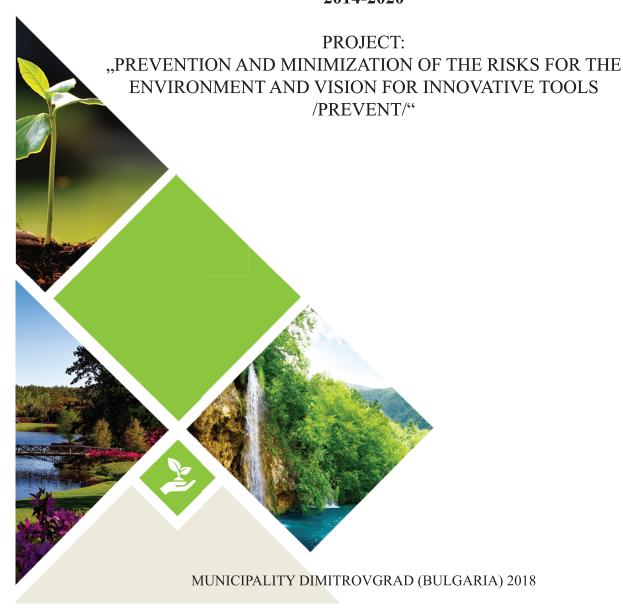




# **GENERAL STRATEGY ON**

# PREVENTING AND MITIGATING THE CONSEQUENCES OF NATURAL AND MAN-MADE DISASTERS

# INTERREG IPA CROSS-BORDER COOPERATION BULGARIA - TURKEY PROGRAMME 2014-2020



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### 1. NTRODUCTION

In today's conditions of environmental imbalance and dynamic technological development, various accidents occur, that negatively impact life, welfare and the natural resources of the planet.

The global goals of the sustainable development idea are directly or indirectly linked with human and environmental protection against fires, industrial accidents, natural disasters and other emergency situations. The far-sighted protection approach requires realization of the necessary policies through strategy implementation providing the vision for prevention and/or successful eradication of accidents.



Fig. 1 – "Global goals for sustainable development"

The current "GENERAL STRATEGY ON PREVENTING AND MITIGATING THE CONSEQUENCES OF NATURAL AND MAN-MADE DISASTERS" is developed for the needs of project PREVENTION AND MINIMIZATION OF THE RISKS FOR THE ENVIRONMENT AND VISION FOR INNOVATIVE TOOLS /PREVENT/ which is realized under the INTERREG IPA CROSS-BORDER COOPERATION BULGARIA - TURKEY PROGRAMME 2014-2020

The document has been developed in accordance with the good practices in strategic planning and includes:

- CHARACTERISTICS OF DIMITROVGRAD MUNICIPALITY
- CHARACTERISTICS OF DISASTER PROTECTION SYSTEM IN DIMITROVGRAD MUNICIPALITY
- STATISTICAL DATA REGARDING ACCIDENTS OCCURRED IN DIMITROVGRAD MUNICIPALITY
- CHARACTERISTICS OF UZUNKOPRU MUNICIPALITY
- STATISTICAL DATA REGARDING ACCIDENTS OCCURRED IN UZUNKOPRU MUNICIPALITY
- RISK ANALYSIS AND ASSESSMENT
- VISION AND STRATEGIC GOALS
- ACTIVITIES FOR ACHIEVING THE OBJECTIVES
- MECHANISM FOR EVALUATION OF RESULTS
- ACTION AND IMPLEMENTATION PLAN

A strategy has been proposed which reflects the potential risks for disasters and the opportunities for implementing successful measures and activities for prevention, emergency, rescue and recovery actions. The strategy follows the principles of timeliness and flexibility regarding the definition of strategic objectives and implementation activities, that ensure adequate adaptation in conditions of unpredictability and turbulence of the environment.

# 2. CHARACTERISTICS OF DIMITROVGRAD MUNICIPALITY

#### **Location and boundaries**

Dimitrovgrad Municipality is located in the central part of South Central Planning Region. In administrative aspect it belongs to HaskovDistrict. To the north it is bordered by the Municipalities of Chirpan and Opan (Stara Zagora District), to the east – by the Municipality of Simeonovgrad, to the south by the Municipalities of Haskovo and Mineralni Bani, to the west by the Municipality of Parvomay (Plovdiv District). Dimitrovgrad Municipality occupies approximately 10% (567,6 m2) of the territory of Haskovo district, 13.07% of the agricultural lands, 7,44% of the forests, 21.759% of population. European corridors EC 10 and EC 9 cross the territory of Dimitrovgrad Municipality.



Fig. 2 – "Haskovo district"



Fig. 3 – "Dimitrovgrad Municipality"

#### **Urban** network

The urban network of the municipality consists of two cities (Dimitrovgrad and Merichleri) and 25 villages, spread evenly across its territory. The core Dimitrovgrad is not only functional but also the spatial center of the territory which has no significant relief barriers apart from Maritsa River and the uplands between Haskovo and Dimitrovgrad. The density of the urban network is close to the national average – 5 localities in 100 m2. The average distance between the localities is around 5 km – a favorable prerequisite for establishment and functioning of live territorial residential community. The established imbalance between the urban aspect of the towns and villages in Dimitrovgrad Municipality is a result of the demographic and functional characteristics.



Fig. 4 – "Urban network of Dimitrovgrad Municipality"

#### Functional area allocation

The flat terrain, diversified by forests on the hills and Maritsa River in the central part determines the functional area allocation. The major part is occupied by agricultural lands and the central one (along the line Haskovo-Dimitrovgrad-Radievo and the peripheral northeast parts) by hills. Dimitrovgrad municipality occupies 567.6 m2: 416.6 m2 (73.39%) are agricultural lands, 72.97 m2 (12.89%) belong to scattered and non-specific terrains, and 44.73 m2 (7.88%) of the territory represents urban area.

#### Climate

The climate in the region is transitional continental Mediterranean. The average annual temperature in Dimitrovgrad is higher than the national average +12.6 ° C. This contributes for intensive processes of evaporation, especially during the summer months. The distribution of rainfall is uneven throughout the year. Two maximums have been identified: in spring period during the months of May – June and in autum period during October-December. The basic minimum is during September, and the second during February – March. The territory of the municipality falls within the only area of intersection between the isolines of the lowest (January) and highest (July) temperatures in Europe. This causes the high temperature amplitudes, which exceed here 70°C in the annual cross section. The positive average January temperature on the one hand and the relatively high average July temperature on the other indicate the transitional continental features of the climate. The actual average air temperature for January is0-1°C and for April is above 13°C. The region is characterized by continuous steady temperature keeping in the spring-summer-autumn period with duration of 200 to 220 days. The average start date of sustained temperature keeping above 10°C is before March, 31 and the average end date - from 4 to 9 November.

#### Land resources

The natural complex of diverse landscape consisting of plains and hills creates favorable conditions for development of agriculture and livestock production. The relatively good water potentials, lack of threat to the ecological balance activities, are a prerequisite for the development of the Dimitrovgrad Municipality - its strategic resource.

The structure of land resources is assessed to be balanced and adequate for the development of the municipality within the aspects of the main potential – agriculture.

#### Soils and mineral resources

In accordance with the physiographic division of the country, Dimitrovgrad municipality is located within the Kraishtensko-Tundzha (transitional) zone, in the area of Upper Thracian Valley (Upper Thracian Valley area). The soils are mainly black soils vertisols. The cinnamon forest soils also occupy significant areas. Meadow cinnamon soils are located in the Valley of Maritsa River. The most fertile meadow-alluvial soil and meadow-marsh soils are found there and to a smaller degree, the alluvial meadow soils. Prevailing are the lands of IV, V and VI category. The main cultivated crops are cereals – wheat, barley (about 50% of plantations), triticale and others. Industrial plants are represented by rape, sunflower and corn. The production of vegetables, traditional in the Municipality, has strongly decreased, and occupies about 3,000 acres. One of the municipal resources – meadows, common pastures and pastures has not been used effectively as a basis for livestock development. The earth layers are rich in hard coals, limestone and clay.

#### Water resources

The territory of Dimitrovgrad Municipality is characterized by diversity in terms of water supplies. Water resources are within the normal range, but the small amount of rainfall, typical for the Municipality, requires intensive irrigation, which hinders the drinking water supply in some localities.

The rivers in this region are of the Aegean auriferous basin. Main water resource and water receiver is the Maritsa River and its feeders. For regulation of the surface water courses in view of provision of necessary water resources for irrigation, a microdam network has been established on the territory of Dimitrovgrad Municipality. The catchment area of Maritsa River is a kind of aquifer with high level of ground waters and rich ground water resources including thermal mineral waters. The aquifers are not always clearly specified which is a prerequisite for direct hydraulic relation between the ground and surface waters. In this way, the "normal" year-round supply and quantity of the rivers is maintained, but at the same time conditions are created for the penetration of pollution from the open water streams into the ground waters. Ground waters are mainly used as of drinking and industrial water supply. In the territory of the region there are also thermal mineral waters – such are the drillings in Merichleri which are valuable water resource.

### Status of the local economy

The unfavorable economic factors influencing the EU and Bulgarian economy have largely affected the development of the local economy. The demographic crisis, the aging and the migration of local population are also factors influencing the state of the local economy. In recent years however, foreign investments in Dimitrovgrad municipality occupy the largest part in Haskovo region . The municipality is a leading economic unit on a regional level, having a considerable resource of free territories for investment intentions. Not surprisingly, the industrial zone between Dimitrovgrad and Haskovo is actively being built, with a tendency for their "connection". Another feature of the municipality is the functioning of Dimitrovgrad Sunday Market.

# 3. CHARACTERISTICS OF DISASTER PROTECTION SYSTEM IN DIMITROVGRAD MUNICIPALITY

Provision of fire safety and protection against fire, disasters and emergency situations is performed by the fire safety and civil protection authorities in accordance with the Law on the Ministry of Interior and the Disaster Protection Act and includes:

- Prevention;
- State fire distinguishing and preventive control;
- Fire-fighting and rescue activities;
- Authorization and control activities of traders operating in fire safety in premises and / or maintenance and operation of facilities, systems and equipment related to fire safety;
- Compliance assessment and control activities of products for fire extinguishing;
- Emergency rescue and recovery activities, operational protection in case of floods and search and rescue operations, and chemical, biological and radiation protection;
- Early warning and announcement in case of disasters and aerial danger of the executive authorities and the population;
- Methodical and expert support for disaster protection to the territorial executive authorities with regards to disaster protection and organization of the voluntary groups activities;
- Defining the fire performance of products and the technical and operational performance of firefighting equipment and firefighting products.

The scope and content of the individual activities is determined by the Rules of Organization and procedures of the Ministry of Interior. The terms and conditions for carrying out the activities shall be determined by ordinances and instructions of the Minister of Interior. The Law on the Ministry of the Interior regulates:

- fire safety and protection of the population are the bodies of General Directorate Fire Safety and Civil Protection MoI (GD FSCP-MoI) and employees which pursuant to a concluded contract between MoI and stakeholders are assigned to ensure fire safety and protection in case of fire, disasters and emergency situations;
- General Directorate Fire Safety and Civil Protection MoI (GD FSCP-MoI) is a national specialized structure of MoI for provision of fire safety and protection in case of fire, disasters and emergency situations and for implementation of informational, control and administrative criminal activity and provision of administrative services.

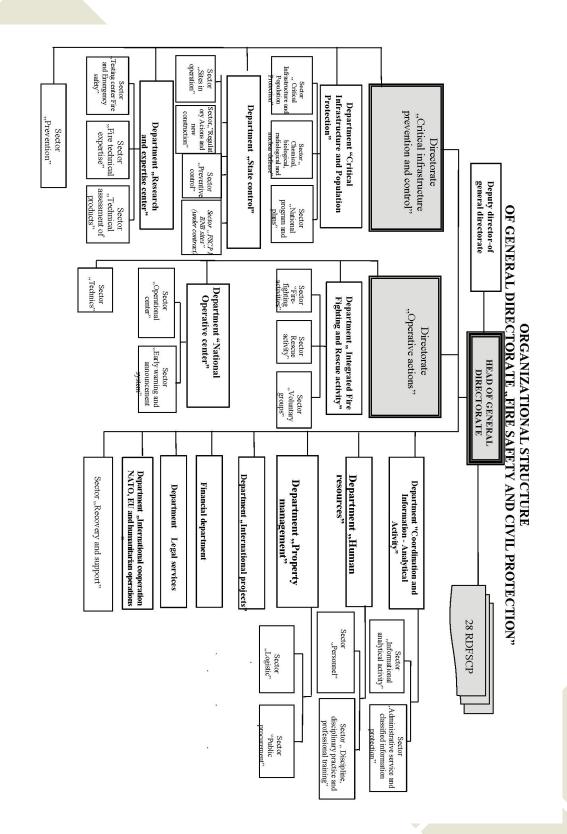


Fig. 5 – "Organizational structure of GD FSCP-Mol"

The territory of Dimitrovgrad Municipality is serviced by Regional Office Fire Safety and Civil Protection (ROFSCP) which is directly subordinated to Regional directorate for FSCP – Haskovo (RDFSCP-Haskovo) unit of GD FSCP-MoI. The execution of fire-fighting (FF) and emergency rescue operations (RO) and maintenance of permanent operational readiness are performed by the employees working in the "FF and RO" on continuous shifts, divided into four shifts. The direct management and control of the fire-fighting and emergency rescue activities in ROFSCP- Dimitrovgrad is performed by the head of group FF and ERO and the four shifts include employees working as Head of Shifts, Team Leader, Fire-fighter and special vehicle Driver. The State fire-fighting control (SFFC) and preventive action (PA) is implemented by the Head of department "SFFC and PA", inspectors "SFFC and PA" and junior inspector "SFFC and PA".

The Disaster Protection Act regulates the public relations connected with the protection of life and health of the population, the environmental and property protection in case of disasters. The bodies of the executive power, the legal persons and the sole entrepreneurs shall organize the protection in case of disasters, implementing the functions assigned to them

Disaster protection shall be provided on a national, district and municipal level and carried out through:

- -performing preventive activity;
- -performing protection activities in the event of disaster upon occurrence thereof;
- -relief and recovery;
- -resource provision;
- -provision and acceptance of relief funds;

The planning of disaster protection shall be carried out on municipal, district and national level. Disaster protection plans shall be drawn up by parts intended for each of the hazards specific for the respective area, provided that the parts dealing with earth-quakes, floods, nuclear and radiological accidents shall be obligatory.

The planning of disaster risk reduction shall be carried out on municipal, district and national level. The planning includes the development and updating of: a national strategy for disaster risk reduction; a national disaster risk reduction program; sectional and regional programs related to disaster risk reduction; regional disaster risk reduction programs; municipal programs to reduce disaster risk.

To fulfil the objectives of the regional disaster risk reduction program and to reduce the risks identified in the municipal disaster protection plan, municipal disaster risk reduction programs shall be developed. The implementation of the municipal disaster risk reduction program is based on approval of annual plans. The activities related to protection of the population in case of danger or occurrence of disasters shall be:

- -warning;
- -implementation of urgent measures in order to mitigate the effect;
- -announcement;
- -rescue operations;
- -providing medical assistance in emergency cases;
- -initial psychological counselling to victims and rescue teams;
- -control and elimination of ecological incidents;
- -protection against explosive substances and munitions;
- -search and rescue operations;
- -radiation, chemical and biological protection in case of incidents and accidents with dangerous substances and materials and against nuclear, chemical and biological weapons:
  - -limitation and liquidation of fires;
- -temporary relocation, evacuation, sheltering and supplying of individual protection means;
  - -implementation of urgent emergency and restoration works;
- -limitation of the distribution and liquidation of occurred epidemic explosions, epidemics and epizootics of infectious and parasitic diseases;
  - -other operations, related to the protection;

The activities shall be carried out by unified rescue system, which includes units of the ministries and administrations, municipalities, trade companies and sole entrepreneurs, emergency centers, other medical and health establishments, non-profit legal persons, including volunteer formations, the armed forces. The main structural parts of the unified rescue system are -General Directorate Fire Safety and Civil Protection – MoI (GD FSCP-MoI), regional directorates of MoI Bulgarian Red cross and emergency centers.

In the event of disasters, the separate bodies of the integrated rescue system organize and implement the activities in accordance with the disaster protection plans. The coordination of the components of the unified rescue system shall be implemented through the operative centers of the Fire Safety and Rescue Directorate General at the Ministry of Interior. The interaction and coordination between the bodies of the integrated rescue system, participating in the activities within the disaster area shall be made by the head of rescue operations.

The Disaster Protection Act defines that the mayor of the Municipality shall:

- -organize and manage the protection in case of disaster on the territory of the municipality;
- -organize coordinate and perform preventive actions for avoidance or reduction of the disaster consequences;
  - -make organization for early warning in the event of disasters;
  - -plan the financial resources for disaster protection;
- -create with an order a municipal headquarter for implementation of the the municipal disaster protection plan and for interaction;
  - -appoint the head of rescue operations by an order;
- -coordinate and control the development and implementation of the municipal disaster risk reduction program;
- -coordinate and control the development and implementation of the municipal disaster risk plan;
  - -ensure the response efficiency of the municipality;
- -organize the training of the municipal administration and the population of the respective municipality in acting and responding in case of disasters and implementation of the necessary protective measures;
- -submit data for preparing the district disaster risk reduction program and the district disaster protection plan;
- -provide vans for living, prefabricated houses or tents, if there are no available housing under the Municipal Property Act;

# 4. STATISTICAL DATA REGARDING ACCIDENTS OCCURRED IN DIMITROVGRAD MUNICIPALITY

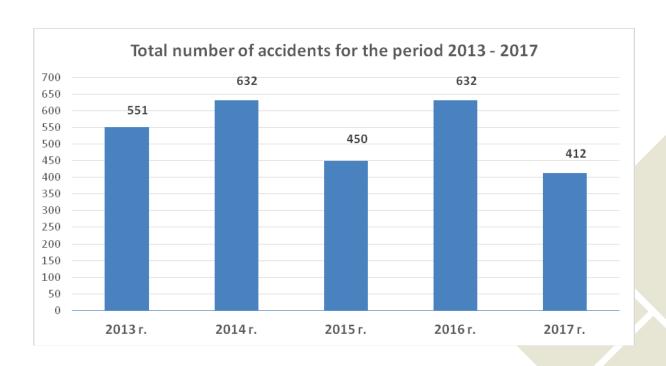
The statistical analysis of the accidents occurred on the territory of Dimitrovgrad Municipality of for the period 2013 - 2017 is based on data included in the annual activities reports of ROFSCP -Dimitrovgrad.

For the reported period statistical data have been studied, necessary to analyze the following:

- Number or registered accident per year;
- Distribution of accidents by type;
- Operative activities for the elimination of accidents;
- Number of registered accidents by localities;
- Distribution of accidents by months;
- Distribution of accidents by hour of the day;
- Distribution of accidents by origin location;
- Distribution of accidents by reason of occurrence.
- ✓ The number of registered accidents per calendar year is relatively constant value and varies between 450 650 [accidents / year].
- ✓ On the territory of Dimitrovgrad municipality different types of accidents occur mainly fires, but also various emergency situations and / or disasters requiring drainage, assistance to citizens or other technical assistance from the fire safety and civil protection authorities.
- ✓ One of the leading activities of the regional fire-fighting office is the elimination of fires, but there are also other important activities such as emergency rescue operations required after the occurrence of natural disasters floods, hurricanes, heavy snowfalls, frosting etc.

Table 1 – Total number of accidents and their distribution by type for the period 2013-2017

Accident type \ year	2013	2014	2015	2016	2017
Fires with direct losses	71	68	76	92	69
Fires without direct losses	287	105	143	350	184
Technical assistance / drainage	101	297	141	91	114
Car accidents	5	9	6	16	9
Provision of help /assistance	10	16	13	10	1
Incidents with dangerous substances	7	85	33	3	2
Duty with FF equipment	33	36	21	22	21
Assistance to other ROFSCP	23	0	6	39	6
Other type of accidents	3	6	3	0	2
False calls	11	10	8	9	4
Total number of accidents	551	632	450	632	412



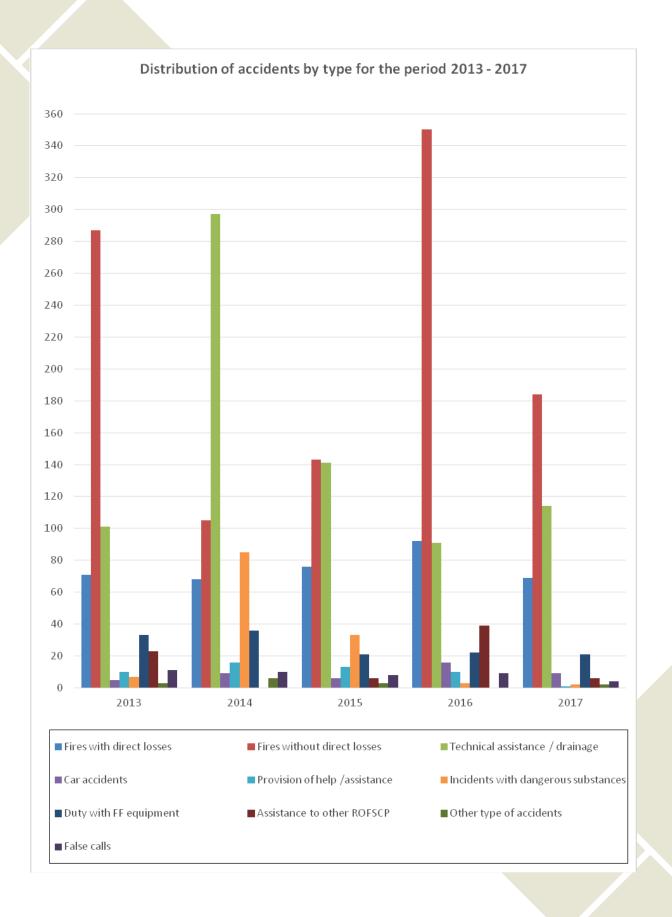


Table 2 – Operational activities for elimination of accidents for the period 2013 – 2017

Activity type \ Year	2013	2014	2015	2016	2017
Elimination of fires	358	173	219	442	253
Emergency rescue operations	123	407	193	120	126
Other	70	52	38	70	33
Total number of operational activities	551	632	450	632	412

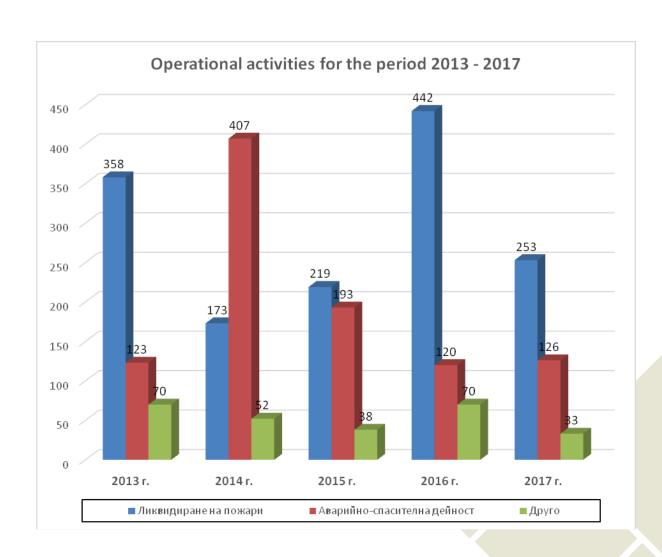
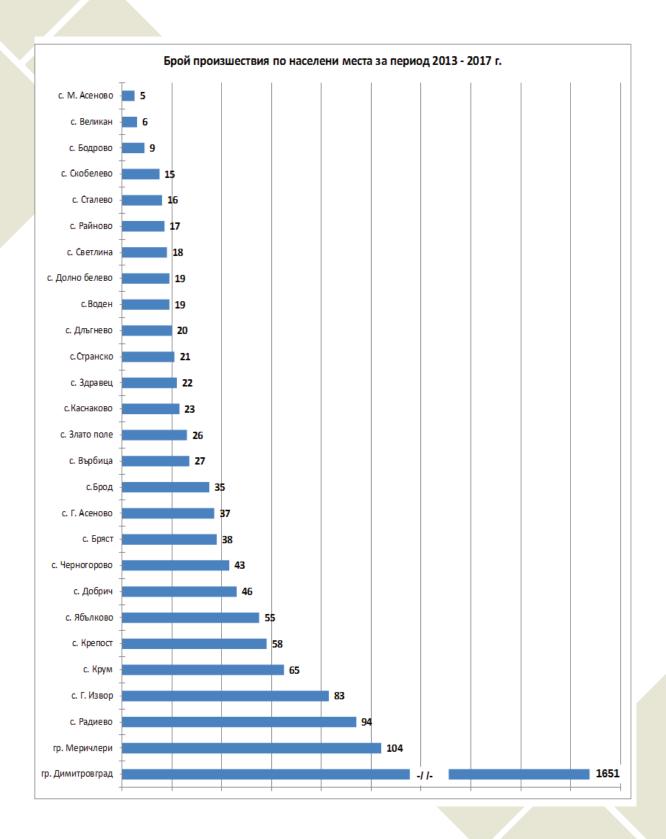


Table 3 – Number of accidents by locations for the period 2013 – 2017

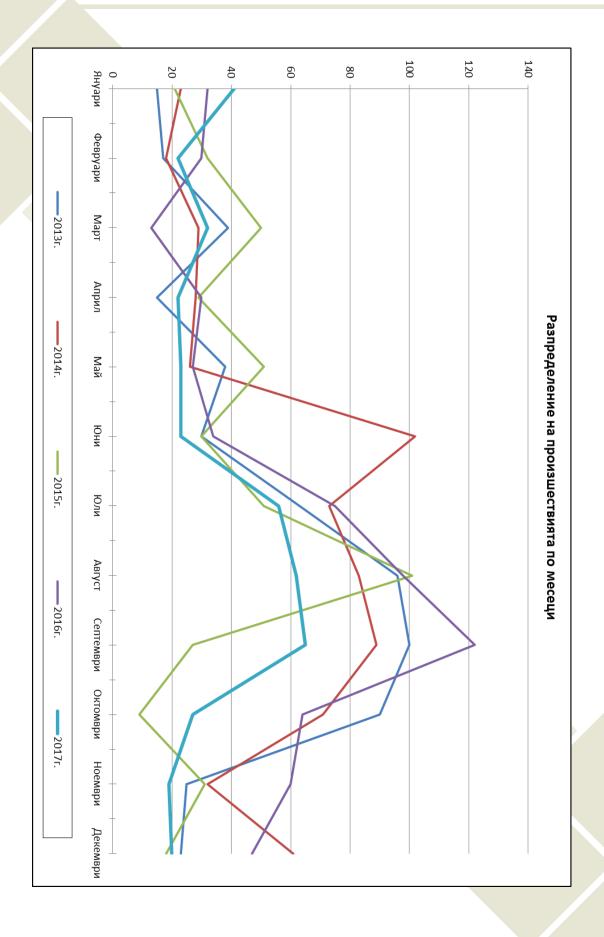
Location \ Year	2017	2016	2015
Dimitrovgrad	237	323	316
Merichlery	15	26	22
Radievo village	15	37	22
Gorski izvor village	19	16	8
Krum village	9	9	10
Krepost village	8	22	8
Yabalkovo village	5	17	7
Dobritch village	9	15	3
Chernogorovo village	8	6	6
Bryast village	6	11	5
G.Asenovvo village	3	13	2
Brod village	8	9	6
Varbitsa village	0	8	4
Zlato Pole village	1	6	3
Kasnakovo village	6	5	1
Zdravets village	4	9	1
Stransko village	5	4	2
Dlagnevo village	5	2	3
Voden village	5	4	0
Dolno Belevo village	3	6	1
Svetlina village	4	3	1
Rainovo village	1	6	2
Stalevo village	3	5	2
Skobelevo village	2	6	1
Bodrovo village	0	6	3



- Details on the number of accidents by location indicates that the highest risks are generated on the territory of the town of Dimitrovgrad and significantly lower are the accidents occurring in the neighboring villages. Even smaller are the number of accidents occurring in the more distant locations, except the village of Gorski Izvor. This finding justifies the establishment of voluntary group in the village of Gorski Izvor that will balance the response time in accidents all over the municipality.
- The distribution of accidents by months for each year follows a certain dependence and the highest number of accidents are reported during the summer months, which is explained by an increase in field and forest fires as a result of high temperatures and prolonged drought.

Table 4 – Distribution of accidents by months for the period 2013 – 2017

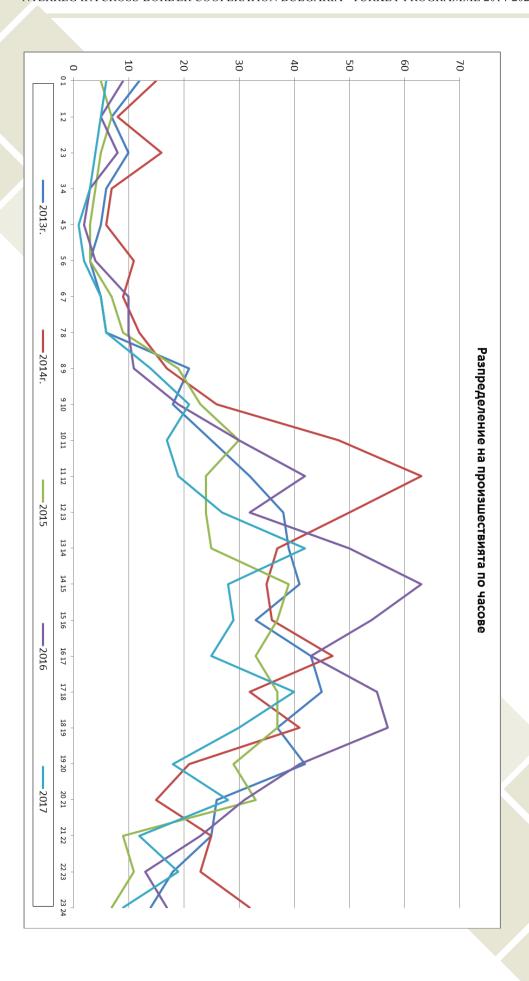
Month \ Year	2013	2014	2015	2016	2017
January	15	23	21	32	41
February	17	18	32	30	22
March	39	29	50	13	32
April	15	28	29	30	22
May	38	26	51	27	23
June	30	102	30	34	23
July	63	73	51	75	56
August	96	83	101	98	62
September	100	89	27	122	65
October	90	71	9	64	27
November	25	32	31	60	19
December	23	61	18	47	20
Total number of accidents	551	635	450	632	412



The distribution of accidents by hour of the day for each year also follows a specific dependence, explained by the impact of human activity on the occurrence of accidents. Therefore, the greatest number of accidents is reported between 10:00 and 20:00.

Table 5 – Distribution of accidents by hour of the day for the period 2013 – 2017

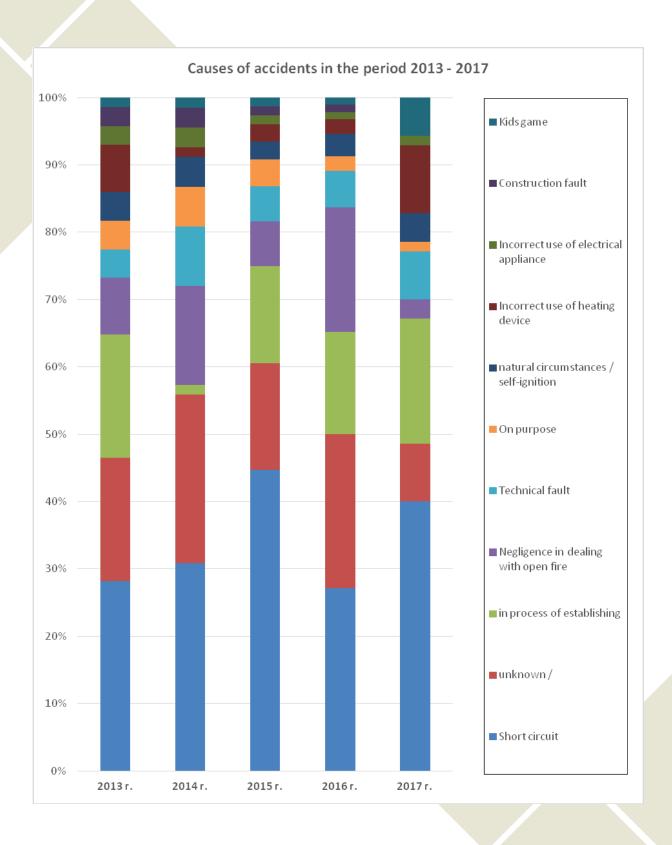
Hour \ year	2013	2014	2015	2016	2017
0-1	12	15	5	9	6
1-2	7	8	7	5	5
2-3	10	16	5	8	4
3-4	6	7	4	3	3
4-5	5	6	3	2	1
5-6	3	11	3	4	2
6-7	5	9	7	10	5
7-8	6	12	9	10	6
8-9	21	17	19	11	14
9-10	18	26	23	19	21
10-11	25	48	30	30	17
11-12	32	63	24	42	19
12-13	38	50	24	32	27
13-14	39	37	25	50	42
14-15	41	35	39	63	28
15-16	33	36	37	54	29
16-17	43	47	33	43	25
17-18	45	32	37	55	40
18-19	37	41	37	57	30
19-20	42	21	29	41	18
20-21	26	15	33	31	28
21-22	25	25	9	23	12
22-23	18	23	11	13	19
23-24	14	32	7	17	9



Data on the causes of accidents show that of significant importance are the human causes (negligence when handling open fire, incorrect use of a heater, incorrect use of electrical devices, children's play, and fireworks). This suggests that it is necessary to increase the awareness of the population regarding the rules and norms for fire and emergency safety.

Table 6 – Distribution of accidents by causes 2013 – 2017

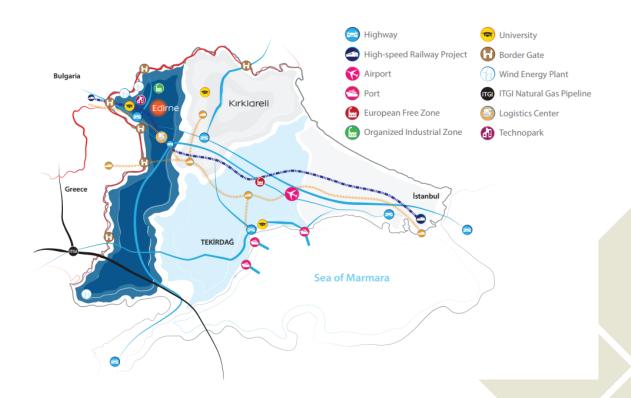
Cause \ year	2013	2014	2015	2016	2017
Short circuit	20	21	34	25	28
unknown / in process of establishing	13	17	12	21	6
Negligence in dealing with open fire	13	1	11	14	13
Technical fault	6	10	5	17	2
On purpose	3	6	4	5	5
natural circumstances / self-ignition	3	4	3	2	1
Incorrect use of heating device	3	3	2	3	3
Incorrect use of electrical appliance	5	1	2	2	7
Construction fault	2	2	1	1	1
Kids game	2	2	1	1	0
Fire operations / Incorrect technology	1	1	1	1	4

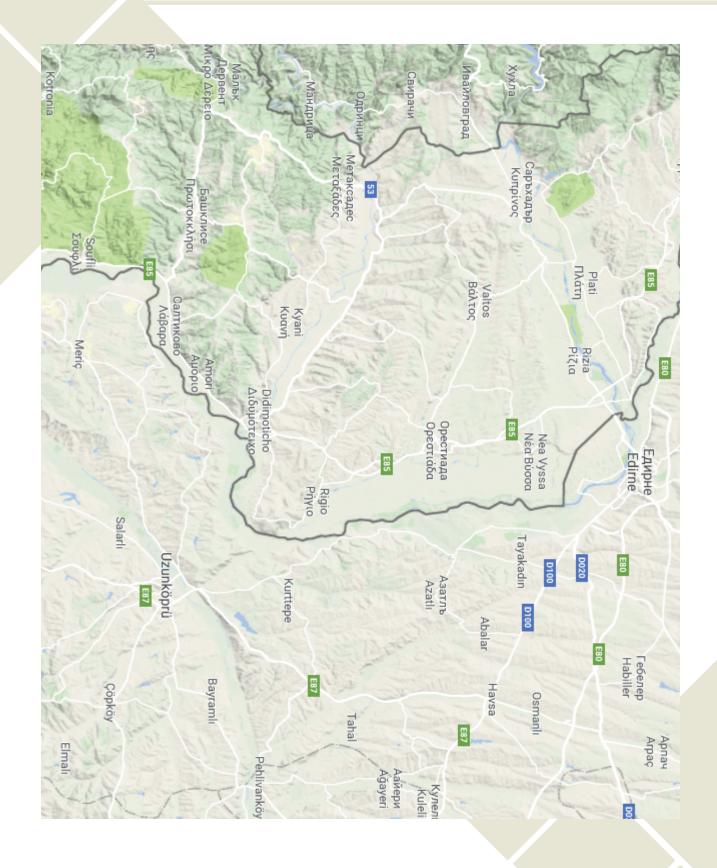


# 5. CHARACTERISTICS OF UZUNKÖPRU MUNICIPALITY

Uzunköpru is a town in the European part of Turkey, Edirne Province. The town is a province center and municipality, located around 60 km south of Edirne. It is located downstream along Maritsa River, on Egerne River. Almost 75% of the town's territory consists of lower-lying areas with altitude not exceeding 18 m. Small hills and plateaus spread around mostly in the north and south form the only heights in the region. The highest point in the town is Suleymani Hill - 221 m.

The weather in Uzunköpru is under the influence of the heavy Thracian transitional type of Mediterranean climate, which is a mixture of continental and maritime climate. Wind usually comes from north direction with moderate speed. While summer is hot with almost no rainfalls, the winter is cold with snowfalls. Most of the rainfalls are registered in spring. Another distinction is that 70% of the undeveloped area consists of arable land intended for farming, 20% are meadows and pastures and 10% are forests and shrubs. In recent years, the forests started to increase thanks to the afforestation measures undertaken.

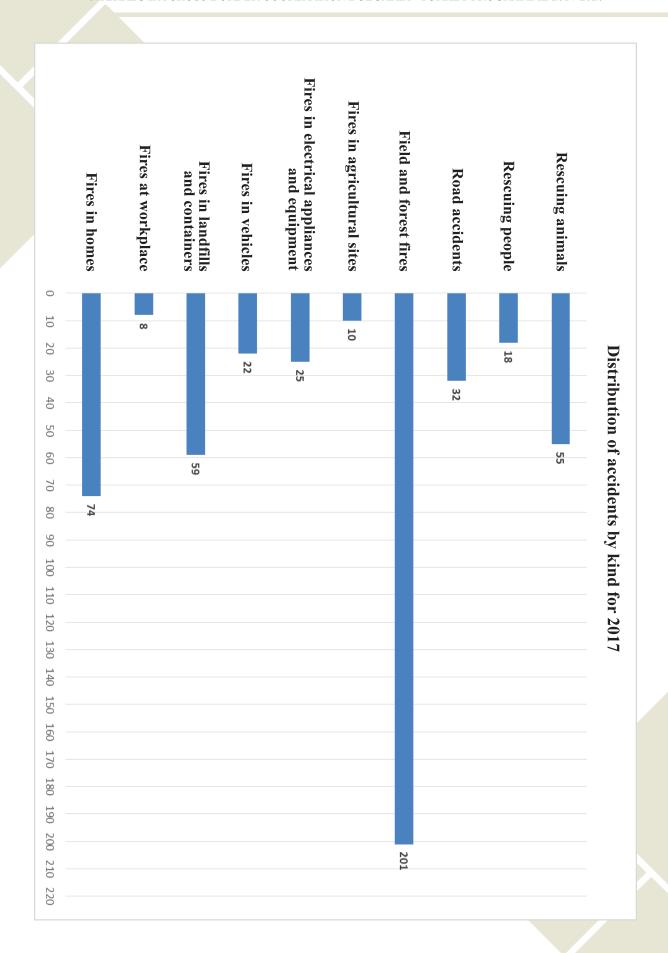




# 6. STATISTICAL DATA REGARDING ACCIDENTS OCCURRED IN UZUNKOPRU MUNICIPALITY

Accident type	Number
Fires in homes	74
Fires at workplace	8
Fires in landfills and containers	59
Fires in vehicles	22
Fires in electrical appliances and equipment	25
Fires in agricultural sites	10
Field and forest fires	201
Road accidents	32
Rescuing people	18
Rescuing animals	55

- ✓ Various kinds of accidents occur on the territory of Uzunköpru Municipality mainly fires, but also different emergency situations requiring drainage, assistance to people or other kind of technical support from the fire safety and civil protection authorities.
- ✓ The significant number of fires in open spaces can be explained by the specifications of the territory of Uzunköpru Municipality.



## 7. RISK ANALYSIS AND ASSESSMENT

The analysis of risks to humans and environment resulting from the occurrence of natural and man-made disasters in the subject area is based on:

- the characteristics of the municipalities and the particularities in terms of location and boundaries, functional land allocation, climate, socio-economic relations, etc.;
- the state of the legal framework and the institutional organization of the disaster and emergency protection system, including the current state of human resources and the specialized fire and rescue equipment serving the municipalities;
- results and conclusions from a comparative analysis of statistical data for disaster occurred on the territory of the municipalities;

In this context a SWOT analysis has been prepared, through which the following will be identified:

- threats, which may cause different kinds of accidents (fires, floods, emergency, etc);
- problems resulting from legal, regulatory, organizational and financial issues;
- good practices to be continued and / or improved in their role as a foundation for future institutional strengthening and upgrading of the disaster and emergency protection system;
- the perspectives and opportunities for more efficiency and sustainable development.

S | STRENGHTS

## ✓ Regulatory framework

The activities of the fire safety and civil protection authorities and the local executive bodies is settled in many legal and regulatory acts. In its good aspect, the regulatory framework provides the necessary powers and obligations of the requested authorities and organizations – both for prevention and control activities and for rescue and urgent emergency recovery actions.

# ✓ Professional training of the fire safety and civil protection authorities

The provision of fire safety and civil protection in the municipalities is executed by the relevant fire safety and civil protection authorities. In accordance with the legal and regulatory acts the employees pass initial training, participate in various further training programs and most of them already have gained working experience. In this respect both the management and executive personnel has the necessary professional qualification to perform their responsibilities in disaster protection.

#### ✓ Interaction between local institutions

Both municipalities have effective dialogue between the municipal administration, the Regional Office for Fire Safety and Civil Protection, the Regional Police Department and other relevant disaster protection bodies and organizations.

# ✓ Outdated and inadequate fire-fighting and emergency rescue equipment

The fire brigades do not have the necessary fire and rescue vehicles (fire-fighting lifting devices, fire-fighting vehicles for forest fires, etc.) to ensure the effective fight against complex and specific fires, industrial accidents and other emergencies.

# ✓ Lack of specialized equipment for emergency rescue operations

Provision of specialized technical facilities and equipment is necessary for rescue and safety operations in disasters, for operative actions in water and emergency recovery works after floods, earthquakes, hurricanes etc.

#### ✓ Shortage of human resources

There are no voluntary rescue teams established on the territory of the Dimitrovgrad Municipality to support the fire safety and civil protection bodies for the successful implementation of the fire-fighting and rescue activities (especially in case of disaster

W | WEAKNESSES situations, major accidents and incidents with large numbers of injured people).

### ✓ Limited prevention

The persistently high number of man-made accidents registered, suggests the need to expand the preventive actions in respect of public training for compliance with the rules and regulations for fire and emergency safety and adequate reaction in case of disasters and emergency situations.

## ✓ Structural funds of the European Union

Provision of alternative funding of the various activities for achieving the prevention and disaster protection targets may be possible by realization of projects under the operative programs of the EU structural funds.

#### ✓ Volunteers

At a national level has been developed and approved the regulatory framework, related to establishing and operating of volunteer groups which will assist the subdivisions of the integrated rescue system in case of disasters. Local efforts are needed to form volunteer groups which shall operate on the territory of the municipality.

# ✓ Specialized emergency rescue equipment

The opportunities of the new and modern emergency rescue equipment may significantly increase the efficiency of the rescue teams in search, rescue and recovery operations in case of disasters and other emergency situations.

### **✓** IT technologies

The information and communication technologies and other computer systems integrated into the fire safety and civil protection systems provide new opportunities for timely identification of fires, early warning and announcement, resource assistance of the operative

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**OPPORTUNITIES** 

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### **✓ International experience**

actions, communication support etc.

The international relationships of the Municipality allow to benefit from shared knowledge and international experience regarding the disaster and emergency protection.

### **✓** Of natural origin

The high temperature amplitudes, specific landscape and the crossing of Maritsa River are the main threat reasons of natural origin – forest and field fires, floods, tornados and storms, frosting.

### ✓ Of industrial origin

The highly developed industry in the town of Dimitrovgrad determines the threats from the occurrence of fires and accidents in the production enterprises.

## ✓ Of infrastructural origin

The area is a strategic transport intersection and a source of serious threats of an infrastructural origin - transport accidents, incidents in dangerous goods transportation, incidents with the rolling stock and railway facilities.

### **✓** Of anthropogenic origin

Sources of threats can also be identified according to other particularities of the region related to human activities - forest and field fires caused by human negligence and / or intent. The mass gathering of people at the Dimitrovgrad Sunday Market significantly increases the likelihood of accidents. Another characteristic is the evenly distributed and active population in the villages, which increases the risks of occurrence of accidents in the settlements and the non-urbanized territories.

### **✓** Other threats

Possible threats of another origin are - radiation and chemical accidents, epidemic outbreaks, epidemics and epizooties of infectious and parasitic diseases.

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**THREATS** 

### 8. VISION AND STRATEGIC GOALS

#### 8.1. VISION

The vision in the current strategy has been defined within the context of project: "Prevention and minimization of the Risks for the Environment and Vision for Innovative Tools /PREVENT /"under the INTERREG IPA CROSS-BORDER COOPERATION BULGARIA - TURKEY PROGRAMME 2014-2020.

#### **VISION**

"PREVENTING AND MINIMIZATION OF THE ENVIRONMENT RISKS BY AVOIDING AND MITIGATING THE CONSEQUENCES OF NATURAL AND MAN-MADE DISASTERS"

#### 8.2. STRATEGIC GOALS

STRATEGIC <b>GOAL</b> № 1	Efficient prevention for fire safety and civil protection
STRATEGIC GOAL № 2	Early detection of accidents and timely announcement
STRATEGIC <b>GOAL</b> № 3	Efficient interaction system of the reaction forces in disasters
STRATEGIC <b>GOAL</b> № 4	Adequate operative readinessfor rescue and emergency recovery works in disasters

# STRATEGIC GOAL № 1 Efficient prevention for fire safety and civil protection

Prevention is the most important task in civil and environmental protection against the negative impact of fires, disasters and emergency situations. In respect to this, the preventive actions related to avoidance of fires and accidents shall include:

•Availability of updated regulations at a municipal level in search of flexible approach and additional possibilities for implementation and development of firefighting and emergency control;

- Planning the disaster protection at a municipal level in accordance with the legal and regulatory procedures;
- Development and implementation of international cooperation policies in joint protection of border areas against disasters and emergency situations;
- Conducting training of various target groups (population, volunteers, mayors of localities etc.) regarding the compliance with the rules and regulations on fire and emergency safety and adequate reaction in case of occurred disasters and emergency situations, organizing trainings and workshops for international experience exchange related to prevention and response readiness in emergency situations.

# STRATEGIC GOAL № 2 Early detection of accidents and timely announcement

According to the theory of fire initiation, growth and termination, of significant importance for the prevention or limitation of the losses caused by fires is its early detection and timely operative actions for eliminating it. Equally important is the early identification and warning of flood hazard. For this reason the next important strategic goal is the early detection of accidents and timely announcement via:

- Automation and computerization of the opportunities and methods for early detection of field and forest fires on the territory of Dimitrovgrad Municipality;
- Protection of important public sites and dangerous production sites through the systems for early detection of accidents and timely announcement;
- Ensuring the necessary knowledge and skills of the interested parties regarding the early warning and announcement system;
- Automation and computerization of the opportunities and methods for early identification and warning for floods in the territory of Uzuncopru Municipality;

# STRATEGIC GOAL № 3 Efficient interaction system of the reaction forces in disasters

Despite the planned preventive actions and measures and technical solutions for early detection of accidents, provision should be made for efficient interaction system of the reaction forces in disasters. In general terms this means provision of the following:

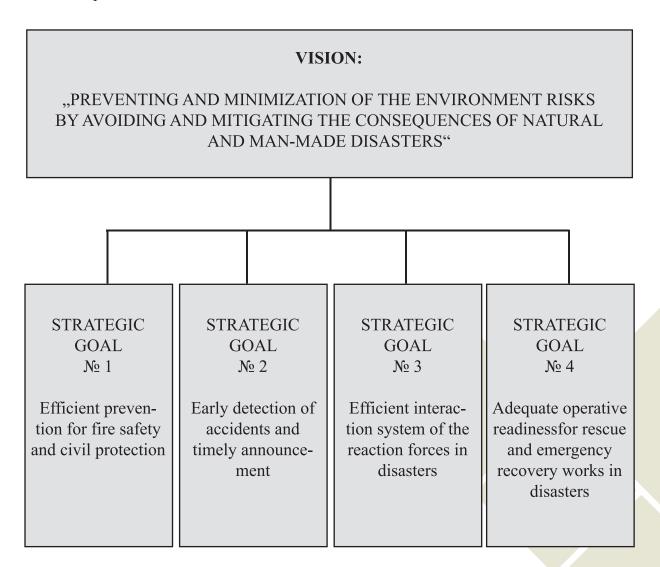
- Updated and working mechanisms for interaction and coordination between the reaction forces in disasters on the municipal territory in accordance with the regulations in force;
- Suitable conditions and specialized equipment for the operational management of forces and means in case of disasters and emergencies on the municipal territory;
- Required knowledge and skills of interested persons on the interaction and coordination of reaction forces in disasters.

### **STRATEGIC GOAL № 4**

# Adequate operative readiness for rescue and emergency recovery works in disasters

The quality operational intervention in case of emergencies requires adequate operational readiness for rescue and emergency recovery works. And this determines the need for:

- Provision of specialized vehicles and equipment for the elimination of big forest fires, for rescue and security activities in disaster situations, for operational actions in the water, for emergency recovery works after floods, earthquakes, hurricanes, etc;
- Establishment of voluntary rescue teams to support the fire safety and civil protection bodies for the successful implementation of the fire-fighting and rescue activities (especially in case of disaster situations, major accidents and incidents with large numbers of injured people). Reducing the response time in case of disasters in the outermost localities is achievable through timely reaction of located closely voluntary rescue teams, which can undertake initial operative actions until the arrival of the fire safety and civil protection teams.



# 9. ACTIVITIES FOR ACHIEVING THE GOALS

STRATEGIC GOAL	ACTIVITIES FOR ACHIEVING THE
STRATEGIC GOAL  № 1  Efficient prevention for fire safety and civil protection	<ul> <li>Development and approval of new and updated municipal rules for fire safety and civil protection.</li> <li>Updating the Disaster Risk Reduction Plan and the Disaster Protection Plan on the territory of Dimitrovgrad Municipality.</li> <li>Establishment and development of Prevention Center (for conducting training of the population for compliance with the rules and regulations on fire and emergency safety and adequate reaction in case of disasters and emergency situations; for volunteer's training as per the Disaster Protection Act; for conducting training and workshops for experience exchange between Bulgaria and Turkey related to prevention and readiness to react in emergency situations; for scientific and expert's activities supporting the executive bodies in planning the disaster protection as per the Disaster Protection Act)</li> </ul>
STRATEGIC GOAL  № 2  Early detection of accidents and timely announcement	<ul> <li>Implementation of automated system for early detection of field and forest fires on the territory of Dimitrovgrad Municipality</li> <li>Implementation of automated system for early detection and warning against floods on the territory of Uzuncopru Municipality.</li> <li>Provision of fire alarm systems in public places (schools and kindergartens, theaters, sports halls and similar sites for mass gathering of people)</li> <li>Review of the systems for early detection of accidents and timely announcement, integrated in the risky industrial sites.</li> <li>Significant increase of the knowledge and skills of the interested people regarding the public announcement system on the municipal territory.</li> </ul>

# STRATEGIC GOAL

Efficient interaction system of the reaction forces in disasters

- Significant increase of the knowledge and skills of the population regarding the early warning and announcement system on the municipal territory.
- Updating the system of interaction and coordination of the reaction forces on the territory of Dimitrovgrad Municipality in accordance with the new provisions of the Disaster Protection Act: the composition and functioning of the Municipal Headquarter and the Municipal Council for Disaster Risk Reduction.
- Establishment of a crisis center for the operational management of forces and means in disaster and emergency on the territory of the municipality.
- Provision of specialized equipment for the planned crisis center for the operational management of forces and means in disasters and emergencies: computer systems and technologies, applied software, databases, etc.
- Significant increasing the knowledge and skills of interested people regarding the interaction and coordination of reaction forces in disasters.

# STRATEGIC GOAL No 4

Adequate operative readinessfor rescue and emergency recovery works in disasters

- Modernization of the fire-fighting and rescue equipment of the fire-fighting offices for executing fire and rescue operations on the territory of the serviced area;
- Provision of specialized vehicles and equipment for the elimination of big forest fires, for rescue and security activities in disaster situations, for operational actions in the water, for emergency recovery works after floods, earthquakes, hurricanes, etc.
- Establishment of voluntary rescue teams to support the fire safety and civil protection bodies for the successful implementation of the fire-fighting and rescue activities (especially in case of disaster situations, major accidents and incidents with large numbers of injured people). Moreover it is possible to reduce the response time in case of disasters in the outermost localities is achievable through timely reaction of located closely voluntary rescue teams which can undertake initial operative actions until the arrival of the fire safety and civil protection teams.

### 10. MECHANISM FOR EVALUATION OF RESULTS

The technology for assessing the achieved results of the implementation of the activities for realization of the defined objectives of the strategy, should determine the "expected results" and the corresponding "measurable criteria for evaluation of the results".

The table below provides understandable evaluation criteria that will help to study the results achieved and analyze the established strategy for prevention against natural and man-made disasters and mitigation the consequences thereby.

It should be noted that the particularity of the area in subject predetermines the overall assessment of the strategy result. The implementation of each planned activity should influence not only the specific criteria, but all measurable ones.

It is recommended to periodically assess the achieved results through reports, containing statistical data and questionnaires on the effectiveness of fire prevention and civil protection, the opportunities of the adopted technical solutions for early detection of accidents and timely announcement, the effectiveness of the interaction system of the reaction forces in disasters and the operational readiness for rescue and emergency recovery works in disasters and emergency situations.

An update of the strategy can be issued, should it be found necessary, through the periodic reports, where by means of analysis, the potential new threats for occurrence of accident can be identified and the relevant actions and measures for adequate response.

No.	EXPECTED RESULTS FROM THE IMPLEMENTATION OF THE PLANNED ACTIVITIES	MEASURABLE CRITERIA FOR EVALUATION OF RESULTS
1	Reducing the number of accidents that occurred	Number of accidents [number]
2	Reducing the number of man-made accidents that occurred	Number of man-made accidents [number]
3	Reducing the operational intervention time of rescue teams	Operational intervention time [minutes]
4	Reducing the number of accidents turned into disasters	Number of accidents turned into disasters [number]
5	Reducing the number of people died in accidents	Number of people died [number]
6	Reducing the number of people injured in accidents	Number of people injured [number]

№	EXPECTED RESULTS FROM THE IMPLEMENTATION OF THE PLANNED ACTIVITIES	MEASURABLE CRITERIA FOR EVALUATION OF RESULTS
7	Reducing the material losses caused by accidents	Material losses [BGN]
8	Reducing the environmental damages	Affected land [m2]
9	Reducing the costs of fire-fighting and emergency rescue activities in accidents	Costs of fire-fighting and emergency rescu activities in accidents [BGN]
10	Increasing the public awareness regarding the safety rules and regulations	Number of trained people [number]
11	Increasing the population training for reaction in disasters	Number of trained people [number]
12	Increasing the local executive bodies training for reaction in disasters	Number of trained employees [number]
13	Increasing the training of local units' leaders for reaction in disasters	Number of trained leaders [number]
14	Raising public awareness regarding fire and emergency safety	Number of publications [number]
15	Increase of residents satisfaction	Residents satisfaction [%]

# 11. ACTION AND IMPLEMENTATION PLAN

The below proposed action and implementation plan underlines in a general manner the sequence and distribution of the activities defined in the present strategy for a five-year period. A separate document, "Program for Implementation of the General Strategy on Preventing and Mitigating the Consequences of Natural and Man-made Disasters" has to be prepared subsequently, which shall define the following:

- Specific tasks and the financial costs to execute the envisaged activities and respectively achieving the results;
  - The responsible persons and specific terms for implementation of the tasks.

TERM: BY THE END OF 2018	
1.1	Development and approval of new and updated municipal rules for fire safety and civil protection.
1.2	Updating the Disaster Risk Reduction Plan and the Disaster Protection Plan on the territory of Dimitrovgrad Municipality.
1.3	Updating the system of interaction and coordination of the reaction forces on the territory of Dimitrovgrad Municipality in accordance with the new provisions of the Disaster Protection Act: the composition and functioning of the Municipal Headquarter and the Municipal Council for Disaster Risk Reduction.
1.4	Implementation of automated system for early detection of field and forest fires on the territory of Dimitrovgrad Municipality.
1.5	Implementation of automated system for early detection and warning against floods on the territory of Uzuncopru Municipality.
1.6	Issuing of annual report regarding the strategy implementation (evaluation of the achieved results through measurable criteria)
TERM: BY THE END OF 2019	
2.1	Establishment and development of Prevention Center (for conducting trainings)
2.2	Establishment of voluntary rescue teams to support the fire safety and civil protection bodies for the successful implementation of the fire-fighting and rescue activities.
2.3	Issuing of annual report regarding the strategy implementation (evaluation of the achieved results through measurable criteria)

TERM:		
BY THE END OF 2020		
3.1	Significant increasing of knowledge and skills of the interested persons regarding the announcement system.	
3.2	Significant increasing of knowledge and skills of the population regarding the early warning and announcement system.	
3.3	Significant increasing of knowledge and skills of interested people regarding the interaction and coordination of reaction forces in disasters.	
3.4	Issuing of annual report regarding the strategy implementation (evaluation of the achieved results through measurable criteria)	
TERM: BY THE END OF 2021		
4.1	Establishment of a crisis center for the operational management of forces and means in case of disasters and emergency situations on a municipal level	
4.2	Provision of specialized equipment for the planned crisis center for the operational management of forces and means in disasters and emergencies: computer systems and technologies, applied software, databases, etc.	
4.3	Issuing of annual report regarding the strategy implementation (evaluation of the achieved results through measurable criteria)	
TERM: BY THE END OF 2022		
5.1	Provision of fire alarm installations in public sites (schools and kindergartens, theaters, sports halls and similar sites for mass gathering of people)	
5.2	Review of the systems for early detection of accidents and timely announcement, integrated in the risky industrial sites	
5.3	Modernization of fire-fighting and rescue equipment for executing fire and rescue operations on the territory of the serviced area.	
5.4	Provision of specialized vehicles and equipment for the elimination of big forest fires, for rescue and security activities in disaster situations, for operational actions in the water, for emergency recovery works after floods, earthquakes, hurricanes, etc	
5.5	Issuing of annual report regarding the strategy implementation (evaluation of the achieved results through measurable criteria)	

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