated with the highest rating.

Cooperation with the Federal and Cantonal Administration of Civil Protection Tuzla takes place on a daily basis and is reflected in communication and coordination on all issues within the jurisdiction, as well as in the nomination of demining projects, technical reconnaissance and permanent marking, which are forwarded to the BH MAC, and in requests for engagement teams for taking over and destroying UXO and MES and demining, which are under the jurisdiction of the Federal and Cantonal Administration of Civil Protection.

The cooperation with both teams as well as with the Federal and Cantonal Administration of Civil Protection is at a high professional level and we are of the opinion that it has produced results that citizens in the area of the city of Građanica can be satisfied with.

Cooperation with the Republika Srpska is carried out in accordance with the provisions of the Agreement on Cooperation in the Implementation of Civil Protection Tasks ("Official Gazette of the Federation of BiH", number: 36/01), which was concluded between the Federal Administration of Civil Protection and the Republican Administration of Civil Protection of the Republic of Srpska.

The agreement was created based on the need to coordinate activities and provide mutual support help in achieving the tasks of civil protection.

In accordance with the Agreement on Cooperation in the Implementation of Civil Protection Tasks, mutual cooperation in providing assistance and protecting and rescuing people and material, cultural and other assets from the dangers and consequences of natural disasters, technological, ecological and other disasters and dangers of a large scale unknown inter-entity lines of demarcation, especially in:

- planning and implementation of proactive protection measures against floods, earthquakes, fires, radiological hazards, infectious diseases, technological and other accidents and dangers,
- informing each other about the dangers, occurrence and consequences of natural and other accidents,
- mutual assistance in protecting, rescuing and removing the consequences of natural and other disasters,

- education and training of members, staffs, services and units of civil protection and other protection and rescue operators through informative meetings, courses, seminars and other types of training, and organizing and conducting joint exercises for protection and rescue.

International cooperation in the field of civil protection with the civil protection authorities of other countries will be achieved with the help and support of the competent ministries and the Council of Ministers of Bosnia and Herzegovina, and on the issues of this cooperation, they will inform each other in advance and harmonize positions by consensus.

In the implementation of the Memorandum of Understanding for the creation of a sustainable section for the removal of unexploded ordnance in the Federation of Bosnia and Herzegovina and the Memorandum of Exchange for the creation of a sustainable section for the removal of unexploded ordnance in the Republika Srpska of Bosnia and Herzegovina, the parties will cooperate and agree on mutual assistance, and especially mutual aid in rescue operations

victims from minefields (Operation "Quick Response").

Center for demining in Bosnia and Herzegovina (BH MAC), Office in Tuzla:

BH MAC is an indispensable institution in all activities regarding all forms of mine action in Bosnia and Herzegovina and is the only one competent and authorized: for accrediting demining organizations (personnel and equipment), conducting mine familiarization operations, mine marking, reconnaissance and mine removal, insurance central database on mines, coordinating activities on demining with other operational agencies, preparing priority proposals for demining operations and issuing work tasks during demining operations, performing inspections, performing quality control and proposing the issuance of a certificate on the performed quality control of cleared areas, proposing a list of priorities tasks to the government of the entity, preparation of work plans, budgets, reports and calculations for presentation to the government of the entity, BH MAC, the Demining Commission in BH and the Donor Committee.

Cooperation with the Office in Tuzla took place on the coordination of providing assistance to scouts on the ground during the development of the MSP project Gornji Skipovac-Samunica, as well as on the provision of the necessary cadastral records from the cadastre, the exchange of various information related to unexploded ordnance and mines, and on a number of other activities prescribed by law.

EUFOR-LOT house Tuzla

The area of the city of Gračanica is in the EUFOR command zone, LOT of houses located in Tuzla, a during the visit of representatives of this house to the Civil Protection Service, all aspects of the work of this service and cooperation with the governmental and non-governmental sector, as well as with international organizations, are discussed.

Ministry of Internal Affairs - Gračanica Police Department

Ministry of Internal Affairs

The strategic plan of operational activities of the Police Department of the Ministry of Internal Affairs of the Republic of Tajikistan to improve the level of safety of the citizens of the Republic of Tajikistan indicates that the main strategic goal in the area of traffic safety is to stop the present negative activities through the implementation of a wide range of preventive and legally prescribed repressive measures and activities. trends of tragic consequences for traffic participants on the roads of Tuzla Canton.

Precisely for this reason, the Police Directorate of the Ministry of Internal Affairs and Communications, according to the traffic problem as one of the segments of the general safety of people and property, due to its complexity and difficulty

consequence pays special attention, in terms of planned and continuous undertaking of preventive and repressive measures foreseen by law.

It is planned to increase the level of safety of road users through increased preventive and repressive activities of the police aimed at eliminating those causes in traffic that, as part of and in cooperation with other factors and causes, most often affect the occurrence of traffic accidents, while through the implementation of actions at the cantonal and local level, as well as in cooperation with other institutions, regular traffic control, conducting campaigns, etc., with the aim of:

- reduction of the total number of traffic accidents,
- reducing the number of traffic accidents with fatal consequences,
- reducing the participation in traffic of drivers under the influence of alcohol,
- reducing the participation in traffic of technically defective vehicles,
- reducing the participation in traffic of unregistered vehicles,
- reduction of participation in traffic by drivers without a passing driving test,
- impact on compliance with traffic regulations and posted traffic signals, especially when it comes to compliance with the permitted speed,
- impact on pedestrians' compliance with traffic regulations.

As part of the regular activities that the Police Administration carries out every year, we would also like to mention here the taking of measures and actions related to planning activities related to the presence of police officers in the immediate vicinity of school and preschool facilities, intersections and pedestrian crossings, as well as the directions of movement of students from houses to school and back, which, among other things, are undertaken with the aim of safe movement of school and preschool age children in traffic.

In addition to the aforementioned tasks, there is significant cooperation with the PU Grayanica, which takes place in the following activities:

- regulation of traffic,
- coordination and establishment of order in conditions of natural and other disasters,
- coordination in the event of a fire and security of the fire scene,
- coordination when taking over UXO and MES from citizens. - securing the place of observed or found UXO until the arrival of experts for the destruction-deactivation of UXO, - other activities related to the safety of citizens.

This cooperation takes place almost every day and gives good results in terms of general safety and security of citizens.

Ministry of Agriculture, Forestry and Water Management

The Water Act (hereinafter referred to as the Federal Water Act) determines the distribution of revenues from collected general water fees and special water fees, as well as revenues collected based on the lease of public water assets on surface waters of category I in the canton, in the following ratio:

- to the competent water agency 40%
- in favor of the cantonal budget 45%
- in favor of the Environmental Protection Fund of the Federation 15%

The same Law determined that the income from the lease of public water assets on surface waters of category II belongs entirely to the budget of the canton.

According to Article 178 of the Federal Law on Water, revenues from general and special water fees belonging to the Canton are used to co-finance the construction and maintenance of water facilities from Article 14 of the aforementioned Law: protective facilities, drainage facilities, facilities

for the use of water, and facilities for the protection of water from pollution, as well as other activities related to water management - preparation of technical documentation, etc., in accordance with the annual plan and program of the cantonal ministry responsible for water.

The program for investing water fee funds in the field of water management is adopted on an annual basis. Investments of general and special water fees are made in accordance with the Decision on criteria for determining priority projects in the field of water management of city and municipal importance.

The revenue from general and special water charges belonging to the Canton in 2022 is estimated at 11,476,900.00 KM. The estimate of planned revenues was made based on the analysis of realized revenues in 2021.

Transferred contractual obligations for projects from 2021 amount to 2,065,462.04 KM, while obligations for projects for which the public procurement procedure has been initiated in 2021 amount to 581,321.95 KM. Tuzla Canton's obligations based on loan repayment in 2022 amount to KM 920,000.00. Projects and activities of importance for the Canton are planned in the amount of 1,760,000.00 KM.

Every year, the distribution of available funds for projects of city or municipal significance is made on the basis of nominated projects by cities or municipalities from the area of Tuzla Canton, submitted at the request of the Ministry of Agriculture, Forestry and Water Management.

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There are no long-term projections of the expenditure of these funds.

Agency for the water area of the Sava River

The cooperation with the Agency for the Water Area of the Sava River has been very successful, so that activities have been carried out to protect and reduce the flooding of residential, commercial and infrastructure facilities in the area of the City of Građanica as a result of the overflowing of the Spreja River, namely:

- On the basis of the signed Agreement of the Agency for the Sava River Water Area

The Mayor of the City of Građanica and the Director of Roding doo Građanica in 2021 carried out works on securing the flow profile of the river Spreja at 8 locations (value of works: 98,891.22 KM) in the area of the City of Građanica, namely:

- MZ Stjepan Polje: dumping of garbage and logs,
- MZ Stjepan Polje: debris in a length of about 30 m,
- MZ Stjepan Polje: fallen tree in the riverbed,
- MZ Građanica: swimming pools "Terme", the remains of a former wooden bridge,
- MZ Donja Lohinja: mouth of the Lohinjska river in Spreja, alluvium in a length of about 40 meters,
- MZ Donja Lohinja: garbage deposits on the supports of the bridge to Kakmuž,
- MZ Donja Orahovica: debris at the location of Ibrija Polje,
- MZ Mirijina: garbage deposits on the girders of the iron bridge.

- By the Sava River Water Area Agency

The Mayor of the City of Građanica and the contractor Roding Građanica have signed and completed the Contract on the execution of works to ensure the flow profile of the Spreja River in the territory of the City of Građanica at 5 locations, the value of the works is 231,321.43 KM (including VAT), the total length of which is 1,236 m: Location 1 – MZ Mirijina, at the location from the mouth of the Kosova (Ratiška) River Jaruga in

a length of 300 meters downstream; Location 2 – MZ Donja Orahovica, at the location from the exit from Mirijina in a length of 386 meters; Location 3 – MZ Donja Lohinja, at the location from the confluence of the Lohinjska River in Spreja in a length of 150 meters **upstream**; Location 7 - MZ Grajanica, at the location of Prijedor (MZ Pribava), in a length of 300 meters downstream and Location 9 - MZ Stjepan Polje, at the location of Trnovađe, in a length of 100 meters.

The Agreement between the Agency for the Sava River Water Area, The Mayor of the City of Grajanica and the Mayor of the City of Grajanica and Roding doo Grajanica dated June 20, 2022 was signed and completed by the Agency for the Water Area of the Sava River, the contractor Roding Grajanica. year on the execution of the works "Ensurance of the flow profile of the river Spreja at critical locations in the area of the City of Grajanica" at 5 locations, the value of the works is 198,850.92 KM (including VAT), a total length of 1,127 m, that is: MZ Mirijina, 250 m, Donja Orahovica 350 m, Donja Lohinja 427 m (2 locations), Pribava 100 m.

- For the annual work plan of the Agency for the Sava River Water Area and the financial plan for 2023, a proposal for the development and cleaning of the Spreja River of importance for the area of the city of Grajanica was prepared and submitted, namely: The main project for the development of the river bed of the Spreja in the municipality of Grajanica, a section of of the bridge from Karanovac to the confluence of Sokoluša and Spreja, length 1,357.34 m, continuation of the works according to the completed Elaborations for securing the flow profile of the Spreja river bed for 10 locations with a total length of 13,100 m, as well as financing the creation of new Elaborations for securing the flow profile of the Spreja river bed in the length of 17,548 m.
- Cleaning of drifts and driftwood under the Drijenja bridge in Grajanica was carried out as an intervention.

Federal Institute for Agropedology, Sarajevo

The problems of land flooding, release of toxic substances into the river Spreja and soil pollution from PAHs and heavy metals have been current for the last 20 years.

Namely, the City of Grajanica, the Mayor and City Services, together with the Fishermen's Association, Ecological Associations and the Initiative Committee for the Protection of the Spreja River and Sprejko polje, worked to animate the public and ask those responsible for solutions to stop soil pollution and flooding of the Spreja Valley.

In addition to damage caused by floods in the Spreja river valley, there are also evident damages caused by the presence of pollutants in the soil, which can result in the damage or loss of several functions and serious damage to the ecosystem. The presence of pollutants in the soil above a certain level multiplies the negative consequences for the food chain, and thus also for human health, and for all types of ecosystems and other natural resources. Heavy metals and organic pollutants originating from industrial plants pose a special danger.

The City Administration of the City of Grajanica sent a Request to the Government of the Federation of BiH for the engagement of the Federal Institute for Agropedology in sampling and testing the contamination of agricultural land with heavy metals and organic pollutants in the areas after flooding in the lower reaches of the Spreja River.

Federal Agropedological Institute in 2014 according to the Decision of the Government of the Federation of Bosnia and Herzegovina, V.868/2014 dated 06/05/2014. carried out detailed research and established a three-year monitoring of soil and plant material pollution with heavy metals and organic pollutants in the lower reaches of the Spreja River.

In order to protect agricultural land and plants from heavy metals and organic pollutants in Sprejko polje, the Mayor of the City of Grajanica and the Heads of the Municipality of Dobojski Istok and

Lukavac signed a series of conclusions that were submitted to the competent institutions of the Federation of Bosnia and Herzegovina and the Tuzla Canton. On the basis of the above, the Prosecutor's Office of the Republic of Turkey requested from the PU of Građanica available documentation related to the problems of pollution of the Spreja River and the land in Sprejko polje in the area of the city of Građanica and Doboj Istok, so that, upon the authority of the Mayor, the Civil Protection Service of Građanica submitted to it 62 documents which were related to pollution and flooding of the Sprejan Valley.

In the Report on the monitoring of the lower course of the Spreja River for 2020, the Federal Institute for Agropedology also provided the measures that must be implemented in order to rehabilitate the area, i.e. prevention and remediation measures that read:

- Limited production of certain agricultural products is recommended, and cattle grazing etc. on contaminated land is not applied, based on Article 28, paragraph (4) of the Law on Agricultural Land ("Official Gazette of the Federation of BiH" number 52/09).
- It is necessary to prohibit the release of waste materials in advance, and it is recommended to compensate the costs of remediation of contaminated agricultural land and compensation for damage caused to agricultural producers, all in accordance with Articles 25, 26 and 27 of the Law on Agricultural Land ("Official Gazette of the Federation of BiH" number 52/09).
- Decontamination of agricultural land, in accordance with Article 25, paragraph (2) of the Law on Agricultural Land ("Official Gazette of the Federation of Bosnia and Herzegovina" No. 52/09), according to the proposed measures from the Contaminated Agricultural Land Remediation Program.

Thus, in April 2021, an extended meeting was organized by the Mayor and the associates of the Municipality of Doboj Istok with representatives of the Ministry of Agriculture, Forestry and Water Management of the Republic of Croatia, the City of Građanica, the Municipality of Lukavac and representatives of the Federal Institute for Agropedology, who presented "Monitoring of the lower reaches of the river Spreja 2014-2020. year", i.e. determining the level of soil and plant pollution from the presence of heavy metals and organic pollutants in the Spreja river valley and based on discussions and proposals, the Mayor of Građanica and the Municipal Mayors of Lukavac and Doboj Istok adopted the following

CONCLUSIONS

1. Polluters and the causers of ecological accidents on plant and animal life in the Spreja River watercourse and agricultural land, which continue continuously in 2021, are condemned in the strongest terms, and the competent Cantonal and Federal inspection authorities are requested to strengthen the legally prescribed measures against polluters, as would stop the pollution of watercourses and agricultural land.
2. The Government of the Federation of Bosnia and Herzegovina is requested that for the period 2021-2025 tasked the Federal Institute for Agropedology to continue monitoring the lower reaches of the Spreja River, as well as to propose urgent and permanent remediation measures for polluted land in the lower reaches of the Spreja River based on the results of the research conducted so far.
3. The Ministry of Agriculture, Forestry and Water Management of the TK is requested to, in accordance with the current regulations and established limits of polluted land in the valley of the Spreja River, at the proposal of the Cantonal Agricultural Inspector, prohibit the use of agricultural land in the lower reaches of the Spreja River, i.e. limit the production of certain agricultural products on contaminated land, in accordance with Article 28 of the Law on Agricultural Land ("Official Gazette of FBiH", no. 52/09).

4. The Ministry of Agriculture, Forestry and Water Management of the TK is requested to, in accordance with Article 25, Paragraph 2 of the Law on Agricultural Land ("Official Gazette of the FBiH", no. 52/09), undertake activities on the development of recommendations for soil reclamation with made a long-term plan for the preparation of plots for agricultural production.
5. The competent authorities are requested to prohibit the discharge of waste materials into the watercourse of the Spreja River and to collect from the polluters the costs of remediation of contaminated agricultural land and the costs of repairing damages caused to agricultural producers, in accordance with Articles 25, 26 and 27 of the Law on Agricultural land ("Official Gazette of the Federation of Bosnia and Herzegovina", number: 52/09).
6. The Agency for the Water Area of the Sava River is requested to carry out activities with the JU "Vode Srpske" on the urgent and permanent arrangement of the bed of the lower course of the Spreja River in order to prevent the overflow of water from the bed in the lower course.
7. A report is requested from the Federal Ministry of Environment and Tourism on the activities carried out to resolve prevention measures, which relate to the ban on the discharge of harmful and dangerous substances into the watercourse of the Spreja River from 2014 to 2020, and a plan of activities for the protection of the watercourse of the Spreja River and systematic resolution of land pollution.
8. Information is requested from the Federal Administration for Inspection Affairs-Federal Urban Planning and Environmental Inspectorate about the performed supervision and implemented ordered measures in the legal entity "Global Ispat koksna industrija" d.o.o. Lukavac on the construction of purifiers for all waste water from the production complex: technological, sanitary and surface water and whether the environmental permit for work has been renewed.

The aforementioned conclusions were forwarded to the following addresses: Government of the Federation of BiH, Government of Tuzla Canton, Prosecution of TK, Ministry of Agriculture, Forestry and Water Management of TK, Federal Ministry of Environment and Tourism, Agency for the Sava River Water Area, JU "Vode Srpske", Federal Administration for Inspection Affairs Sarajevo-Federal Urban Planning and Environmental Inspectorate and Cantonal Administration for Inspection Affairs Tuzla.

This struggle continues in the coming period with a unique attitude without political influence.

8. Overview of expected costs with funding sources

In accordance with the Law on the Protection and Rescue of People and Material Assets from Natural and Other Disasters, the Risk Assessment of the City of Grajanica and this Program in the City Budget funds will be planned that will be used specifically for financing protection and rescue, with an emphasis on financing the equipping of civil protection structures, the implementation of preventive measures, as well as the implementation of strategic directions for the development of protection and rescue.

Funds for protection and rescue can be collected from several sources and are earmarked funds that can be used exclusively for the purposes established in the Law on Protection and Rescue and this Development Program, which is detailed in annual plans.

Funds for the implementation of the obligations of the city of Grajanica defined by the Law on Protection and Rescue, the Development Program and the annual plans for the collection and use of protection and rescue funds will be provided from:

- the budget of the City of Grajanica;
- assets of legal entities;
- insurance;
- voluntary contributions;

- international aid - donation;
- other sources established by law, as well as assistance from competent Cantonal and Federal authorities organs.

Funds for protection and rescue, which will be provided through the budgets of the City, will be implemented in the area of the city of Gražanica in the planned five-year period.

Funds for special compensation for protection and rescue planned in the City budget are kept in a special transaction account of the City.

Funds intended for the implementation of special projects, plans and actions of importance for protection and rescue, which are financed or co-financed by regular budget funds by the authorities and companies of the City, Tuzla Canton and the Federation of Bosnia and Herzegovina, are not shown in the table (revenue projection) because they are positioned in those budgets and use according to special procedures.

The use of special compensation funds is carried out on the basis of the annual plan for the use of special compensation funds of the City, which is adopted for each budget year and contains:

- tasks from the protection and rescue development program and the protection and rescue plan, which during the year they plan to finance from these funds;
- funds and equipment that are planned to be acquired for equipping protection and rescue structures from these financial resources;
- projects of preventive protection and rescue measures approved by the Mayor, which are co-financed from these funds, and for which the majority of the funds are provided in the budget city;
- the amount of funds that is planned to be used in the event of a natural or other disaster for the implementation of emergency measures to save people and material goods in the course of action natural or other accidents and remediation of the consequences and compensation of part of the damages after natural or other accidents;
- necessary financial resources for the costs of participating in the implementation of protection and rescue measures by order of the headquarters of civil protection;
- activities that are planned in the current budget year for the purpose of preparation, training and civil protection structure exercises and the amount of financial resources needed for their implementation activities;
- all other activities that are intended to be financed from the funds during the year special allowances in accordance with the Law on Protection and Rescue, Decision on organizing and functioning of the protection and rescue of people and material goods for area of the Municipality/City of Gražanica and this Program.

The annual income and expenditure plan for special compensation funds is issued by the Civil Protection Service with the opinion of the City Civil Protection Headquarters for funds belonging to the City.

An annual report on the collection, distribution and use of special compensation funds is submitted to the Mayor, the Cantonal and Federal Administration of Civil Protection no later than March 31 of the current year for the previous year.

Unspent special compensation funds from previous years are not extinguished at the end of the budget year, but are transferred to the next budget year and are disposed of in accordance with the valid Decision on the conditions and manner of using funds obtained on the basis of the special compensation for protection against natural and other disasters.

The method of using these funds is detailed in the annual plans for the collection and use of protection and rescue funds, and the five-year projection is shown in the following table:

A - INCOME

	Revenues	Planned income (KM)					IN TOTAL
		2023.	2024.	2025.	2026.	2027.	
719114	A special tax for protection against natural and other disasters based on the paid net salary of employees	100	100	100	100	100	500
719115	A special tax for protection against natural and other disasters based on contracts for temporary and casual work	0	0	0	0	0	0
722581	Special compensation for protection against natural and other disasters where the basis is the aggregate amount of net wages	301.316	301.316	301.316	301.316	301.316	1.506.580
722582	Special compensation for protection against natural and other disasters where the basis is the aggregate amount of net receipts	8.000	8.000	8.000	8.000	8.000	40.000
722581/1	Sredstva CZ iz previous years	652.954	0	0	0	0	652.954
	IN TOTAL:	962.370	309.416	309.416	309.416	309.416	2.200.034

NOTE: Unspent special compensation funds from previous years are not extinguished at the end of the budget year, but are transferred to the next budget year and are disposed of in accordance with the current Decision on the conditions and manner of using funds obtained on the basis of the special compensation for protection against natural and other disasters and the Annual Plan for the use of funds from the City's special fee, which is adopted for each budget year.

**FRAMEWORK ANNUAL PLAN OF INCOME GAINED ON THE BASIS OF FEE FOR
FIRE FIGHTING UNITS FROM FIRE INSURANCE PREMIUM I
FUNCTIONAL MOTOR VEHICLE INSURANCE PREMIUMS FOR
FIREFIGHTERS IN THE AREA OF THE CITY OF GRAÏANICA**

B- INCOME

	Revenues	Planned income (KM) 2024.				IN TOTAL	
		2023	2025.	2026.	2027.		
722583	Fee for firefighting units from the insurance premium against fire and natural forces	2.000	2.000	2.000	2.000	2.000	10.000

722584	Compensation from the functional premium of motor vehicle insurance for fire departments	1.000	1.000	1.000	1.000	1.000	5.000
722612	Revenues from the provision of public services - fire department	20.000	20.000	20.000	20.000	20.000	100.000
	Total income	23.000	23.000	23.000	23.000	23.000	115.000

Projection of the expenditure of the special compensation for protection and rescue for the period 2023 - 2027.

Red. number	Planned activities	Planned income (KM)					TOTAL (KM)
		2023	2024	2025	2026	2027	
1.	Funding of emergency measures to protect and rescue people and material goods and prevent the spread of danger from natural and other disasters and their consequences, in accordance with the possibilities of providing assistance for mitigating the direct consequences of natural and other disasters (removal of the consequences of natural and other disasters, expenses for the rehabilitation of landslides, remediation of part of the damages caused by natural and other disasters in accordance with their financial capabilities and other protection and rescue needs, in accordance with the Decision on the conditions and method of using funds obtained on the basis of special compensation for protection against natural and other disasters and the Annual plan for the use of special compensation funds. town)	254.183	123.593	123.593	123.593	123.593	748.555
2.	Equipping civil protection structures in accordance with the Law on the Protection and Rescue of People and Material Assets from Natural and Other Disasters (expenses for civil protection uniforms, civil protection equipment, etc.), payment of taxes, customs and other duties when importing donated funds and equipment for the needs of equipping civil protection structures and the construction of warehouses in which the purchased equipment will be stored, additions, equipping of the City Civil Protection Operational Center and procurement and maintenance of the system for alerting the population; subsidizing the purchase of equipment necessary for the implementation of personal and collective	419.477	93.000	93.000	93.000	93.000	791.477

	protection of citizens, etc. in accordance with the Decision on the conditions and manner of using the funds obtained on the basis of the special compensation for protection against natural and other disasters and the Annual plan for the use of the funds of the special						
3.	compensation of the city, Participation of financial resources in the implementation of preventive protection and rescue measures that are in the function of preventing the occurrence of natural or other disasters accidents or mitigating the effects of those accidents, which are included in the program and planning documents of protection and rescue (co-financing of demining of suspected areas from mines, cleaning of watercourses - public works, co-financing of OOCK in the organization of elementary school students' competition in the field of PMP and warning about the danger of mines, preventive animal protection, disinfection, disinsection and pest control, etc. in accordance with the Decision on the conditions and method of using the funds obtained on the basis of the special compensation for protection against natural and other disasters and the Annual plan for the use of the special compensation funds of the city	192.474	61.884	61.884	61.884	61.884	440.010
4.	Funds of special compensation that are also used for preparation, training and exercises structure of civil protection in country and abroad.	48.118	15.470	15.470	15.470	15.470	109.998
5.	Financing of unplanned costs in the implementation of protection and rescue measures in accordance with Decision on the conditions and method of using the funds obtained on the basis of the special compensation for protection against natural and other disasters and the Annual plan for the use of the special compensation funds of the city	48.118	15.470	15.470	15.470	15.470	109.998
	IN TOTAL:	962.370	309.416	309.416	309.416	309.416	2.200.034

Unspent special fee funds from previous years for purposes from the Annual Plan are not extinguished at the end of the budget year, but are transferred to the next budget year and are disposed of in accordance with the Decision on the conditions and manner of using funds generated on the basis of the special fee for protection against natural and other accidents ("Official Gazette of FBiH", numbers 80/13 and 20/20) and the Annual plan for the use of funds obtained on the basis of a special compensation for protection and rescue from natural and other disasters for the area of the City of Građanica for the current year. Unspent funds for this purpose on 31.12. of the current year are transferred to the next year for the financing of prescribed activities in the field of civil protection and will be included in the Projection of income and expenditure of the special compensation for protection and rescue for the period 2023 - 2027 (a balanced plan for the realization of funds on that basis and the expenditure thereof and that analytical by budget item).

Projection of expenditures for fire protection and fire fighting for the period 2023 - 2027

Red. number	Planned activities	Planned expenditures (KM)					TOTAL (KM)
		2023	2024.	2025.	2026.	2027.	
1.	Procurement of minimal technical equipment and resources that should be possessed by a professional fire	20.000	20.000	20.000	20.000	20.000	100.000
2.	department Fire station - energy efficiency - extended storage CZ and garages for firefighting vehicles and equipment, insulation work on the roof, procurement of carpentry and heating of the fire station	20.000	30.000	0	0	0	50.000
3.	Acquisition of a used fire truck with an upgrade - a fire tank with a capacity of up to 8,000 l of water, up to 1,000 l of foam with an upgrade of equipment and resources	0	150.000	0	0	0	150.000
4.	Expenditures for ongoing maintenance of PVJ assets	30.000	30.000	30.000	30.000	30.000	150.000
5.	Expenses for the purchase of used fire truck for rescue from heights, automatic ladder up to 25 m long or hydraulic articulated platform up to 25 m	80.000	0	0	0	0	80.000
6.	Procurement of missing sets of technical tools for technical emergencies (traffic accidents, etc.)	0	10.000	10.000	10.000	10.000	40.000
7.	Expenditures for the purchase of a 4x4 off-road vehicle for forest fires with a high-pressure pump and a 600-liter water tank	0	0	50.000	0	0	50.000
9.	Expenditures for personal and common clothing, footwear and equipment for firefighters in PVJ	0	20.000	0	20.000	0	40.000
10.	Expenditures for ongoing maintenance of PVJ assets	0					
11.	Extension of the fire station and provision of energy efficiency (warming, replacement of carpentry, etc.)	0					
12.	Improvement of the preventive protection system	0					
13.	Education of the population	0					
	IN TOTAL:	150.000	260.000	110.000	80.000	60.000	660.000

Table ____ : CITY OF GRAJANICA - Strategic goal 1. Construction and strengthening of the protection and rescue system													
PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	PLANNED/EXPECTED IVAN THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS					EXPECTED COSTS	SOURCE FINANCING NOTE	
1	2		3	4	5	6					7	8	9
1.1.	1.1.1. Financing of emergency measures for the protection and rescue of people and material goods and preventing the spread of the danger of natural disasters and their consequences	Financing of emergency protection and rescue measures in the course of immediate danger and the course of action of a natural or other disaster	Assistance provided during the implementation of emergency protection and rescue measures	The amount of funds for emergency interventions	Service for CZ					x	300.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.1.2. Emergency expenses intervention measures for the rehabilitation of landslides	Providing assistance to mitigate and eliminate the direct consequences of natural and other disasters caused by landslides and landslides	Normalization of life and work in the affected area and faster elimination of the consequences of natural and other disasters	The amount of funds for eliminating the consequences of natural and other disasters from landslides and landslides	Service for CZ					x	418.555	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.1.3. Compensation for work and costs of going to the field of the commission for assessing damage from natural and other disasters	Going to the field of the damage assessment commission	Making a report on damage assessment in the affected area in accordance with the valid regulations	The final report on the estimated damage by the authority was adopted organs	Service for CZ					x	30.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.2.1. Procurement of equipment and material and technical means (small inventory)	Procurement of equipment and resources - small inventory for the needs of CZ structures	Purchased equipment and material and technical means (small inventory)	Number of acquired material and technical means	Service for CZ						34.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said

1.2 Equipping civil protection structures	1.2.2. Expenditure on clothing i uniform	Procurement of uniforms for headquarters, commissioners, protection and rescue services and civil protection units	Headquarters, commissioners of the service and civil protection units have uniforms	Number of acquired uniforms	Service for CZ							70.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said	
	1.2.3. Expenditures for joint procurement (KUCZ TK, City of Grajanica and JP "Spreja" dd Tuzla) Systems for informing and alerting citizens in the area of TK - for needs of the City Gracanica	Construction of the basis of the early warning system in the area of the City Gracanica	Established system early warning	3 electronic sirens installed	Cantonal administration of civil protection, JP Prevents Tuzla, City of Gracanica-Service for civil protection								70.000	City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	The estimate of the joint procurement related to the City of Grajanica amounts to approx. 137,000, of which 70,000 are the funds of the special compensation for ZIS, and the remaining part are the funds of KUCZ and JP Spreja
	1.2.4. Expenditures for ongoing maintenance and servicing of CZ equipment and resources	Regular servicing of equipment and resources	Blagovremeno servisiranje opreme i means CZ-e	Number of serviced devices-equipment and means	Service for CZ								30.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.2.5. Equipment for CZ and investment reconstruction	Investment construction and equipping of civil protection structures	Equipped structures of civil protection	Amount of funds intended for investment construction and equipping of CZ structures	Service for CZ								209.477	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.2.6. Insulation works on the investment built-up warehouse, including the construction of a garage for fire engines and equipping and procurement of carpentry	Insulation of the roof of the built-up warehouse and facilities for CZ warehouses and garages for fire engines	Completed on time works	Amount of funds intended for investment construction and equipment facilities for CZ warehouses and garages for fire engines	Service for CZ								60.000	City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said

1.2.7. Expenditures for the co-financing of the procurement of a used CADY all-terrain vehicle for the needs of the ZIS-Veterinary Service	of the funds for the procurement of equipment and funds for protection and rescue services of the City of Grajanica	Equipped protection and rescue services of the City of Grajanica with the equipment necessary for their work and activity in accordance with the framework formation.	Number of equipped services	Service for CZ								10.000	City budget Gračanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.2.8. Expenditures for the co-financing of the purchase of a used CADY all-terrain vehicle for the needs of the Service for Water Supply in JP Vodovod i Kanalizacija Grajanica	Allocation of funds for the purchase of equipment and resources for protection and rescue services of the City of Grajanica	Equipped protection and rescue services of the City of Grajanica with the equipment necessary for their work and action in accordance with the framework formation.	Number of equipped services	Service for CZ								10.000	City budget Gračanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.2.9. Expenditures for the co-financing of the procurement of vehicles for the transport of the injured - an ambulance, the procurement of the ZIS service - Aid funds	the allocation of funds for the transport of equipment for the and Medical protection and rescue services of the City of Grajanica	Equipped protection and rescue services of the City of Grajanica with the equipment necessary for their work and action in accordance with the framework formation.	Number of equipped services	Service for CZ								50.000	City budget Gračanica Special purpose funds i Donations from seniors levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.2.10. Expenditures for co-financing of procurement of construction machinery- Backhoe for the needs of the service, the ZIS- for communal work (for and means of sanitation of the terrain and protection of the environment)	allocation of funds for the procurement of equipment and means of cleanliness, services for the protection and saving the City of Grajanica	Equipped protection and rescue services of the City of Grajanica with the equipment necessary for their work and action in accordance with the framework formation.	Number of equipped services	Service for CZ								70.000	City budget Gračanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said

	1.2.11. Expenditures for the acquisition of MTS, acquisition and maintenance of the system for alerting the population and equipping the CZ center	Procurement of means of communication for the Operations Center CZ and the City Protection and Rescue Service and the establishment of a better communication connection of the KOC with the emergency	Acquired means of communication and communication with KOC and emergency services	Number of equipped services with means of connection	Service for CZ						40.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	services (police, ambulance service, procurement of equipment necessary for implementation of personal and collective protection of citizens	Subsidiarization Strengthening preparedness for the joint action in response to natural and other disasters	Higher level of readiness for joint action	The number of joint activities carried out	Service for CZ						30.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.3. Implementation of preventive protection and rescue measures	1.3.1. Co-financing of marking and demining of suspected landmines in the area of the city of Grayanica	Co-financing of demining by the City Gracanica	By demining suspected areas of mines, preconditions are created for the return of the pre-war population to their homes, a safer environment the population of the surrounding settlements and the use of forest and agricultural areas, as well as the development of tourism, hunting and animal husbandry.	Area demined through co-financing projects (m2)	Service for CZ						155.000	City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said

	1.3.2. Watercourse cleaning – public works	Participation in the implementation of preventive protection and rescue measures that are in the function of prevention occurrence of natural or other disasters or mitigating their effects	Watercourses have been cleared of debris and waste material and the permeability of watercourses has been increased	Number of cleaned watercourses	Service for CZ							242.010	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.3.3. Co-financing by OOCK in the organization of a competition for IŠ students in the field of PMP, warning about the danger of mines and DDK	Co-financing by OOCK in the organization of a competition for elementary school students in the field of first aid and warning against the	Train students to recognize dangers, procedures and protection measures through education.	The number of students who have undergone education	Service for CZ							13.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
	1.3.4. Co-financing the costs of pest control and/or disinfection and/or disinsection	danger of mines and UXO	Better protection of the population and a prerequisite for preventing the occurrence of infectious diseases	Locations where extermination and/or disinfection and disinsection were carried out	Service for CZ							30.000	City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.4. Training and exercises of civil protection structures in the country and abroad	1.4.1. Training and exercise of civil protection structures and the population City of Grajanica	Training and rehearsing of members of the headquarters and protection and rescue services and the population City of Grajanica	Trained and trained members of the headquarters and protection and rescue services City of Grajanica	The number of trained and trained members of the headquarters and protection and rescue services and the population City of Grajanica	Service for CZ							109.998	City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said
1.5. Expenditures for financing unplanned expenses in implementation of protection and rescue measures	1.5.1. Funding of emergency measures emergency measures in situations where budget funds are not protection and sufficient in the implementation of rescue protection and rescue, the immediate engagement of the danger and the course in protection and rescue operations	Funding of emergency measures in rescue measures in the course including natural or other accidents	Assistance provided during the implementation of emergency protection and rescue measures	The amount of funds for emergency interventions	Service for CZ							109.998	City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	The stated funds are exclusively estimated funds of special compensation for said

Table____: CITY OF GRAJANICA - Strategic goal 2. Strengthening of fire protection and fire fighting and protection and rescue services as part of a unified system of protection and rescue

PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	planned/ EXPECTED THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS					EXPECTED COSTS	SOURCE FINANCING NOTE		
1	2		3	4	5	6					7	8	9	
2.1. Equipping firefighting units and facilities, investment construction and maintenance	2.1.1 Procurement of minimal technical equipment and resources for the needs PVJ	Procurement of firefighting equipment, technical and other funds for firefighting units	Better equipment of firefighting units	Purchased minimal technical equipment and resources for the needs of PVJ	Service for CZ		xxxx				x	100.000	Budget of the City of Grajanica, Financial resources from property fire insurance premiums and natural forces and resources from the charged functional premium of insurance, which refers to motor vehicle insurance, Donations from higher levels of government and others donor	
	2.1.2. Acquisition of a used fire engine with an upgrade - a fire tank with a capacity of up to 8,000 l of water, up to 1,000 l of foam with an upgrade of equipment and resources	Procurement of a fire engine for the needs of the fire department	Better equipment of firefighting units	Purchased used fire engine with upgrade- units	Service for cz		xxxx				x		City budget Gracanica i Donations from higher levels of government and other donors	
	2.1.3. Expenses for the purchase of a used fire truck for rescue from heights, an automatic ladder up to 25 m long or a hydraulic articulated platform up to 25 m long.	Procurement of a used fire engine for the needs of the fire department	Better equipment of firefighting units	Acquired hydraulic platform	Service for CZ		xxxx				x		City budget Gracanica i Donations from higher levels of government and other donors	
	2.1.4. Procurement of the missing set of technical tools for technical interventions	Procurement firefighting equipment, technical and other resources for firefighting units	Better equipment of firefighting units	Acquired technical tools	Service for CZ		xxxx				x		Budget of the City of Grajanica Special purpose funds i Donations from higher levels of government and other donors	
	2.1.5. Expenditures for the purchase of an all- terrain vehicle for forest fires 4x4 with a high- pressure pump and a tank of up to 600 liters of water	Procurement of firefighting equipment, technical and other resources for firefighting units	Better equipment of firefighting units	Acquired all-terrain vehicle for forest fires	Service for CZ			x					City budget Grajanica i Donations from higher levels of government and others donor	
	2.1.6. Expenditures for personal and joint clothing and footwear and equipment for firefighters in PVJ	Procurement of personal and joint children's shoes and equipment for firefighters in	Better equipment of firefighting units	Acquired personal and common equipment	Service for CZ								City budget Grajanica i Donations from higher levels of government and other donors	
	2.1.7. Expenditures for ongoing maintenance of assets PVJ	Regular maintenance funds of PVJ	Means and equipment in good condition	Number of funds maintained	Service for CZ							City budget Grajanica i Donations from seniors and other donors		
	2.1.8. Extension of the fire station and provision of energy efficiency (warming and replacement of carpentry)	Improvement of accommodation for firefighters and material	Improved conditions and accommodation goods	Saving electricity and fuel for heating	Service for CZ	xxxx				x	50.000	City of Grajanica City budget Donations from higher levels of government and other donors		

Table ____: CITY OF GRAĐANICA - Strategic goal 2. Strengthening of fire protection and fire fighting and protection and rescue services as part of a unified system of protection and rescue												
PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	planned/ EXPECTED THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS				EXPECTED COSTS	SOURCE FUNDED AND	REMARK
1	2		3	4	5	6				7	8	9
2.4. Improvement of spatial protection	2.4.1. Fire protection measures in the system of preventive planning 2.4.2. Preventive measures implemented during the design and construction of buildings 2.4.3. Maintenance of installations 2.4.4. Installing the active system fire protection 2.4.5. Construction of sources and installations for water supply for fire fighting 2.4.6. Fire detection in open spaces 2.4.7. Measures related to lighting fires and burning weeds and other plant waste in open spaces	Preventive fire protection measures	By implementing the above measures, preventive protection against fires will be arranged, i.e. they will prevent their occurrence	Better organization and protection of the population and material goods from fire - Reduced number of fires and damage to buildings, forests and open space.	Service for spatial planning, geodetic and property legal affairs of the City Gracanica, Construction inspector, Cantonal urban planning and construction inspector, Inspectorate for protection and rescue KUCZ, Fire Protection Inspectorate of the MUP TK, Cantonal Forestry Inspector	*	*	*	*			Municipal/city authorities, OSCZ, fire brigades, MUP, KU for inspection duties, JP "Sume TK. The aforementioned entities will use their own funds to implement measures and activities within their jurisdiction.
2.5. Education of the population	2.5.1. Training of the population through lectures, presentations, exercises, etc. 2.5.2. Addressing via electronic media 2.5.3. Printing of propaganda material	Preventive measures fire protection	Higher level of awareness about the danger of fire	The number of training participants	Service for CZ PVJ	*	*	*	*	17.500,00		Financial resources from property fire insurance premiums and natural forces and resources from the charged functional premium of insurance, which refers to motor insurance vehicles
2.2. Training and training of firefighting units	2.2.1. Organizing exercises and education		Higher level of readiness of firefighting units for the execution of assigned tasks	The number of firefighters who have undergone various types of training and exercises		*	*	*	*	35.000,00		Financial resources from property fire insurance premiums and natural forces and resources from the charged functional premium of insurance, which refers to motor vehicle insurance

Table ____ : CITY OF GRAJANICA - Strategic goal 3. Improvement of inter-institutional cooperation, cooperation with civil society and the business sector will be achieved through the following activities:														
PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	PLANNED / EXPECTED IN THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS					EXPECTED COSTS	SOURCE FINANCING NOTE		
1	2		3	4	5	6					7	8	9	
3.1. Improving the cooperation of institutions at all levels from the local community, cantons, Entities in FBiH and RS and BiH in the sectors of water, demining, land protection, environmental protection, protection and rescue, and spatial planning with the aim of reducing the risk of natural	3.1.1. Implementation of the listed obligations of all entities under their jurisdiction, which are in the function of protection and rescue and other disasters	Integrated risk management obligations of all entities from and adjustment of their jurisdiction, which are in the function of protection and rescue change as a good practice includes all relevant subjects in prevention and preparedness for natural and other disasters, at all levels of the organization	Implementation of listed obligations of all entities from and adjustment of their jurisdiction, which are in the function of protection and rescue	Number of implemented legal obligations, exchanged information, databases, etc.	Service for CZ								City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	
3.2. Cooperation with the Armed Forces of Bosnia and Herzegovina	3.2.1 Cooperation with the Armed Forces of Bosnia and Herzegovina	Rehearsing SOPs for joint action	Ease of OS engagement BiH and joint action in the state of nature and others accidents	Number of organized joint meetings, education, etc.	Service for CZ								City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	

3.3. Collaboration with civil protection structures of neighboring municipalities and cities, cantons, the Federation of Bosnia and Herzegovina, the RS and Brčko District, and the institutions of Bosnia and Herzegovina (Ministry of Security, etc.)	3.3.1. Achieving cooperation with civil protection structures of neighboring municipalities and cities, cantons, the Federation of Bosnia and Herzegovina, in the Republic of Srpska and the Brčko District of Bosnia and Herzegovina	3.3.1. Strengthening prevention and preparedness for joint action in response to natural and other disasters	Higher level of readiness for joint action	The number of implemented joint activities	Civil protection	xxxx				x		City budget Gracanica Special purpose funds i Donations from higher levels of government and others donor	
3.4. Improving cooperation with civil society - NGOs	3.4. 1. Improvement of cooperation with civil societies - NGOs	3.4.1. Inclusion of NGOs in the protection and rescue system	The non-governmental sector plays a positive role related to the participation of the public in consultations during the drafting of regulations, then in communication and informing about issues of importance for the protection and rescue, promotion of volunteer work and more active involvement of citizens in civil protection structures	Number of NGOs included in the protection and rescue system	Civil protection	xxxx				x		City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	
3.5. Improving cooperation with the business sector	3.5. 1. Improving cooperation with the business sector	Strengthening the role of legal entities in the field of economy, which deal with the tasks referred to in Article 32, paragraph 1 of the Law on the Protection and Rescue of People and of material goods from natural and other disasters ("Official Gazette of the Federation of Bosnia and Herzegovina", number 39/03, 22/06 and 43/10)	Getting to know the human and material potential of legal entities (production facilities, buildings, material and technical means and equipment and other means and assets) and their degree of organization and ability in implementing protection and rescue measures	The number of legal entities whose resources can be efficiently used during protection and rescue activities	Civil protection	xxxx				x		City budget Gracanica Special purpose funds i Donations from higher levels of government and other donors	

Table ____ : CITY OF GRAJANICA - Strategic goal 3. Improvement of inter-institutional cooperation, cooperation with civil society and the business sector will be achieved through the following activities:														
PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	PLANNED/EXPECTED IVAN THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS					EXPECTED COSTS	SOURCE FINANCING NOTE		
1	2		3	4	5	6					7	8	9	
Improvement of preventive flood protection of watercourses of the river Spreya - watercourses of categories I and II	The main project for the improvement of the Spreya River bed in the municipality of Grajanica, section from the bridge to Karanovac to the mouth of the river Falcons in the river They prevent		By regulating the water flow of the Spreya river, it prevents the bridge for Karanovac upstream to the confluence of the Sokoluša and the Spreya River, we achieve effective flood protection and thereby protect the population, residential, commercial and infrastructure facilities	Completed works by The main project in the length of 1357.34 m	Agency for the water area of the Sava River		xxxx				x	1.8 million USD	Planned through the project " Increasing investment in flood risk reduction in Bosnia and Herzegovina ...GFC i UNDP, Agency for the Sava River Water Area and Public institution Vode RS-e	
	Continuation of works on „ Ensuring the flow profile of the river Spreya at critical locations in the City area Gracanica	Interventional cleaning of the Spreya river bed	By cleaning watercourses of the river Spreya, as a preventive measure we achieve effective flood protection and thereby protect the population, residential, commercial and infrastructure facilities until the regulation of the river Spreya is done	Completed works by Elaborate in the length of approx. 5,000 m	Agency for the water area of the Sava River in coordination with By the city Gracanica		xxxx				x	2.500.000	Agency for the water area of the river Save the Donkey Donors	
	Ensuring the flow profile of watercourses of category II in the area of the City Gracanica	Interventional cleaning of river beds - watercourses of category II	By cleaning category II watercourses, as a preventive measure, we achieve effective flood protection and thereby protect the population, residential, commercial and infrastructure facilities.	Completed works	Ministry of Agriculture, Forestry and Water Management TK in coordination with By the city Gracanica		xxxx				x		Ministry of Agriculture, Forestry and Water Management TK, City of Grajanica and other donors	

Table ____ : CITY OF GRAĀNICA - Strategic goal 3. Improvement of inter-institutional cooperation, cooperation with civil society and the business sector will be achieved through the following activities:													
PROGRAM	THE PROJECT	MEASURES I ACTIVITIES	PLANNED/EXPECTED IVAN THE RESULT	INDICATOR EXECUTIONS	CARRIER ACTIVITIES	DEADLINES FOR REALIZATION BY YEARS					EXPECTED COSTS	SOURCE FINANCING NOTE	
1	2		3	4	5	6					7	8	9
1.3. Implementation of preventive measures for protection and rescue	<p>1.3.1. Co-financing of the marking and demining of suspected mine areas in the area of the City of Građanica</p> <p>1. SME Donji Skipovac, 2. MSP Gornji Skipovac-Samunica, 3. Topalovići-Centar, 4. Topalovići-Economy 5. Gornji Skipovac 1 A 6. Gornji Skipovac 1 B, 7. Gornji Skipovac 2 B, 8. Topalovići - Podkućnica, 9. Topalovići-Podkućnice 2</p>	Reduction of suspicious areas from mines to the City of Građanica	By demining suspected areas of mines, preconditions are created for the return of the pre-war population to their homes, a safer environment for the population of the surrounding settlements and the use of forest and agricultural areas, as well as the development of tourism, hunting and animal husbandry.	The surface cleared of mines and put into use (5,502,682.21 m ²)	Center for demining in Bosnia and Herzegovina, Coordination FUCH, FUCH, Services for CZ							Center for demining in BiH (BH MAC), City budget Gracanica Special purpose funds i Donations from seniors levels of government and other donors	

9. FINAL PART

The Mayor of the City of Građanica, through the competent Services for the Administration of the Single City Authority of the City of Građanica, will monitor the implementation of the tasks set out in the Development Program and, within the framework of his authority, work on the implementation of this development program.

Administrative services and other bodies and legal entities are obliged, in their annual work plans, to plan and execute all tasks from the Development Program that have been established for the area for which they are established in accordance with the applicable laws and regulations which are in charge in the manner determined in the Development Program, taking into account that funds from planned and established sources ensure the realization of all strategic directions.

The Civil Protection Service, as the basic expert body for the field of protection and rescue and as the basic expert body for the field of fire protection and firefighting at the level of the City of Građanica, has the obligation to monitor the implementation of the Development Program and within the scope of its powers, established by the Law on Protection and Rescue, According to the Law on Fire Protection and Fire Fighting, the Decision on the Organization and Functioning of the Protection and Rescue of People and Property from Natural and Other Disasters for the Građanica Municipality and the Decision on the Organization and Functioning of Fire Protection and Fire Fighting in the Građanica Municipality, encourages and coordinates the activities of the services for the administration of the City of Građanica, public companies, legal entities and other bodies of interest for protection and rescue in engaging in the implementation of tasks determined in the Development Program for their areas and regularly informs competent authorities about the state of implementation of the Development Program and problems that slow down and prevent the implementation of tasks.

This Development Program shall enter into force on the eighth day from the date of its publication in „
To the official gazette of the City of Građanica"

Bosnia and Herzegovina
Federation of Bosnia and Herzegovina
Tuzla canton
CITY OF GRAĐANICA
town Council

Number: 01–40– /2023.
Gračanica, years.

PRESIDENT OF THE CITY COUNCIL

Mirzet Topčagić

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IMAGE Ž E N J E

LEGAL BASIS:

The legal basis for the adoption of the Development Program for the Protection and Rescue of People and Property from Natural and Other Disasters of the City of Gražanica for the period from 2023 to 2027 (hereinafter referred to as the Program) is found in Article 29, Clause 2 and Articles 168, 169 ., 174 and 174a of the Law on the Protection and Rescue of People and Property from Natural and Other Disasters ("Official Gazette of the Federal Republic of BiH", No. 39/03, 22/06 and 43/10) (hereinafter the Law)

REASONS FOR ENACTMENT:

The reason for adopting the Program lies in the fact that the Development Program determines the policy and strategy for the protection and rescue of people and material goods from natural and other disasters, in which specific programs, projects and initiatives are defined in accordance with the established policy and strategic directions of the development of protection and rescue.

JUSTIFICATION OF THE PROGRAM TEXT:

The text of the program was created so that it contains all the elements from Article 169 of the Law, i.e.:

1. Policy of development of protection and rescue of the City of Gražanica;
2. Conclusions from the municipality/city vulnerability assessment;
3. Data on the state of organization of civil protection and the achieved degree of protection and rescue from certain natural and other disasters;
4. Preventive protection and rescue measures to be implemented;
5. Basic goals, tasks and way of achieving protection and rescue with guidelines for organizing forces and means of civil protection, i.e. protection and rescue forces,
6. Basics for creating a training and qualification program in protection and rescue;
7. Guidelines for research and development activities of importance for protection and rescue;
8. Overview of expected costs with funding sources.

PROGRAM FUNDING:

Financial resources for the implementation of the Program will be provided in the budget of the city of Gražanica, in accordance with Articles 179 to 184 of the Law, as well as from the special compensation for protection and rescue that is paid by all legal entities and citizens who are self-employed and state bodies at a rate of 0.5% of the base made up of the paid net wages for employees in the working relationship and all persons engaged under the contract on the performance of temporary and occasional jobs in accordance with Article 180. of the Law.

IMPLEMENTATION OF THE PROGRAM:

The City Council, Mayor, City Administration Services, Local Communities, legal entities and natural persons in the area of Gražanica are responsible for implementing the program.