

EU FIRESPELL PROJECT

*Fostering Improved Reaction of Cross-Border Emergency Services and
Prevention Increasing Safety Level*

Strategic project under the cross-border cooperation programme
INTERREG Italy — Croatia

NATIONAL REPORT ON THE OPERATION OF THE EMERGENCY SERVICES SYSTEM IN THE REPUBLIC OF CROATIA

December 2021

Summary

The FIRESPELL project is implemented within the framework of the Cross-border Cooperation Programme between Italy and Croatia (Interreg Italia Croatia). One of the project activities foresees the preparation of a national report on the functioning of the emergency services system in the Republic of Croatia. In parallel, a national report is being prepared in the neighbouring Republic of Italy within the FIREPSILL project. Both national reports are guided by the basic guidelines of the FIRESPELL project and aim to develop separately the identified specificities and challenges of the national emergency services systems. By comparing the individual conclusions and recommendations of each national report and by reviewing some selected successful and effective examples of good practice in both countries, a document with clear guidelines and proposals for improving the national emergency systems and the Union Civil Protection Mechanism will be developed at project level.

Key words: project, emergency service, extraordinary event, coordination, cooperation, challenges, recommendations, development.

Sažetak

Projekt FIRESPELL provodi se u sklopu Programa prekogranične suradnje Italije i Hrvatske (Interreg Italia Croatia) te je kao jedna od projektnih aktivnosti predviđena izrada Nacionalnog izvješća o radu sustava hitnih službi u Republici Hrvatskoj. Paralelno se u sklopu projekta FIRESPELL, nacionalno izvješće izrađuje u susjednoj Talijanskoj Republici. Oba nacionalna izvješća su vođena osnovnim smjernicama projekta FIRESPELL, te imaju za cilj zasebno razraditi prepoznate posebnosti i izazove nacionalnih sustava hitnih službi. Usporedbom izdvojenih zaključaka i preporuka svakog nacionalnog izvješća, te sagledavanjem izdvojenih, uspješnih i učinkovitih primjera dobre prakse u obje države, u konačnici će se na razini projekta izraditi dokument sa jasnim smjernicama i prijedlozima za poboljšanje nacionalnih sustava hitnih službi kao i Mehanizma Unije za civilnu zaštitu.

Ključne riječi: projekt, hitna služba, izvanredni događaj, koordinacija, suradnja, izazovi, preporuke, razvoj.

Report commissioned by: Istria County

Prepared by: Mreža civilne zaštite / Civil Protection Network

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1. INTRODUCTORY REMARKS

The National Report on the Operation of the Emergency Services System in the Republic of Croatia will provide a comparative analysis of the emergency services system and identify proposals for its further development at all stages of emergency management (planning, prevention, preparedness, response and recovery).

Emergency services systems in Croatia are developed in accordance with the identified risks which affect human life and health, the economy and social stability and policies.

For the purposes of this National Report, the term 'emergency' combines the terms 'accident' (at a local level), 'major accident' (at a regional level) and 'disaster' (at the state level, including the possibility of seeking international assistance).

For the purposes of the National Report, 'emergency services' are services on constant duty, tasked with the provision of immediate emergency response, such as firefighters, police, emergency medical assistance, mountain rescue service, and maritime search and rescue.

Emergency services systems are integrated through the emergency number 112. The National Report also presents an overview of the civil protection system.

The National Report establishes the current situation and identifies proposals for improvement with the aim of upgrading the emergency services system through the existing FIRESPIILL project and through future projects to be financed by EU funds.

1.1. FIRESPIILL project

The FIRESPIILL project aims to increase the capacity of emergency services organisations in order to improve cross-border efficiency in combating natural and man-made disasters, while also reducing the exposure of the population to the impact of hazards and increasing the safety of the Croatian and Italian Adriatic basin by improving measures and instruments for emergency prevention and management.

The purpose of the project is to foster improved response of cross-border emergency services and prevention by increasing the level of safety.

Project activities:

- improving existing regulations on the operation of emergency services
- improving crisis management systems in terms of new and innovative solutions
- encouraging citizen action in the event of disasters (fires, oil spills and other marine hazards, and earthquakes).

The project is implemented by a total of 14 partners:

Partners from the Italian Republic: Abruzzo Region, COPE — Europe Point Consortium based in Teramo, Marche Region, Puglia Region, Emilia Romagna Region, ARPA FVG – Regional Environmental Protection Agency of Friuli Venezia Giulia, Veneto Region and Pescara Coast Guard.

Partners from the Republic of Croatia: Istria County, Dubrovnik-Neretva County, ATRAC — Adriatic Training and Research Centre for Accidental Marine Pollution Preparedness and Response, Zadar County, Development Agency of Šibenik-Knin County and Split-Dalmatia County.

Total project value: EUR 16,492,799.60

Project start date: 1 April 2020

Project completion date: 31 December 2022

In order to improve the effectiveness, preparedness and connections with the emergency services of project partners, Istria County has the role of national coordinator in drafting the National Report on the Operation of the Emergency Services System in the Republic of Croatia in accordance with the statutory regulations, other regulations and protocols, including the activation of the Union Civil Protection Mechanism.

1.2. Methodological approach to drafting the Report

A comprehensive approach to drafting the National Report will provide a clear methodology that defines the problem, subject, objectives, methods, and the contributions of the Report.

The problem addressed in the National Report is the theoretical and practical issue of emergency services operation, i.e., their strengths and weaknesses. It also constitutes a key element of the National Report.

The National Report presents and analyses the emergency services system for emergency management in the form of a case study, providing a detailed overview of its organisation, description, activities, challenges and problems of all stakeholders involved, from government institutions, local and regional self-government units to non-governmental organisations, placing a particular emphasis on emergency services.

The subject of the National Report is the overview and analysis of the Croatian emergency services system (a general overview), including a special detailed reference to the local and regional systems of the project partners: Istria, Dubrovnik-Neretva, Zadar, Šibenik-Knin and Split-Dalmatia counties (detailed overview). The Report also mentions Primorje-Gorski Kotar and Lika-Senj counties in order to aggregate and analyse data from all the coastal counties, which share the same risks and develop similar operational capacities for emergency management.

The overview and analysis of this system refer to the legislative framework, operational procedures for on-site activities at the emergency response and recovery stages, mutual coordination and communication at the horizontal and vertical levels, information and communication tools used by emergency services and their mutual compatibility, procedures for receiving and sending international assistance bilaterally and through the Union Civil Protection Mechanism.

The objectives of the National Report are to lay down guidelines for strengthening the coordinated and multidisciplinary approach to the operation of

Croatian emergency services, with a focus on the territory of the counties participating in the project, to demonstrate how to establish an efficient emergency response and recovery system, and to determine whether the established system is able to provide an adequate response to the challenges and risks arising from the effects of climate change and man-made emergencies. The Report has the following objectives:

- analysis of the current legislation applicable to the emergency services system;
- outline of the legal framework with a reference to the limitations identified in the operational activities and implementation of accident prevention and risk management measures by the involved services at the national/regional/local level;
- comparison of reconstruction models following natural disasters;
- analysis of the national approach of the emergency services system in the event of realisation of expected climate change trends compared to accidents/catastrophes/hazards caused by human error;
- analysis of existing mechanisms and protocols for joint international emergency response procedures (Croatia and Italy);
- analysis of currently used platforms within the emergency services system and the need for their upgrade.

The National Report drafting methods are aimed at collecting, presenting and analysing data in an unbiased manner, examining the internal structure of the emergency services system and gaining a deeper insight into its operation. The National Report is primarily a case study, but given the combined use of various research methods, it is partly empirical, partly qualitative, and partly quantitative. Primary and secondary data sources have been used as part of the National Report drafting methods.

Primary source data was collected based on a questionnaire completed by the representatives of services in seven coastal counties: Istria, Primorje-Gorski Kotar, Lika-Senj, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva.

Secondary source data was collected by reviewing the regulations and planning documents:

- umbrella laws applicable to the police, civil protection, firefighting, health care, mountain rescue services, the Red Cross, maritime search and rescue and local and regional self-government units;
- operational action plans for emergency services and risk assessments (state and county level);
- international treaties (multilateral at the European Union level and bilateral with neighbouring countries: Italy, Slovenia, Bosnia and Herzegovina, and Montenegro);
- existing reports and expert papers in the field of emergency services.

The National Report is conceived as a comprehensive analysis of the emergency services system, covering all the system elements, as well as their structure and functions that interconnect them into a systematic whole at the county and state level.

The National Report can also be expected to provide practical benefits for the homeland security system and the civil protection system, as it includes a systematic overview of proposals for enhancing the emergency services system.

The SWOT analysis¹ presented at the end of the National Report has identified the advantages, disadvantages, weaknesses and strengths of the Croatian emergency services system, with an emphasis on coastal counties (Istria, Primorje-Gorski Kotar, Lika-Senj, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva).

The National Report provides an overview of proposals for the implementation of lessons learned in legislation and planning documents and for enhancing the operational capacities of emergency services in order to reduce the effect of emergencies on people's lives and property as well as on the environment.

¹ SWOT analysis is a method used to assess the capability of someone or something, including four key factors: strengths, weaknesses, opportunities and threats.

2. RISK MANAGEMENT AND CLIMATE CHANGE ADAPTATION

Risk management is a process of implementing disaster risk reduction policies and strategies to prevent the emergence of new risks, reduce existing risks and manage residual risk while fostering resilience and reducing vulnerabilities and losses caused by emergencies.

In 2010, in order to harmonise the process and methods of drafting national risk assessments, the European Union adopted 'Risk Assessment and Mapping Guidelines for Disaster Management', setting out a general framework for disaster prevention and proposing measures to minimise the effects of disasters, taking into account the future impact of climate change.

These Guidelines build on the experience in the practical implementation of national risk assessments and mapping, in particular of existing good practices of disaster risk assessment in the Member States.

As a fully-fledged Member State of the European Union, Croatia has an obligation to draft strategic documents for risk management and climate change adaptation, which has a major impact on the measures and activities carried out by emergency services.

2.1. Disaster risk assessment

Pursuant to the Civil Protection System Act², in November 2019 the Croatian Government adopted the **Disaster Risk Assessment for the Republic of Croatia**.

In accordance with the Civil Protection System Act, major accident risk assessments in Croatia are drafted at the regional (counties and the City of Zagreb) and local level (cities, towns and municipalities) of the system. According to the national assessment, major accidents and disasters emerge from a wide range of natural phenomena and from technical and technological processes, posing a significant social and economic burden for Croatia.

The adoption of this risk assessment at a national level continues the process of changing the paradigm of the civil protection system by gradually shifting the focus

² Narodne novine (Official Gazette of the Republic of Croatia) nos. 82/15 and 118/18, 31/20 and 20/21

of activities from the development of response capacities to strengthening risk management/reduction capacities (reducing the vulnerability of all categories of social values exposed to the adverse effects of threats).

When analysing each scenario, the assessment also considered the impacts of climate change on a particular risk. Given that the European Commission's guidelines highlighted these impacts as an important part of the risk assessment, a special task force was established to draft and analyse texts relating to climate change impacts on risks, gathering representatives of the Ministry of Environmental Protection and Energy,³ the Croatian Meteorological and Hydrological Service and the Ministry of the Interior.

The assessment has identified and analysed a total of 15 risks (plus one complex risk: earthquake and flood in the City of Zagreb), providing an overview of the impact of climate change on 10 of them.

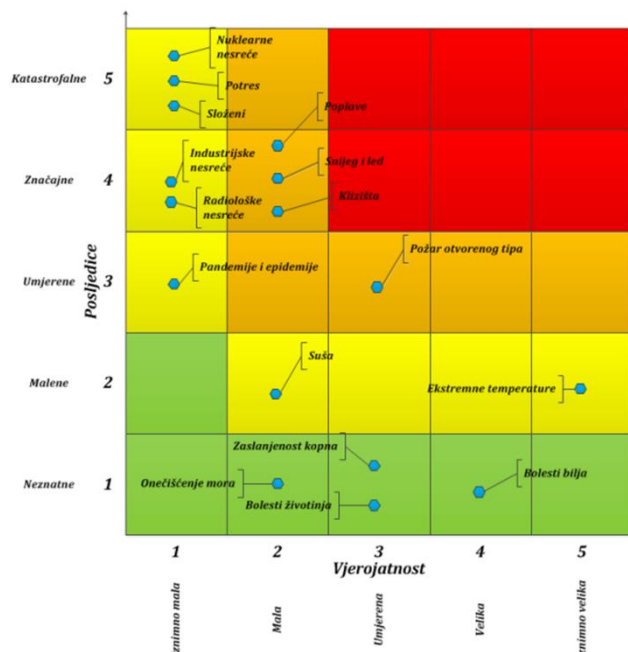


Figure 1: Risk matrix (events with worst possible consequences)⁴

The Disaster Risk Assessment for the Republic of Croatia divides risks into three categories:

³ Today, the area of environmental protection and energy falls within the competence of the Ministry of Economy and Sustainable Development.

⁴ Source: Disaster Risk Assessment for the Republic of Croatia

1. unacceptable risks: floods caused by overflow of inland water bodies, earthquakes and wildfires;
2. tolerable risks: landslides, extreme temperatures, epidemics and pandemics, snow and ice, nuclear accidents, radiation accidents, industrial accidents, drought and marine pollution;
3. acceptable risks: plant diseases, animal diseases and soil salinisation.

Unacceptable risks need to be reduced as soon as possible at the national level and using national and European Union funds. The assessment has defined investment priorities, primarily in scenario-specific areas and across the entire territory of Croatia. This is a strategic orientation for equipping and training emergency services in Croatia.

Of the 10 risks addressed in the Disaster Risk Assessment for the Republic of Croatia, for which the impact of climate change is presented, two have been identified as unacceptable risks (floods caused by overflow of inland water bodies, earthquakes, and wildfires), five as tolerable risks (landslides, extreme temperatures, epidemics and pandemics, snow and ice, drought) and three as acceptable risks (plant diseases, animal diseases and soil salinisation).

According to the above, climate change has a significant impact on the risks affecting human life and health, the economy and social stability and policies in Croatia.

The risk assessment does not include the risk of transport accidents (in road, rail, air and maritime transport), which is largely an important segment of emergency management by emergency services, especially those on the coast, and especially during the summer season.

2.2. Climate change trends in relation to emergencies in Croatia

According to the 'Climate change, impacts and vulnerability in Europe 2016' report, the observed climate change already has far-reaching consequences for ecosystems, the economy, human health and the well-being of Europe's citizens.

The report states that all European regions are vulnerable to climate change, but some of them will be affected more than others. Southern and south-eastern Europe are projected to be climate change hotspots, as the most harmful effects

are expected in these areas. These areas are already experiencing large increases in extreme summer temperatures and decreases in precipitation and river flows, which has increased the risks of severe droughts, lower crop yields, biodiversity loss and forest fires. Increasingly frequent heat waves and changes in the distribution of climate-sensitive infectious diseases are expected to endanger human health and well-being.

The main health effects of climate change are related to extreme weather events, changes in the distribution of climate-sensitive diseases and changes in social and environmental conditions. As mentioned in the Report, river and coastal flooding have affected millions of people in Europe over the past decade.

The situation in Croatia should also be considered in this context, and strategic documents should set climate change adaptation goals and activities and identify risks that may lead to emergencies.

On 7 April 2020, the Croatian Parliament adopted the **Climate Change Adaptation Strategy in the Republic of Croatia until 2040, with an outlook to 2070** (hereinafter: the Strategy). This is the first national Adaptation Strategy to address the sectors most exposed and vulnerable to climate change, according to current knowledge.

The Strategy states that climate change adaptation requires the attention and involvement of all stakeholders, the economy and decision-makers at the national, regional and local levels of government. The measures need to be tailored to the estimated needs, implementation possibilities and available capacities.

The Strategy outlines the impacts and challenges of climate change adaptation in the field of disaster risk management:

- wildfires due to extended periods of high solar irradiance and extended periods of high air temperature;
- epidemics and pandemics due to the impact of changes in precipitation volume, humidity and evaporation on the mode of transmission of diseases or on the properties of disease agents;
- increased health and socio-economic burden on the community due to food contamination and environmental pollution following occurrences such as floods or landslides.

The Strategy also outlines possible responses to reduce high vulnerability as part of disaster risk management:

- strengthening the competencies of key stakeholders in climate change-related risk management;
- enhancing the capacities for management and recovery following major accidents and disasters relating to climate change;
- setting out multidisciplinary priority guidelines for climate change-related procedures;
- extending the monitoring and risk assessment system using the tools for monitoring climate change risk indicators;
- more efficient remediation of damage resulting from major accidents and disasters relating to climate change;
- modifying the burden borne by the community following exposure to climate change-related threats.

The Strategy defines disaster risk management as undertaking preventive and planning activities to reduce vulnerability and mitigate the adverse effects of disaster risks. Climate change can increase the likelihood and intensity of a disaster. The major expected impacts leading to a high or medium vulnerability in this sector are landslides, floods, wildfires due to extended periods of high solar irradiance and extended periods of high air temperature, extreme temperatures due to extended periods of high solar irradiance and extended periods of high air temperature, pandemics due to the impact of changes in precipitation volume, humidity and evaporation on the mode of transmission of diseases or on the properties of disease agents, as well as complex risks, especially in urban areas.

The above shows that Croatia is strategically focused on climate change adaptation and all emergency services should adapt their operation at all management stages (planning, prevention, preparedness, response and recovery) in order to contribute to the implementation of the Strategy and climate change adaptation, in particular to reduce the disaster risks presented in the risk assessment, but also to increase the operational capacity for rapid and efficient emergency response and recovery.

Croatia is currently harmonising the Disaster Risk Management Strategy until 2030, which aims to enhance a proactive approach to risk management, with the ultimate goal of achieving comprehensive, sustainable and, in the long-term, justified disaster risk management.

Particular account should be taken of so-called *HILP*⁵ emergencies caused by climate change (e.g., large volumes of precipitation in a small area – for example, the floods in Zadar in September 2017). These emergencies are characterised by low probability of occurrence, unacceptable effects, and rapid occurrence, while the remediation of their effects requires the involvement of local and regional emergency services, and possibly the involvement of state-level operational forces.

The above shows that, due to the threats and risks Croatia is exposed to, there is an imperative to improve the management processes (planning, prevention, preparedness, response and recovery). They are the basis for developing a legislative framework and operational plans for the timely and efficient emergency service operation.

⁵ High Impact – Low Probability

3. LEGISLATIVE AND PLANNING ACTION FRAMEWORK

Knowledge of the legislative and planning action framework is an extremely important segment of emergency service operation. Each service has its own rules of action, which define all the measures and activities carried out, and is also organised at all levels to ensure efficient and effective operation. In the process of accession to the European Union, the legislative framework was brought into compliance with the *acquis* and the regulations defining the operation of emergency services have been raised to a higher level to achieve interoperability with the other Member States.

The following section presents the acts applicable to the police, civil protection, firefighting, health care, mountain rescue service, the Red Cross, maritime search and rescue and the regulations of strategic importance in this area (the Constitution, the National Security Strategy and the Homeland Security System Act), as well as international regulations governing cooperation and mutual provision of assistance in the event of emergencies.

3.1. National legislation

The Constitution of the Republic of Croatia⁶ is a unique legal act of general application with the greatest legal force in Croatia, which contains a predominant number of constitutional standards. It was adopted by the Croatian Parliament on 22 December 1990. It contains 146 articles in 10 parts. The Constitution defines, *inter alia*, areas of safety, health care, firefighting, civil protection, marine protection, and other areas relevant to the operation of emergency services.

The National Security Strategy⁷ is a comprehensive national security concept that ensures better coordination, strategic planning, pooling of resources and uniform capacities development with the aim of developing security policies that guarantee citizens a high level of security at the national level, in cooperation with allies and partners.

The Strategy sets out the following objectives:

⁶ Official Gazette nos. 56/90, 135/97, 08/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14.

⁷ Official Gazette No 73/17

- achieving the highest level of security and protecting the population and critical infrastructure;
- establishing and developing a homeland security system;
- developing and maintaining strong and active defence;
- environmental sustainability in Croatia and development of a strong and sustainable economy;
- demographic renewal and revitalisation of Croatian society;
- developing a citizen-friendly state administration and strategic communication;
- protecting, strengthening and promoting the highest constitutional values and Croatian national identity;
- enhancing the international reputation and influence of Croatia;
- ensuring the existence, protecting the identity and political subjectivity of the Croatian people, as constitutive in Bosnia and Herzegovina, protecting and supporting Croats in other states and diaspora.

The National Security Strategy describes the instruments and mechanisms available to Croatia for the development, protection and realisation of national interests, independently and in cooperation with allies and partners in the areas of common interest. Emergency services certainly have an important role to play in achieving these objectives.

The Homeland Security System Act,⁸ which was adopted to meet the strategic objectives of the National Security Strategy, defines the homeland security system as resources of the internal affairs, defence, security and intelligence system, civil protection, firefighting, foreign affairs and other authorities performing organised and coordinated activities and tasks of identifying, assessing, reducing and/or eliminating security risks of importance to the national security of Croatia.

The Act also defines the term 'crisis' as an event or situation which endangers national security, the health and life of citizens, significantly harms the environment or causes significant economic damage, and the response to such an event or situation requires coordinated action by multiple state authorities and coordinated application of measures within the competence of those authorities.

⁸ Official Gazette No 108/17

The Act provides for the operation of the Coordination of the Homeland Security System as an inter-departmental authority responsible for harmonising and coordinating the operation of the homeland security system. In accordance with Article 12, the members of the Coordination are the deputy prime minister of Croatia responsible for national security as president of the Coordination of the Homeland Security System; adviser to the president of Croatia responsible for national security; heads of central state administration authorities responsible for internal affairs, defence, foreign affairs, Croatian veterans, civil protection, environmental protection, finance, justice, health care, sea, transport and infrastructure; chief of General Staff of the Armed Forces of the Republic of Croatia; general police director; chief fire commander; head of the Office of the National Security Council; director of the Security and Intelligence Agency, director of the Military Security and Intelligence Agency and director of the Information Systems Security Bureau.

The above shows that the work of the Coordination involves heads of emergency services at the national level, which enables efficient strategic coordination in the event of crises.

The Office of the National Security Council supports the work of the Coordination of the Homeland Security System, while the Ministry of Croatian Veterans' Affairs coordinates the activities of all authorities involved in the homeland security system.

The Civil Protection System Act⁹ regulates the system and operation of civil protection, the rights and obligations of state administration authorities, local and regional self-government units, legal and natural persons; training for the purpose of the civil protection system; civil protection financing; administrative and inspection supervision.

Civil protection in Croatia is a system of organising stakeholders, operational forces and citizens in order to protect and rescue people, animals, material and cultural goods and the environment in the event of major accidents and disasters and to remedy the consequences of terrorism and war destruction.

⁹ Official Gazette nos. 82/15, 118/18, 31/20, 20/21

The coordination of the system at the national level is within the competence of the Ministry of the Interior, whose organisational structure includes the Civil Protection Directorate. The Directorate covers the entire territory of Croatia through five regional civil protection offices (Zagreb, Rijeka, Varaždin, Osijek and Split) and 15 civil protection services, which are connected to zonal/regional offices in terms of organisation and are located in the county centres, corresponding to a total of 20 separate locations¹⁰ in Croatia, including the 112 county centre.

Through the single European emergency number 112, the Civil Protection Directorate (competent 112 county centre) receives all types of emergency calls, forwards information to the competent services, coordinates their interaction and aggregates feedback on the activities carried out.

By-laws regulating all segments of the civil protection system (planning, prevention, preparedness and response) were adopted pursuant to the Act.

The Act requires the adoption of the following strategic documents:

- disaster risk assessment¹¹
- disaster risk reduction strategy
- civil protection system development strategy
- national civil protection action plan¹².

The civil protection system provides a platform for the involvement of all relevant stakeholders (representatives of emergency services actively participate in the work of the civil protection headquarters). The civil protection system operates at all levels (state, regional and local) in order for all stakeholders and operational forces to jointly implement measures and activities aimed at protecting the population, property and the environment in the event of emergencies¹³.

The Firefighting Act¹⁴ regulates the Croatian firefighting system, in particular the conditions and manner of organising fire departments and organisations at the national, regional and local levels, their firefighting obligations, the establishment, management and operation of fire brigades, the legal employment status of

¹⁰ The Zagreb Regional Civil Protection Office (RCPO) covers the City of Zagreb and Zagreb County.

¹¹ Major accident risk assessments are also adopted at the level of all local and regional self-government units (LRSGUs).

¹² Civil protection action plans are also adopted at the level of all LRSGUs.

¹³ See more on the civil protection system in chapter 6.

¹⁴ Official Gazette No 125/19

professional firefighters and the legal status of volunteer firefighters, fire emergency response operations, the rights and obligations when conducting firefighting emergency response operations and occupational safety during firefighting emergency response operations, education, training and upskilling within the firefighting system, financing of firefighting at all levels and supervision.

Firefighting is a professional and humanitarian activity focused on preventive measures of fire and explosion protection, firefighting, the rescue of people and property, providing technical assistance in the event of incidents and dangerous situations and performing other tasks in the event of accidents.

The management of the firefighting system at national level lies within the competence of the Croatian Firefighter's Association, which has been operating as a central state office since 1 January 2019. Firefighting activities are performed exclusively by fire brigades and firefighters' organisations.

The operations centre of the firefighters' association of a county or the City of Zagreb receives alerts about fire emergencies via the emergency number 193 and the firefighting communication system.

The Act requires the adoption of the following strategic documents:

- national firefighting development strategy
- firefighting plan of the Republic of Croatia.

It is particularly important to refer to the programme of activities regarding the implementation of special fire protection measures of interest to the Republic of Croatia (adopted by the Croatian Government for each year). The programme of activities integrates all activities of entities (ministries, state administration authorities, public institutions, local and regional self-government units, citizens' associations and other organisations and authorities involved in the implementation of fire protection measures) to fight wildfires more efficiently. The programme of activities defines, among other stakeholders, the tasks of all emergency services to ensure mutual coordination when preparing for and during the fire season.

The Police Act¹⁵ regulates the fundamentals of police organisation and the specificities of the legal employment status of police officers at the Ministry of the

¹⁵ Official Gazette nos. 34/11, 130/12, 89/14, 151/14, 33/15, 121/16, 66/19

Interior. The primary task of the police is to protect the life and personal safety of people and property. The implementation of police tasks lies within the competence of the General Police Directorate, an administrative organisation of the Ministry of the Interior, and 20 police departments operating throughout Croatia and located in county seats¹⁶.

The 192 police operations and communications centre is a special organisational unit of the police department that receives notifications of security events and occurrences in a given area of competence, processes them and distributes them to police stations and police officers on the ground, as well as to individuals and institutions outside the police system.

In addition to the Police Act, **the Police Duties and Powers Act**¹⁷, which lays down duties and powers in the prevention and elimination of dangers and criminal investigations, is particularly important for police work in terms of legislation.

In the event of emergencies caused by natural disasters, accidents, fires, floods, epidemics or other threats, the police undertakes all necessary measures to prevent the spread of such threats, informs and, where necessary, deploys other competent services outside the system of the Ministry of the Interior.

The Health Care Act¹⁸ regulates the principles and measures of health care, the rights and obligations of health care beneficiaries, the authorities competent for public health care, the content and organisational forms of the provision of health care and the supervision of its provision.

Health care includes a system of social, group and individual measures, services and activities for health preservation and improvement, disease prevention, early disease detection, timely treatment and provision of medical care, rehabilitation and palliative care.

The authorities competent for the implementation of this act at the national level are the Ministry of Health, the Croatian Health Insurance Fund, the Croatian Institute for Transfusion Medicine, the Croatian Institute of Public Health and the Croatian Institute of Emergency Medicine.

¹⁶ The Zagreb Police Department covers the City of Zagreb and Zagreb County.

¹⁷ Official Gazette nos. 76/09, 92/14, 70/19

¹⁸ Official Gazette nos. 100/18, 125/19, 147/20

The Croatian Institute of Emergency Medicine (CIEM) is a public health institution for the provision of emergency medical services and telemedicine services throughout the territory of Croatia. The CIEM ensures the implementation of emergency health care measures, the emergency transport of ill and injured persons to an adequate health care institution and the provision of medical care during such transport. Pursuant to the Health Care Act, the Ministry of Health established the Emergency Medicine Network in Croatia¹⁹.

According to the Medical Reporting Unit Manual published by the CIEM, the Medical Dispatch Service (MDS) is a key element of the successful operation of the emergency medical service (EMS). Its main task is to respond to an emergency medical call (to the number 112 or 194) and collect relevant information as soon as possible, to evaluate them appropriately and, based on the information obtained, to make a proper decision whether to intervene by sending a suitably trained and equipped team to the scene on time.

In order to manage and coordinate the work of health care institutions and private health care workers in the event of major incidents/crises, the Health Care Act establishes the Ministry of Health Crisis Headquarters.

The Maritime Code²⁰ regulates the Croatian marine and submarine areas and legal relations therein, the safety of navigation in the Croatian internal sea waters and territorial sea, the protection and conservation of natural marine resources and the marine environment, basic substantive relations with regard to watercraft, the contractual and other obligations relating to ships, registration of watercraft, limitation of the liability of the ship operator, enforcement and insurance on ships.

The competent authority for the implementation of the Act at the national level is the Ministry of the Sea, Transport and Infrastructure.

According to the Maritime Code, maritime search and rescue activities are carried out by the Maritime Search and Rescue Service, consisting of the Maritime Search and Rescue Headquarters, the National Maritime Rescue Coordination Centre Rijeka (MRCC Rijeka), maritime rescue sub-centre (harbourmaster's offices in Pula, Rijeka, Senj, Zadar, Šibenik, Split, Ploče and Dubrovnik), coastal observation posts (all harbourmaster's branch offices + coastal radio stations +

¹⁹ Official Gazette nos. 49/16, 67/17.

²⁰ Official Gazette nos. 181/04, 76/07, 146/08, 61/11, 56/13, 26/15, 17/19

guarded lighthouses + surveillance stations of the Croatian Navy) and search and rescue units (maritime, air and land units). MRCC Rijeka is on 24-hour standby duty and is available via the toll-free telephone line 195.

The Contingency Plan for Accidental Marine Pollution²¹ is a document on sustainable development and environmental protection, which lays down procedures and measures for the anticipation, prevention, containment, preparedness for and responding to accidental marine pollution and natural emergencies at sea in order to protect the marine environment. The following entities participate in the implementation of the Contingency Plan:

- Contingency Plan Implementation Headquarters (the authority responsible for the implementation of procedures and measures for the anticipation, prevention, containment, preparedness and response under the Contingency Plan and Sub-Regional Plan²²)
- National Maritime Rescue Coordination Centre in Rijeka (the authority responsible for the coordination of the Headquarters and county operations centres in the event of accidental marine pollution in Croatia)
- county operations centre (the authority responsible for the implementation of procedures and measures for the anticipation, prevention, containment, preparedness and response under the county emergency plan and for the operational participation in the implementation of the Contingency Plan and the Sub-Regional plan).

Representatives of state- and county-level emergency services also participate in the work of the Contingency Plan Implementation Headquarters.

The Croatian Mountain Rescue Service Act²³ regulates the organisation, activities and financing of the Croatian Mountain Rescue Service (CMRS), the rights of members of the Croatian Mountain Rescue Service during emergency response operations, cooperation with international organisations, state administration authorities and other natural and legal persons, obligations of organisers and participants in sports, tourism and other activities, and supervision.

²¹ Official Gazette No 92/08

²² The 2008 Agreement between the Governments of the Republic of Croatia, the Republic of Italy and the Republic of Slovenia on the Sub-Regional Contingency Plan for Prevention of, Preparedness for and Response to Major Marine Pollution Incidents in the Adriatic Sea.

²³ Official Gazette nos. 79/06, 110/15

The CMRS is a national, professional, humanitarian, non-profit association which performs activities of interest to Croatia, and which unites the stations of the Croatian Mountain Rescue Service on the territory of Croatia. The CMRS organises, improves and performs the activity of rescuing and protecting human lives in mountains and inaccessible areas and in other emergency circumstances through the 112 centre. It brings together mountain rescuers and covers the entire territory of Croatia.

The Croatian Red Cross Act²⁴ regulates the public powers, activities and financing of the Croatian Red Cross as a national Red Cross society on the territory of Croatia, as well as the conditions and manner of use and protection of the Red Cross brand and name. In its work, the Croatian Red Cross pursues humanitarian objectives and tasks relating to health protection and improvement, social welfare, health and humanitarian education, while also advocating compliance with international humanitarian law and the protection of human rights. The Croatian Red Cross fulfils specific obligations in the event of armed conflicts, major natural, environmental, technological and other accidents and epidemics resulting in mass casualties.

The Croatian Red Cross operates throughout Croatia as a non-profit legal person engaged in resolving humanitarian issues, organising health and social programmes, preparing the population to act in large-scale accidents and disasters, as well as reducing and remedying the effects of large-scale accidents and disasters.

The Local and Regional Self-Government Act²⁵ regulates local and regional self-government units, their scope of activities and organisation, the manner of operation of their bodies, supervision over their acts and work, and other matters relevant to their work.

According to the Act, municipalities, towns and cities, within their scope of self-government, carry out tasks of local importance, which directly meet the needs of

²⁴ Official Gazette nos. 71/10, 136/20

²⁵ Official Gazette nos. 33/01, 60/01, 129/05, 109/07, 125/08, 36/09, 36/09, 150/11, 144/12, 19/13, 137/15, 123/17, 98/19, 144/20

citizens, namely the tasks relating to, *inter alia*, primary health care, the protection and improvement of the natural environment, fire protection and civil protection.

The Act also requires that counties perform, within their scope of self-government, tasks of regional importance relating to, *inter alia*, primary health care and the protection and improvement of the natural environment.

This shows that LRSGUs have obligations within the scope of activities carried out by emergency services at the regional and local levels and the activities are coordinated with the national level in accordance with statutory regulations.

Recovery from emergencies is the last stage of emergency management, and is particularly important for reducing the residual risk in the area affected by the emergency. Recovery is an activity of reconstructing or improving livelihoods and health, as well as economic, physical, social, cultural and environmental resources, systems and activities of the community or society affected by a major accident or disaster, following the cessation of the imminent threat to people, in order to avoid or reduce the risk of future major accidents or disasters.

The Act on Mitigation and Remediation of Consequences of Natural Disasters²⁶ regulates the criteria and powers for declaring a natural disaster, assessing the damage caused by a natural disaster, granting aid for the mitigation and partial remediation of the consequences of natural disasters occurring in Croatia. The Act also regulates the Register of Natural Disaster Damages and other issues relating to aid grants for the mitigation and partial remediation of the consequences of natural disasters. Natural disasters involve sudden circumstances caused by adverse weather events, seismic activity and other natural causes that interrupt the normal course of life, lead to casualties, damage to and/or loss of property and damage to public infrastructure and/or the environment.

The legal framework for recovery from emergencies in Croatia has been adopted *ad hoc* during specific emergencies, i.e., when the Croatian Government declared a state of disaster or when the regional level could not independently remedy the consequences and recover the affected area. Two acts have been adopted in Croatia in this regard:

²⁶ Official Gazette No 16/19

- Act on Remediation of Disaster Consequences in Vukovar-Syrmia County²⁷
- Act on Reconstruction of Earthquake-Damaged Buildings in the City of Zagreb, Krapina-Zagorje County, Zagreb County, Sisak-Moslavina County and Karlovac County²⁸.

An important role in the recovery is played by legal persons whose engagement is required by the above acts and by the Civil Protection System Act, where legal persons are included in the category of additional operational forces that may be activated on the basis of a mobilisation order issued by a competent authority (state, county, city, town or municipality).

3.2. International legislation

International treaties aim to define the conditions of voluntary and mutual assistance in the event of emergencies, which is provided at a request submitted through diplomatic channels or at the request of the competent civil protection authorities. In addition, international treaties define areas of mutual interest:

- planning and implementation of measures for the protection against floods, earthquakes, fires, environmental pollution, incidents of navigation in internal waters, radiological hazards, as well as industrial and other emergencies;
- mutual reporting on the hazards, occurrence and consequences of emergencies;
- mutual assistance in the protection, rescue and remediation of consequences of emergencies;
- vocational training and upskilling of members of civil protection services and operational forces through information sessions, courses, training programmes, seminars and other forms of cooperation, as well as organising and conducting joint protection and rescue exercises;
- exchange of scientific and technical data and other documents important for the protection against emergencies;
- cooperation in the development and production of protective and rescue equipment;
- other areas of cooperation.

²⁷ Official Gazette No 174/04 (expired one year after it entered into force on 16 June 2014).

²⁸ Official Gazette nos. 102/20, 10/21, 117/21

Croatia has signed **bilateral treaties** in the field of civil protection with the following countries: Hungary, Slovenia, Bosnia and Herzegovina, Austria, Slovakia, Poland, France, Montenegro, the Russian Federation, Macedonia, Albania, Serbia and Ukraine. It has also signed memoranda of understanding with Germany, Italy, the Netherlands, Kosovo and Israel.

At a multilateral level, Croatia has actively participated in the **Union Civil Protection Mechanism** since 2009.

The Union Civil Protection Mechanism aims to strengthen cooperation between the Union and the Member States and facilitate coordination in the field of civil protection in order to improve the efficiency of the emergency prevention, preparedness and response system.

The protection provided by the Union Civil Protection Mechanism primarily includes protection of the population, but also of the environment and property, including cultural heritage, against all types of emergencies caused by natural or man-made risks, including the consequences of acts of terrorism, technological, radiation or environmental accidents, marine pollution and health emergencies occurring inside or outside the European Union. In the event of consequences of acts of terrorism or radiation disasters, the Union Civil Protection Mechanism may only cover preparedness and response activities.

The Union Civil Protection Mechanism promotes solidarity among the Member States through practical cooperation and coordination, without prejudice to the primary responsibility of the Member States to protect the population, the environment and property, including cultural heritage, on their territory against the consequences of emergencies, as well as to ensure sufficient capacities within their disaster management systems to provide an adequate and consistent response to emergencies of the nature and scale that may reasonably be expected and prepared for.

In Croatia, the Civil Protection Directorate of the Ministry of the Interior (MI CPD) is in charge of cooperation activities under the Union Civil Protection Mechanism. While the Union Civil Protection Mechanism includes a number of elements for cooperation and coordination in the event of disasters, one of the most important

is the Emergency Response Coordination Centre – ERCC²⁹. The ERCC is the operations centre of the Union Civil Protection Mechanism, which operates within the Directorate-General for Humanitarian Aid and Civil Protection — DG ECHO³⁰ and is active on a 24-hour, seven-days-a-week basis. The ERCC is the operations centre at which states³¹ participating in the Union Civil Protection Mechanism may obtain, in one place, information on available civil protection resources and equipment for responding to emergencies.

Operational capacities called ‘civil protection modules’ are a self-sufficient and autonomous, pre-defined task- and needs-driven organisation form of the Member States’ capacities, i.e., a mobile operational group of the Member States, which constitutes a combination of human and material resources that may be described in terms of emergency response capacities or according to the tasks it can perform. The modules involved in the provision of assistance are intended for search and rescue from collapsed buildings, aerial firefighting, ground forces firefighting, high-capacity pumps, flood protection, rescue from water with boats, etc. To this end, emergency services may develop operational capacities to provide urgent international emergency assistance.

In particular, the capacity to receive international assistance needs to be developed by implementing the concept of ‘host nation support’ adopted at the European Union level.

3.3. Numbers of emergency services

The Decision of the Council of the European Union of 29 July 1991 introduced the single European emergency number — 112. Under this Decision, the Member States need to ensure that 112 is introduced in public telephone networks, as well as in future digital networks of integrated services and public mobile services, as the single European emergency number. In Croatia, the 112 number was introduced by the Electronic Communications Act³² and the Civil Protection System Act, becoming applicable on 11 February 2005.

²⁹ Emergency Response Coordination Centre

³⁰ Directorate-General for Civil Protection and Humanitarian Aid

³¹ The contact point in Croatia is the Civil Protection Operations Centre (the organisational unit of the Civil Protection Directorate of the Ministry of the Interior) — which is also a contact point for seeking international assistance under bilateral treaties.

³² Official Gazette nos. 73/08, 90/11, 133/12, 80/13, 71/14, 72/17

According to the recommendations of the European Union, most European countries use short codes starting with the digit 1 as emergency numbers, following the example of 112. Precisely for this reason, on 9 December 2009, the HAKOM Council³³ adopted the Numbering Plan for Croatia. This Plan enabled the reservation of short codes, i.e., the numbers 192, 193, 194, 195 and 1987 for the future needs of the emergency services of the police, firefighters, emergency medical assistance, the National Maritime Rescue Coordination Centre and roadside assistance.

All emergency numbers are available from any telephone device:

- The number 192 was introduced on 1 July 2010. As of 31 October 2011, the old number (92) is no longer in use.
- The number 1987 was introduced on 17 May 2010. The old (987) and the new number were used simultaneously until 1 January 2011.
- The number 194 was introduced on 16 January 2012.
- The number 193 was introduced on 01 December 2011.
- The number 195 was introduced on 13 February 2012, while the old number 9155 completely ceased to be used as of 13 February 2014.

Given that the organisation of individual emergency services in Croatia is, in principle, based on the division of the national territory into smaller administrative/geographical units (county level and local level, i.e., municipal and city/town level), each emergency department has its own geographic telephone number, which serves as the primary emergency telephone number.

3.4. Recommendations for improvement

Knowledge of the legislative and planning framework for operation is an extremely important segment of emergency service operation. The above shows that each service is subject to an umbrella act laying down all the measures and activities carried out and defining the competent authority. In the process of accession to the European Union, the legislative framework was brought into compliance with the *acquis*, which has greatly improved the operation of emergency services.

Insight into all Croatian regulations that define the operation of emergency services, or at least those that are assumed to belong to this category, shows that

³³ Croatian Regulatory Authority for Network Industries

there is currently no uniform definition of ‘emergency service’. It has also been observed that the regulations include the terms ‘urgent’ and ‘emergency’, while most regulations define only the framework for the operation of each service, but not cooperation with other services at a horizontal level, except for the Homeland Security System Act (which defines strategic Coordination) and the Civil Protection System Act, which integrates all services, especially through participation in the work of the civil protection headquarters at all levels.

In addition, the terminology for events and situations is not agreed, with various terms being used (emergency circumstances, emergencies, crisis situations, accidents, major accidents, disasters, crises, emergency occurrences, emergency conditions, natural disasters, etc.)³⁴ that need to be harmonised at the level of all emergency services.

In order to strengthen and harmonise the cooperation of stakeholders in the Croatian emergency services system, the Croatian Government needs to adopt a Strategic Framework for the Development of Emergency Services, which would aim to enable more efficient operation of emergency services in the event of emergencies and strengthen their mutual communication and coordination. The strategic framework should define the operational functioning and cooperation of emergency services at a horizontal level, the concepts within the system, the rights and obligations of stakeholders, the system levels, the planning system, preparedness, mobilisation and coordination in the event of emergencies; the tasks, organisation and competence of ‘communication centres’ and their spatial and information connection (a common system of connections), joint training of all stakeholders in the system and financing. The international standard ISO 22320:2018 for emergency management may serve as a basis for the development of the Guidelines.

When it comes to strengthening bilateral cooperation with all neighbouring countries, it is proposed that a bilateral treaty on cooperation in the field of protection and rescue be signed between the Republic of Croatia and the Italian Republic, especially in the context of long-term active international cooperation, which could be even more successful given the joint EU FIRESPELL project.

³⁴ As stated at the beginning, the term ‘emergency’ is used for the purposes of this Report.

4. ORGANISATION ON STATE LEVEL

The Croatian Government exercises executive power pursuant to the Constitution and the law. In the exercise of executive power, the Government determines, directs and aligns the implementation of policies and programmes and to that end proposes and adopts strategies, issues guidelines, adopts acts and undertakes other measures necessary for the regulation of relations in the area of its competence.

The Government proposes laws and other acts, the state budget and the final balance to the Croatian Parliament, it implements laws and other decisions of the Croatian Parliament, adopts decrees for the implementation of laws, conducts foreign and internal policies, *directs and supervises the work of the state administration*, takes care of the economic development of the country, *directs the activities and development of public services* and performs other tasks required by the Constitution and the law.

The Act on the Organisation and Scope of State Administration Authorities³⁵ organises state administration authorities and defines their scope of activities. The state administration system currently includes 16 ministries and 12 state administration organisations. The Croatian Government has adopted decrees on the internal organisation of all state administration authorities. The Ministry of the Interior, the Ministry of Health, the Ministry of the Sea, Transport and Infrastructure and the Croatian Firefighters' Association are particularly important for the emergency services system. Operational and logistical support to the work of emergency services is also provided by other state administration authorities (e.g., the Ministry of Defence through the involvement of the Armed Forces in operational activities, the Ministry of Economy and Sustainable Development through environmental protection and commodity reserves, and other authorities within the scope of this Act and the decrees on the internal organisation).

The Associations Act³⁶ regulates the establishment, legal status, operation, registration, financing, assets, responsibilities, status change, supervision, and

³⁵ Official Gazette No 85/20

³⁶ Official Gazette No 74/14

dissolution of an association with legal personality in Croatia. Of particular importance for the emergency services system are the Croatian Mountain Rescue Service and the Croatian Red Cross, which base their work on the Act on Associations, but also on separate acts and international obligations and guidelines.

4.1. Ministry of the Interior

The Ministry of the Interior carries out administrative and other tasks relating to police and criminal police affairs, namely the protection of life and personal safety of people and property, and other tasks in accordance with the regulations defining police work. The Ministry of the Interior also carries out administrative and professional tasks relating to the establishment of the civil protection system, the rescue of citizens, material and other goods in the event of major accidents and disasters, and other tasks in accordance with the regulations defining the work of civil protection.

The Ministry is headed by the minister of the interior, who is also the deputy prime minister of Croatia and the *head of the Croatian Civil Protection Headquarters*.³⁷

In accordance with the Decree on the Internal Organisation³⁸, the following organisational units have been established at the headquarters of the Ministry of the Interior (a total of 5,237 posts established at the headquarters): cabinet of the minister, general secretariat, independent services/sectors (internal audit; cooperation with the Military Ordinariate of the Republic of Croatia, information security, supervision of personal data protection, information and communication systems), the Forensic Science Centre 'Ivan Vučetić', directorates (European affairs, international relations and European Union funds; human resources; material and financial affairs; immigration, citizenship and administrative affairs), as well as the *General Police Directorate* and the *Civil Protection Directorate*.

³⁷ Pursuant to the Civil Protection System Act, the minister of the interior is the head of the Civil Protection Headquarters (Article 22).

³⁸ Official Gazette No 97/20

4.1.1. General Police Directorate

As part of its duties and obligations, the General Police Directorate analyses and assesses the general security situation and the situation and trends regarding crime, foresees the likely development regarding the security situation, assesses risks, and organises measures and activities within the competence of the police.

The General Police Directorate coordinates the work of organisational units within the Directorate:

- General Police Director's Office
- Police Directorate
- Criminal Police Directorate
- Border Police Directorate
- Special Security Affairs Directorate
- Operations and Communications Centre³⁹
- Special Police Command
- Police Academy.⁴⁰

The General Police Directorate directs and supervises the work of *police departments*, which are divided into 4 categories:

1. Zagreb (includes the City of Zagreb and Zagreb County)
2. Split-Dalmatia, Osijek-Baranja, Primorje-Gorski Kotar, Istria
3. Dubrovnik-Neretva, Karlovac, Sisak-Moslavina, Šibenik-Knin, Vukovar-Syrmia, Zadar
4. Bjelovar-Bilogora, Brod-Posavina, Koprivnica-Križevci, Krapina-Zagorje, Lika-Senj, Međimurje, Požega-Slavonia, Varaždin, Virovitica-Podravina.

Police departments collect data on all security-relevant events and assess the security situation in their area of competence. Each police department includes an operations and communications centre (emergency number 192) which receives notifications about security-related events, and directs and supervises operational

³⁹ Receives notifications about security-related events and occurrences on Croatian territory and coordinates the measures and actions taken by the General Police Directorate and many other activities of interest to the police. The role of coordination with other state administration authorities at the horizontal level is especially important.

⁴⁰ Provides basic education for the profession of police officer, specialisation, vocational training and upskilling, police training and higher education.

measures among the organisational units of the police department. Police stations operate in the area of each police department.

It can be concluded that the police is the most active and most numerous emergency service in Croatia, whose role is always important for the protection of people and property affected by an emergency, depending on its type and intensity.

4.1.2. Civil Protection Directorate

The Civil Protection Directorate was established by the Decree on the Internal Organisation of the Ministry of the Interior, and started its work on 1 January 2019 for the purpose of performing administrative and professional tasks involving the establishment of the civil protection system, the rescue of citizens, providing for material and other goods in the event of major accidents and disasters; organising stakeholders, operational forces and citizens in order to protect and rescue people, animals, material and cultural goods and the environment in the event of major accidents and disasters and to remedy the consequences of terrorism and war destruction; training and upskilling of protection and rescue stakeholders; carrying out civil protection tasks, measures and activities; managing the alert and notification system and conducting international cooperation in the field of civil protection; carrying out inspection tasks in the fields of civil protection, fire protection, production and trade of explosive substances and weapons, private protection and detective work, mine action; radiological and nuclear safety, tasks relating to the 112 system and tasks relating to demining and explosive atmospheres.

The objectives of the Civil Protection Directorate are to establish new capacities of the civil protection system through:

- consolidation of civil protection systems;
- uniform preparation, planning, procedures, equipping and training;
- establishing a system of clear powers and competence;
- uniform coordination of civil protection system operation;
- efficiency and rationalisation of resource use;
- shortening response time;
- efficient preparedness supervision.

The following organisational units have been established at the Civil Protection Directorate:

- Civil Protection Directorate Office
- Civil Protection Operations Centre⁴¹
- National Civil Protection Training Centre⁴²
- Inspection Affairs Sector
- Disaster Risk Reduction Sector
- Radiological And Nuclear Safety Sector
- Preparedness And Coordination Sector
- 112 Sector
- State Emergency Response Unit⁴³
- Explosive Atmospheres Sector
- Croatian Mine Action Centre.

The regional civil protection offices in Zagreb, Split, Rijeka, Osijek and Varaždin have been established as internal organisational units, outside the headquarters, to perform tasks within the scope of activities of the Civil Protection Directorate for the counties and the City of Zagreb. In order to perform tasks within the scope of activities of the Regional Civil Protection Office, the prevention and preparedness service, *the 112 county centre*,⁴⁴ the inspection affairs service and the civil protection service have been established at county headquarters.

The Decree Amending the Decree on the Internal Organisation of the Ministry of the Interior (OG No 24/2019) established 1029 posts at the Civil Protection

⁴¹ Performs tasks related to the reception, collection, analysis, processing, transmission and distribution of reports, data, decisions, orders and commands on all types of hazards and possible consequences; exchanges information with communication points in the civil protection systems of other countries and international organisations; coordinates the reception and/or deployment of emergency assistance in the event of disasters, carries out the functions of a land-based rescue coordination centre in the event of an aircraft accident, supports the work of the Croatian Civil Protection Headquarters and performs many other tasks within the competence of the CPOC.

⁴² Responsible for the development of education, instruction and training policies within the civil protection system; creates a uniform methodology for the development of civil protection curricula and programmes, and carries out other training activities in the civil protection system.

⁴³ The State Emergency Response Unit performs specialist tasks relating to search and rescue from collapsed buildings, search and rescue in floods, chemical, biological, radiological and nuclear protection (CBRN), provision of care to the population and technical and tactical support.

⁴⁴ The operations and communications duty service ensures the coordination of communication among the stakeholders and operational forces of the civil protection system in the county, directs and forwards information on events and requests for assistance to competent emergency services, and performs many other tasks within the competence of the 112 county centre around the clock.

Directorate, including the regional civil protection offices (covering Varaždin, Split, Rijeka, Osijek and Zagreb zones) and the civil protection services in each county.

4.2. Croatian Firefighters' Association

The Croatian Firefighters' Association (CFA) performs administrative and professional tasks related to firefighting; conducts training of fire brigade members; provides technical assistance in the event of incidents and dangerous situations; performs inspection tasks in the field of firefighting and other tasks related to firefighting.

Among other things, the Croatian Firefighters' Association carries out the following activities:

- drafts the proposal of the national firefighting development strategy;
- models the Croatian firefighting system;
- encourages action to improve fire protection and the implementation of firefighting activities;
- develops a programme of activities in the implementation of special fire protection measures of interest to Croatia and refers it to the adoption procedure;
- coordinates activities relating to the inclusion of fire brigades in the civil protection system;
- organises the 193 state firefighting operations centre;⁴⁵
- organises firefighting activities;
- provides a central information and communication system;
- develops procurement plans for firefighting equipment and technology.

The central office of the Croatian Firefighters' Association in Zagreb consists of the following organisational units:

- cabinet of the chief fire commander
- the 193 state firefighting operations centre
- general secretariat
- Programme, Security and Support Sector
- Firefighting Sector⁴⁶

⁴⁵ Operations and communications centre for fire emergency response operations at the level of the Republic of Croatia

⁴⁶ Fire emergency response brigades in Split, Dubrovnik, Šibenik and Zadar operate within the Sector.

- Inspection Sector
- independent internal audit service.

The State Firefighting School, which was established by the Founding Decree⁴⁷ issued by the Republic of Croatia, and whose founding rights and duties are performed on behalf of the founder by the Croatian Government through the Croatian Firefighter's Association, is the legal successor of the Firefighting School — an adult education centre. The school's activities include developing and proposing education programmes/curricula for the acquisition of appropriate qualifications and implementing education and training in the firefighting system.

Based on fire risk assessments and fire protection plans, the firefighting system at the level of local self-government consists of 70 public fire brigades — PFB (of which three are in the process of being established), which include 2,545 professional firefighters, and 1,845 volunteer fire departments with a total of 64,456 members, of which 21,912 are operational firefighters. Fifty-four fire brigades (21 professional corporate fire brigades — PCFB and 26 volunteer corporate fire departments — VCFD) are active within legal persons (corporate entities). Local firefighters' organisations are affiliated with municipal firefighters' associations (130), firefighters' associations of towns and cities (63) and regional firefighters' associations (28), which are affiliated with 20 county firefighters' associations and the City of Zagreb Firefighters' Association.

The firefighting operations centre of the firefighters' association of a county or the City of Zagreb receives alerts about fire emergencies via the emergency number 193.

The Croatian Firefighters' Association is the central state office competent for firefighting, headed by the chief fire commander. The chief fire commander is responsible to the Croatian Government for the legality of the work of the Croatian Firefighters' Association and for the equipment, organisation, training and response preparedness of fire organisations, fire brigades and firefighters in Croatia.

⁴⁷ Official Gazette No 107/20

4.3. Ministry of Health

The Ministry of Health carries out administrative and other tasks relating to the health care and health insurance system; monitoring and improving the health status and health needs of the population, protecting the population against infectious and non-infectious diseases, non-ionising radiation; protection against noise; food safety and hygiene in accordance with special food regulations and other tasks in accordance with regulations defining the operation of the health care system.

The Ministry of Health also carries out administrative and professional tasks of managing and coordinating the health care system in the event of major incidents/crises.

The ministry is headed by the minister of health, who is also the chairman of the Ministry of Health Crisis Headquarters.

According to the Internal Organisation Decree,⁴⁸ the following organisational units have been established at the headquarters of the Ministry of Health (a total of 339 posts established at the headquarters): cabinet of the minister, general secretariat, directorates (primary health care, health tourism, medicines and medical devices, public health and public health care; hospital health care, transplantation, biomedicine and health care quality; financial affairs and public procurement; e-Health; legal affairs in health care), independent sectors (for European Union funds and international health care projects; for health inspections; for European affairs and international cooperation in health care) and the independent internal audit service.

The Ministry of Health is responsible for emergency medicine, health care and public health activities, which is particularly important in the operation of emergency services and health care.

4.3.1. Croatian Institute of Emergency Medicine

The Croatian Institute of Emergency Medicine is a public health institution for performing emergency medicine and telemedicine activities in the Republic of

⁴⁸ Official Gazette No 97/20

Croatia. It began operating in May 2009 and was established under the Croatian Government Decree on the Establishment of the Croatian Institute of Emergency Medicine.⁴⁹ The powers and scope of activities, as well as the organisation, administration and management of the Institute, are defined by the Health Care Act⁵⁰ and the Statute.

The Croatian Institute of Emergency Medicine implements the principles of comprehensiveness, continuity, availability and full access to emergency medical services, supporting the need for a specialised approach in both outpatient as well as hospital health care. Through continuing cooperation with the county institutes of emergency medicine, hospital emergency medical services and other stakeholders in the emergency patient care process, the Institute ensures the implementation of emergency health care measures, the emergency transport of ill and injured persons to an adequate health care institution and the provision of medical care during such transport. The Institute proposes and designs training programmes for lifelong/continuing education and participates in the implementation and monitoring of education and professional training of emergency medical workers. The Croatian Institute of Emergency Medicine coordinates, provides professional guidance and supervises the work of county institutes of emergency medicine (20 counties and the city of Zagreb).

4.3.2. Croatian Institute of Public Health

The Croatian Institute of Public Health is the leading public health institution in Croatia. The Croatian Institute of Public Health carries out activities relating to the epidemiology of infectious diseases and chronic mass non-infectious diseases, public health, health education and promotion, disease prevention, health ecology, microbiology, school health services, mental health and addiction prevention.

Quality cooperation, coordination and partnership among stakeholders at the national, regional and local levels are essential in achieving the basic purpose of public health and preserving and improving the health of the population. The network of public health institutes led by the Croatian Institute of Public Health has a central place in this process. The Croatian Institute of Public Health and the

⁴⁹ Official Gazette No 28/09

⁵⁰ Official Gazette nos. 100/18, 125/19, 147/20

county institutes of public health play a crucial role in combating the COVID-19 epidemic.

4.4. Ministry of the Sea, Transport and Infrastructure

The Ministry of the Sea, Transport and Infrastructure (MSTI) performs administrative and other tasks relating to domestic and international maritime, nautical, road, rail, combined and air transport; cableways and inland waterway transport, including the infrastructure of these modes of transport; protection of the sea against pollution caused by ships; maritime ports, maritime domain and demarcation of maritime domains, maritime insurance and maritime agencies; safety of maritime navigation; as well as other tasks laid down in the Act on the Organisation and Scope of State Administration Authorities.

According to the Internal Organisation Decree,⁵¹ the following organisational units have been established at the headquarters of the Ministry of the Sea, Transport and Infrastructure (a total of 1,008 posts established at the headquarters): cabinet of the minister, general secretariat, directorates (maritime affairs, maritime safety, inland waterway navigation, road and railway infrastructure, civil aviation, electronic communications and postal services, road transport and inspection, EU funds and strategic planning, budget and finance), and the independent internal audit service.

The Maritime Safety Directorate is responsible, among other things, for the search and rescue of human lives at sea and inland waters and for the protection of the sea, submarine area and inland waters against pollution caused by ships. Harbourmaster's offices (Pula, Rijeka, Senj, Zadar, Šibenik, Split, Ploče, Dubrovnik, Sisak, Osijek, Slavonski Brod and Vukovar) have been established within the Directorate.

The National Maritime Rescue Coordination Centre (MRCC Rijeka) has also been established within the Directorate. The MRCC Rijeka organises and coordinates search and rescue activities in accordance with the National Maritime Search and Rescue Plan, carries out required procedures for determining places of refuge, performs the tasks of the Maritime Assistance Service (MAS) in accordance with the International Maritime Organisation Resolution A.950(23), performs activities

⁵¹ Official Gazette No 97/20

and tasks in accordance with the Contingency Plan for Accidental Marine Pollution, and other tasks in accordance with the Decree on the Internal Organisation of the MSTI.

The scope of activities of maritime harbourmaster's offices within the Maritime Safety Directorate, established under the Harbourmaster's Offices Act,⁵² includes, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea in accordance with the National Maritime Search and Rescue Plan.

4.5. Croatian Mountain Rescue Service

The Croatian Mountain Rescue Service (CMRS) is a national, vertically organised, voluntary, professional, humanitarian and non-partisan association of public importance whose main objectives are prevention of accidents, rescue training, rescue and provision of medical first aid in mountains and in other inaccessible areas and in emergencies requiring special expertise in rescuing and providing assistance and the use of technical mountain rescue equipment in order to preserve human lives, health and property. The CMRS is a non-profit association that performs activities of interest to Croatia.

The CMRS was founded in 1950 as an internal service of the Croatian Mountaineering Association. Today it consists of 25 stations located in the entire territory of Croatia and has approximately 1,000 members. The CMRS gathers alpinists, speleologists, high-altitude mountaineers and skiers, who are specially trained to provide medical first aid and trained in all techniques of mountain rescue, flood rescue, including helicopter rescue, as well as searches in inaccessible terrain and with the help of search and rescue dogs. Dedicated expert commissions operate at the CMRS (searches and avalanches; helicopter rescue; rescue techniques and personnel training; speleological rescue; ski resort safety and avalanches; information and analytics; rescue medicine; water and flood rescue; equipment and connections).

The CMRS is a fundamental operational force of the civil protection system for emergency response.

⁵² Official Gazette No 118/18

4.6. Croatian Red Cross

The Croatian Red Cross (CRC) is a non-profit legal person and the national Red Cross society, which is active only in the territory of Croatia, is guided by the basic principles of the Red Cross and acts impartially and without discrimination. It is the largest humanitarian organisation in Croatia.

The legal basis for the activities of the Croatian Red Cross in the field of international humanitarian law is derived from the treaties on international humanitarian law and national legislation, while the Statutes of the International Red Cross and Red Crescent Movement, the Croatian Red Cross Act⁵³ and the Statute of the Croatian Red Cross⁵⁴ provide the basis for its operation.

The Croatian Red Cross operates through an extensive organisational network of societies with legal personality across counties, cities and municipalities, and encompasses a total of 131 Red Cross societies (20 county societies and 111 city and municipal Red Cross societies⁵⁵).

The activities of the Croatian Red Cross are aimed at helping all vulnerable social groups and at the continuous training of employees and volunteers. They include activities in the fields of first aid, voluntary blood donation, health protection and promotion, social welfare, crisis preparedness and response, water rescue and environmental protection of coastal areas, protection of migrants, search services, youth and volunteer services.

The Croatian Red Cross programmes in local communities are aimed at helping all vulnerable groups in society and improving lives. The Croatian Red Cross conducts more than 50 training programmes in Croatia, aimed at strengthening individuals and the community, while also providing humanitarian aid to more than a hundred thousand socially disadvantaged people.

The Croatian Red Cross is a fundamental operational force of the civil protection system for emergency response. The operational forces of the Croatian Red Cross consist of employees and volunteers of Red Cross societies organised into crisis headquarters, emergency response teams and support teams at the local, county and national levels.

⁵³ Official Gazette nos. 171/10, 136/20

⁵⁴ Official Gazette No 56/16

⁵⁵ The City of Zagreb Red Cross Society also has the status of county society.

The organisation of the state administration authorities competent for the operation of emergency services is laid down in the acts and decrees on the internal organisation. Most competent authorities have a defined structure from the state to the regional level (e.g., from the Civil Protection Directorate to the regional offices / civil protection services, or from the MSTI to the level of harbourmaster's offices) or even to the local level (e.g., General Police Directorate, from police departments to police stations). Certain authorities are organised only at the state level but have some management and coordination competence over the regional or local level in the relevant field of activity (e.g., the CFA, from the county fire associations to public fire brigades and volunteer fire departments, or from the CIEM to the county institutes of emergency medical assistance).

The organisation of state authorities is well complemented by citizen's associations (the CMRS and the CRC as civil protection operational forces), covering the entire territory of Croatia and performing numerous emergency management activities.

State authorities are faced with numerous challenges in their work, from the slowness of the state administration in changing/improving the internal organisation and announcing recruitment notices to the demanding public procurement procedure for equipping operational forces, which needs to be taken into account for the purpose of continuous development of the capacities for efficient emergency management in line with new challenges and risks.

5. ORGANISATION ON COUNTY LEVEL – COASTAL AREA

The Act on the Territories of Counties, Cities and Municipalities in the Republic of Croatia⁵⁶ establishes the regional organisation of the Republic of Croatia, as well as the territories of every county, town, city and municipality in Croatia, their names and seats, method of defining and changing the borders of municipalities, towns and cities, the procedure leading up to a change in the regional organisation and other issues relevant to the regional organisation of local and regional self-government units. In total, there are 555 local self-government units in the Republic of Croatia, i.e., 428 municipalities and 127 towns and cities, and 20 regional self-government units, i.e., counties. The City of Zagreb, as the capital of the Republic of Croatia, has a special status as both a city and a county, which brings the number of local and regional self-government units in the Republic of Croatia to a total of 576.

The object of this Report is to present and analyse the functioning of emergency services in the territory of the FIRESPELL project partners (Istria, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva counties), but it also includes Primorje-Gorski kotar and Lika-Senj counties in order to aggregate and analyse data from all the coastal counties, which share the same risks and develop similar operational capacities for emergency management. All data was collected through questionnaires (an empty form is attached to this Report) which were delivered to all emergency services and civil protection operational forces.

5.1. Istria County

Istria County (in Italian: Regione Istriana) is the westernmost Croatian county, covering the largest part of the Istrian peninsula (2,820 out of 3,120 square kilometres of the Croatian part of Istria). The county's administrative seat is located in Pazin, whereas Pula is the political and economic seat. While the triangle-shape and size of the Istrian peninsula render it the largest and most important example of the well-indented Adriatic coast, based on its geographic structure and the historical definition of the area, it may also be interpreted as a piece of land between two deep and important gulfs – the Gulf of Trieste to the northwest and Kvarner Gulf to the east.

⁵⁶ Official Gazette No 86/06



Basic information:

Population: 208,055 (4.85% of the Croatian population) – 2011

Average population density: 73.96 inhabitants/km²

Surface area: 2,820 km² (4.98% of Croatia's total surface area)

Number of LSGUs: 41 (10 towns and cities and 31 municipalities)

Number of islands: 88

Length of the coastline: 570 km

National parks: 1 (Brijuni)

Nature parks: 1 (Učka)

Figure 2: Map of Istria County⁵⁷

The **major accident risk assessment** for Istria County was adopted in July 2018 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. The risk evaluation includes:⁵⁸

No	Risk	Consequences	Likelihood
1	Flood	4	4
2	Earthquake	4	4
3	Technical/technological	4	3
4	Epidemic	3	4
5	Drought	4	4
6	Outdoor fire	4	5
7	Low temperatures	2	4
8	Ice/hail	3	4
9	Extreme temperatures	3	3

The risk assessment determines the preparedness of the civil protection system:⁵⁹

- prevention – high

⁵⁷ <https://proleksis.lzmk.hr/28352/>

⁵⁸ Categories: 1 – extremely low, 2 – low, 3 – moderate, 4 – significant, 5 – catastrophic

⁵⁹ There are 4 categories of preparedness: very low, low, high and very high.

- response – high
- combined – high.

The Istria County **civil protection action plan** was adopted in September 2019 with the aim to establish the organisation, mobilisation and operation of the civil protection system, the tasks and competences, human resources and necessary material and technical resources, as well as protection and rescue measures and procedures in the event of emergencies within the territory of Istria County.

5.1.1. Overview of operational capacities

The capacities of the Istria County civil protection emergency services and operational forces, which complement the work of emergency services in the field and provide them with necessary operational and logistical support, are listed below.⁶⁰

The **Istria County Firefighter's Association (ICFA)** is responsible for firefighting on the territory of Istria County, and answers to the county prefect, i.e., to the fire chief within its scope of activities and competences stipulated in the relevant regulations. Seven public fire brigades (Buzet, Labin, Pazin, Poreč, Pula, Rovinj and Umag) and 34 volunteer fire departments operate in Istria County, with 230 employees, 1,050 volunteer firefighters, 31 firefighters active only in the summer season and 50 trained employees of the state-owned company Hrvatske šume (Croatian Forests), adding up to a total of 1,351 fire brigade members in the County. The fire brigades have a total of 198 vehicles (25 personal vehicles, 35 off-road vehicles, 38 passenger vans, 12 cargo vans for transporting equipment and 88 other operational vehicles), three rescue and firefighting vessels, five drones for fire monitoring and search operations, and two search and rescue dogs at their disposal.

Operational activities in the event of emergencies are carried out pursuant to:

- the Firefighting Act and the Fire Protection Act
- the programme of activities in the implementation of special fire protection measures of interest to Croatia and the Contingency Plan
- the Istria County firefighting areas operational plan

⁶⁰ The same form of overview will be provided for the other coastal counties.

- the ICFA monitoring and reporting service plan and the scouting and preventive patrols plan.

The Istria County fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels, residential buildings and industry), search and rescue operations (floods, collapsed buildings, sea, mountains and other inaccessible areas), provision of care, first aid, securing the area, technical interventions in the industry, on buildings, in outdoor areas and in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution, explosions and COVID-19-related interventions.

On 1 January 2006, the Protection and Rescue Service was established as part of the Istria County Firefighter's Association, as the first service of this kind in the Republic of Croatia. From 1 August 2015, the service is known as the ICFA Civil Protection Service. The main task of the Service is providing professional, operational and administrative support to local and regional self-government authorities in accordance with the provisions of the Civil Protection System Act. All citizen's associations involved in protection and rescue in Istria County have been integrated in a single system, which complements the fundamental civil protection operational forces. The Civil Protection Service also enables cooperation with state authorities and legal persons in performing professional and analytical tasks related to data collection and participation in the preparation/adoption of civil protection risk assessments and action plans. Since the establishment of the Civil Protection Service within the Istria County Firefighter's Association, it has been tasked with interventions by Istria County, all 10 Istrian towns and cities, and 29 municipalities through agreements on the provision of civil protection services within the competence of local self-government units.

The County Firefighting Operations Centre (193 CFOC) is located within the premises of the Public Fire Brigade Pula (PFB Pula). The CFOC operates 24/7 with two employees during the day and one employee in the night shift, and 1–2 employees are added if necessary. In the summer season, when necessary, the CFOC is joined by firefighters working on a seasonal basis. The CFOC has two incoming telephone lines for calls from citizens and uses a digital radio connection system, as well as VATRO-net, the central database of the Croatian Firefighter's Association. Currently, the CFOC has no back-up location in case of inability to

operate (e.g., due to damage from earthquakes), but the standby units of all seven PFBs in Istria County have been designated as temporary alternative call centres. Training, upskilling, seminars and courses are regularly carried out, with up to 181 employees and volunteers having participated annually in 2016–2020, along with exercises in which 230 employees and volunteers have participated annually in 2016–2020⁶¹.

Challenges the Firefighter's Association has been facing in its operations:

1. significant climate change – adverse weather conditions
2. large number of tourists during the summer
3. operating during a pandemic.

Proposals for improvement within the Firefighter's Association:

1. organise a fire brigade which would operate at sea and in other water bodies;
2. purchase vessels, extinguishing and rescue equipment, and pollution prevention equipment;
3. train employees for extinguishing and rescuing vessels and people at sea and in other water bodies, and to prevent and remedy pollution.

The **Istria Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Istria Police Department is responsible for 10 police stations (Buje, Buzet, Labin, Pazin, Poreč, Pula, Rovinj, the Traffic Police Station Pula and the Maritime and Airport Police Station Pula).

⁶¹ Participation in 2020 has been low due to the COVID-19 pandemic.

The Istria Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several sectors (police; criminal police; borders; legal, financial and technical affairs; immigration, citizenship and administrative affairs).

The **Istria County Teaching Institute for Emergency Medicine** is an organised emergency medical service (EMS) system in Istria County, aimed at providing state-of-the-art, well-organised, modernly equipped, accessible and professional medical services, and based in Pula. There are seven EMS departments throughout Istria County (Pula, Buzet, Labin, Pazin, Poreč, Rovinj and Umag), with a total of 200 employees and 29 vehicles.

The Educational Centre within the Istria County Teaching Institute for Emergency Medicine, with its seat in Pula, has 10 employees, whose primary task is to educate on providing medical care to injured persons.

Operational activities in the event of emergencies are carried out pursuant to the standard operating procedure (SOP) for responding to major accidents.

The 194 Medical Emergency Reporting Unit (MERU) of the Istria County Teaching Institute for Emergency Medicine is located in Pula and has a total of 10 employees (two per shift, while the number of dispatchers grows during the tourist season and in case of an increased number of calls and emergency response operations). The MERU has two incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, as well as the 'e-hitna' (e-emergency) system for receiving phone calls. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the MERU, but as an alternative, mobile phones and a special telephone line to which calls are redirected can be used.

Specialised courses (ALS, ITLS, EPALS), national training exercises for EMS employees and courses for MERU employees are regularly carried out and attended by 200 employees each year. On average, 60 employees participate in mass accident simulation exercises (airport, sea, hotel, traffic) each year.

Challenges the Teaching Institute for Emergency Medicine has been facing in its operations:

1. insufficient number of EMS teams

2. insufficient coordination between other emergency services, unfamiliarity with the protocols and non-existence of a joint communication system in case of mass accidents (handheld radios)
3. lack of communication.

Proposals for improvement within the Teaching Institute for Emergency Medicine:

1. human resource mobilisation plan
2. more frequent simulation exercises
3. purchasing a pickup truck which would enable rapid arrival at the accident site even in case of inaccessible terrain, with a well-equipped trailer that would enable the provision of medical care to a large number of injured persons.

The **Harbourmaster's Office Pula** performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Istria County, there are six harbourmaster's branch offices in addition to the Harbourmaster's Office Pula (Umag, Novigrad, Poreč, Rovinj, Raša and Rabac), with a total of 30 employees (with 15 employees foreseen for emergency response operations) and four search and rescue vessels. Operational activities in emergency events (search and rescue at sea, technical interventions in maritime traffic and remediation of marine/coastal pollution) are carried out pursuant to the following:

- the National Maritime Search and Rescue Plan
- the Search and Rescue Service's official manual.

The Operations and Communications Centre of the Harbourmaster's Office Pula has five employees, four of which work in shifts, and more employees are added in the summer season. The software package for receiving phone calls is based on Microsoft technology. Currently, there are two incoming telephone lines for calls from citizens and the VHF radio connection system is used. No back-up location in case of inability to operate is planned for the Centre, but as an alternative, calls can be received by the MRCC Rijeka.

Specialised seminars (passenger/fishing vessel supervision, maritime common good inspection, technical inspections of boats) and exercises (accidental pollution, safety measures in ports) are regularly carried out and attended by employees of the Harbourmaster's Office each year.

Proposals for improvement within the Harbourmaster's office:

1. recruiting new employees
2. continuous education.

The **Croatian Mountain Rescue Service Istria station** operates throughout Istria County and carries out search and rescue activities in inaccessible areas in order to preserve human lives, health and property. The station's headquarters is located in Pula, with one employee and 31 volunteers, as well as four vehicles and one drone.

Operational activities in emergency events (search and rescue in floods, search and rescue in the mountains and other inaccessible areas, provision of first aid to injured persons) are carried out pursuant to the statute and operational plan. All emergency alerts are transmitted through the 112 county centre in Pazin. The station uses TETRA and VHF radio connection systems.

Specialised courses are regularly attended by station members, as are instructor seminars and themed exercises (cave rescue, search operations, first aid, winter and summer drills).

Challenges the MRS station has been facing in its operations:

1. Premises are insufficient. Their locations are inadequate (poor transport connections), of inadequate size, are lacking garage space or are located in buildings which might not be earthquake resistant.
2. The vehicles are old and unreliable, their repairs are frequent and expensive.
3. In case of catastrophes, members are mobilised in an inefficient manner (the mobilised person becomes an 'operational obstacle' for their employer).

Proposals for improvement within the MRS station:

1. Finding a solution for relocating into adequate premises. Regarding the premises in Pula, the construction of an 'emergency services' building is planned (PFB, emergency medical assistance, Red Cross, CMRS).
2. A similar solution should be found for the premises in Pazin.

The **Istria County Red Cross Society** (IC RCS) is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the

Associations Act and the Statute of the Istria County Red Cross Society, adopted at the Istria County Red Cross Society Assembly on 29 July 2016. The Istria County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of seven town and city societies of the Red Cross from Istria County (Buje, Buzet, Labin, Pazin, Poreč, Pula and Rovinj).

The society's headquarters is located in Pazin, with four employees and 128 volunteers, as well as two vehicles (with two trailers: one transport trailer and one mobile kitchen) and two vessels.

Operational activities in emergency events (providing care to people and first aid to injured persons) are carried out pursuant to the following:

- operational action plan of the IC RCS for crisis management
- Civil Protection Action Plan for Istria County
- guidelines for the basic units of the Croatian Red Cross
- Statute of the IC RCS
- Strategic plan of the IC RCS for 2019- 2022.

At the level of the IC RCS, a special rescue unit which operates in difficult conditions has been set up in accordance with the CRS training programme, and capacities for providing psychosocial support in crisis situations are continuously being developed.

Specialised courses (work in the event of disasters, first aid, rescue in open waters, rescue in difficult conditions, provision of psychosocial support, handling protective gear during a pandemic) and exercises (mass accidents, water rescue, asylum and migration, human trafficking), are regularly attended by Red Cross employees and volunteers.

Challenges the IC RCS has been facing in its operations:

1. employed volunteers (whose mobilisation is not legally regulated);
2. the IC RCS coordinates the work of seven town and city societies with different financial capabilities and needs in the field;
3. employees are overburdened with various activities and bureaucracy, increasingly stringent legal obligations and lack of storage space.

Proposals for improvement within the IC RCS:

1. address the status of volunteers in case of crises occurring during their working hours;
2. ensure adequate storage space for disposing necessary equipment.

The Civil Protection Service (CPS) Pazin, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Istria County, as well as other tasks pursuant to applicable civil protection regulations. The 112 county centre as part of the CPS Pazin has 14 employees (two per shift – the number of employees remains the same in the summer season) and carries out operational activities in emergency events pursuant to the standard operational procedures for 112 centres in case of road and motorway accidents, search and rescue on the mainland or on the islands, accidents at sea, domestic violence, and floods.

The 112 county centre uses the Sfera software package for receiving phone calls, and has no physical limitation of incoming calls due to its usage of Voice over IP. The 112 county centre uses the TETRA radio connection system. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the centre, but as an alternative, calls can be received via the 112 county centre in Rijeka.

Specialised courses (foreign languages, psychology courses, courses on mines and explosives, domestic violence and working with children) and simulation and communication exercises of the 112 centres focused on various scenarios (domestic violence, traffic accidents, receiving a telephone call in a foreign language) are regularly carried out, in addition to corporate exercises with regard to practising standard operational procedures, and attended or performed by employees of the Civil Protection Service Pazin.

Challenges the CPS Pazin has been facing in its operations:

1. working in stressful circumstances with injured persons;
2. the standard operational procedures do not cover all areas / competences overlap;
3. crisis communication.

Proposals for improvement within the CPS Pazin:

1. organise courses for employees (foreign languages, psychology, on certain topics);
2. participate in more operations and communications exercises with operational forces;
3. practise communication with all operational activities stakeholders.

5.1.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁶² per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Firefighting	1,539	1,892	2,007	1,762	1,507
Institute for Emergency Medicine	40,871	49,255	45,327	41,421	29,537
Harbourmaster's Office	39	45	47	64	37
Mountain Rescue Service	16	17	15	8	11
Red Cross	0	0	0	0	5
CPS Pazin ⁶³	3,702	4,238	4,060	4,113	3,143

5.1.3. Good practice and recommendations for improvement

The Istria County Civil Protection Headquarters is an example of good practice regarding coordination of stakeholders and operational forces within the civil protection system in the implementation of measures and activities during the COVID-19 pandemic.

Recommendations for the Istria County services:

1. construction of an emergency services county centre in Pula (fire brigade, civil protection and 112 centre, emergency medical assistance, Red Cross, CMRS and the Marine Environmental Protection Service);
2. spatial integration of the firefighting, civil protection, and urgent medical assistance reporting and operating centre;
3. reorganising civil protection and transferring the 112 centre to county (regional self-government) level;

⁶² The total number of emergency response operations for all services is not shown because several services keep records for the same emergency event.

⁶³ Overview of calls toward the 112 county centre

4. systemic education and coordination efforts of all emergency services, as well as introducing them to internal rulebooks and creation of a national rulebook;
5. aligning modes of communication and connections;
6. establishing a database of equipment which can be immediately accessed when an accident occurs, provide for additional equipment and supplies;
7. connecting all civil protection services within a single radio connection system;
8. providing joint exercises and education (experience and knowledge sharing) more frequently;
9. using a standardised incident management procedure for all stakeholders in order to accelerate information flow and prevent conflicts of competence between several services – introducing GIS⁶⁴ and command systems (ZEOS⁶⁵, NICS⁶⁶).
10. better exploiting the potential of the Ministry of the Interior's service unit in Valbandon for training members of the emergency services and operational forces of the civil protection system. A good example is the ISTRA 2017 civil protection field exercise coordinated from Valbandon, where civil protection modules from Croatia and Slovenia tasked with the search and rescue from collapsed buildings were accommodated.

5.2. Primorje-Gorski kotar County

Primorje-Gorski kotar County (PGC) is located in the west of Croatia, and borders the Republic of Slovenia to the north, Istria County to the west, Karlovac and Lika-Senj counties to the east, and on the southeast, it shares a maritime border with Zadar County in the Kvarner Gulf. It includes the City of Rijeka, the northeastern part of the Istrian peninsula, the Kvarner islands, the Croatian Littoral and Gorski kotar. The county's administrative seat is located in Rijeka, the third-largest city in Croatia. Primorje-Gorski kotar County is divided into three parts: the mountainous area, the littoral area and the islands.

⁶⁴ Geographic Information System

⁶⁵ Geographic information system of the MI CPD

⁶⁶ Next-Generation Incident Command System: information tool intended for emergency services and other stakeholders of the civil protection system



Figure 3: Map of Primorje-Gorski kotar County⁶⁷

Basic information:

Population: 296,195 (6.9% of the Croatian population) – 2011

Average population density: 82.57 inhabitants/km²

Surface area: 3,588 km² (6.3% of Croatia's total surface area)

Number of LSGUs: 36 (14 towns and cities and 22 municipalities)

Number of islands: 149

Length of the coastline: 1,065 km

National parks: 1 (Risnjak)

Nature parks: 1 (Učka)

The **major accident risk assessment** for Primorje-Gorski kotar County was adopted in November 2018 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. The identified risk evaluation includes:

No	Risk	Evaluation
1	Earthquake	Tolerable risk
2	Extreme temperatures	Tolerable risk
3	Epidemic and pandemic	Tolerable risk
4	Snow and ice	Tolerable risk
5	Flood – overflow	Tolerable risk
6	Flood – dam failure	Tolerable risk
7	Wildfire	Tolerable risk
8	Industrial accident	Tolerable risk
9	Wind	Tolerable risk

The risk assessment determines the preparedness of the civil protection system:⁶⁸

- prevention – high
- response – high
- combined – high.

⁶⁷ <https://proleksis.lzmk.hr/4131/>

The Primorje-Gorski kotar County **civil protection action plan** was adopted in November 2019 with the aim to establish the organisation, mobilisation and operation of the civil protection system, the tasks and competences, human resources and necessary material and technical resources, as well as protection and rescue measures and procedures in the event of emergencies within the territory of Primorje-Gorski kotar County.

5.2.1. Overview of operational capacities

The **Primorje-Gorski kotar County Firefighter's Association** is responsible for firefighting on the territory of Primorje-Gorski kotar County, and answers to the county prefect, i.e., to the fire chief within its scope of activities and competences stipulated in the relevant regulations. Six public fire brigades (Crikvenica, Rijeka, Opatija, Delnice, Krk and Lošinj) and 59 volunteer fire departments operate in Primorje-Gorski kotar County, with 249 employees and 906 volunteer firefighters, adding up to a total of 1,155 fire brigade members in the county. The fire brigades have a total of 309 vehicles (31 personal vehicles, 136 off-road vehicles, one command and communication vehicle, 43 passenger vans and 98 other operational vehicles), three vessels, four drones, and eight search and rescue dogs at their disposal.

Operational activities in the event of emergencies are carried out pursuant to:

- the Firefighting Act
- the PGC Fire Protection Plan
- the PGC Civil Protection Action Plan
- the Croatian programme of activities regarding fire protection measures
- the PGC programme of activities regarding fire protection measures.

The PGC fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, mountains and other inaccessible areas), provision of care, first aid, securing the area, technical interventions in the industry, on buildings, in outdoor areas and in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The County Firefighting Operations Centre (193 CFOC) is located within the premises of the Public Fire Brigade Rijeka (PFB Rijeka). The CFOC operates 24/7 and has a total of nine employees, two per shift. The CFOC has six incoming

telephone lines for calls from citizens and uses an analogue radio connection system, TETRA and DMR radio connection systems, as well as the central VATRO-net database and UVI for managing fire emergency response operations. The back-up location for the CFOC in case of inability to operate (e.g., due to damage from earthquakes) is in Šapjane (Fire Training Centre), and PFB Opatija has been designated as the temporary alternative call centre.

The Primorje-Gorski kotar County Firefighter's Association has founded the Fire Training Centre in Šapjane in order to provide training for firefighters and other stakeholders in the protection and rescue of people, animals and material property. The Centre has one employee. The space is intended for all types of training, courses, presentation, and all activities regarding the protection and rescue of people, animals and material property.

Training, upskilling, seminars and courses (rescuing from heights and depths, firefighting in closed spaces, fighting wildfires, working with isolation equipment, radioactive substances) are regularly carried out, with 200–250 employees and volunteers having participated annually in 2016–2020, along with exercises in which 150–420 employees and volunteers have participated annually in 2016–2020.

Challenges the PGC Firefighter's Association has been facing in its operations:

1. overlapping of legislative powers
2. communication between services
3. insufficient investing of financial resources in development.

Proposals for improvement within the PGC Firefighter's Association:

1. continuous education of operational forces
2. regular renewal of necessary equipment
3. allocation of radio frequencies.

The **Primorje-Gorski kotar Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other

tasks set out in specific regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Primorje-Gorski kotar Police Department is responsible for 13 police stations (Rijeka I and II, Mali Lošinj and its department in Cres, Crikvenica, Čabar, Delnice, Krk, Opatija, Rab, Vrbovsko, the Traffic Police Station in Rijeka, the Border Police Station in Rupa and the Maritime and Airport Police Station in Rijeka).

The Primorje-Gorski kotar Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several sectors (police; criminal police; borders; legal, financial and technical affairs; immigration, citizenship and administrative affairs).

The **Primorje-Gorski kotar County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency medicine that provides outpatient urgent medical assistance throughout the territory of Primorje-Gorski kotar County. This means providing emergency health care at the accident site to persons who suddenly fall ill or are injured, providing adequate emergency transport of such persons to an appropriate health institution and providing medical care during such transport. The Institute's seat is located in Rijeka, and nine EMS departments operate in the county (Cres, Crikvenica, Čabar, Delnice, Krk, Mali Lošinj, Opatija, Rab and Vrbovsko), with a total of 250 employees, 56 vehicles and one trailer for providing care in the event of major accidents.

The Educational Centre in Rijeka has six employees, whose primary task is to educate on providing medical care to injured persons.

Operational activities in the event of emergencies are carried out pursuant to the mass casualty action plan and the START triage system.

The Medical Emergency Reporting Unit (MERU) of the 194 PGC Institute for Emergency Medicine is located in Rijeka and has 20 employees (three per shift). The MERU has two incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, as well as the 'e-hitna' (e-emergency) system for receiving phone calls. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned.

Specialisation courses (MRMI⁶⁹, ITLS⁷⁰) and educational exercises for EMS employees are regularly carried out and attended by up to 86 employees each year. Joint exercises with other services (airport, shipyard, traffic, evacuation) are on average attended by up to 67 employees each year.

Challenges the PGC Institute for Emergency Medicine has been facing in its operations:

1. large number of response operations beyond EMS domain
2. large fluctuation in the number of medical doctors
3. work of the emergency services during the COVID crisis.

Proposals for improvement within the PGC Institute for Emergency Medicine:

1. ensuring adequate facilities for employee education
2. ensuring adequate facilities for accommodating EMS vehicles and equipment.

The **Harbourmaster's Office Rijeka** performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Primorje-Gorski kotar County, there are 19 harbourmaster's branch offices in addition to the Harbourmaster's office in Rijeka (Unije, Lopar, Mošćenička Draga, Opatija, Bakar, Kraljevica, Crikvenica, Novi Vinodolski, Omišalj, Malinska, Krk, Punat, Baška, Šilo, Cres, Mali Lošinj, Nerezine, Susak and Rab), with a total of 58 employees (with 11 employees foreseen for emergency response operations), and six search and rescue vessels. Operational activities in emergency events (search and rescue at sea, securing the area and remediation of marine/coastal pollution) are carried out pursuant to the following:

- the National Maritime Search and Rescue Plan
- the Search and Rescue Service's official manual
- the Harbourmaster's Offices Act
- the County Plan for Accidental Marine Pollution in PGC.

Search and rescue training and exercises (search and rescue, marine pollution) are regularly carried out and attended by employees of the Harbourmaster's Office each year.

⁶⁹ Medical Response to Major Incidents course

⁷⁰ International Trauma Life Support

Challenges the Harbourmaster's Office Rijeka has been facing in its operations:

1. lack of adequate vessels stationed throughout the harbourmaster's branch offices
2. lack of employees trained for search and rescue at sea within the harbourmaster's branch offices.

Proposals for improvement within the Harbourmaster's office:

1. purchasing adequate SAR vessels
2. hiring employees at the harbourmaster's branch offices
3. purchasing vessels for the control/remediation of marine pollution.

Two stations of the Croatian Mountain Rescue Service operate in Primorje-Gorski kotar County – **in Rijeka and in Delnice**. The stations carry out search and rescue activities in inaccessible areas in order to preserve human lives, health and property.

The CMRS station's headquarters in Rijeka is located in a public underground shelter which the City of Rijeka put at its disposal. The underground facilities include space for accommodating equipment and vehicles, a meeting room, and a space for employees maintaining standby operation. The CMRS station in Rijeka has 45 members, five vehicles with one dog trailer, and a snowmobile. For communication a VHF radio connection system is used, and in cooperation with the PGC Institute for Emergency Medicine a repeater has been obtained, which covers most of the territory within the competence of the Rijeka station.

The CMRS station in Delnice has 36 members, four vehicles, one boat and one drone. Analogue and digital radio connections are used in all interventions and other activities. For better coverage, three repeaters set to the CMRS's frequency (on Učka, Petehovac and Guslica) have been installed in PGC, and there is one mobile repeater which is used when necessary.

The **Primorje-Gorski kotar County Red Cross Society** (PGC RCS) is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the Associations Act and the Statute of the Primorje-Gorski kotar County Red Cross Society. The Primorje-Gorski kotar County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of ten town and city societies of the Red Cross from Primorje-Gorski kotar County (Crikvenica,

Čabar, Delnice, Krk, Mali Lošinj, Novi Vinodolski, Opatija, Rab, Rijeka and Vrbovsko).

The society's headquarters is located in Rijeka, with four employees and 93 volunteers, as well as two vehicles and 1 boat.

Operational activities in emergency events (providing care to people and first aid to injured persons) are carried out pursuant to the following:

- the civil protection operational plan (PGC RCS)
- the standard operational procedures (PGC RCS)
- the Ordinance on Organisation, Preparation and Operation of the Croatian Red Cross in Crisis Situations
- the Guidelines on the Organisation, Tasks and Training of the Operational Forces of the Croatian Red Cross.

Capacities for preparing food in the field, providing psychosocial support to affected citizens and members of the operational forces, evacuation of citizens exposed to floods and delivering groceries to homes which can be reached only by vessels were developed at PGC RCS level, and a search service of the Croatian Red Cross was founded (tasked with reconnecting separated family members).

Specialised courses and training for members of the emergency response team are regularly carried out (water rescue in difficult conditions, first aid, psychosocial support, search service and preparing food in the field), in addition to exercises (joint exercises of the civil protection operational forces, national exercise of the CRC emergency response team, SAR teams), which are attended by employees and volunteers of the Red Cross.

Challenges the PGC RCS has been facing in its operations:

1. the absence of trained volunteers from their workplace upon request of the Croatian Red Cross for the purpose of exercises and crisis response operations
2. participation of members of the Croatian Red Cross intervention team in crisis situations when they haven't been officially mobilised (costs, absence from work).

The Civil Protection Regional Office (CPRO) Rijeka, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre,

early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Primorje-Gorski kotar County (it also covers Istria, Lika-Senj and Karlovac counties), as well as other tasks pursuant to applicable civil protection regulations. The 112 county centre as part of the CPRO Rijeka has 18 employees (3-4 per shift) and carries out operational activities in emergency events pursuant to the standard operational procedures for 112 centres in case of road and motorway accidents, search and rescue on the mainland or on the islands, accidents at sea, domestic violence, and floods.

The 112 county centre uses the CoordCom software package for receiving phone calls, and has no physical limitation of incoming calls due to its usage of Voice over IP. The 112 county centre uses the TETRA radio connection system. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the centre, but as an alternative, calls can be received via the 112 county centre in Osijek.

Specialised courses (foreign languages, psychology courses), simulation and communication exercises of the 112 centres focused on various scenarios (domestic violence, traffic accidents, receiving a telephone call in a foreign language) are regularly carried out, in addition to simulation and communication exercises attended by employees of the 112 county centre in Rijeka.

Challenges the 112 county centre has been facing in its operations:

1. working in stressful situations (rescuing injured persons).

Proposals for improvement within the 112 county centre:

1. intensify courses.

The State Civil Protection Emergency Response Unit (SCPERU) operates in Primorje-Gorski kotar County through its service in Rijeka which, as an organisational unit of the MI CPD, performs professional civil protection tasks in the form of search and rescue from collapsed buildings, search and rescue in floods, CBRN⁷¹ defence, providing care and offering technical and tactical support.

⁷¹ Chemical, biological, radiological and nuclear defence

The SCPERU in Rijeka consists of professional core members and back-up members.

5.2.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁷² per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Firefighting	2,584	4,178	2,385	3,532	3,755
Institute for Emergency Medicine	27,975	28,154	28,638	29,112	24,835
Harbourmaster's Office	92	71	138	64	53
Red Cross ⁷³			1		1
Civil Protection Regional Office in Rijeka ⁷⁴	4,308	5,206	4,900	5,450	5,000

5.2.3. Good practice and recommendations for improvement

The Fire Training Centre in Šapjane is an example of good practice in Primorje-Gorski kotar County, because it offers quality education and training of firefighters, but also of other emergency services and civil protection operational forces engaged in the search and rescue of people, animals and property.

Recommendations for the Primorje-Gorski kotar County services:

1. working in the framework of civil protection headquarters
2. working on joint projects
3. becoming familiar with the scope of activities of all emergency services
4. holding at least one meeting of the emergency services per quarter
5. evaluating response operations in which several emergency services were involved
6. preparing a joint mass casualty action plan
7. improving communication between operational forces
8. practising the correct communication protocol for crisis situations
9. regularly holding courses and exercises (operational and demonstration exercises).

⁷² The total number of emergency response operations for all services is not shown because several services keep records for the same emergency event.

⁷³ In 2020, employees and volunteers of the Red Cross were heavily engaged in responding to the COVID-19 pandemic, pursuant partly to the mobilisation decision, and partly to the conclusions of the county and city civil protection headquarters, as well as their public competences pursuant to the Croatian Red Cross Act.

⁷⁴ Overview of calls toward the 112 county centre

5.3. Lika-Senj County

Lika-Senj County (LSC) is located in the western part of Croatia, between Primorje-Gorski kotar County in the northwest, Karlovac County in the north, Zadar County in the south and southeast, and Bosnia and Herzegovina in the east. It mostly belongs to the mountainous part of Croatia, and to a lesser extent to the Croatian Littoral, which are two large and different geographical and physiognomically homogeneous parts of Croatia. It has a central geographical position and serves as an important connector of the Croatian territory. The County's administrative seat lies in Gospić. Special mention should be given to Velebit, Croatia's longest and most prominent mountain, which divides Lika-Senj County into two parts: the littoral and the continental.



Basic information:

Population: 50,927 – 2011

Average population density: 9.51 inhabitants/km²

Surface area: 5,350 km² (9.46% of Croatia's total surface area – the largest county in Croatia)

Number of LSGUs: 12 (4 towns and cities and 8 municipalities)

Number of islands: 30

Length of the coastline: 200 km

National parks: 3 (Plitvice Lakes, Paklenica and Northern Velebit)

Nature parks: 1 (Velebit)

Figure 4: Map of Lika-Senj County⁷⁵

The **major accident risk assessment** for Lika-Senj County was adopted in October 2020 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. Based on this assessment, a risk evaluation was performed:

⁷⁵ 'Proleksis' encyclopaedia entry on Lika-Senj County

No	Risk	Evaluation
1	Earthquake	Tolerable risk
2	Flood	Tolerable risk
3	Epidemic and pandemic	Tolerable risk
4	Wildfire	Tolerable risk
5	Snow and ice	Acceptable risk
6	Storms and hurricane strikes	Acceptable risk
7	Extreme temperatures	Acceptable risk

The risk assessment determines the preparedness of the civil protection system:

- prevention – high
- response – high
- combined – high.

The Lika-Senj County **civil protection action plan** was adopted in March 2021 with the aim to establish the organisation, mobilisation and operation of the civil protection system, the tasks and competences, human resources and necessary material and technical resources, as well as protection and rescue measures and procedures in the event of emergencies within the territory of Lika-Senj County.

5.3.1. Overview of operational capacities

The **Lika-Senj County Firefighter’s Association** is responsible for firefighting on the territory of Lika-Senj County, and answers to the county prefect, i.e., to the fire chief within its scope of activities and competences stipulated in the relevant regulations. Three public fire brigades (Gospić, Senj and Plitvice lakes) and 18 volunteer fire departments operate in Lika-Senj County.

Operational activities in the event of emergencies are carried out pursuant to:

- the Firefighting Act
- the LSC Fire Protection Plan
- the LSC Civil Protection Action Plan
- the Croatian programme of activities regarding fire protection measures.

The LSC fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, mountains and other inaccessible areas), provision of care, first aid, securing the area, technical interventions in the industry, on buildings, in

outdoor areas and in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The County Firefighting Operations Centre (193 CFOC) is located within the premises of the Public Fire Brigade Gospić (PFB Gospić). Training, upskilling, seminars and courses are regularly carried out and attended by professional and volunteer firefighters.

The **Lika-Senj Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific regulations. The police department has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences. The Lika-Senj Police Department is responsible for seven police stations (Gospić, Otočac, Senj, Karlobag and Novalja, and the border police stations in Donji Lapac and Korenica). The Lika-Senj Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several services (police; criminal police; borders; joint and administrative affairs).

The **Lika-Senj County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency medicine that provides outpatient urgent medical assistance throughout the territory of Lika-Senj County. This means providing emergency health care at the accident site to persons who suddenly fall ill or are injured, providing adequate emergency transport of such persons to an appropriate health institution and providing medical care during such transport. The Institute's seat is located in Gospić, and six EMS departments operate in the county (Otočac, Senj, Korenica, Karlobag, Novalja and Lovinac), with a total of 139 employees and 21 vehicles.

Operational activities in the event of emergencies are carried out pursuant to the standard operating procedure (SOP) for responding to major accidents and guidelines for dealing with pandemics.

The Medical Emergency Reporting Unit (MERU) of the 194 LSC Institute for Emergency Medicine is located in Gospić and has 10 employees (two per shift). The MERU has three incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, as well as the 'e-hitna' (e-emergency) system for receiving phone calls. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned, whereas phone calls can alternatively be received over the mobile network.

Specialisation courses (ALS, ITLS) and educational exercises for EMS employees are regularly carried out and attended by up to 65 employees each year. Joint exercises with other services are held annually (traffic – tunnel accidents).

Challenges the LSC Institute for Emergency Medicine has been facing in its operations:

1. lack of medical doctors and nurses
2. large fluctuation of employees
3. the county's large surface and, consequently, great distance from certain emergency sites.

Proposals for improvement within the LSC Institute for Emergency Medicine:

1. setting up additional departments/teams in certain locations
2. holding exercises focused on various scenarios.

The **Harbourmaster's Office Senj**, performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Lika-Senj County, there are four other harbourmaster's branch offices in addition to the Harbourmaster's Office Senj (Sveti Juraj, Jablanac, Karlobag and Novalja). Operational activities in emergency events (search and rescue at sea and remediation of marine/coastal pollution) are carried out pursuant to the following:

- the National Maritime Search and Rescue Plan
- the Search and Rescue Service's official manual
- the Harbourmaster's Offices Act
- the County Contingency Plan for Accidental Marine Pollution in LSC.

Search and rescue training and exercises (search and rescue, marine pollution) are regularly carried out and attended by employees of the Harbourmaster's Office each year.

The **Croatian Mountain Rescue Service station in Gospić** was established in 1989. Human, as well as material and technical resources have grown exponentially, and so today the CMRS station in Gospić is an operational search and rescue service, which serves all citizens of Lika-Senj County. The station has 30 volunteers. Operational activities in emergency events (search and rescue in floods, search and rescue in the mountains and other inaccessible areas, provision of first aid to injured persons) are carried out pursuant to the operational plan. All emergency alerts are transmitted through the 112 county centre in Gospić.

Specialised courses are regularly attended by station members, as are instructor seminars and themed exercises.

The **Lika-Senj County Red Cross Society (LSC RCS)** is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the Associations Act and the Statute of the Lika-Senj County Red Cross Society. The Lika-Senj County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of three town and city societies of the Red Cross from Lika-Senj County (Gospić, Otočac and Korenica). The society's headquarters is located in Gospić, with seven employees and 25 volunteers, as well as seven vehicles and three boats.

Operational activities in emergency events (search and rescue in floods, search and rescue at sea, provision of care, securing the area and providing first aid to injured persons) are carried out pursuant to the operational plan.

The LSC RCS in Gospić operates a training centre, as well as an operations and communications centre with two employees, one per shift.

Specialised courses and training aimed at members of the emergency response team are regularly carried out (rescue in rivers, lakes and at sea, first aid, psychosocial support, search service and setting up temporary centres), in addition to exercises which are attended by employees and volunteers of the Red Cross.

Challenges the LSC RCS has been facing in its operations:

1. rapid mobilisation of the intervention team
2. making in contact with endangered persons
3. reaching the site within the planned time frame.

Proposals for improvement within the LSC RCS:

1. lack of all-terrain vehicles
2. addressing the absence of volunteers from their workplace due to emergency response operations
3. providing additional resources for emergency services.

The Civil Protection Service (CPS) Gospić, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Lika-Senj County, as well as other tasks pursuant to applicable civil protection regulations. The 112 county centre operates as part of the CPS in Gospić (with two employees per shift – the number of employees remains the same in the summer season) and carries out operational activities in emergency events pursuant to the standard operational procedures for 112 centres. The 112 county centre uses the TETRA radio connection system. Specialised courses as well as simulation and communication exercises of the 112 centres focused on various scenarios, aimed at practising standard operational procedures and attended by employees of the CPS in Gospić, are regularly carried out.

5.3.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁷⁶ per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Institute for Emergency Medicine	20,203	21,722	21,076	22,124	15,894
Red Cross			1	1	1

⁷⁶ Only data from the Institute for Emergency Medicine and the Red Cross Society has been received for the purposes of this Report.

5.3.3. Good practice and recommendations for improvement

The Lika-Senj County Civil Protection Headquarters is an example of good practice regarding coordination of stakeholders and operational forces within the civil protection system in the implementation of measures and activities during the COVID-19 pandemic.

Recommendations for the Lika-Senj County services:

1. performing joint crisis management exercises
2. preparing an SOP for emergency response together with other services.

5.4. Zadar County

Zadar County is located in the middle of the Croatian part of the Adriatic coast. It mostly belongs to southern Croatia (Dalmatia), and, to a lesser extent, to the Croatian mountainous region, where it encompasses the eastern part of the Lika-Krbava region, together with the area along the Una River. Geographically, the county is surrounded by the Cres-Lošinj, Kornati, Žut-Sit and Murter archipelagos. On the mainland it is surrounded by the Dinarides mountain range, including Velebit, the highlands of Lika (Ličko sredogorje), Plješivica, Ujilica (Bosnia and Herzegovina) and the North Dalmatian plateau. Administratively, it borders Šibenik-Knin and Lika-Senj counties, and shares a maritime border with Primorje-Gorski kotar County in the north-west. The County's administrative seat lies in Zadar. Due to its naturally central position, Zadar County has an important role in connecting the north and south of Croatia with regard to both road and rail transport.



Figure 5: Map of Zadar County⁷⁷

Basic information:

Population: 170,017 – 2011

Average population density: 46.66 inhabitants/km²

Surface area: 3,643 km² (6.4% of Croatia's total surface area)

Number of LSGUs: 34 (6 towns and cities and 28 municipalities)

Number of islands: 242

Length of the coastline: 1,300 km, including the islands

National parks: 2 (Kornati, Paklenica)

Nature parks: 2 (Veľebit and Vransko jezero)

The **major accident risk assessment** for Zadar County was adopted in June 2019 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. Based on this assessment, a risk evaluation was performed:

No	Risk	Evaluation
1	Earthquake	Tolerable risk
2	Flood	Tolerable risk
3	Industrial accident	Tolerable risk
4	Wildfire	Unacceptable risk
5	Storms and hurricane strikes	Tolerable risk
6	Epidemics and pandemics	Tolerable risk
7	Extreme temperatures	Tolerable risk

The risk assessment determines the preparedness of the civil protection system:

- prevention – high
- response – high
- combined – high.

⁷⁷ <https://proleksis.lzmk.hr/4131/>

5.4.1. Overview of operational capacities

The Zadar County Firefighter's Association is a voluntary, professional, humanitarian and non-partisan association which, since its establishment in 1993, promotes the interests of firefighting organisations throughout Zadar County. Four public fire brigades (in Benkovac, Biograd na Moru, Gračac and Zadar) and 41 volunteer fire brigades with 200 employees and around 1,300 volunteer firefighters operate in Zadar County. The fire brigades have a total of 174 vehicles (12 personal vehicles, 14 off-road vehicles, 25 command vehicles, 22 passenger vans and cargo vans for transporting equipment, and 115 other operational vehicles), two vessels (one boat for transporting firefighters, extinguishing and rescue operations, and environmental protection and one boat for transporting firefighters and rescue operations), two drones and one search and rescue dog at their disposal.

Operational activities in the event of emergencies are carried out pursuant to:

- the operational plan and the mobilisation schedule for fighting wildfires
- the fire risk assessment and management plan
- the contingency plan in case of large wildfires on the territory of the Republic of Croatia
- the programme of activities in the implementation of special fire protection measures of interest to Croatia
- the Firefighting Act.

The Zadar County fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, at sea), securing the area, technical interventions in the industry, on buildings, in outdoor areas and in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The County Firefighting Operations Centre (193 CFOC) is located within the premises of the Public Fire Brigade Zadar (PFB Zadar). The CFOC operates 24/7 and has a total of nine employees, two per shift. In the summer season, the CFOC is joined by operators of the 'Hrvatske šume' (Croatian Forests) video surveillance system. The CFOC has three incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, the VATRO-net central database and UVI for managing emergency response operations. Currently, the CFOC has

no back-up location in case of inability to operate (e.g., due to damage from earthquakes), and no temporary alternative call centres have been designated.

Training, upskilling, seminars and courses are regularly carried out (upskilling of firefighters, arriving at the intervention site and fighting forest fires, aircraft intervention coordinator training, search and rescue team with dog), with around 90 employees and volunteers having participated annually in 2016–2020, in addition to exercises focused on various scenarios, in which around 25 employees and volunteers have participated annually in 2016–2020.

Challenges the Firefighter's Association has been facing in its operations:

1. completing emergency response operations in the shortest possible time
2. protecting the lives and health of operation participants (employees and civilians)
3. effectiveness of the emergency response operation with regard to minimising material damage.

Proposals for improvement within the Firefighter's Association:

1. better fire brigade equipment
2. more operational firefighters
3. continuous upskilling.

The **Zadar Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Zadar Police Department is responsible for nine police stations (Zadar I and II, Biograd, Benkovac, Gračac, Obrovac, Pag, the Traffic Police Station Zadar, and the Maritime and Airport Police Station Zadar).

The Zadar Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several services (police; criminal police; borders; legal, financial and technical affairs; administrative affairs, citizenships and status of foreigners).

The **Zadar County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency medicine that provides outpatient urgent medical assistance throughout the territory of Zadar County. This means providing emergency health care at the accident site to persons who suddenly fall ill or are injured, providing adequate emergency transport of such persons to an appropriate health institution and providing medical care during such transport. The Institute's seat is located in Zadar, and nine EMS departments (Biograd, Gračac, Pag, Nin, Preko, Posedarje, Benkovac, Starigrad and Zadar) and six non-emergency medical transportation (NEMT) offices operate in the county, with a total of 265 employees (155 ambulance workers and 90 NEMT workers) and 72 vehicles (30 ambulance cars and 42 NEMT cars).

Operational activities in the event of emergencies are carried out pursuant to:

- the protocol in case of communication channel failure
- the triage and major incident response protocol (pursuant to the MRMI course)
- the instructions on alerting superiors in the hierarchical chain in the event of emergencies (instructions vary according to emergency type)
- the general treatment protocol for emergency patients according to the guidelines of the Croatian Institute for Emergency Medicine (CIEM)
- the helicopter service use protocol.

The Medical Emergency Reporting Unit (MERU) of the 194 Zadar County Institute for Emergency Medicine is located in Zadar and has 10 employees (two per shift – in the summer season, one employee is added to the day shift). The MERU has 12 incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, as well as the 'e-hitna' (e-emergency) system for receiving phone calls. Currently, the 112 centre in Zadar is designated as the back-up location in case of inability to operate (e.g., due to damage from earthquakes) and as the temporary alternative call centre.

In-house training and educational exercises are regularly carried out (ITLS, ALS, AVD).

Challenges the Zadar County Institute for Emergency Medicine has been facing in its operations:

1. insufficient number of teams in certain areas, especially in the summer season
2. the service is overburdened with non-emergency patients
3. poor condition of the vehicle fleet.

Proposals for improvement within the Zadar County Institute for Emergency Medicine:

1. Central procurement of ambulance cars at the level of the Republic of Croatia (writing-off all vehicles older than five years for ambulance and seven years for NEMT cars, i.e., all ambulance cars that have passed 150-200 thousand km and NEMT cars that have passed 300-500 thousand km).
2. Organising primary health care (a 24/7 clinic set up by the health centre) on the premises of the Zadar General Hospital Emergency Department (emergency admission), especially outpatient emergency services, which are overburdened with non-emergency patients. In the summer season, the emergency department is visited by several hundred non-emergency patients daily. Tourist clinics should be set up in the summer because people view the additional ambulance teams as a tourist clinic, and are unhappy when they are denied service because the teams are in the field 24/7. Tourists have the right to receive primary health care / visit a tourist clinic.
3. The lack of doctors is especially felt in the tourist season. There are barely enough doctors to cover the ambulance network, and the situation will worsen in the future. A possible solution is to cover the network with t2 teams where no doctors have applied for a position in the t1 team.

The **Harbourmaster's Office Zadar** performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Zadar County, there are nine harbourmaster's branch offices in addition to the harbourmaster's office in Zadar (Biograd n/M, Novigrad, Starigrad Paklenica, Pag, Preko, Sali, Božava, Ist

and Silba), with a total of 37 employees (with 19 employees foreseen for emergency response operations) and five search and rescue vessels.

Operational activities in emergency events (firefighting on vessels, search and rescue at sea, securing the area, technical interventions in maritime traffic and remediation of marine/coastal pollution) are carried out pursuant to the following:

- the National Maritime Search and Rescue Plan
- the Contingency Plan for Accidental Marine Pollution
- the joint action plan of the authorities responsible for the supervision and protection of the rights and interests of the Republic of Croatia at sea
- the plan for the transport of firefighters and equipment in case of fires at sea or the maritime common good on the territory of the Zadar Harbourmaster's Office.

Search and rescue training and exercises (search and rescue, marine pollution) are regularly carried out and attended by employees of the Harbourmaster's Office each year.

Challenges the Harbourmaster's Office in Zadar has been facing in its operations relate to search and rescue activities and marine pollution.

Proposals for improvement within the Zadar Harbourmaster's Office include strengthening human as well as material and technical resources.

The **Croatian Mountain Rescue Service station in Zadar** was established in October 1979. Zadar mountaineers and speleologists saw the need for its establishment. The station covers Zadar County, the area around South Velebit, particularly NP Paklenica, as well as the hinterland and the islands. The station has one employee and 40 volunteers with 10 vehicles, one field survey drone, and two search and rescue dogs.

Operational activities in emergency events (search and rescue in floods, from collapsed buildings, in the mountains and other inaccessible areas, provision of first aid to injured persons) are carried out pursuant to:

- the CMRS Act
- the Civil Protection System Act
- the CMRS Development Strategy until 2030
- the 2030 Croatian National Development Strategy
- the operation plan of the CMRS Station in Zadar.

All emergency alerts are transmitted through the 112 county centre in Zadar.

Specialised courses and exercises are regularly carried out (first aid and ITLS, rescue techniques for winter and summer, speleological rescue techniques, RECUE 3 swift water rescue, cartography, search team leader, drone pilot, cave diver, search and rescue dog handler, off-road driving, instructor courses) and attended by members of the station.

Challenges the CMRS station in Zadar has been facing in its operations:

1. poor cooperation with other services (excessive administration, unfamiliarity with competences etc.)
2. lack of resources (lack of accommodation, resources for helicopter rescue)
3. approach based on volunteering (which is a strength, but also a flaw due to the large scope of work).

Proposals for improvement within the CMRS station in Zadar:

1. partial professionalisation
2. education certification
3. strengthening the infrastructure.

The **Zadar County Red Cross Society** is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the Associations Act and the Statute of the Zadar County Red Cross Society. The Zadar County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of six town and city societies of the Red Cross from Zadar County (Zadar, Biograd na Moru, Benkovac, Obrovac, Pag and Gračac).

The society's headquarters is located in Zadar, with 34 volunteers and three vehicles in total.

Operational activities in emergency events (provision of care, first aid to injured persons, and humanitarian and psychosocial support to the affected population) are carried out pursuant to:

- the Statute of the Zadar County RCS
- the CRC ethical codex
- the operational plan
- the Zadar civil protection service action plan.

Specialised courses and training aimed at members of the intervention team are regularly carried out (first aid, psychosocial support, search service and setting up

tents), as are exercises focused on various scenarios (earthquake, flood, fire), which are attended by employees and volunteers of the Red Cross.

Challenges the Zadar County RCS has been facing in its operations:

1. small inaccessible warehouse (which belongs to the Zadar City RCS)
2. lack of equipment (connected with challenge no. 1)
3. lack of vehicles (one vehicle for passenger transport, the other two are borrowed from the Zadar City RCS).

Proposals for improvement within the ZC RCS station in Zadar include procuring equipment and vehicles and relocating the warehouse.

The Civil Protection Service (CPS) Zadar, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Zadar County, as well as other tasks pursuant to applicable civil protection regulations. The 112 county centre operates as part of the CPS Zadar with 10 employees (two per shift – the number of employees remains the same in the summer season) and carries out operational activities in emergency events pursuant to:

- the Civil Protection System Act
- the civil protection risk assessment and action plan
- the Ordinance on Standard Operational Procedures for Providing Help to a Lower Hierarchical Level by a Higher level of the Civil Protection System
- rules of procedure of the headquarters
- SOP for alerting the population.

The 112 county centre uses the Sfera software package for receiving phone calls and has three incoming phone lines. The 112 county centre uses the TETRA radio connection system, as well as ZEOS for maintaining databases. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the centre, but as an alternative, calls can be received via the 112 county centre in Split.

Specialised courses (lectures aimed at students, training of heads and other members of the civil protection headquarters) and civil protection exercises are regularly carried out and attended by employees of the CPS Zadar.

Challenges the CPS Zadar has been facing in its operations:

1. coordinating operational forces outside of its competence
2. overlap of communications (via the 112 and 192 telephone numbers)
3. command responsibilities in case of major accidents and catastrophes overlap.

Proposals for improvement within the CPS Zadar:

1. specifying certain provisions of the legal framework regarding jurisdiction
2. setting up crisis management departments in cities with over 10,000 inhabitants
3. stipulating the merging of territorially connected local self-government units regarding the response to accidents (joint operational forces) – the legal possibility exists, but is not applied due to concerns that the municipality status would be withdrawn.

5.4.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁷⁸ per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Firefighting	1,445	2,689	936	1,221	969
Institute for Emergency Medicine	52,200	51,122	50,402	48,350	32,102
Harbourmaster's Office	348	417	616	620	482
Mountain Rescue Service	41	97	93	75	73
Red Cross	1				

5.4.3. Good practice and recommendations for improvement

The CMRS station Zadar, as a citizen's association with a long tradition which continuously develops its operational capacities for responding to emergencies, is an example of good practice and has in many instances provided timely and efficient search and rescue services in all weather conditions on the territory of Zadar County.

Recommendations for the Zadar County services:

⁷⁸ The total number of emergency response operations for all services is not shown because several services keep records for the same emergency event.

1. raising awareness of fire protection among the general population
2. improving communication between all emergency services
3. improving communication with regional and local self-governments
4. organising more joint trainings and exercises (excluding demonstration exercises)
5. minimising administration
6. setting up a prevention department on county level
7. strengthening operational readiness and the presence of state civil protection intervention units on county level
8. implementation of citizen education programmes.

5.5. Šibenik-Knin County

Šibenik-Knin County is located in the middle of northern Dalmatia, and includes the Croatian islands and Zagora, the wide karst region of the Dalmatian hinterland. Based on its spatial features, the county can be divided into two parts: the littoral (including the islands) and the continental part. The littoral part consists of a narrow coastal belt, the area immediately behind the coast and the islands. Today, the geographic position and transport connections of Šibenik-Knin County can be described as moderately favourable, considering that the County is connected to other parts of the Croatian territory via road, rail and maritime transport routes. The County's administrative seat lies in Šibenik. The main land transport routes extend from the northwest to the southeast and connect Šibenik-Knin County with its neighbouring counties, and through them with the northern and southernmost parts of Croatia.

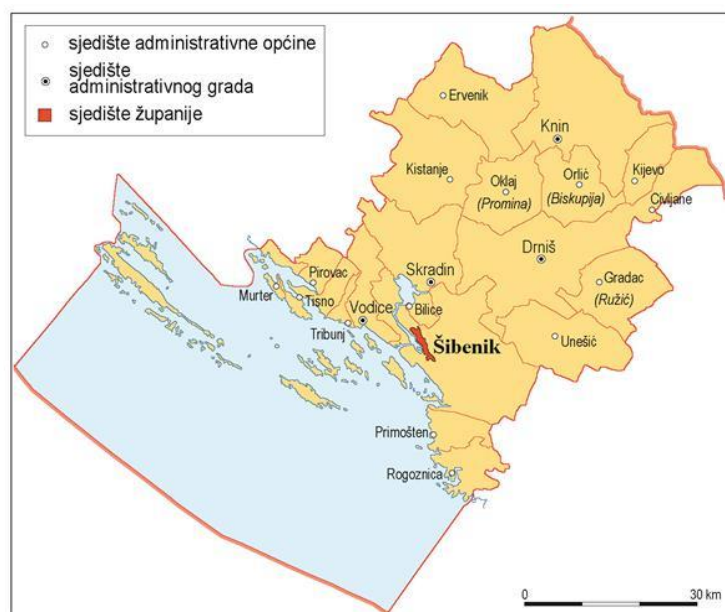


Figure 6: Map of Šibenik-Knin County⁷⁹

Basic information:

Population: 109,375 – 2011

Average population density: 36.5 inhabitants/km²

Surface area: 5,670 km²

Number of LSGUs: 20 (5 towns and cities and 15 municipalities)

Number of islands: 259

Length of the coastline: 805 km, including the islands

National parks: 2 (Kornati, Krka)

Nature parks: 2 (Veľebit and Vransko jezero)

The **major accident risk assessment** for Šibenik-Knin County was adopted in January 2021 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. Based on this assessment, a risk evaluation was performed:

No	Risk	Evaluation
1	Earthquake	Tolerable risk
2	Flood	Tolerable risk
3	Technological accident	Tolerable risk
4	Wildfire	Unacceptable risk
5	Epidemics and pandemics	Unacceptable risk
6	Extreme temperatures	Tolerable risk

The risk assessment determines the preparedness of the civil protection system:

- prevention – high
- response – high
- combined – high.

⁷⁹ <https://proleksis.lzmk.hr/4131/>

5.5.1. Overview of operational capacities

The **Šibenik-Knin County Firefighter's Association** is a voluntary, professional, humanitarian and non-partisan association of public and volunteer fire brigades. Four public fire brigades (Šibenik, Knin, Drniš and Vodice) and 27 volunteer fire departments operate in Šibenik-Knin County. The Šibenik-Knin County Firefighter's Association, with its 12 employees and 665 volunteer firefighters, has 118 vehicles (20 personal vehicles, 60 off-road vehicles, 25 command vehicles, 18 passenger vans, one cargo van for transporting equipment and 19 other types of operational vehicles), two vessels (an ECO boat and a PAG 2002 motorboat for firefighting and transporting of firefighters) at its disposal.

Operational activities in the event of emergencies are carried out pursuant to:

- the risk assessment regarding fires and technical explosions for Šibenik-Knin County
- the Šibenik-Knin County Fire Protection Plan
- the Šibenik-Knin County Risk Assessment
- the Fire Brigade Mobilisation Plan
- the Šibenik-Knin County operational plan
- the operational plan for the programme of activities in the implementation of special fire protection measures of interest to Croatia
- the Country Fire Brigade Mobilisation Plan.

The Šibenik-Knin County fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, at sea, in the mountains and other inaccessible areas), securing the area, technical interventions in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The County Firefighting Operations Centre (CFOC) is located within the premises of the 112 county centre in Šibenik. The CFOC operates 24/7 and has a total of six employees (one per shift – in the summer season, the number of surveillance camera operators increases). The CFOC has two incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, an analogue firefighting radio connection system, the VATRO-net central database and UVI for managing emergency response operations. Currently, the CFOC has

no back-up location in case of inability to operate (e.g., due to damage from earthquakes), but the FOC of the Public Fire Brigade in Šibenik serves as the temporary alternative call centre.

Training, upskilling, seminars and courses (in rescuing from heights and depths, collapsed buildings, technical interventions, flashover simulator training, courses for pre-school and school children) are regularly carried out, with up to 170 employees and volunteers having participated annually in 2016–2020, in addition to exercises focused on various scenarios (fires, collapsed buildings, search and rescue, evacuation, critical infrastructure), in which up to 210 employees and volunteers have participated annually in 2016–2020.

Challenges the Firefighter's Association has been facing in its operations:

1. ensuring the necessary level of coordination between operational forces in an emergency
2. positioning the civil protection headquarters in relation to the operational forces and state authorities (application of the subsidiarity principle)
3. major accidents: normative, functional and organisational aspects (everything that is important for better applicability in case of real emergencies).

Proposals for improvement within the Firefighter's Association:

1. hiring new and young professionals
2. training and upskilling of current employees with regard to new know-how and skills
3. participating in EU projects aimed at civil protection, catastrophe risk prevention and protection of critical infrastructure.

The **Šibenik-Knin Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area

from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Šibenik-Knin Police department is responsible for six police stations (Šibenik – subdepartment in Primošten, Vodice, Drniš, Knin, the Traffic Police Station Šibenik and the Maritime Police Station Šibenik). The Šibenik-Knin Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several services (police; criminal police; borders; legal, financial and technical affairs; administrative affairs, citizenships and status of foreigners).

The **Šibenik-Knin County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency medicine that provides outpatient urgent medical assistance throughout the territory of Šibenik-Knin County. This means providing emergency health care at the accident site to persons who suddenly fall ill or are injured, providing adequate emergency transport of such persons to an appropriate health institution and providing medical care during such transport. The Institute's seat is located in Šibenik, and six EMS departments operate in the county (Drniš, Knin, Primošten, Šibenik, Tisno and Vodice), with a total of 128 employees and 18 vehicles.

Operational activities in the event of emergencies are carried out pursuant to the internal protocol for responding to mass accidents.

The Medical Emergency Reporting Unit (MERU) of the 194 Šibenik-Knin County Institute for Emergency Medicine is located in Šibenik and has 10 employees (two per shift). The MERU has 2–3 incoming telephone lines for calls from citizens and uses the TETRA digital radio connection system, as well as Rinels for receiving phone calls. Currently, no back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned, and the 112 county centre Šibenik serves as the temporary alternative call centre.

In-house training (MRMI, NICS) and exercises focused on various scenarios (earthquake, fire, evacuation, mountain rescue, etc.) are regularly carried out and attended by the Institute's employees.

Challenges the Šibenik-Knin County Institute for Emergency Medicine has been facing in its operations include the number of injured persons and communication between operational services.

A proposal for improvement within the Šibenik-Knin County Institute for Emergency Medicine pertains to improving communication between operational services.

The **Harbourmaster's Office Šibenik** performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Šibenik-Knin County, there are five harbourmaster's branch offices in addition to the Harbourmaster's Office in Šibenik (in Murter, Tisno, Vodice, Primošten and Rogoznica), with a total of 30 employees (five employees in the operational centre, with one employee per shift, whereas 14 employees are foreseen for emergency response operations) and four search and rescue vessels.

Operational activities in emergency events (search and rescue at sea and remediation of marine/coastal pollution) are carried out pursuant to the maritime search and rescue plan and the county plan for pollution prevention. The TETRA and VHF radio systems are used.

Search and rescue training and exercises are regularly carried out and attended by employees of the Harbourmaster's Office each year. In the last three years, there was no marine pollution remediation exercise.

Challenges the Harbourmaster's Office Šibenik has been facing in its operations include poor organisation, lack of motivation and shifting responsibility for action.

Proposals for improvement within the Harbourmaster's Office Šibenik include centralisation of the services at sea similar to the US Coast Guard, including volunteers in maritime rescue actions and motivating the employees.

The **Croatian Mountain Rescue Service station in Šibenik** was established in June 2004 for the purpose of organising, improving and performing activities of search and rescue of human lives in the mountains, in inaccessible areas and in emergency events. The station has one employee and 46 volunteers with five vehicles, one vessel, two drones for aerial monitoring, and three search and rescue dogs.

Operational activities in case of emergencies (search and rescue in floods and in inland waters, at sea, from collapsed buildings, in mountains and other inaccessible areas, as well as providing first aid and medical care to injured

persons, rescue from speleological objects, cliffs and canyons, avalanche search and rescue) are carried out pursuant to:

- the statute of the CMRS station in Šibenik
- the operational plan of the CMRS station in Šibenik
- the basic training programme for mountain rescuers
- the training programme for CMRS members in the area of providing first aid on mountains and in inaccessible areas.

All emergency alerts are transmitted through the 112 county centre in Šibenik.

Specialised courses and exercises are regularly carried out (first aid and ITLS, rescue techniques for winter and summer, speleological rescue techniques, RESCUE3 swift water rescue, cartography, search team leader, drone pilot, cave diver, search and rescue dog handler, off-road driving) and attended by members of the station.

Challenges the CMRS station in Šibenik has been facing in its operations:

1. there is no command base in the field for the management of search and rescue teams;
2. members use their private equipment;
3. lack of understanding of the heads of LSGUs for the CMRS's needs.

Proposals for improvement within the CMRS station in Šibenik:

1. purchasing a 4x4 command vehicle with the help of EU project funds
2. regular renewal of rescue team equipment
3. increasing the financial resources for regular operation of the CMRS.

The **Šibenik-Knin County Red Cross Society** (ŠKC RCS) is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the Associations Act and the Statute of the Šibenik-Knin County Red Cross Society. The Šibenik-Knin County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of four city and town societies of the Red Cross from Šibenik-Knin County (Šibenik, Knin, Drniš and Vodice).

The **Šibenik City Red Cross Society** has 15 employees, 45 volunteers and three vehicles at its disposal. The operations and communications centre has nine employees, and there are three open telephone lines for calls from citizens.

Operational activities in emergency events (provision of care, first aid to injured persons, search and rescue service) are carried out by the City Society pursuant to:

- the Croatian Red Cross Act
- the Croatian Red Cross Statute
- the Croatian Red Cross action plan for emergency situations
- the Šibenik City Red Cross Society's instructions on the course of action in crisis situations.

Training is offered to intervention team members (course of action in crisis situations), whereas the last exercises took place in 2018.

A proposal for improvement within the Šibenik City Red Cross Society includes purchasing equipment.

The Civil Protection Service (CPS) Šibenik, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Šibenik-Knin County, as well as other tasks pursuant to applicable civil protection regulations. The CPS Šibenik has 21 employees and four vehicles. The 112 county centre operates as part of the CPS Šibenik with 10 employees (two per shift – the number of employees remains the same in the summer season) and carries out operational activities in emergency events pursuant to:

- the SOP of the 112 county centre and the Civil Protection Operational Centre regarding the use of weather forecasts by the Croatian Meteorological and Hydrological Service (CMHS)
- the SOP of the 112 county centre and the Civil protection Operational Centre regarding search and rescue operations on the mainland or on islands
- SOP for alerting the population
- SOP for the single 112 operations and communications centre in the event of wildfires

- instructions for the course of action of on-duty employees in the State Protection and Rescue Centre and the 112 county centre.

The 112 county centre uses the Sfera software package for receiving phone calls and has three incoming phone lines. The 112 county centre uses the TETRA radio connection system, as well as ZEOS for maintaining databases. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the centre, but as an alternative, calls can be received via the 112 county centre in Split.

Specialised courses (lectures aimed at students, dangers of landmines, training of heads and other members of the civil protection headquarters) and civil protection exercises focused on various scenarios are regularly carried out and attended by employees of the CPS Šibenik.

Challenges the CPS Šibenik has been facing in its operations:

1. ensuring the necessary level of coordination between operational forces in an emergency
2. positioning the civil protection headquarters in relation to the operational forces and state authorities, i.e., application of the subsidiarity principle
3. major accidents – normative, functional and organisational aspects (everything that is important for better applicability in case of real emergencies).

Proposals for improvement within the CPS Šibenik:

1. hiring new and young professionals
2. training and upskilling of current employees with regard to new know-how and skills
3. participating in EU projects aimed at civil protection, catastrophe risk prevention and protection of critical infrastructure.

5.5.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁸⁰ per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Firefighting	1,070	1,499	679	1,007	890
Harbourmaster's Office	81	77	90	86	100

⁸⁰ The total number of emergency response operations for all services is not shown because several services keep records for the same emergency event.

Mountain Rescue Service	81	79	67	61	68
Red Cross		1		1	1
CPS Šibenik ⁸¹	6,233	7,204	5,885	6,835	5,587

5.5.3. Good practice and recommendations for improvement

An example of good practice in Šibenik-Knin County is the spatial integration of the CFOC and the 112 county centre, which facilitates information exchange, communication and coordination in emergencies.

Recommendations for the Šibenik-Knin County services:

1. joint field and simulation exercises
2. cooperation in preparing various documents regarding the scope of activities and competences of the services when coordinated operation is needed
3. establishing a joint communication/cooperation channel
4. clear division of competences
5. more joint trainings
6. communicating with and introducing the heads of local self-government units with the CMRS's work
7. sharing relevant information in the framework of joint actions and strengthening mutual communication and coordination.

5.6. Split-Dalmatia County

Split-Dalmatia County is the largest county in the Republic of Croatia. It lies in the central part of southern Croatia and extends from Vrlika in the north to the islands of Vis and Palagruža in the south, from Marina in the west to Vrgorac and Gradac in the east. The County's administrative seat lies in Split. Split-Dalmatia County borders Bosnia and Herzegovina to the north, Dubrovnik-Neretva County to the east and Šibenik-Knin County to the west, and extends to the border of the territorial sea of the Republic of Croatia in the south.

⁸¹ Overview of calls toward the 112 county centre



Basic information:

Population: 454,798 – 2011

Average population density: 100.64 inhabitants/km²

Surface area: 14,106 km²

Number of LSGUs: 55 (16 towns and cities and 39 municipalities)

Number of islands: 171

Length of the coastline: 874.45 km, including the islands

National parks: none

Nature parks: 1 (Biokovo)

Figure 7: Map of Split-Dalmatia County⁸²

The **major accident risk assessment** for Split-Dalmatia County was adopted in March 2021 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. Based on this assessment, a risk evaluation was performed:

No	Risk	Evaluation
1	Earthquake	Tolerable risk
2	Wildfire	Tolerable risk
3	Flood	Tolerable risk
4	Extreme temperatures	Tolerable risk
5	Drought	Tolerable risk
6	Snow and ice	Acceptable risk
7	Hail	Acceptable risk
8	Landslides	Acceptable risk
9	Epidemics and pandemics	Tolerable risk
10	Industrial accident	Tolerable risk
11	Technical/technological and other traffic accidents (maritime traffic accidents)	Tolerable risk

The risk assessment determines the preparedness of the civil protection system:

- prevention – high
- response – high
- combined – high.

⁸² <https://proleksis.lzmk.hr/57645/>

5.6.1. Overview of operational capacities

The **Split-Dalmatia County Firefighter's Association** is a voluntary, professional, humanitarian and non-partisan association which promotes the interests of firefighting organisations throughout Split-Dalmatia County. Six public fire brigades (Split, Makarska, Podstrana, Sinj, Trogir and Imotski), four corporate fire brigades and 39 volunteer fire brigades operate in Split-Dalmatia County.

There are 390 professional and 1,391 volunteer firefighters in the county, with a total of 375 vehicles.

The Split-Dalmatia County fire brigade activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, at sea), securing the area, technical interventions in the industry, on buildings, in outdoor areas and in traffic (road, rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The **Split-Dalmatia Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Split-Dalmatia Police Department is responsible for 17 police stations (Split I and II, Brač, Hvar, Kaštela, Makarska, Omiš, Sinj, Solin, Trogir, Vis, border police stations Imotski, Trilj and Vrgorac, the Traffic Police Station Split, the Maritime Police Station Split and the Airport Police Station Split).

The Split-Dalmatia Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several sectors (police; criminal police; borders; legal, financial and technical affairs; immigration, citizenship and administrative affairs). The police department has a total of 277

vehicles, 10 vessels, and seven police dogs at its disposal and takes part in emergencies (search and rescue at sea, in the mountains and in other inaccessible areas, securing the area). The police department also participates in search and rescue operations in the event of floods and collapsed buildings when the operational forces that are primarily tasked with this require assistance.

The Police Department operates a 192 centre, which receives phone calls via CoordCom software and uses the TETRA radio connection system. The Centre carries out operational activities in the event of emergencies pursuant to the standard operational procedures, plans and instructions. The Primorje-Gorski kotar County operations and communications centre serves as the alternative call centre.

Specialised courses, training (migration and state border protection, topography and orientation, terrain search using thermal imaging cameras) and exercises (fires, earthquakes, dangerous substances, evacuation, aviation accidents, explosive devices in ports and on vessels, marine pollution) are regularly carried out and attended by police officers, and the number of participants is continuously increasing (27 officers participated in trainings in 2016, whereas 102 officers participated in 2020).

Challenges the Police Department has been facing in its operations include a lack of employees and equipment, bureaucracy, and fires on Dinara Mountain and the villages at its foot. Proposals for improvement within the Police Department include hiring more people, purchasing new equipment, reducing bureaucracy, purchasing two drones and communicating with other state administration authorities.

The **Split-Dalmatia County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency care that provides outpatient urgent medical assistance throughout the territory of Split-Dalmatia County. This means providing emergency health care at the accident site to persons who suddenly fall ill or are injured, providing adequate emergency transport of such persons to an appropriate health institution and providing medical care during such transport. The Institute's seat is located in Split, and six EMS departments operate in the county (Gornji Humac, Hvar, Imotski, Jelsa, Kaštel Stari, Makarska, Omiš, Podaca, Šestanovac Sinj, Solin and Split). The Medical Emergency Reporting Unit

(MERU) of the 194 Split-Dalmatia County Institute for Emergency Medicine is located in Split.

The **Harbourmaster's Office Split** performs, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. On the territory of Split-Dalmatia County, there are 15 harbourmaster's branch offices in addition to the Harbourmaster's Office in Split (Trogir, Omiš, Makarska, Rogač, Supetar, Milna, Sumartin, Hvar, Jelsa, Stari Grad, Sućuraj, Vis, Komiža, Bol and Kaštela).

Two stations of the Croatian Mountain Rescue Service operate in Split-Dalmatia County – **in Split and in Makarska**. The stations carry out search and rescue activities in inaccessible areas in order to preserve human lives, health and property. The Croatian Mountain Rescue Service station in Split was established in 1956. The station has four employees and 105 volunteers with 32 vehicles, three drones, five vessels, and seven search and rescue dogs. The Croatian Mountain Rescue Service station in Makarska was established in 1984. The station has 36 volunteers, six vehicles, and two search and rescue dogs. Operational activities in the event of emergencies (search and rescue in floods, from collapsed buildings, in the mountains and other inaccessible areas, providing medical care and first aid to injured persons) are carried out pursuant to the SOP for search and rescue operations on the mainland and on islands. All emergency alerts are transmitted through the 112 county centre in Split. The station uses TETRA and an analogue radio connection system. Specialised courses, training and exercises based on the CMRS programme are regularly carried out and attended by members of the MRS stations.

Challenges the CMRS station in Split has been facing in its operations:

1. lack of information about the accident site
2. no radio signal coverage of the area
3. insufficient equipment.

Proposals for improvement within the CMRS station in Split:

1. increasing capacities (number of people) and territorial coverage in the form of branches

2. improving status of the volunteers in case of emergency response operations (absence from work)
3. insurance for the back-up team which sometimes participates in emergency response operations.

The **Split-Dalmatia County Red Cross Society** is a humanitarian and voluntary association of Red Cross town and city societies active in Split-Dalmatia County for the purpose of promoting humanitarian goals within the protection and rescue system, based on the mission and principles of the International Red Cross Movement. The Split-Dalmatia County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of 13 town and city societies of the Red Cross from the county (Split, Solin, Kaštela, Trogir, Imotski, Sinj, Vrgorac, Hvar, Vis, Supetar, Makarska, Omiš, Vrlika). Operational activities carried out in emergency events include provision of care, first aid to injured persons and humanitarian and psychosocial support to the affected population.

The Civil Protection Regional Office (CPRO) Split, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Split-Dalmatia County (it also covers Zadar, Šibenik-Knin and Dubrovnik-Neretva counties), as well as other tasks pursuant to applicable civil protection regulations. The 112 county centre as part of the CPRO Split has 19 employees (four per shift). The 112 county centre Split receives telephone calls via CoordCom and has four incoming telephone lines for calls from citizens. It uses the TETRA radio connection system. The 112 county centre Split carries out operational activities in emergency events pursuant to the standard operational procedures for 112 centres in case of road and motorway accidents, search and rescue on the mainland and the islands, accidents at sea, domestic violence and floods. The back-up location (e.g., due to damage from earthquakes) is in Divulje (regional

civil protection teaching centre), while the alternative call-centre is the 112 county centre Zagreb.

The **State Civil Protection Emergency Response Unit (SCPERU)** operates in Split-Dalmatia County through its **service in Split** which, as an organisational unit of the MI CPD, performs professional civil protection tasks in the form of search and rescue from collapsed buildings, search and rescue in floods, CBRN defence, providing care and offering technical and tactical support. The SCPERU in Split consists of professional core members and back-up members.

5.6.2. Overview of emergency response operations

The table below shows a summary of emergency response operations per service in the 2016-2020 period.

Service/year	2016	2017	2018	2019	2020
Police department ⁸³	27	23	18	23	24
Mountain Rescue Service ⁸⁴	296	310	393	463	443

5.6.3. Good practice and recommendations for improvement

Split-Dalmatia County actively implements EU projects in the field of civil protection, and currently three projects are being implemented with the County as partner (FIRESPELL, E-Citijens, TransCPEarlWarning). It needs to be highlighted that through the FIRESPELL project a regional teaching centre for the training of operational firefighting forces will be built in Vučevica, Klis municipality, and construction has started this year.

Recommendations for improvement include joint trainings and exercises, a joint connection system between emergency services, cooperation via the headquarters and preparation of mutual cooperation protocols, as well as periodic meetings and sharing of experiences.

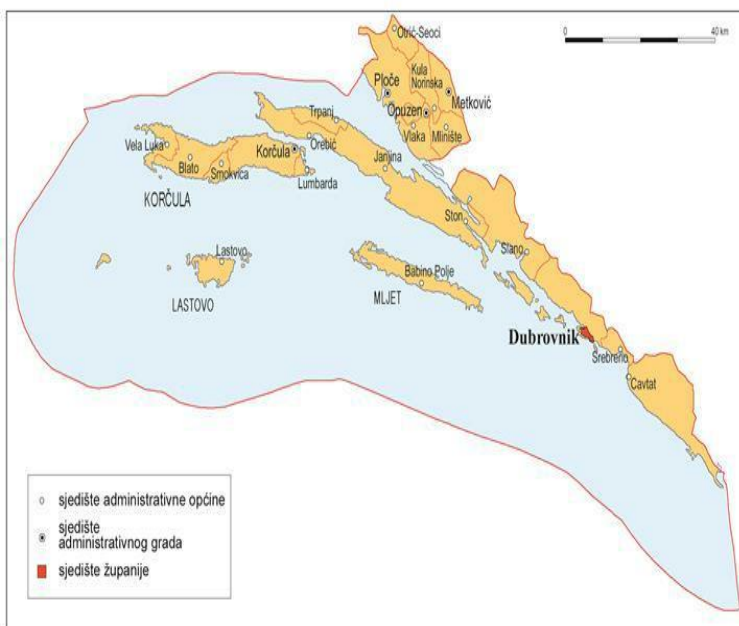
5.7. Dubrovnik-Neretva County

Dubrovnik-Neretva County (DNC) is located on the very south of the Republic of Croatia. To the north, the county borders Split-Dalmatia County on the sea and on the mainland, to the west it shares a sea border with the Italian Republic, to the

⁸³ Data is provided only for emergency events

⁸⁴ Data was obtained only from the CMRS station in Split.

south it borders Montenegro, and to the east it borders Bosnia and Herzegovina. The county is specific for its narrow and inhomogeneous coastal belt which is separated from the hinterland by a mountain massif, whereas in the Neum–Klek area it is separated by the state border with Bosnia and Herzegovina, and a natural connection with the hinterland exists only in the lower part of the Neretva valley. The County’s administrative seat lies in Dubrovnik. Therefore, the County consists of two basic functional and physiognomic entities: the relatively narrow coastal area with several islands, and the lower reaches of Neretva with the coastal part gravitating towards it.



Basic information:

Population: 122,568 – 2011
(2.9% of the total Croatian population)

Average population density:
68.62 inhabitants/km²

Surface area: 9,272.37 km²
(10.32% of Croatia’s total surface area)

Number of LSGUs: 22 (5 towns and cities and 17 municipalities)

Number of islands: 306

Length of the coastline:
1024.63 km

National parks: 1 (Mljet)

Nature parks: 1 (Lastovo Archipelago)

Figure 7: Map of Dubrovnik-Neretva County⁸⁵

The **major accident risk assessment** for Dubrovnik-Neretva County was adopted in October 2020 pursuant to the Civil Protection System Act and adopted regulations on its implementation in the planning of civil protection activities. Based on this assessment, a risk evaluation was performed:

No	Risk	Evaluation
1	Earthquake	Unacceptable risk
2	Flood	Tolerable risk

⁸⁵ <https://proleksis.lzmk.hr/18643/>

3	Extreme temperatures	Tolerable risk
4	Epidemics and pandemics	Tolerable risk
5	Wildfire	Tolerable risk
6	Soil salinisation	Acceptable risk
7	Flood due to dam break	Unacceptable risk

The risk assessment determines the preparedness of the civil protection system:

- prevention – high
- response – high
- combined – high.

5.7.1. Overview of operational capacities

The **Dubrovnik-Neretva County Firefighter's Association** is a voluntary, professional, humanitarian and non-partisan association of public and volunteer fire brigades. Six public fire brigades (Dubrovnik Firefighters, Ploče, Metković, Dubrovnik Littoral, Konavle and Mljet) and 45 volunteer fire brigades operate in Dubrovnik-Neretva County. The Dubrovnik-Neretva County Firefighter's Association has two employees, 202 professional firefighters and 782 volunteer firefighters, as well as 208 vehicles (16 personal vehicles, 38 off-road vehicles, 23 passenger vans, six cargo vans for transporting equipment and 125 other types of operational vehicles), five sea vessels, three inland water vessels, five drones, and three search and rescue dogs at its disposal.

Operational activities in the event of emergencies are carried out pursuant to:

- the Fire Protection Plan
- the risk assessment regarding fires and technical explosions
- the Croatian Government's programme of activities in the implementation of special fire protection measures of interest to Croatia
- the operational plan for the Croatian Government's programme of activities in the implementation of special fire protection measures of interest to Croatia.

The Dubrovnik-Neretva County fire brigade emergency activities in the field in the event of emergencies include firefighting (urban areas, wildfires, vessels), search and rescue operations (floods, collapsed buildings, at sea, in the mountains and other inaccessible areas), securing the area, technical interventions in traffic (road,

rail, air, maritime traffic and transport of dangerous goods), remediation of marine/coastal pollution.

The County Firefighting Operations Centre (CFOC) is located within the premises of the Public Fire Station 'Dubrovački vatrogasci' (Dubrovnik Firefighters). The CFOC operates 24/7 and has a total of 10 employees (two per shift – in the summer season, the number of operators increases). The CFOC has five incoming telephone lines for calls from citizens and uses a digital and analogue radio connection system, as well as the central VATRO-net database and UVI for managing fire emergency response operations. The 112 county centre Dubrovnik serves as the back-up location for the CFOC in case of inability to operate (e.g., due to damage from earthquakes), and as the temporary alternative call centre.

Training, upskilling, seminars and courses (water rescue, height and depth rescue, helicopter transport to emergency response operations, training for fire non-commissioned officer and fire officer) are regularly carried out, with up to 530 employees and volunteers having participated annually in 2016–2020, in addition to exercises focused on various scenarios (fires, collapsed buildings, search and rescue, evacuation, critical infrastructure) in which up to 530 employees and volunteers have participated annually in 2016–2020.

Challenges the DNC Firefighter's Association has been facing in its operations:

1. rapid and professional emergency response
2. rapid decision-making
3. keeping a cool head during emergency response operations.

Proposals for improvement within the DNC Firefighter's Association:

1. upskilling of employees
2. keeping up with new technologies
3. attracting new members to the volunteer fire departments.

The **Dubrovnik-Neretva Police Department** monitors and assesses the security situation, as well as occurrences conducive to the emergence and development of crime. It organises, harmonises, directs and monitors the work of police stations. It is directly involved in performing more complex tasks within the police station's scope of activities, and carries out and implements established border control and state border security measures. It also implements measures for the protection of certain persons and buildings, while also performing other tasks set out in specific

regulations. The police has an important role in the event of emergencies in that it secures the area according to a specific plan, while blocking access to the area from the inside and the outside in order to physically secure the site and prohibit movement and traffic, while also remedying the resulting consequences.

The Dubrovnik-Neretva Police Department is responsible for 11 police stations (Dubrovnik, Ston, Korčula, Lastovo, Metković, Ploče, Traffic Police Station Dubrovnik, border police stations Gruda and Metković, the Maritime Police Station Dubrovnik and the Airport Police Station Čilipi). The Dubrovnik-Neretva Police Department is organised around the police chief's office, the 192 police operations and communications centre, and several services (police; criminal police; borders; legal, financial and technical affairs; administrative affairs, citizenships and status of foreigners).

The **Dubrovnik-Neretva County Institute for Emergency Medicine** is an operational health institution in the field of outpatient emergency medicine that provides outpatient emergency medical care in the county, and for that purpose cooperates with the neighbouring counties, all participants in the process of treating urgent patients, as well as the Croatian Institute for Emergency Medicine. The Institute's seat is located in Dubrovnik, and eight EMS departments operate in the county (Čilipi, Banići, Janjina, Orebić, Korčula, Blato, Metković and Ploče), with a total of 185 employees and 30 vehicles.

Two harbourmaster's offices, in Dubrovnik and in Ploče, operate in Dubrovnik-Neretva County, and perform, *inter alia*, supervision of navigation in the Croatian internal sea waters and territorial sea, as well as search and rescue of human lives and property at sea. There are 12 harbourmaster's branch offices in addition to the Harbourmaster's Office in Dubrovnik (in Orebić, Cavtat, Slano, Sobra, Ston, Trpanj, Korčula, Vela Luka, Lastovo, Trstenik, Gradska Luka, Marina Komolac), with a total of 46 employees and four search and rescue vehicles. The Harbourmaster's Office Ploče operates together with the branch office in Metković. The TETRA and VHF radio systems are used. Operational activities in emergency events (search and rescue at sea, securing the area, emergency medical transport from islands and vessels, and marine/coastal pollution remediation) are carried out pursuant to the following:

- the National Search and Rescue Plan
- the County Plan for Accidental Marine Pollution
- the SOPs for surveillance activities and the protection of Croatian rights and interests at sea
- the Maritime Code.

Search and rescue courses and exercises, training for the case of accidental marine pollution from ships, and regular annual exercises (communication exercise with the MRCC and annual exercise of the COC focused on accidental marine pollution) are carried out and attended by employees of the Harbourmaster's Office.

Challenges the Harbourmaster's Office Dubrovnik has been facing in its operations include communication with the media.

Two stations of the Croatian Mountain Rescue Service operate in Dubrovnik-Neretva County – **in Dubrovnik and in Orebić**. The stations carry out search and rescue activities in inaccessible areas in order to preserve human lives, health and property. The Croatian Mountain Rescue Service station in Dubrovnik was established in 2005 and operates via its three branches (Neretva, Mljet and Konavle) throughout four towns and cities and eight municipalities, i.e., 12 local self-government units. The station has two employees and 41 volunteers with 10 vehicles, three drones and five vessels. The Croatian Mountain Rescue Service station in Orebić was established in 2008. The station has 22 volunteers. Operational activities of both stations in emergency events (search and rescue in floods, from collapsed buildings, in the mountains and other inaccessible areas, provision of medical care and first aid to injured persons) are carried out pursuant to the SOP. All emergency alerts are transmitted through the 112 county centre Dubrovnik. Specialised courses, training and exercises are regularly carried out and attended by members of the MRS stations.

The **Dubrovnik-Neretva County Red Cross Society** (DNC RCS) is, according to its legal structure, an association operating pursuant to the Croatian Red Cross Act, the Associations Act and the Statute of the Dubrovnik-Neretva County Red Cross Society. The Dubrovnik-Neretva County Red Cross Society, as an organisational form of the Croatian Red Cross, is an association of six town and

city societies of the Red Cross (Dubrovnik, Ploče, Lastovo, Korčula and Metković). The town and city societies have 18 employees and 80 volunteers, with six vehicles and one vessel. Operational activities in the event of emergencies (search and rescue at sea, providing care to people, providing first aid to injured persons, search service and other Red Cross activities⁸⁶) are carried out pursuant to the Croatian Red Cross Ordinance on Operation in Crisis Situations. During 2020, from the moment when the COVID-19 pandemic was declared, the Red Cross City Society Dubrovnik has received 250 phone calls for psychosocial assistance, and carried out 2,570 deliveries for vulnerable citizens (the elderly and the infirm, ill people, people who are self-isolating and disabled people).

Training is provided to members of the emergency response team (reuniting separated family members, psychosocial support, first aid, rescue in difficult conditions, preparing and handing out meals), and exercises of the Red Cross County Society and the national intervention team are carried out.

Challenges the Red Cross has been facing in its operations include mobilising volunteers who have a full-time job, insufficient storage space, and lack of equipment.

The Civil Protection Service (CPS) Dubrovnik, as an organisational unit of the Civil Protection Directorate of the Ministry of the Interior (MI CPD), is responsible for professional civil protection tasks, operation of the 112 centre, early warning and alerting of citizens and local and regional self-government authorities, professional tasks, planning and operational tasks, as well as ensuring uniformity of civil protection system stakeholders and operational forces in carrying out activities and civil protection measures in emergency events within the territory of Dubrovnik-Neretva County, as well as other tasks pursuant to applicable civil protection regulations. The CPS Dubrovnik has 18 employees and three vehicles. The 112 county centre operates as part of the CPS Dubrovnik with 11 employees

⁸⁶ Situation assessments and activity coordination, first aid, search service, hygienic and epidemiological protection, caring for injured and ill persons, social work, provision of psychosocial support to citizens, preparing and organising temporary centres, preparing and giving out food in the field, receiving and giving out humanitarian aid, ensuring communications, technical assistance, logistics, informing especially children and young people on how to act in emergencies, accident prevention activities and prevention of incidents at public gatherings, culture and sports events, competitions etc.

(two per shift – the number of employees remains the same in the summer season) and carries out operational activities in emergency events pursuant to:

- instructions for the course of action of on-duty employees of the state protection and rescue centre and the 112 county centre
- the standard operational procedure for alerting the population
- the standard operational procedure for the single 112 operations and communications centre regarding firefighting interventions
- the standard operational procedure for the 112 county centre and the Civil Protection Operations Centre (CPOC) for search and rescue operations on the mainland and on islands
- the standard operational procedure for the 112 county centre and the CPOC in case of traffic accidents on state, county, local and unclassified roads
- the Agreement on Emergency Air Transport.

The 112 county centre uses the Sfera software package for receiving phone calls and has an unlimited number of incoming phone lines. The 112 county centre uses the TETRA radio connection system, as well as ZEOS for maintaining databases. No back-up location in case of inability to operate (e.g., due to damage from earthquakes) is planned for the centre, but as an alternative, calls can be received via the 112 county centre in Split.

5.7.2. Overview of emergency response operations

The table below shows a summary of emergency response operations⁸⁷ per service in the 2016–2020 period.

Service/year	2016	2017	2018	2019	2020
Firefighting	920	1,057	975	981	862
Emergency medicine	43,188	44,426	45,739	45,477	29,205
Harbourmaster's Office	-	17	52	33	25
Mountain Rescue Service	36	46	49	45	26
Red Cross	1,265	1,873	4,067	3,359	210

5.7.3. Good practice and recommendations for improvement

An example of good practice in Dubrovnik-Neretva County is the large number of lessons aimed at school and kindergarten children about disaster risk reduction in

⁸⁷ The total number of emergency response operations for all services is not shown because several services keep records for the same emergency event.

order to inform children about the risks that surround us, how to protect oneself, how to call for help and provide help to someone who is injured.

Recommendations for the Dubrovnik-Neretva County services include better networking on command level and the need for coordination meetings of all emergency services in order to achieve better communication in the field.

6. CIVIL PROTECTION SYSTEM

In the Republic of Croatia, civil protection is a system of organising stakeholders, operational forces and citizens in order to protect and rescue people, animals, material and cultural goods and the environment in the event of major accidents and disasters and to remedy the consequences of terrorism and war destruction.

The civil protection system is developed in accordance with the identified risks which affect human life and health, the economy and social stability and policies.

Within the civil protection system, civil protection activities are pursued.

Civil protection measures include alerting and notifying, evacuation, providing care, removing, rescuing, providing first aid, CBRN defence, sanitisation (human, animal and ground), protection of animals and foodstuffs of animal origin, protection of plants and foodstuffs of plant origin.

Activities of the civil protection system include preparation (in the form of prevention and planning activities as part of the regular activity of civil protection system stakeholders) and operational activities (ranging from early warning and preparedness to response).

Civil protection system measures and activities are carried out by stakeholders and operational forces.

Civil protection system stakeholders are:

- the Government of the Republic of Croatia
- the central state administration authority responsible for civil protection affairs – Ministry of
- the Interior
- state administration and other authorities
- Croatian Armed Forces and police
- local and regional self-government units.

Civil protection system operational forces are:

- civil protection headquarters
- firefighting operational forces
- Croatian Red Cross operational forces
- Croatian Mountain Rescue Service operational forces
- associations

- civil protection units and commissioners
- on-site coordinators
- legal persons within the civil protection system.

A large number of members (professionals and volunteers), who are an important resource of the fundamental operational forces (firefighting, CMRS, CRC) and on-site civil protection coordinators, units and commissioners, as well as citizen's and legal person's associations, participate in the civil protection system operational forces. The operational forces have significant material resources allocated pursuant to recognised risks and provided with the support of the Armed Forces of the Republic of Croatia, the police and emergency medical assistance.

Important support to the civil protection system is provided by aircraft and aerial vehicles (particularly helicopters and drones), used for search and rescue activities, aerial surveillance of affected areas and transporting people and equipment into areas affected by a major accident or disaster.

The local (towns, cities and municipalities) and regional (counties and the City of Zagreb) civil protection system level is responsible for coordinating the work of stakeholders and operational forces within its competence, but lacks the necessary administration, professional and financial capacities, so additional investments are required in order to efficiently fulfil all duties.

The role of legal persons is very important for the civil protection system in the context of strengthening the system's operational efficiency on country, regional and local level.

As the stakeholder responsible for the protection of vital national interests, especially citizen's health and lives, material property and standards that enable decent work and life on its territory, the state bears the most responsibility for creating and financing capacities which will be included in operational activities in case of major accidents and disasters. The Civil Protection Directorate within the Ministry of the Interior carries out numerous activities for capacity development of the civil protection system's operational forces.

Through the civil protection system, cooperation with the private sector and scientific and educational institutions is being increasingly developed, so solutions based on modern technologies can be used for the purpose of operations and communications centres, information technology and connection systems, as well as capacity building for operational activities.

Civil protection headquarters are especially important in the coordination of emergency services in the event of emergencies. The civil protection headquarters is a professional, operational and coordination authority which aligns the activities of the civil protection system's operational forces in the preparatory phase, before consequences of the emergency arise and during the implementation of civil protection measures and activities.

The on-site coordinator role is not recognised by other operational forces of the civil protection system as an important link between the system's operational (forces in the field) and tactical level (civil protection headquarters) which can facilitate the work of emergency services in the field, where the head of the emergency service with primary competence for the emergency acts as the on-site coordinator.

The civil protection system is one of the fundamental elements of the homeland security system, tasked with responding to the threats and risks that lead to emergencies. The civil protection system needs to develop all necessary capacities for the swift mitigation and remediation of the consequences of emergencies. It shall also enable efficient integration of EU and NATO systems into the national civil protection system, as well as efficient international cooperation in this area.

7. GOOD PRACTICE – ITALIAN REPUBLIC

The FIRESPELL project is implemented together with partners from the Italian Republic, where the project's results will complement the development of civil protection. This Report summarises the organisation of the civil protection system and examples of good practice in the Italian Republic, which can serve as a base for the development of certain elements of the Croatian civil protection system and will affect the development of emergency services and their capacity for managing emergencies.

The scope of civil protection in the Italian state is defined in accordance with Art. 117 of the Italian Constitution. The Italian civil protection system was established in 1992 pursuant to the act establishing the National Civil Protection Service. From 2 January 2018, the national service is defined in the Civil Protection Act, which reformed the legal regulation. The Act was drawn up in order to simplify and streamline the provisions on civil protection.

The levels of the national civil protection service are:

- the Civil Service Department (within the Government of the Italian Republic)
- state administration authorities
- regions
- autonomous regions
- local authorities.

The main stakeholders on state level are:

- the National Firefighter's Association
- armed forces
- police forces
- the Italian Red Cross
- the national health service
- the National Alpine Cliff and Cave Rescue Corps.

Assessment and prevention

Regarding assessment, the Civil Protection Act provides for innovation in the dynamic study of possible risk scenarios. Assessment is a preparatory activity for alert and civil protection planning activities. Regarding prevention, the development of capacities over time is taken into consideration, which clearly shows that the field of prevention can, as a whole, encompass structural and non-

structural measures. Non-structural prevention measures include a number of activities, most prominently alerting and informing performed by civil protection services with regard to risk scenarios, rules of conduct, and civil protection planning. Structural measures are introduced as 'structural civil protection prevention', at the same time pointing out specific civil protection matters connected to structural prevention. Interventions aimed at mitigating structural risks on the emergency site are also regulated.

Scientific research

The Civil Protection Act defines operational criteria which allow only for the implementation of measures and activities which are deemed to be of high quality according to rules of the scientific community. The scientific community participates in the National Civil Protection Service through integrated activities and through preparatory research activities. The scientific community contributes to the National Civil Protection Service through technical and scientific support, monitoring, predicting and preventing various risk hypotheses on the national territory, development projects and technical innovation of the monitoring networks, as well as studies and surveys. The activities are regulated through agreements with certain research institutes, in particular with the National Institute of Geophysics and Volcanology (NIGV), the National Research Council (NRC) and the Agency for New Technologies, Energy and Environment (ANTEE).

The **Joint Research Centre (JRC)**⁸⁸, as the European Commission's science and knowledge service, operates in the Italian Republic (in Ispra, a town in northern Italy). The JRC supports EU policies with independent scientific evidence during the whole management cycle. It was founded in 1960 as a nuclear research centre and is today regarded as a leading European research campus with a large number of laboratories and a unique research infrastructure. In addition to various scientific fields of research, it also covers security, migration, health care, nuclear safety and climate change, which all significantly affect the capacity development in civil protection and emergency services.

Volunteers

⁸⁸ The Joint Research Centre operates in five other locations in four EU member states (Brussels, Geel, Karlsruhe, Petten, Seville).

Volunteering in the area of civil protection originates from major emergencies that occurred in Italy in the last 60 years: the flood in Florence in 1966 and the earthquakes in Friuli and Irpinia. The large spontaneous mobilisation of citizens clearly showed that there is plenty of solidarity among the people, but there needs to be an organised public system which is able to use this advantage and build on it. Today, volunteers are an important resource in the form of skills and operational capacities, and there are over 5,000 organisations throughout the country. In support of this initiative, a detailed regulatory model was set up, providing legal protection, courses and training in order to improve on intervention capacities. The Civil Protection Act provides for organised volunteering of everyone registered in the National Registry of Civil Protection Volunteers throughout the National Service's operational structures. In particular, for the review and testing of emergency intervention organisation models, the Civil Protection Department and the regions organise emergency simulation exercises attended by volunteer organisations. Volunteering in the area of civil protection is distributed among national and local organisations throughout the country and represented by the National Committee defined in the Civil Protection Act.

The Republic of Croatia and the Italian Republic have for many years cooperated in the field of civil protection and emergency services, considering that these two neighbouring states share common risks (earthquakes, floods, fires and accidents at sea) and it is necessary to further strengthen bilateral cooperation regarding good practices in order to develop the capacities for emergency management.

8. SITUATION ANALYSIS AND RECOMMENDATIONS FOR IMPROVEMENT

Based on an overview of the legislative framework, the organisation on state and regional level and the measures and activities implemented by emergency services and operational forces of the civil protection system which carry out operational activities in the field, and having regard to international obligations and examples of good practice in the Italian Republic, a SWOT analysis was performed based on recognised and comprehensive elements (strengths, weaknesses, opportunities/possibilities and threats). The SWOT analysis is a base for defining recommendations for improvement.

STRENGTHS	WEAKNESSES
<ol style="list-style-type: none"> 1. the Civil protection headquarters is recognised as a cooperation platform for emergencies on all system levels; 2. implementation of lessons learned through past crisis situations (migrant crisis, floods, fires, earthquakes, pandemic) and system preparedness for changes and modernisation; experience in international exercises and projects; 3. Firefighting Operational Command Centre in Divulje; 4. professionalism, experience and motivation of the emergency services; 5. training polygons in Šapjane and construction of the firefighting polygon in Večevica. 	<ol style="list-style-type: none"> 1. there is no integrated management (leadership and command) system supported by the GIS application; 2. emergency services have no helicopter support system for emergency response operations; 3. a small percentage of operational employees volunteer with several services, which impedes keeping records of the civil protection system operational forces, and also impedes operations; 4. inconsistencies in regulations stipulating the operations of emergency services; 5. uncoordinated communication system of all emergency services and civil protection operational forces.
OPPORTUNITIES/POSSIBILITIES	THREATS
<ol style="list-style-type: none"> 1. good cooperation among all emergency services on all organisation levels; 2. a large number of volunteers participates in the civil protection system operational forces, constituting an important human resource; 3. EU funds and available resources for capacity building and development within the emergency services; 4. cooperation with scientific and educational institutions; 5. application of best practices of EU Member States. 	<ol style="list-style-type: none"> 1. on system level, there is no unified approach to addressing the rights and obligations of volunteers, the rights and obligations of their employees if they are employed, as well as possible benefits for volunteers and employers; 2. individual segments of the emergency service system and civil protection operational forces on local level are unevenly equipped; 3. there is no unified leadership and command system for interventions; 4. insufficient funds on LRSGU level for the successful development of emergency services; 5. the current COVID-19 pandemic.

Recommendations for improvement:

1. adopting a legislative framework for the operation of emergency services in order to strengthen horizontal cooperation;
2. equipping and organising emergency services and civil protection system operational forces in accordance with the modular principle on regional and local level;
3. spatially connecting emergency services and civil protection on regional level for the purpose of better communication and coordination;
4. providing helicopter support to the emergency service system;
5. improving information and communication capacities to support decision-making;
6. developing a joint database of operational forces, material resources and equipment;
7. defining and aligning the rights of volunteer members;
8. systematic implementation of emergency services joint training and exercises;
9. full roll-out of the training polygons in Šapjane and Vučevica;
10. raising public awareness of the importance of prevention, self-protection and establishing a culture of safety;
11. developing operational capacities for providing and receiving international aid;
12. defining priorities for emergency services regarding development through EU funds (multiannual financial framework 2021 –2027), particularly for developing infrastructure for the operation of emergency services and civil protection.

9. CONCLUSION

The complexity of threats and risks and necessary capabilities highlights the cross-sectoral character of this area. The key to efficient operation of the emergency services lies in an effective normative framework, a strong institutional position of central and county authorities, a systemic approach to risk management, development of existing/basic operational forces, cross-sectoral cooperation and implementation of best practices of EU Member States.

In the context of risk minimisation, it is particularly important to carry out climate change mitigation and adaptation activities and to strengthen coordination activities between all participants, as well as to develop an early warning system in order to minimise the consequences of emergencies caused by climate change.

Civil protection headquarters need to serve, on all levels, as a cooperation platform for all competent institutions/services in order to achieve coordinated action in emergencies.

The key to the system's efficient operation lies in an effective normative framework, a strong institutional position of central state and county authorities competent for emergency services, a systemic approach to risk management, development of existing/basic operational forces in the field of civil protection, cross-sectoral cooperation and implementation of best practices of EU Member States. In developing a concept for upgrading the emergency services, it is necessary to comply with the principles of subsidiarity, sustainable development, continuity of action, solidarity, humanity and non-discrimination, as well as lessons learned from the recent coronavirus epidemic and pandemic, the disastrous earthquakes in Zagreb and Sisak-Moslavina County, and 'seasonal' floods and forest fires.

We are thankful to everyone who contributed to the preparation of this National Report on the Functioning of the Emergency Services System in Croatia, filled out the questionnaire, took the time, recognised the importance of data sharing and shared their knowledge and experiences in the field of developing emergency services and civil protection.

10. SOURCES

Regulations

Constitution of the Republic of Croatia
National Security Strategy
Act on the Government of the Republic of Croatia
Homeland Security System Act
Civil Protection System Act
Firefighting Act
Police Act
Police Duties and Powers Act
Health Care Act
Maritime Code
Croatian Mountain Rescue Service Act
Croatian Red Cross Act
Local and Regional Self-Government Act
Act on Mitigation and Remediation of Consequences of Natural Disasters
Electronic Communications Act
Act on the Organisation and Scope of State Administration Authorities
Associations Act
Act on the Territories of Counties, Cities and Municipalities in the Republic of Croatia
Climate Change Adaptation Strategy in the Republic of Croatia until 2040, with an outlook to 2070

Decrees on the internal organisation/establishment (Ministry of the Interior, Croatian Firefighters' Association, Ministry of Health, Croatian Institute of Emergency Medicine, Croatian Institute of Public Health, Ministry of the Sea, Transport and Infrastructure)

International documents

EU Risk Assessment and Mapping Guidelines for Disaster Management
Regulation (EU) 2021/836 of the European Parliament and of the Council amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism
Climate change, impacts and vulnerability in Europe 2016 report
National Report on the Operation of the Emergency Services System in the Italian Republic

Risk assessments

Disaster Risk Assessment for the Republic of Croatia
Major accident risk assessments (coastal counties: Istria, Primorje-Gorski kotar, Lika-Senj, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva)

Websites:

www.hgss.hr
www.hck.hr
www.hzhm.hr
www.hzjz.hr
<https://hvz.gov.hr>
www.hakom.hr
<https://proleksis.lzmk.hr/>
<https://registar-otoka.gov.hr/>
www.italy-croatia.eu/web/firespill

Annex 1

DATA COLLECTION QUESTIONNAIRE

The **FIRESPELL project** is implemented within the framework of the Cross-border Cooperation Programme between Italy and Croatia (Interreg Italia Croatia). One of the project activities foresees the preparation of a national report on the functioning of the emergency services system in the Republic of Croatia. In parallel, a national report is being prepared in the neighbouring Republic of Italy within the FIRESPELL project. Both national reports are guided by the basic guidelines of the FIRESPELL project and aim to develop separately the identified specificities and challenges of the national emergency services systems (see more at <https://www.italy-croatia.eu/web/firespill>).

The **National Report on the Operation of the Emergency Services System** in the Republic of Croatia will define the base and include a comparative analysis of the emergency services system, and identify proposals for its further development at all stages of emergency management (planning, prevention, preparedness, response and recovery).

The object of this Report is to **present and analyse the Croatian emergency services system** (a general overview), including a special detailed reference to the local and regional systems of the project partners: Istria, Dubrovnik-Neretva, Zadar, Šibenik-Knin and Split-Dalmatia counties (detailed overview), as well as Primorje-Gorski kotar and Lika-Senj counties.

The objectives of this Report are to lay down guidelines for strengthening the coordinated and multidisciplinary approach to the operation of Croatian emergency services, with a focus on the territory of the counties participating in the project, to demonstrate how to establish an efficient emergency response and recovery system, and to determine whether the established system is able to provide an adequate response to the challenges and risks arising from the effects of climate change and man-made emergencies.

The National Report relies heavily on primary information from civil protection system stakeholders (institutions/services), which is why **this questionnaire has been prepared**. Please **fill out the form with essential information** about your institution/service, which will contribute to drafting the National Report.

In case of questions, please contact the **Civil Protection Network/Mreža civilne zaštite** (preparation coordinator of the National Report on behalf of the commissioning party – Istria County, in the capacity of project partner) at mcivilnezastite@gmail.com (please also deliver the questionnaire to this address).

We kindly ask you to email the completed form **by 1 December 2021**.

We thank you in advance for your time!

COUNTY:	<i>enter</i>
INSTITUTION/SERVICE:	<i>enter</i>

1. GENERAL INFORMATION ABOUT THE ORGANISATION (institution/service)

Location of headquarters:	<i>enter name and address</i>
Location of training centre (if applicable):	<i>enter name and address</i>
Departments/branch offices/stations/bases outside of the headquarters:	<i>enter number</i>
Employees:	<i>enter number</i>
Volunteers (if applicable):	<i>enter number</i>
Employees and volunteers taking part in emergency response operations:	<i>enter number – employees</i> <i>enter number – volunteers</i>
Training centre employees:	<i>enter number</i>
Service (search and rescue) dogs:	<i>enter number</i>
Total number of vehicles:	<i>enter number</i>
Personal vehicles:	<i>enter number</i>
Off-road vehicles (4x4):	<i>enter number</i>
Command and communication vehicles:	<i>enter number</i>
Passenger vans:	<i>enter number</i>
Cargo vans for equipment transport:	<i>enter number</i>
Other vehicles:	<i>enter number</i>
Number of vessels:	<i>enter number and purpose</i>
Number of drones:	<i>enter number and purpose</i>

2. PLANNING DOCUMENTS

<i>Enter the five most important planning documents (plans, SOPs, instructions, guidelines etc.) pursuant to which operational activities are carried out in emergency events:</i>
1.
2.
3.
4.
5.

3. OPERATIONAL CAPACITIES

<i>Tick the activities you carry out in the field in the event of emergencies (competent, equipped and trained for)</i>
<input type="checkbox"/> Firefighting in urban areas
<input type="checkbox"/> Fighting of wildfires
<input type="checkbox"/> Firefighting on vessels

<input type="checkbox"/> Search and rescue in floods <input type="checkbox"/> Search and rescue from collapsed buildings <input type="checkbox"/> Search and rescue at sea <input type="checkbox"/> Search and rescue in the mountains and other inaccessible areas <input type="checkbox"/> Accommodating people in evacuation centres (solid construction) <input type="checkbox"/> Accommodating people in camps (containers and tents) <input type="checkbox"/> Providing first aid to injured persons <input type="checkbox"/> Providing medical care to injured persons <input type="checkbox"/> Securing the area <input type="checkbox"/> Technical interventions in road transport <input type="checkbox"/> Technical interventions in rail transport <input type="checkbox"/> Technical interventions in air transport <input type="checkbox"/> Technical interventions in maritime transport <input type="checkbox"/> Technical interventions with dangerous substances on land <input type="checkbox"/> Marine/coastal pollution
Would you like to highlight something that is not mentioned above?

4. OPERATIONS AND COMMUNICATIONS CENTRE

Location of the centre:	<i>enter name and address</i>
Location of the centre's departments (if applicable):	<i>enter name and address</i>
Telephone number for citizens:	<i>enter number</i>
Total number of employees:	<i>enter number</i>
Number of employees per shift:	<i>enter number</i>
Does the number of employees change in the summer season? If yes, in what way?	<i>enter yes/no</i> <i>briefly explain</i>
Software package/software for receiving phone calls:	<i>enter name</i>
Number of incoming telephone lines for calls from citizens:	<i>enter number</i>
Radio connection system used:	<i>enter name</i>
Special software for maintaining databases of operational capacities:	<i>enter name</i>
Back-up location for the centre (e.g., due to damage from earthquakes):	<i>enter yes/no and location, how fast can it become operational?</i>
Temporary alternative call centre (e.g., in case of a large number of calls, technical failure):	<i>specify the centre</i>

5. OVERVIEW OF EMERGENCY RESPONSE OPERATIONS

Enter the total number of emergency response operations per type for each year.

Type of operation/year	2016	2017	2018	2019	2020
Firefighting in urban areas:					
Fighting of wildfires:					
Firefighting on vessels:					
Search and rescue in floods:					
Search and rescue from collapsed buildings:					
Search and rescue at sea:					
Search and rescue in the mountains and other inaccessible areas:					
Accommodating people in evacuation centres (solid construction):					
Accommodating people in camps (containers and tents):					
Providing first aid to injured persons:					
Providing medical care to injured persons:					
Securing the area:					
Technical interventions in road transport:					
Technical interventions in rail transport:					
Technical interventions in air transport:					
Technical interventions in maritime transport:					
Technical interventions with dangerous substances on land:					
Marine/coastal pollution:					

6. TRAINING AND EXERCISES:

Specify the types of regular training activities you carry out or participate in in order to strengthen the operational capacities of your employees and volunteers for responding to emergencies:

- 1.
- 2.
- 3.
- 4.
- 5.
-

Overview of participation	2016	2017	2018	2019	2020
Number of employees who participated in trainings:					
Number of volunteers who participated in trainings:					

Specify the types of exercises carried out with the purpose of strengthening operational capacities for responding to emergencies, and on which scenarios they are focused:

- 1.
- 2.
- 3.
- 4.
- 5.
-

Overview of participation	2016	2017	2018	2019	2020
Number of employees who participated in exercises:					
Number of volunteers who participated in exercises:					

7. FINAL REMARKS

Specify 3 challenges you have been facing in your operations:

- 1.
- 2.
- 3.

Specify 3 proposals for improvement within your service/institution:

- 1.
- 2.
- 3.

Specify 3 proposals for improving cooperation with other services/institutions:

- 1.
- 2.
- 3.

If you would like to share information not provided for in the questionnaire that might be useful for drafting the National Report, please enter them here or attach to the completed form as a separate file.

Thank you for filling out the questionnaire!

Please save your answers and email the questionnaire to: mcivilnezastite@gmail.com