

**National Voluntary Report of the Republic of  
Slovenia**

**Produced as part of the Midterm Review of the  
Sendai Framework 2022**

# 1. Introduction

## Risk Management Architecture

The Sendai MTR report for the Republic of Slovenia (Slovenia) is based on the Resolution on the National Program of Protection against Natural and other Disasters 2016-2022 and on the draft of the Resolution on the National Program of Protection against Natural and other Disasters 2023-2030 (New DRR Strategy for Slovenia 2023-2030), which is under preparation and is planned to be adopted before the end of 2022. It is also linked to the Resolution on the National Security Strategy of the Republic of Slovenia, with which the state defines guidelines for the effective protection of national interests and national security goals as one of the fundamental values of Slovenian society, enshrined in the Constitution of the Republic of Slovenia. The National Program is linked to the Development Strategy of Slovenia 2030, which represents the overall development framework of Slovenia until 2030, and which also represents the main national document on the implementation of the Agenda2030 and the Sustainable Development Goals. The goal of a safe and globally responsible Slovenia will be achieved, among other things, by promoting prevention and strengthening capacities for comprehensive management of natural and other disasters.

In addition to national interests, the National Program also takes into account Slovenia's obligations arising from accepted international and regional treaties, conventions and agreements as well as concluded bilateral agreements in the field of protection against disasters and disaster risk reduction. The National Program follows the guidelines of the Sendai Framework for Disaster Risk Reduction for the period 2015-2030 and takes into account the principles of the 2030 Agenda for Sustainable Development and the Paris Climate Agreement. It is harmonized with Regulation (EU) 2021/836 of the European Parliament and of the Council of 20 May 2021 on the amendment of Decision no. 1313/2013/EU on the Union mechanism in the field of civil protection

Climate change and related events affect the growth of the number of disasters, their intensity, duration, frequency of occurrence, and scale. Extensive fires in the natural environment, drought, strong winds, hail, floods and landslides that have occurred in Slovenia in the recent period confirm this.

Further, the number and scope of accidents with cross-sector, cross-border and multi-state impacts, such as e.g. infectious disease epidemics and other complex crises that exceed the response capabilities of individual subsystems of the national security system, e.g. migrant crisis. Ensuring protection against various natural and other disasters and strengthening disaster risk reduction, including involvement in the response to various forms of terrorism and mass violence, as well as other non-military and military sources of threat, are therefore a permanent vital and strategic goal of the Republic of Slovenia.

It emphasizes prevention and disaster risk reduction, as well as efforts to strengthen the resilience of society and individuals to natural and other disasters. It is still considered that investing in the prevention and reduction of the risks of accidents is more effective, sustainable and cheaper in the long term than other forms of protection against accidents and contributes to a sustainable balance in nature and society, as well as the personal and property security of the inhabitants. Not all disaster risks can be eliminated, so the further development of capacities to respond to natural and other disasters is crucial.

Integrating science in all phases of the disaster management cycle is crucial and contributes significantly to more effective disaster risk management, connecting decision-makers and implementers of protection, rescue and relief tasks at national and international levels.

The program emphasizes infrastructural investments and the upgrading of information-communication and other systems, digitization, the upgrade of the response management system and the provision of other conditions for effective preparedness and response to disasters at the national, regional and local level. The further development of the forces for protection, rescue and assistance will base on volunteering, strengthening and targeted development of professional structures, modular organization and adaptability to specific situations. Activities will continue to improve the situation of rescuers and to ensure that they are properly equipped and trained. Greater emphasis will be placed on preventing accidents, adapting the organization and response of the system to the consequences of climate change, and exercising control over the observance and implementation of regulations. The focus of the activity will also be on strengthening the awareness and training of the population for dealing with disasters.

## **Risks in the Republic of Slovenia**

With a **Report on disaster risk management in the Republic of Slovenia (2020)**, the Republic of Slovenia reports to the European Commission (DG ECHO), as determined in the Article 6 of the Decision No. 1313/2013/EU of the European Parliament and of the European Council of 17 December 2013 on a Union Civil Protection Mechanism ((OJ) L, No. 347 of 20 December 2013; amended by Decision (EU) 2019/420 of the European Parliament and of the European Council of 13. March 2019 (OJ L 77 I of 20. March 2019). In line with this Decision, Member States are obliged to report on the situation relating to certain contents in the area of the management of disaster risks by the end of 2020.

In accordance with the established procedure, the report was developed and coordinated with the responsible ministries, especially the Ministry of the Environment and Spatial Planning, and considered and adopted at the Government of the Republic of Slovenia. In 2019 and 2020, there have been no essential changes in the assessment of disaster risks in the Republic of Slovenia. Therefore, the report relating to the situation and observations in the area of disaster risk assessment, which the Republic of Slovenia sent to the European Commission at the end of 2018.

In the period 2019-2020, some progress has been made in the Republic of Slovenia in the assessment of disaster risk management capabilities. In this period, three new risk management capability assessments for specific disasters have been developed (cyber risks, accident at sea, forest tree diseases and pests), as well as the new version (2.0) of the National Disaster Risk Management Capability Assessment. Just as the other 12 assessments, the new assessments have been developed on the Risk Management Capability Assessment Guidelines (Official Journal L 2015/C 261/03; hereinafter: the European Commission Disaster Risk Management Capability Assessment Guidelines) from 2015. The European Commission has officially withdrawn those Guidelines. However, Article 4 of the Decision on a Union Civil Protection Mechanism still determines the contents and approach to the development of disaster risk management capability assessments, as defined by these Guidelines.

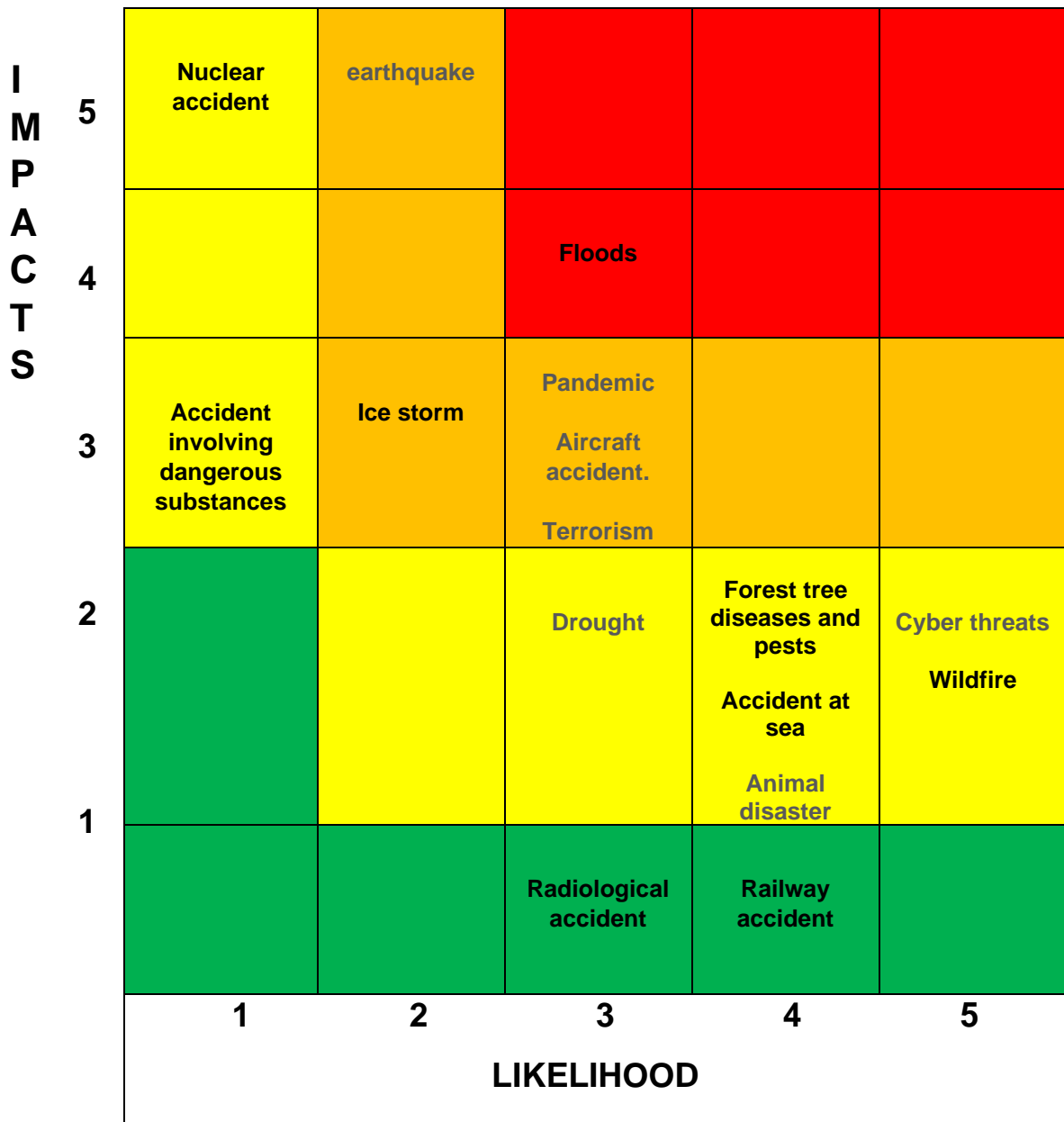
For the time being, the floods which have been identified as a key risk for a disaster in the Republic of Slovenia are the only risk for which the disaster risk assessment has so far established that they represent the highest (very high) risk of a disaster and at the same time also the only “red coloured” risk. This is also evident from the current national disaster risk matrix from 2018 below, published in the last version of the National Disaster Risk Assessment in 2018.

For the purpose of reporting to the European Commission, in particular in terms of describing major prevention and preparedness measures, special emphasis should also be placed on the key risks of a disaster with transboundary impacts and the risk of a disaster with a low likelihood but high impact. In this respect, too, floods in the Republic of Slovenia are recognised as a key risk for disaster, also with possible transboundary impacts.

Year	Event	Duration	Intervention costs (in EUR)
2016	Heavy migration influx (accommodation)	23. 10. 2015 – 1. 7. 2016	-----
2016	Wildfire - Karst region	7. 8. 2016 – 10.8.2016	208.771
2017	Windbreak and floods	12. 12. 2017 – 16. 12. 2017	321.349,72
2017	Fire in the factory that deals with hazardous waste (Kemis)	15.5. – 16.5.2017	350.000
2017	Fire in the factory for waste candles recycling (Eko Plastkom)	8.7.2017	200.319
2017	Fire in the factory Ekosistemi (waste plastics and wood chips)	20.-23.7.2017	900.000
2019	Wildfire – Karst region (Cerje)	21. 8. 2019 – 23.8.2019	115.677
2020	Epidemics Covid-19	13. 3. 2020 – 30. 5. 2020	-----
2020	Wildfire – Karst region (Kastelec, Petrinje pri Kozini)	22. 4. 2020 – 23. 4. 2020	32.142,95
2021	Epidemics Covid-19	19. 10. 2020 – 15. 6. 2021	-----
2022	Big wildfire – NW Slovenia (Preddvor)	29. 3. 2022 – 31. 3. 2022	331.814,43
2022	Wildfire - Karst region	17. 7. 2022 – 1. 8. 2022	N/A yet
2022	Wildfire - Karst region	9. 8. 2022 – 11. 8. 2022	N/A yet

Figure 1: Disaster realisation and intervention costs in Slovenia, 2016 - 2022

**NATIONAL DISASTER RISK MATRIX (2018) – OVERALL PRESENTATION OF IMPACTS**



LEVELS OF IMPACT AND LIKELIHOOD	
5	Very high
4	High
3	Medium
2	Low
1	Very low

LEVELS OF RISK	
	Very high
	High
	Medium
	Low

RELIABILITY OF RESULTS OF RISK ANALYSES	THE COLOUR OF THE ENTRY IN RISK MATRIX
Relatively reliable	Black
Moderately reliable	Dark grey
Relatively unreliable	Light grey

Figure 2: National Disaster Risk Matrix 2018, with legend

Slovenia has regularly reported to the Sendai Framework monitor. Due to the lack of time and absence of some documents as a result of a severe cyber-attack in August we kindly ask to refer to the on-line data in Sendai Monitor for Slovenia.

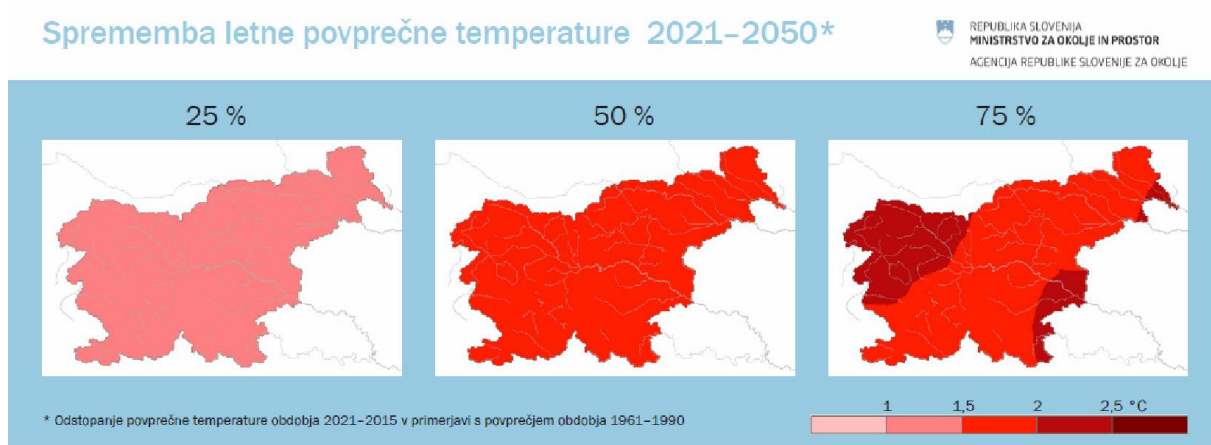


Figure 2: The increase of the average annual temperature in the period 2021-2050 calculated based on a model in reference to the period 1961-1990, presented in degrees Celsius. \*Changes in the average annual temperature in the period 2021–2050. \*Deviation of the average temperature in the period 2021–2050 from the average temperature in the period 1961–1990

## **Methodology**

### **Methodology and Process**

The Sendai Midterm review for Slovenia has been prepared in parallel with the preparation of the new DRR Strategy for Slovenia for the period from 2023-2030. The selection of the stakeholders (contributors) has been done according to the UNDRR guidelines. The UN DRR questionnaire has been translated into Slovenian language and sent to the potential stakeholders twice. Besides all governmental bodies in the country, also several civil-society organisations as well as academia have been invited to the participation, all together 32 stakeholders. 14 stakeholders responded substantively to this Midterm Review process. A second source of information were the contributions of the stakeholders for the new Slovenian DRR Strategy that is under preparation.

The process of the preparation of the report was significantly jeopardized with a heavy cyber-attack to the IT system of the Administration for Civil Protection and Disaster Relief in the mid-August, which caused unavailability of the work and documentation that had already been done and a loss of all the related e-correspondence. Therefore, it is likely that there have been more contributions but were lost in the cyber-attack.

The indicators included in this report have been taken from the national Sendai report, no other indicators have been used since the preparation of the DRR Strategy for Slovenia is still ongoing and it's foreseen to be concluded and adopted until the end of 2022. Due to already mentioned severe cyber-attack there was unfortunately no time to be deeply involved in the measurements of indicators and statistical data in Slovenia.

## 2. Retrospective engagement

### Risk Understanding

#### Monitoring and Risk Assessment

Great progress was also made in the field of **monitoring**. During this period, the Environment Agency of the Republic of Slovenia (ARSO) ensured regular investment maintenance of the measuring network of meteorological, hydrological and oceanographic measuring points and their renovation or establishment also with funds from the cohesion project BOBER. The renovation of the ARSO website has begun with the aim of better and faster information to citizens about weather-related dangerous events and easier access to public data, the recording units at all seismic observatories of the State Network of Seismic Observatories (DMPO) were updated. In the field of drought risk reduction, activities were carried out to improve drought monitoring as a basis for improving drought management to reduce damage.

**The Environmental Agency of the Republic of Slovenia** carried out or led research into meteorological, hydrological, oceanographic and seismological phenomena and developed measuring, analytical and prognostic techniques and methods, while also connecting with foreign research organizations and providers of similar services in other countries. By preparing and selecting indicators for all types of drought, they improved drought monitoring, which is the basis for improving drought management to reduce damage. As part of bilateral and European agreements and the consortium, the network of international exchange of hydrological and meteorological data in real time was expanded. Forecasts, warnings, and educational and intelligence content were provided via own channels or various social network platforms. Production of special forecasts and content adapted for communication through the aforementioned channels. The direct exchange of data and warnings about the dangers of natural phenomena with the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief was established.

In the adopted legal amendments and new executive regulations, the findings from the risk assessment for individual parties and certain preventive measures and measures to reduce the risk of natural and other disasters were taken into account. The preparation of the risk assessment has continued. Between 2016 and 2022, three new risk assessments of individual accidents at the national level were prepared, the Risk Assessment for Nuclear and Radiological Accidents in Slovenia was revised, and the National Disaster Risk Assessment was revised. During this time, risk management capacity assessments for 15 disasters and two versions of the National Disaster Risk Management Capacity Assessment were also produced. In the period 2016–2022, the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief at the national and regional level prepared or updated 10 risk assessments due to natural and other disasters. Based on the findings of the threat assessment, risk assessment and other professional bases, six national protection and rescue plans were developed or supplemented. After the revision of the national plans, the ministries and state services completed and harmonized the activity plans with the national plans within the stipulated time, and the planning bodies in the regions, municipalities, companies, institutes and other organizations harmonized their plans with the basic plans. All valid state plans are publicly available on the website: Gov.si.

#### Slovenia has prepared the following documents in the area of **flood risk reduction**:

- Flood risk assessment (Ministry of Environment and Spatial Planning, 2016)
- Assessment of the risk of floods in the Republic of Slovenia (ACPDR, 2016)

- Assessment of flood risk management capacity (Ministry of Environment and Space, 2018)
- State assessment of the ability to manage risks (Ministry of Environment and Space, 2018)
- Flood Risk Reduction Plan 2017-2021 (Ministry of Environment and Space, 2017)
- Methodology for revising the preliminary flood risk assessment (Water Institute of the RS, 2018)
- Preliminary flood risk assessment (Ministry of Environment and Space, 2019)
- National flood protection and rescue plan (ACPDR, 2019)

For each of the 18 river basins, in addition to other content required by regulations (description, links to flood risk maps and flood threat maps, objectives, description of cooperation with the public, presentation of bilateral and multilateral coordination in the case of international river basins, which we share with neighbouring countries, etc.). A summary of the set of anti-flood measures that must be implemented to achieve the goals of reducing the risk identified in the individual basin is prepared. For each of the 20 measures in each of the 18 river basins, its level of priority (high, medium or low), a description of whether the measure is implemented and its (potential) implementer were defined. The implementation of measures is divided between ministries, constituent bodies, municipalities (local communities).

Further, for the risks of major **accidents involving dangerous substances**, we can assess that the understanding and assessment of risk is improving, mainly through constant and direct communication between the risk bearers (operators of devices with dangerous substances), professional institutions and administrative bodies. The Resolution on the National Environmental Protection Program for the period 2020-2030, adopted in Slovenia, also addresses areas important for the implementation of the Sendai Agreement - climate change, water management, protection of ecosystems, preservation of natural resources.

### Education and Communication

ACPDR puts great efforts in educating different public providing brochures, internet-based information and applications. They established and support a special subject on natural and other hazards in primary school. In tertiary education natural and other hazards are taught at specific subjects at the University of Ljubljana: at the Department of Geography at Faculty of Arts, Faculty of Civil and Geodetic Engineering and at the University of Primorska. In 2016, an UNESCO Chair on Water-related Disaster Risk Reduction was established. Students can obtain related knowledge also the Natural Sciences Faculty Department of Geology and the Forestry Faculty, as well as at the Faculty of Social Sciences Department of Defence. We miss larger involvement of other social sciences. ACPDR is responsible for professional education for rescue units which is exceptionally well organized and recognized abroad.

For residents, children, the blind and partially sighted, deaf and hard of hearing, functionally disabled people, the elderly, the professional public, etc. various publications (folders, posters), promotional materials, articles published in publications for children and youth from kindergarten to college (Ciciban, Zmajček, Mogenos etc.) were prepared. Besides, applications for publication on the web, smartphone, social networks, adapted for deaf and hard-of-hearing and blind and partially sighted people (Website Have you done everything for a safe home? and application 112) were prepared. Annual contests Natural and other disasters for young people were held, the project October-month of fire safety was carried out every year, they were announced on TV spots with sign language, radio ads and digital-online advertising on the topic of various natural and other disasters were carried out. The Administration of the Republic of Slovenia for Civil Protection and Disaster relief has participated in various events, fairs, and the emergency number 112 was highlighted in all activities, tools, and media (promotion of the number 112 takes place throughout the year at all administration activities). Special attention was paid to the publication of instructions for



residents on the website gov.si in the areas of fire protection, drowning protection, space management, and protection against natural and other disasters.

As part of the MASPREM development research task, the Geological Institute has prepared the following online content:

- Video help for users of the online application e-Plaz: <https://www.youtube.com/watch?v=njN4XOQZj4w>
- MASPREM promotional video: [https://www.youtube.com/watch?v=M\\_3KbBT4xYA&t=9s](https://www.youtube.com/watch?v=M_3KbBT4xYA&t=9s)
- Recommendations on how to act in case of crawling: [https://www.geo-zs.si/?option=com\\_content&view=article&id=111](https://www.geo-zs.si/?option=com_content&view=article&id=111)

Bogataj's days of protection and rescue, an event whose purpose is to present the system of protection against natural and other disasters and to raise awareness among the public (especially young people) about the risks of natural and other disasters were organised. They are intent to strengthen preparedness for personal and mutual protection and to present modern protective and rescue means and the activities of various rescue services included in the system of protection, rescue and assistance. The event was held in Murska Sobota in June 2017, in Postojna in October 2019 and in Ptuj in May 2022. The events were organized by the Administration of the Republic of Slovenia for Protection and Rescue in cooperation with local communities.

In 2017, the national symposium on natural and other hazards Ušeniščnik's day was held. The focus of the 4<sup>th</sup> national conference was on discussing the sustainable city development and natural disasters. The purpose was to analyse examples and types of natural disasters, present the latest methods and scientific insights, and risk management in Slovenia. The event was organized by the Slovenian Academy of Sciences and Arts (by short SASA) Anton Melik Geographical Institute and supported by the ACPDR.

In the observed period 6 issues of the magazine UJMA professional journal, were published. The journal connects authors of various expertise from the field of protection against natural and other disaster. There is no comparable interdisciplinary journal in this field abroad. The magazine is available free of charge in both book and electronic form. It is sent to organizations in the field of protection against natural and other disasters, municipalities, individuals, public libraries, institutes, and many faculties, where it has become part of the study material.

In 2015, the Ministry for Environment and Spatial Planning – Water Directorate conducted a series of national workshops under OPVP 'How to live with floods'. Informing, informing and raising awareness of at-risk subjects, the youngest and school-aged children, local communities, municipalities, professional institutions, societies also takes place within the framework of many projects, recently e.g. Frisco1, goMURra, Grevislin, Visfrim. As part of the Frisco 1 project, e.g. 12 awareness-raising workshops in cross-border basins and many other awareness-raising activities for the youngest.

In recent years, the National Research Agency funded three basic research projects from the field of natural and other hazards, one on Resilience of Alpine regions, Snow avalanche hazard management and Response of snow avalanche hazard to the Climate change, led by Slovenian Academy of Sciences and Arts. The Droughtwatch.eu, developed within the framework of the DriDanube Interreg project, Forest drought monitoring, developed by the Slovenian Forestry Institute, and the SEA Forest fire hazard index were published. Slovenia is also involved in the Copernicus Mechanism, among which also Copernicus Emergency Management System (Copernicus EMS)

## **Risk Governance**

The Slovenian risk governance system is divided into the national, regional and local levels, and supported by the State and Municipalities yet still every individual is responsible for his own safety. Protection against natural and other disasters is a subsystem of national security and therefore belongs to the Ministry of Defence. In this way it is coordinated and linked with other national security subsystems while we face lack of horizontal links, e.g. coordination with other sectors, such as space, health and education. We also face lack of public participation on all levels. The National DRR Strategy for Slovenia for the period 2023–2030 is under preparation. The local DRR strategies (programs) of 212 local communities are done on the local level, are financially evaluated, and like this, they represent the basis for the investment in DRR on the local level. According to the National law on protection against natural and other disasters local communities, adopt their programmes and DRR plans which should be in line with the national DRR strategy.

For all identified risks in Slovenia, it is considered necessary to continue work on:  
development of the legislative framework

- intersectoral cooperation and integration
- emphasis on complex crises is also coming to the fore.

## Local Governance

Protection, rescue and relief forces are predominantly organized in municipalities (NUTS 5) and includes different stakeholders, such as the mayor, first-aid units, first veterinary aid units, technical rescue units, units and services for radiological, chemical and biological protection, units for protection against unexploded ordnance and so on. The Mayors are fully responsible for safety and protection of citizens and they coordinate the activities with the local civil protection headquarters. Building on decades of history, thousands of voluntary rescue service unit members are available, among others: 44,000 firemen, 700 members of mountain rescue service, 100 members of cave rescue service, and 130 members of underwater rescue service. The units cooperate with Medical and Police services, when applicable, and follow a strict timetable of education and training, mostly held by ACPDR .

Municipalities independently organize and prepare and manage the system in their area, assess damage and eliminate the consequences of disasters. The state helps them in this with forces and resources under its jurisdiction. The organization, equipment and readiness to carry out protection and rescue are very different between municipalities and depend on the size and diversity of the municipalities and their capacities. The division between tasks under national and municipal jurisdiction is clear.

Recently some voluntary services have significantly reduced the number of their members; for example, mountain rescue services in the Alpine region are heavily burdened with outdoor-activity accidents, while on the other hand the firemen are a key institution in car accidents response. Rescue actions often mean high burden of time, resources and economic stress for the companies which do not allow their workers to miss work for rescue activities although they get refunds. Helicopter rescue units which support the high-mountain rescue services lack funds for a stable service which is shared by the Police and the Army.

In Slovenia we follow a subsidiary approach which is good in case of local and nation-wide events, but it does show some deficiencies in sharing the responsibilities and finances at regional-scale events, as the system is mostly based on top-down approach. The multilevel

(informing, educating, advocating, social) and interactive nature of the new media platforms should be taken into account. In 2014, the National platform was established and as it consists of stakeholders from governmental and nongovernmental sectors it may become an important coordination body for discussing and reaching a common understanding of relevant risks, threats and hazards. It also includes three associations of local communities in the Republic of Slovenia: SOS (Community of Municipalities in Slovenia), MOS (Association of Urban Municipalities of Slovenia) and ZOS (Association of Municipalities of Slovenia). The representatives of all three associations actively participate in project and working groups on the state level in the cases which are directly related to their local community. The National platform for Disaster Risk Reduction will be re-activated in 2022.

### Inclusive Governance

In Slovenia there is a strong emphasis to engage different social groups in the joint preparations to counter disasters. The Administration for Civil Protection and Disaster Relief is very much involved in the processes which include cooperation of the representatives of vulnerable groups.

The Administration for Civil Protection and Disaster Relief of the Republic of Slovenia participates as a partner in an EU project Safe and Equal in EMERgences – SEE ME, co-financed in the framework of the Union Civil Protection Mechanism – Prevention and Preparedness. The Safe and Equal in EMERgencies (SEE ME) project aims to ensure that persons with disabilities have equal access to opportunities in emergencies.

Despite the adoption of the UN Convention on the Rights of Persons with Disabilities (2006) and the 2010-20 European Disability Strategy, persons with disabilities face inadequate access to rescue in emergencies. This results from a lack of common standards in their protection and rescue, and their right to equal access and opportunities in emergencies is often neglected. Persons with disabilities are excluded from decision-making in the emergency planning and management process, and first responders are not trained to rescue and protect different disability groups. These barriers exacerbate the vulnerability of an already vulnerable group in society.

SEE ME aims to improve the safety of persons with disabilities and ensure they have equality in emergencies by:

- raising awareness to equal rights in emergencies;
- analysing gaps and needs in the protection and rescue of persons with disabilities;
- collecting and exchanging best practices, expertise and planning;
- and developing guidelines and protocols related to assistance, protection and rescue of persons with disabilities.

The project also advocates for persons with disabilities to play an active role in civil protection prevention and in planning activities.

### Governance in linked areas

In the last two years, all the organizational and professional capacities of **National Institute of Public Health** have been involved in controlling the SARS-CoV-2 pandemic, monitoring the epidemiological situation at home and in the world, and consequently preparing risk assessments, epidemiological investigations, response, preventive action and advice to the public. The Center for Infectious Diseases of the National Institute of Public Health monitored the epidemiological situation in the country through the regional units and, based on the collected data on reported infectious diseases, assessed the risks and proposed measures for

their control. The collected data were the basis for the creation of preventive programs and advice on general measures.

After the beginning of the war in Ukraine, ACPDR started coordinating the **transportation of humanitarian aid**. Municipalities, the Red Cross of Slovenia, Slovenska Karitas and the Evangelical humanitarian organization Podpornica participated in this. Help was collected from municipalities, non-governmental organizations and private individuals based on recommendations regarding types of equipment, quality and packaging. ACPDR organized the transportation of the collected humanitarian aid to DLC Roje, where the inspection and palletizing of the delivered humanitarian aid and administrative procedures for further transport were carried out.

In order to improve preparedness for disasters, the **Red Cross of Slovenia** supplemented the documents defining the organization, equipping and training of members of the Red Cross to respond to disasters. They have also prepared a plan for the gradual replacement of worn-out equipment, updated first aid training programs and gained extensive experience in responding to disasters in Slovenia, such as covid-19, migration, hail and when offering humanitarian aid abroad. To respond to disasters, the Red Cross of Slovenia provided the training of one hundred first aid teams, three stationary units and a team for the operation of the mobile stationary station of the Red Cross.

## **Risk Financing**

In 2021, a comprehensive study on the contribution of public funds for the protection and rescue system and the budget for disaster mitigation in Slovenia was published. The structure of public funds for disaster relief was analysed and the inconsistency of criteria and approaches in Slovenian municipalities were presented. We compared public funds with private investments in insurance, with claimed losses and with GDP. The main finding is that the relative financial burden of natural disasters increases as the spatial level decreases. 1) Private individuals are relatively more burdened (by insurance) than municipalities (by prevention and mitigation measures, such as investments, preparedness and compensation). 2) Municipalities, are relatively about five times more financially burdened than the government. The observed inverse relationship between the (relatively) available (material and human) resources and the spatial level raises a number of new questions about the organization of natural disaster management at all levels (<https://ojs-gr.zrc-sazu.si/gv/article/view/8176>).

## **Investments in DRR (Administration for Civil Protection and Disaster Relief of the Republic of Slovenia)**

<b>Year</b>	<b>Amount in EUR</b>
2015	36.939.508
2016	37.935.691
2017	34.350.587
2018	38.067.208
2020	52.943.186
2021	58.979.990
2022	74.778.803 (planned until end of 2022)

**Agriculture** was among the most sensitive sectors due to its direct dependence on weather and environmental conditions. As part of the Rural Development Program 2014-2020,

cultivation technologies were promoted that prevented natural disasters or mitigated their consequences. They co-financed the purchase and installation of anti-hail nets and greenhouses, the arrangement of new and technological upgrades of existing irrigation systems. Insurance of agricultural production is a mechanism that enables quick payment to compensate for loss of income after a natural disaster, co-financing of the insurance premium by the state for certain insurances in agriculture is guaranteed. The share of insurance is increasing from year to year. The Ministry responsible for agriculture co-financed the implementation of air defence against hail, granted "de minimis" aid due to the consequences of natural disasters and implemented four Programs for the elimination of the consequences of natural disasters in agriculture in 2016, 2017 and 2021.

**The Ministry of Agriculture, Forestry and Food and the Agency for Agricultural Markets and Rural Development** established a project group to upgrade the financial risk management system in agriculture, forestry and beekeeping due to natural disasters. Among other things, proposals were prepared for upgrading the financial risk management system in agriculture and forestry and beekeeping due to natural disasters and checked the methodologies for assessing damage after natural disasters and the forms of assistance and risk management measures. The systemic nature of risk is discussed in the sectors of agriculture that are most exposed to risks due to natural disasters: fruit growing, viticulture, beekeeping, forestry, animal husbandry, and other crop production. With the help of the Rural Development Program and measures, especially in the installation of nets against hail, greenhouses and co-financing of irrigation systems, the vulnerability of the agricultural sector has decreased somewhat. When preparing national development documents, we make sure that they include elements related to risk management. For example: In the Resolution on strategic directions for the development of Slovenian agriculture and food industry until 2020 - "We will ensure food for tomorrow" (Official Gazette of the Republic of Slovenia, No. 25/11), we included challenges related to solving the consequences of natural disasters. In addition, the risks due to natural disasters are included in the Rural Development Program and in the new Strategic Plan.

Slovenia has pledged already in 2016 to earmark at least 10% of its humanitarian funds for DRR and building resilience. The pledge was confirmed also as one of the goals, included in the Strategy on International development cooperation and humanitarian aid of the Republic of Slovenia, adopted by the Government in 2018. The target was reached in 2018 and 2019 (both years, 11% of Slovenia's humanitarian assistance was earmarked for DRR and building resilience), but the percentage dropped in 2020 due to increase of emergency response. In nominal terms, the value increased consistently. In the period 2018-2021, a total of EUR 915,000 was provided for preventive action activities. Before 2018, there was no separate data collection for the area of preventive action, data for 2022 is not yet available.

**The Insurance Supervision Agency** monitors climate risks and their impact on the insurance sector by analysing the exposure of insurance companies to the physical and transition risks of climate change on an annual basis. It presents the results of the analyses within the working subgroup of the Committee for Financial Stability.

The regulation on the co-financing of insurance premiums for the insurance of primary agricultural production and fisheries determines the purpose, beneficiaries, conditions and procedure for granting assistance for the payment of insurance premiums for the insurance of primary agricultural production. The aid is granted in the form of grants, namely as payment for the co-financed part of the insurance premiums.

One of the insurance companies has developed a mobile application that warns users of dangerous weather events and thus enables users who live in places at risk of flooding to more easily monitor the flow and water level of selected waters, and they are informed in time when

the flow and water level increase. The mentioned application informs users about the upcoming danger of hail for 15 regions in Slovenia, thus enabling timely action.

The established disaster recovery system is dispersing risks to the whole society by providing help of the State for reconstruction and recovery, especially in the field of agriculture. This is one of the reasons why the individual and institutional responsibilities are neglected, leading to low insurance levels (e.g. 60 % of insured private losses). This especially applies to earthquake risk (with low percent of insured buildings and high percent of earthquake-unsafe, mostly old buildings) and the field of agriculture (with low percent of insured crops and relying on State subsidies and damage compensation).

### **Preparedness and Build Back Better**

As the Slovenian management system is organized in a partial way, disaster risk reduction is supported by different Ministries. In general, the majority of rescue and relief activities are coordinated by the Civil Protection in the framework of the ACPDR . Although ACPDR is focused rescue and relief management and also supports disaster risk prevention and is actively involved in the EU regional programs related to prevention, preparedness and response to man-made and natural disasters in South-Eastern Europe (IPA). Since 2014, ACPDR has established a renowned AJDA system of damage assessment on state, regional and municipality levels which includes a web application for assessing damage to agriculture.

The Ministry of the Environment and Spatial Planning directs the spatial development in order to minimize the effects of natural disasters, and provides mechanisms of solidarity assistance if such events occur. For example, it provides commissions for earthquake and landslide damage assessment. However, some more efforts need to be put in the spatial planning system to increase the society's resilience to natural hazards as some factors, such as inadequate spatial planning, lack of supervision, insufficient insurance policies as insurance against natural hazards is not obligatory, and a mix of politics and capital influences, lead to legally built buildings in hazardous areas despite laws prohibiting the practice. Despite Slovenia's high susceptibility to various natural processes, to date only a tenth of municipalities have prepared landslide susceptibility maps, even though at least one-fifth of the country is in urgent need of such maps.

### Preparedness for nuclear accident

In the field of **nuclear safety and radiation protection**, the continuity of the harmonization of domestic legislation with international development and best practice, and above all with already established international commitments and standards, was ensured. In 2021, the Protection Strategy in the event of a nuclear and radiological accident was adopted in the Krško Nuclear Power Plant as the largest nuclear facility in the country. In 2021, an extensive safety upgrade program, which was initiated after the Fukushima NPP accident, was completed.

In 2017, an international assessment of preparedness for nuclear and radiological accidents - EPREV (*Emergency Preparedness Review*) was carried out by the International Atomic Energy Agency (IAEA) and with a participation of all relevant stakeholders in Slovenia. Most of the activities in this area were aimed at eliminating identified deficiencies and preparing for the follow-up mission in October 2022, where a significant progress of the state in all areas of the review has been identified. During this period, potassium iodide tablets, which are intended for preliminary distribution in the area of 10 km around the Krško Nuclear Power Plant, were also replaced and extended expiration date of tablets kept in state commodity reserves.

In accordance with the training plan, the Administration of the Republic of Slovenia for Nuclear Safety organized and participated in (international) exercises and carried out technical and substantive training for members of the Group for the management of an extraordinary event, which it supplemented according to perceived gaps and findings at the training sessions of the members of the Group for risk management.

The **Administration of the Republic of Slovenia for Nuclear Safety**, which is in charge of constant data analysis, ensured 24-hour readiness in the event that radiation exceeded alarm levels anywhere in the country. In 2021, it began the renovation of the entire early warning network and procured 59 new measuring probes for monitoring the radioactivity of the environment. In 2019, the Administration of the Republic of Slovenia for Protection and Rescue replaced the old Zare Plus system with a more reliable digital Zare Plus D system, and in 2021, a satellite phone was also installed in the Emergency Preparedness Centre. During this period, a system for transferring data measured by mobile units to a data review application called Radioactivity in the Environment was also established. Regular testing, inspection and servicing of communication equipment was ensured.

### Monitoring and alert systems

In addition to the already listed **observation systems**, the framework of the notification and alarm monitoring system also includes others, such as the remote "Video Kras" camera network under the jurisdiction of the ACPDR. It also includes systems for informing and alerting people, such as the SPIN application for real-time information on interventions and accidents, a public alarm system using sirens and a new platform for informing and alerting residents through various modern communication channels. The system also includes an information and communication network in the field of protection against natural and other disasters, which consists of the ZIR network, the ZARE, DRO DMR and the "Pozivanje" radio networks, which are primarily intended for protection and rescue forces and Civil Protection units and a network of fixed communications in 112 centers, primarily intended for the reception and processing of emergency calls to the single European emergency number 112.

A digital radio network of state authorities DRO-DMR was established. It is part of a single digital radio network built with DMR technology intended for the field of protection and rescue, which, together with the digital radio network of the **Police**, built on TETRA technology, represents a single digital radio network of state bodies in the Republic of Slovenia. The network is primarily intended for emergency medical services, but gradually other services and forces for protection, rescue and assistance will also be included in it.

Activities for the acquisition and renovation of public alarm sirens continued. A platform for informing and alerting people was established, which is an upgrade of the public alarm system. It will enable informing and alerting people through various communication channels. So far, it is possible to send messages through the application for mobile phones, the social network Facebook and e-mail. With this, Slovenia fulfilled the obligation from the European Directive on the European Code of Electronic Communications, which imposed on all member states the obligation to establish this type of service by June 21, 2022.

In one of the first actions of its kind, the Geological Survey of Slovenia has established monitoring in the landslide area above the settlement and the alarm system in Koroška Bela. The settlement with 2100 inhabitants is at hazard of rapid mass movements, as it was established by past geology studies. The action was supported by the ACPDR and the Ministry of Environment and Spatial Planning and increased the safety of local residents.

A service for receiving **emergency calls** from phone applications via the pan-European PEMA network was established. It is the next generation of the NG112 emergency call, which enables, in addition to voice emergency calls, the transmission of many useful data obtained during the call itself. As the first in Europe, the Administration of the Republic of Slovenia for Protection and Rescue established a system for receiving automatic emergency calls eCall. With the construction of the new TETRA network, the operational performance of the police was significantly improved and coverage was ensured in a large part of the country. The TETRA system was built as part of the overall hybrid system of the digital radio network of state authorities.

**Businesses** that potentially threaten the surrounding population with their activities have installed 50 sirens for public alarming, most of which are hydroelectric power stations. In the public alarm system, the transmission of alarm data is also enabled, and this enables the connection of this system to the platform for informing and alerting people.

### Fire prevention measures

Several mountainous, remote and depopulated areas Slovenia face fast land use changes leading to considerable afforestation. In karst regions with lack of surface water and prevailing coniferous forest, wildfire risk increases considerably. In order to ensure the implementation of **fire prevention measures**, the Forestry Institute of Slovenia built 57 km of fire protection cross-sections anew in the period 2016–2021. Maintenance work was carried out to the extent of 1,198 km of sections (with a diameter of 200 km per year), 155 warning signs were placed or maintained fire safety tables (approx. 25 per year).

### **Partnerships**

The Sendai framework is known in **academia** in Slovenia. Slovenia has an active member in the UNDRR E-STAG group and has contributed to the reports on Socioeconomic and Data Challenges ([https://www.preventionweb.net/files/65182\\_estag.pdf](https://www.preventionweb.net/files/65182_estag.pdf)), presented at the EFDRR 2021 in Geneva, and a thematic paper on wildfire aiming to explain some key factors for understanding the risk, reducing it, and avoiding the serious consequences of wildfires that have heavily impacted Europe in recent years (<https://www.undrr.org/publication/european-science-and-technology-group-e-stag-thematic-paper-fire-risk>). Sendai Framework is also known to local communities, some of them have already joined the MCR2030 campaign and some were also members of the Un DRR “My city is getting ready campaign” (Kamnik, Murska Sobota, Logatec, Kobarid and Velenje). The process of integration other local communities in Slovenia will continue in the next period. The national platform for DRR also gathers the members of all the before mentioned groups.

Administration for Civil Protection and Disaster Relief of the Republic of Slovenia has been actively involved in the preparation of 2<sup>nd</sup> Voluntary National Review on the Implementation of the 2030 Agenda Report to the UN High Level Political Forum 2020 on Sustainable Development in the part which addresses a direct linkage between Sendai Framework and Agenda2030.

<https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=1689&menu=3170>

Slovenia is a member of a Disaster Prevention and Preparedness Initiative for SEE Europe, a regional association in southeast Europe. There have already been some ideas to prepare a regional DRR strategy for SEE but nothing concrete has been done so far in this area.

### **Administration of the Republic of Slovenia for Civil Protection and Disaster Relief**



In the field of protection against natural and other disasters in the period 2016-2022, the Republic of Slovenia continued **international activities** within the framework of bilateral agreements on cooperation in the field of protection against natural and other disasters concluded with Austria, Croatia, Hungary and Italy, Czechia, Slovakia, Poland and the Russian Federation as well as Bosnia and Herzegovina, Montenegro, Kosovo, North Macedonia and Serbia. Cooperation with Germany and Sweden, as well as with China and the United States of America, was intense. Regional cooperation took place within the framework of the Disaster Preparedness and Prevention Initiative for South-Eastern Europe and within the framework of macro regional strategies.

ACPDR was involved in joint efforts to strengthen the Union Civil Protection Mechanism as a fundamental basis for effective assistance and response to major disasters and has intensively participated in the revision of Decision no. 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on the Union Civil Protection Mechanism, which took place in 2019 and 2021. In the framework of Slovenia's presidency of the Council of the EU in 2021, Slovenia started to create goals for disaster resilience in the field civil protection. It also strove to speed up the process of joining Albania, Bosnia and Herzegovina and Kosovo to the Union mechanism in the field of civil protection.

Within the framework of the **Union Civil Protection Mechanism** the Republic of Slovenia monitored the renovation of the common information and communication system and worked for improved cross-sectorial cooperation while providing international rescue assistance. Slovenia participated in the education and training program and trained 70 Slovenian experts. It contributed its units and experts to the common set of capabilities and participated in international rescue interventions. In the years 2016-2022, the Republic of Slovenia provided assistance 42 times (note: until 08/2022) in the event of major disasters in the region and beyond (Ukraine due to the consequences of the war, the Republic of North Macedonia due to fires in the natural environment, Nepal, India, Bhutan, more countries of the Western Balkans due to the covid-19 epidemic, etc.). A procedural manual was also prepared for providing rescue assistance in the event of natural and other disasters abroad. Slovenia asked for the assistance 7 times during this period (note: until 08/2022), due to fires in the natural environment and the covid-19 epidemic.

In the area of the emergency number 112 Slovenia actively cooperates with the European Association EENA and has a member in the 112 Club, which brings together experts in this field at the EU level.

As a member of the United Nations (hereinafter: UN), Slovenia participated in the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, INSARAG guidelines and UN conventions in the field of disaster protection. It monitored NATO's activities in the field of resilience to all types of crises and disasters and was involved in the implementation of measures to strengthen civilian resilience to disasters.

In the area of implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, Slovenia established a reporting system in the Sendai Monitor online reporting system and has been regularly reporting to it since 2018. Slovenian representatives actively participated in global and regional events in the aforementioned field. The Geological Institute participates in the International Consortium for Landslides (ICL), within which it strives to implement the Sendai Framework for Disaster Risk Reduction for the period 2015-2030 in the field of landslides in Slovenia and the Adriatic-Balkan region. In 2017, ACPDR participated in the organization and implementation of the 4th World Forum on Landslides in Ljubljana and was the main organizer of the 3rd Regional Symposium on Landslides in the Adriatic Balkan Region in Ljubljana.

In the area of **state reserves** of material assets and equipment for protection, rescue and rescue units, in the past period, Civil Protection units were equipped (mainly units that are in the European pool of units, e.g. for rescue from caves CaveRescue) and units for water pumping (High Capacity pumping). However, we were less successful in upgrading and renewing state reserves of material resources. After the 2015-16 migrant crisis, almost all disaster accommodation funds were released from the State Logistics Centre. The current state of completeness of state commodity reserves is average achievement of target values of individual sets of equipment 65%.

Emergency communications on the **common European emergency number 112** are received by thirteen regional 112 centers, each in their own region. In addition, regional information centers collect and process data on hazards and accidents, inform ministries and other services, and provide dispatching services for all emergency services. They receive over 500,000 calls a year. This number does not include idle and missed calls. In 2020, the transfer of calls and other services between neighboring regional information centers was enabled so that in the event of a failure of one center, the neighboring one can take over its work and thus prevent a longer interruption of receiving emergency calls. An unsolved problem remains a large number of unanswered calls in the event of sudden events or accidents, when the number of calls to 112 increases sharply in a very short time. It will be possible to solve the problem by reorganizing the work of regional 112 centers, by transferring excess calls to neighboring centers or by two-phase call reception. A prerequisite is the renewal of the call reception technology, i.e. the replacement of the current ISDN technology with SIP technology.

In the field of upgrading the **organization and management of major search and rescue missions for missing persons** in cooperation with units for protection, rescue and assistance (rescue dog handlers, Mountain Rescue Service, Cave Rescue Service, firemen), the **Police** started expert consultations on the topic of searching for missing persons. Their purpose was to upgrade the organization and management of major search campaigns of all participating units. Training of police officers and employees of the **Ministry of the Interior** on the system of protection against natural and other disasters, training of newly appointed members of the regional headquarters and the participation of police units in exercises of national, regional and local significance of the system of protection against natural and other disasters was carried out, in accordance with the annual plan of ACPDR and local communities.

Most of the education and training activities for protection and rescue take place at the **Training Center for Protection and Rescue of the Republic of Slovenia in Ig**. As part of the Educational Center for Protection and Rescue, additional units also operate in Logatec, Pekre near Maribor and Sežana. Since 2016, the facility in Logatec, according to the decision of the Government of the RS became an Asylum Branch of the Office of the Republic of Slovenia for the Care and Integration of Migrants and is intended for the temporary accommodation of endangered and affected persons in the event of natural or other major disasters, the reception and accommodation of units from international assistance to the Republic of Slovenia in the event of natural and other major accidents, training for searching for missing persons and rescuing from ruins, for setting up temporary shelters...). The unit in Pekre is intended for practical training of volunteer firefighters in the use of self-contained breathing apparatus, computer science training and other training in the field of fire protection. In the unit in Sežana, operational firefighters are trained to respond to major fires in the natural environment, to extinguish internal fires, as well as specific training for cavers, foresters and firefighters from other countries.

28 education and training programs were newly developed or renovated, so that there are now 110 valid education and training programs. The programs are prepared for different target groups (members of the Civil Protection, civil servants in the field of civil protection, firefighters, members of the Slovenian Army and Police....). 122.340 participants took part in various forms of training in the six-year period (2016-2021), which means a little more than 20,000 per year,

with the majority being firefighters. In order to ensure continuous training of members of the Civil Protection, professional and volunteer firefighters, members of the rescue services, civil servants, lecturers, instructors and other target groups in the field of ZRP, in accordance with the education and training plans in the ICZR, we adapted the training in 2020 and 2021 to the current measures to prevent the spread of the corona virus. The range of remote trainings has been increased. The participation in these two years was lower than the annual average.

The **training of volunteer firefighters** is carried out by the Firefighters' Union of Slovenia according to programs adopted by the competent authorities of the Chamber of Commerce and Industry and programs prescribed by the minister responsible for protection against natural and other disasters. The Firefighter's School within the Training Centre for Protection and Rescue of the Republic of Slovenia, in cooperation with the **Association of Slovenian Professional Firefighters**, conducts training for candidates to obtain the profession of firefighter and other, more demanding training programs for volunteer and professional firefighters prescribed by the Minister (more demanding extinguishing of internal fires, intervention in road tunnels, rescue from heights using rope technique, firefighting training with helicopters, rescue from water...). About 150 external lecturers, instructors and other experts participate in the training.

On the basis of the approved curriculum for the optional **subject Protection against natural and other disasters**, the subject is implemented in primary schools. Another 25 teachers were newly trained following a special training program for elective course providers. There is also an e-classroom available for teachers of the optional subject and a methodological manual in electronic format.

During this period, the Supplemental Training Program for members of rescue and other services and units for action in the event of a nuclear or radiological accident and the Training Program for protection against ionizing radiation for those performing tasks in the event of a nuclear and radiological accident were prepared. In the area of built-in active **fire protection systems**, a new Rulebook on the control of built-in active fire protection systems was adopted (Official Gazette of the RS, No. 53/19). It defines the groups of built-in active fire protection systems that are controlled, the scope of the control, the parties liable in the process control, conditions that must be met by the operator of tests of built-in active fire protection systems and the technical inspector. Further, on it also includes the procedure for obtaining, terminating and revoking authorization to test built-in active fire protection systems, etc.

In order to facilitate the testing of hydrant networks and regular technical control of hydrant networks, the Rulebook on Amendments to the Rulebook on Testing Hydrant Networks was adopted (Official Gazette of the Republic of Slovenia, No. 60/20). In 2020, a new Rulebook on the preparation of fire risk assessments was drawn up (Official Gazette of the Republic of Slovenia No. 180/20), which defines the methodology for the preparation of a fire risk assessment for buildings, which is the starting point for planning general fire protection measures. For persons authorized to implement fire protection measures, 10 consultations were held, at which the methodology and examples of calculations for individual types of buildings, depending on their purpose, were presented.

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In the field of **fire protection**, the Rulebook on Amendments and Supplements to the Rulebook on Fire Protection was issued in 2022 (Official Gazette of the Republic of Slovenia, No. 20/22), which regulated the implementation of fire protection in the event of exposed problems in the field with the cooperation of fire protection providers with fire brigades.

A draft of the **new Fire Protection Act** was prepared, as the development of the profession and normative regulation in various areas that are important from the point of view of fire protection exceeded the framework provided by the Fire Protection Act. The solutions must also be adapted to the actual needs in the field, e.g. meeting the essential fire protection

requirements for maintenance work, planning fire protection measures, determining the responsibilities and obligations of building owners. Considering the situation regarding the provision of sufficient quantities of water for firefighting, the law does not bring significant changes, nor does it bring new systemic solutions in the field of fire investigation. With the preparation of the draft of the new Fire Protection Act, proposals for amendments and additions to the regulations governing the testing of the hydrant network, training in the field of fire protection, implementation of fire protection measures, etc. will also be submitted for consideration.

In the field of **spatial planning**, the Administration of the Republic of Slovenia for Protection and Rescue is the body responsible for spatial regulation, which, by issuing guidelines and opinions in the field of protection against natural and other disasters and fire protection, participates in the preparation of national, regional and municipal spatial acts. ACPDR also participated in the preparation of the Resolution on the Spatial Development Strategy of Slovenia 2050 and the Maritime Spatial Plan. Records of considered applications for the issuance of guidelines and opinions: in 2016, 414 applications were considered, in 2017 461 applications, in 2018 the number of applications increased to 557, in 2019 the number fell to 418 applications, in 2020 409 applications were considered and in 2021 573 applications, which is the most ever.

The Administration of the Republic of Slovenia for Civil Protection and Disaster Relief has **implemented 48 projects in the period 2016 to 2022**, of which 36 European projects, 1 project from the National program for protection against natural and other disasters and 11 development and research projects.

The implemented development and research projects, in which the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief and other stakeholders in the system of protection against natural and other disaster have participated, followed the fundamental goal by contributing to:

**Upgrades of the information and communication system, projects:**

- POTROG - Upgrading the system for determining earthquake risk and response for the needs of protection and rescue
- MASPREM - Upgrade of the notification and warning system in the event of triggering landslides
- BARRAGES - Upgrade of the study of the effective use of protective water barrages in case of pollution of inland waters
- Alpdiris - Upgrade and development of a modern information solution for managing and monitoring interventions
- SMAZIR - Analysis of emergency events by collecting metadata with capabilities for analysis by scanning threatened and affected areas, inclusion of a meta-data system and geo-located spatial data for display in a geographic information system
- I\_HeERO - Study and pilot deployment of a new eCall service for vehicles and heavy trucks (transportation of dangerous substances)
- SFFWS - Flood Forecasting and Warning System in the Sava Basin
- FRISCO1 - upgrade of the system for early warning against floods in the cross-border basins of the Mura, Drava, Sotle, Bregana, Kolpa and Dragonje.

- **Improving efficiency and responsiveness to modern threat sources, projects:**
  - ICS - Creation of a comprehensive disaster response management model for all levels of management in the field of protection, rescue and assistance in the Republic of Slovenia
  - TAFF - Preparation of operational procedures and guidelines for response to the consequences of heavy rainfall and torrential rain
  - SIQUAKE2020 - preparation and implementation of various events (workshops and exercises) to increase the preparedness and response capacity of the ZRP system in the event of a major earthquake in central Slovenia at the national, regional, EU and international levels.
  - CROSSRISK - improved safety of people and protection of infrastructure against the risks of extreme precipitation and snow cover
  - CROSSIT SAFER – improved safety of people against the risks of fires and earthquakes in the border area with Italy
  - International projects aimed at improving the response to accidents/events with a threat to public health (National Institute for Public Health).

**Supplementing the organization, equipment and training of rescue units at the state level and for participation in the Union Civil Protection Mechanism. Examples of projects:**

- CaveSAR - Adaptation project of the cave rescue service unit for operation in international rescue interventions
- HCP – Increasing the operational capacity of units for pumping larger amounts of water

**The projects also contributed to the realization of other fundamental goals, namely:**

- implementation of measures and activities to improve general disaster preparedness
- multipurpose use of various technical and other means and equipment
- updating training programs, preparing new programs
- improving international cooperation, preferably with neighboring countries and key EU member states and as development aid to the countries of the Western Balkans
- the establishment of an effective coordination mechanism for Slovenia's participation in international rescue operations and assistance to other countries, within the **Union Civil Protection Mechanism** and the UN disaster response system.

**The development and research tasks covered the following topics defined in the Slovenian DRR Strategy 2016-2022:**

- updating the protection and rescue information system and its connectivity with information providers and users (POTROG, MASPREM, BARAŽE);
- introduction of new technologies and upgrading of current ones for data access and data exchange (MASPREM, POTROG)
- development of methods for assessing the level of threat (MASPREM, POTROG, BARAŽE);
- ensure effective handling and action in case of contamination of inland waters with dangerous substances (DAMAGES);

- preparation of online portals with content through which residents will be able to access information related to natural and other disasters (POTROG);
- maintenance of applications that were prepared within development and research tasks (POTROG, MASPREM).

### **Ministry of Environment and Spatial Planning – Water Directorate**

Partnerships and initiatives were developed through the implementation of bilateral and international projects in the field of water management and flood risk reduction. The importance of cross-border and international cooperation is also demonstrated in the implementation of bilateral international agreements relating to water management, activities within the International Sava Basin Commission (ISRBC) and activities within the International Commission for the Protection of the Danube River (ICPDR) and activities in within the working groups at the level of the European Commission. Activities take place within the framework of the implementation of international agreements, through bilateral water management commissions and working groups at sub-regional (ISRBC) and regional (ICPDR) levels.

### **Ministry of Environment and Spatial Planning – Slovenian Nuclear Safety Administration**

At the international level, cooperation with the IAEA is important in the field of preparedness for nuclear and radiological accidents. It is also important to cooperate with other countries on the basis of international agreements and to be a member of many international associations where information is exchanged.

As an example, we can cite participation in the ENRAS project, in which Croatia is also involved. The project develops cross-border services in the field of ensuring security (Civil Protection) in the event of a nuclear or radiological accident. The common challenge of the program area is how to ensure properly coordinated and safe joint interventions in the event of such disasters.

At the national level, cooperation both horizontally between different sectors and vertically is also important.

### **Ministry of the Environment and Spatial Planning – Slovenian Environment Agency (SEA)**

Within the framework of the DriDanube transnational project, the Danube Drought Management Strategy was prepared. Its aim is to change reactive drought management into proactive or from the direction of action after a drought event in the sense of compensation for damage to the preventive action of damage reduction already before and during a drought event, which requires, among other things, appropriate institutional organization and good communication and clear protocols of Who?, When, How?. Possible transfer and adaptation to the national level. During the DriDanube project, SEA organized several national workshops, dialogues on the topic of better drought management with key stakeholders, institutions involved in drought management: Administration for Civil Protection and Disaster Relief of the Republic of Slovenia, Ministry of Environment and Spatial Planning, Ministry of Agriculture, Forestry and Food, Chamber of Agriculture with Institutes, including NGOs, some utility companies or waterworks, some municipalities and some major agricultural producers. The results of the discussions are included in the aforementioned Strategy.

Cooperation in the framework of:

- United Nations Convention to Combat Desertification (UNCCD - United Nations Convention to Combat Desertification)

- World Meteorological Organization - Integrated Drought Management Program (WHO - Integrated Drought Management Programme)

- Drought Management Center for Southeastern Europe (DMCSEE - Drought Management Center for SouthEastern Europe)

The **Ministry of the Interior** participates in the work of the National Coordination Body, led by the Administration for Civil Protection and Disaster Relief and interdepartmental groups, which monitors the implementation of risk assessments and assessment of disaster risk management capabilities.

In the past period, the **Ministry of Agriculture, Forestry and Food and the Agency for Agricultural Markets and Rural Development** encountered an increasingly frequent occurrence of natural disasters: frost in 2016, 2017, 2021, annual hail storms, drought in 2017.

The following activities were carried out to reduce the risks and, as a result, the resulting damage:

- new tools for risk management (possibility of establishing a mutual fund, financial instruments,...)

- raising the awareness of farmers and forest owners about the importance of risk management through education, training and the transfer of knowledge and good practices by the state, and above all by advisory services to farmers,

- active integration of farmers and forest owners in purchasing, selling and other business activities, which, despite encouragement from the state, has still not taken off among Slovenian farmers,

- more accurate collection and monitoring of data on cultivation/production, especially for the purpose of assessing the success of the implementation of measures and, last but not least, planning of new measures.

In doing so, they are facing the announcement of the withdrawal of insurance products (frost insurance) by insurance companies due to the increasingly frequent occurrence of natural disasters in agriculture.

### **Ministry of Health**

According to European legislation and the International Health Regulations, all countries are obliged to establish a system of interdisciplinary response to various public health risks. The International Health Regulations (IHR) (IHR, 2005) is a legally binding document of the World Health Organization for all signatory members of this document. Each signatory country is obliged to report any event or risk of biological, chemical, environmental or nuclear origin that may have an international impact and pose a threat to public health within 24 hours of detection of the event. The purpose of the MZP is to prevent, protect, monitor and implement public health measures in the event of a biological, chemical, environmental or nuclear threat with the possibility of cross-border spread of the risk. Slovenia is a signatory to the agreement on the implementation and observance of the International Health Regulations.

In Slovenia a National NKT contact point (24/7) has been appointed at the National Institute of Public Health, which enables continuous availability and reception and transmission of information to the WHO. NIJZ also has the NKT for the European information network EWRS, which is under the jurisdiction of the European Commission and, according to the Commission

Decision from 2013 (1082/2013), mandates the reporting of all types of cross-border risks, similar to the Ministry of Health.

Despite the covid-19 pandemic, state bodies and other organizations for ensuring **nuclear and radiation safety** and physical protection were active in the associations and institutions of WENRA, ENSRA, HERCA and also in their working groups. They also participated in the consultative committee of the Euratom - Fission research program and monitored the work of the committee of the European Instrument for International Cooperation in the Field of Nuclear Safety. Due to the pandemic, cooperation also took place in the form of virtual meetings, which have their advantages and disadvantages.

The **Ministry of Foreign Affairs**, as the national coordinator of international development cooperation and humanitarian aid of the Republic of Slovenia, has continued its work in the field of international cooperation, also in connection with the reduction of disaster risks. Accordingly, in 2016, within the framework of the World Humanitarian Summit, a commitment was made that Slovenia would allocate 10% of its humanitarian aid in the form of preventive action and disaster risk reduction. The mentioned area is also included in the Resolution on international development cooperation and humanitarian assistance (adopted by the Parliament of the Republic of Slovenia, 2017), which activities to reduce vulnerability and risk of crises, preventive action and strengthening resilience (the priority content area of these activities is ensuring security of supply, in particular children, with drinking water and safe, sufficient and adequate food), defines it as one of the three areas of humanitarian aid. In addition, the Strategy for International Development Cooperation and Humanitarian Aid of the Republic of Slovenia (adopted by the Government of the Republic of Slovenia, 2018) stipulates that Slovenia will allocate at least 10% of its humanitarian aid to the field of preventive action.

Slovenia regularly achieved the aforementioned goal until 2019 (in 2019, it provided 11.6% of its humanitarian assistance for this purpose). In 2020, due to the high proportion of aid that was intended to deal with Covid-19, the goal was not reached, nor, according to preliminary data, in 2021 either (6% of humanitarian aid was provided for this purpose in 2021) .

In the period 2018-2021, a total of EUR 915,000 was provided for preventive action activities. Before 2018, there was no separate data collection for the area of preventive action; data for 2022 is not yet available.

The Ministry of Foreign Affairs is supporting project implementation in the field of DRR and building resilience in developing countries, with the inclusion of private sector. There are two projects in Uganda, one just successfully completed and one under way, addressing the needs of refugees in the field of food security, while private sector is one of co-financers and implementing partners of the project.

### **Ministry of Environment and Spatial Planning – Water Directorate**

In 2015, a Flood Risk Assessment was prepared, which was prepared on the basis of analyzes from an upgraded, updated and supplemented preliminary flood risk assessment. It was prepared for two risk scenarios, taking into account that it threatens or affects human health, the environment, cultural heritage, economic activities) and sensitive objects. In 2016, the Risk Assessment was upgraded with the impact of climate change (an analysis of the impact of climate change on changing the flood risk level was carried out).

The most prominent project is certainly the cooperation between the Association of Geographers of Slovenia, Slovenian Environmental Agency, and Ministry of Environment and Spatial Planning with the installation of high water markers in the areas of river flooding, torrents and karst fields. The campaign has been running since 2014. As part of the campaign, more than 60 signs were installed in five years, with over 700 participants participating. SEA



also systematically maintains a database of high water marks, and in 2019, a display of records of high water marks was established on the Environmental Atlas, which is visible to the general public. The campaign has been running since 2014 and will continue in the future.

### **Ministry of Environment and Spatial Planning – Slovenian Nuclear Safety Administration**

In recent years, there has been a greater emphasis on risk monitoring and a more in-depth view of risk assessment. During this period, the Administration for Civil Protection and Disaster Relief Administration prepared guidelines and detailed explanations regarding the assessment of risks and the ability to manage them. During this period, the Slovenian Nuclear Safety Administration updated the Risk Assessment for Nuclear and Radiological Accidents in Slovenia and issued the first edition of the Risk Management Assessment for Nuclear and Radiological Accidents in Slovenia. The risk assessment for nuclear and radiological accidents in Slovenia envisages ten different accidents with corresponding risk scenarios. For each predicted accident, the possible impacts are worked out, which in the event of an accident would necessarily have to be dealt with cross sectorial, as they interfere with different areas of management. These are:

- impacts on people
- economic and environmental impacts and impacts on cultural heritage,
- political and social influences and
- geographical distribution of risk.

As a participating body, the Slovenian Nuclear Safety Administration also participates in the process of preparing and updating risk assessments and planning documents at the operator of critical infrastructure in the environmental protection sector. In the field of critical infrastructure, the state took a systematic approach to risk assessment, the line ministry offered managers, ministries and participating bodies lectures, meetings, international aspects and support in risk assessment and management. Risk assessments are regularly and systematically reviewed at least once a year or upon major changes.

Pursuant to the Regulation on the Implementation of the Decision on the Union Civil Protection Mechanism, the Ministry of Infrastructure carries out activities in the field of disaster risk assessment and disaster risk management capability assessment (aeronautical and railway accidents and maritime accidents).

The Ministry of the **Environment and Space – the Agency of the Republic of Slovenia for the Environment and Space** in the field of drought implements:

- Improving drought monitoring as a foundation for improving drought management to reduce damage:
- Preparation and selection of indicators for all types of drought - agricultural and hydrological drought of surface and underground waters (Measure in NUV II)
- Continuous weekly monitoring of drought conditions in Slovenia, as well as a cartographic and graphic display and description of the state of all types of droughts in 15 regions in Slovenia - Sušomer tool
- Further development and research in the field of drought indicators in the framework of transnational projects - inclusion of other supporting indicators, including those based on model and satellite data
- Improved early warning (weekly throughout the year)

**Basic activities of the hydrometeorological service Slovenian Environmental Agency (SEA) and international cooperation – an overview for the period 2015-2022 in the area of floods and extraordinary meteorological phenomena (storms, downpours, hail, strong winds, heavy snowfall and icing).**

The Environmental Agency of the Republic of Slovenia conducts or leads research into meteorological, hydrological, oceanographic and seismological phenomena and develops measuring, analytical and prognostic techniques and methods, while also connecting with foreign research organizations and providers of similar services in other countries. The constant provision and exchange of information about natural phenomena is carried out with the aim of generally useful activities, especially protection against natural and other disasters.

As part of international cooperation, SEA also ensures the fulfilment of obligations from international agreements in the field of meteorological, hydrological, oceanographic and seismological observation, forecasting, information and other data exchanges.

Based on bilateral agreements, SEA and the hydro meteorological services of neighbouring countries exchange hydrological and meteorological data in real time as input data to their own hydrological models. This ensures that each institution has better coverage of the border area with measured data, which is necessary for quality model results. The international exchange also includes mediation or exchange of meteorological and hydrological warnings, forecasts of extraordinary operation of hydroelectric power plants or forecasts of extraordinary emptying of hydroelectric power plant reservoirs and professional numerical forecasts and their interpretation.

**The Ministry of Environment and Spatial Planning – Surveying and Mapping Authority**

regularly forwards all its data to both the European Commission and the UN for the needs of action in the event of natural disasters and for the prevention of natural disaster risks (topographic data, spatial units, building cadastre, digital orthophoto plans, etc.).

The **Ministry of Labour, Family, Social Affairs and Equal Opportunities** pursues the sustainable goals of the UN in an integrated manner through the Action Plan for the Implementation of the EU Pillar of Social Rights. From the point of view of disaster support, the Ministry cooperated with the competent directorate for social affairs as a member of the interdepartmental working group for the preparation of Guidelines for the planning, training and implementation of psychosocial assistance during disasters. In the field of social security, it is also an established right that an individual or family who finds themselves in a situation of material danger or if extraordinary expenses related to subsistence arise that cannot be covered by their own income or the income of his family can apply for extraordinary cash social assistance at the social work center. He can also claim extraordinary cash social assistance when it comes to expenses incurred because of a natural disaster (earthquake, flood, fire, natural disaster) or force majeure (epidemic).

The **Ministry of Economic Development and Technology**, in accordance with the Act on Elimination of the Consequences of Natural Disasters, is responsible for the elimination of damage in the economy (to machinery and equipment, stocks and loss of income). Therefore, in the event of natural disasters (which are defined in Act on Elimination of Consequences of

Natural Disasters), they prepare an estimate of the damage to the economy (which is forwarded to ACPDR). To the extent that financial resources are provided activities are carried out to eliminate damage in the economy for those natural disasters that are defined in the Act on Elimination of Consequences of Natural Disasters, such as; in the event of a fire this year, it is not defined as a natural disaster, so the Ministry of the Environment and Spatial Planning must prepare the appropriate legal basis for this (intervention law or a systemic solution by amending the Act on Elimination of Consequences of Natural Disasters).

In addition to what is stated at the **Ministry of Economic Development and Technology**, in accordance with the Regulation on the content and creation of protection and rescue plans, we produce activity plans as supplements to the protection and rescue plan, with which we ensure the implementation of activities that are the responsibility of the MGRT during and after an accident. With them, we determine the measures and tasks and the carriers for their implementation, the organization of their operation and the way of implementing the measures and tasks with the aim of reducing the consequences of the accident on the implementation of activities, or ensuring that the implementation of activities is as little disturbed or limited as possible.

### 3. Contextual Shifts

#### Contextual Shifts 2015–2022

In the field of risk management, the biggest challenge is climate change and the disasters caused by it. Climate change affects virtually all other natural and social systems as slight changes in initial conditions attributable to climate change lead to unexpected and larger impacts or completely altered the sequence of events in already frequent extreme natural disasters. Also in Slovenia in recent years higher atmospheric temperature and a decrease in precipitation led to greater severity of droughts and heat waves. Severe droughts lead to large wildfires, while greater intensity of wind and rain caused flash floods and landslides. There has also been a gradual, cascading linkage of previously unrelated processes, the so-called domino effect, and new linkages between social, technological, and natural processes leading to the so-called Natech phenomena and systemic accidents.

Recently, Slovenia faced several high-intensity events which were highly unlikely based on the magnitude of past events. For example, high precipitation and urban flooding with extreme intensity affected central Slovenia and Prekmurje in September 2021. In Ljubljana, a downpour with an intensity of 94 mm/h was measured. In late January 2021, unusually warm weather allowed rainfall at higher elevations with previously high snowpack and triggered large-scale avalanches that caused traffic problems. The forest fire in the Karst in July 2022 and the sleet in January 2014 had extensive and nation-wide complex systemic consequences, as they affected not only traffic, but and the entire operation of society and critical infrastructure. Such phenomena can lead to cascading events associated with barriers; in Slovenia, among the 47 barriers analyzed, the risk is very high in three, and medium to high in 22. As future climate and disaster risks can no longer be predicted based on historical data and assumptions alone, a re-assessment of the situation is needed.

Likewise, due to the deterioration of the security situation in Europe and the world, the radiological risk has also increased, and epidemics or pandemics. Cyber-attacks are certainly one of the new risks. The existing mechanisms and activities, which are otherwise used in risk management, were a good basis for the formulation of measures and activities during the COVID-19 epidemic.

The deepening of the climate crisis has definitely an impact on the implementation of the Sendai Framework along with other already mentioned risks.

#### Ministry Perspectives

#### **Ministry of the Environment and Spatial Planning - Directorate for the Environment**

Regarding the management of the risks of accidents with dangerous substances, there were no extraordinary events resulting from the changed conditions due to COVID. However, a dedicated meeting was held with managers of plants with a greater risk to the environment, which addressed the challenges of ensuring safe operation during the pandemic. Risks are increasing, as are the costs of managing and addressing natural disasters and extreme weather events due to the effects of climate change, so it will be necessary to strengthen activities for the implementation of the Sendai Framework.

#### **Ministry of Environment and Space - Slovenian Nuclear Safety Administration**

The new risk was perceived both by us, at the level of the Nuclear Safety Authority, as well as e.g. Krško nuclear power plant. At the Slovenian Nuclear Safety Administration, we adopted the internal organizational procedure OP 1.32 "Operation of URSJV in exceptional circumstances" and included these aspects in the implementation of the emergency preparedness process. Both of us (URSJV and NEK) were successful, because we operated smoothly even in these exceptional circumstances.

#### **Ministry of the Environment and Spatial Planning - Agency of the Republic of Slovenia for the Environment**

The drought risk assessment was carried out in coordination and in accordance with the instructions of the ACPDR and in accordance with decision no. 1313/2013/EU of the European Parliament and of the Council on the European Union Civil Protection Mechanism. Two versions were prepared, namely the basic version (2015) and the updated version with climate change estimates (2017). The assessment focuses on the consequences of drought in agriculture, for which financial data for drought episodes in the last 15 years are also collected in the AJDA system, and as a result, a quantitative risk analysis is possible by linking return periods and the degree of consequences. In 2019, the assessment was supplemented with an assessment of the ability to manage risk in cooperation with the sector responsible for natural disasters of the MKGP.

#### **Projected Shifts 2022 - 2030**

#### Ministry Perspectives

The **Ministry of Agriculture, Forestry and Food and the Agency for Agricultural Markets and Rural Development** recognizes the emerging risks due to the rising prices of energy products, fertilizers and basic raw materials.

**Ministry of the Environment and Spatial Planning - Water Directorate:** in the field of water management, adaptation due to climate change and proactive drought management (Strategy, linking monitoring to action) and determination of the priority of water use interdisciplinary will be necessary.

During the Covid-19 pandemic, the **Ministry of the Environment and Space - the Slovenian Nuclear Safety Administration** focused attention on risks in (re)organization, i.e. adaptation

of current conditions and reinforcements. At URSJV, analyses and guidelines for operation in variable conditions were prepared. Given the current security situation related to the war in Ukraine, it will be necessary to pay more attention to new or increased risks.

**Ministry of the Interior:** The international security environment is changing - e.g. the war in Ukraine (indirectly) resulted in the uncertainty of the general supply of essential goods, the management of migration, risk of a nuclear accident with cross-border impact...

### Sendai Framework and the SDGs

The implementation of Sendai Framework is strongly interlinked with the implementation of the Agenda 2030 and the sustainable development goals. In Slovenia, SDGs are integrated in the **Slovenian Development Strategy 2020-2030**.

Slovenia plans to achieve the following 12 Slovenia's development goals, fulfilment of which will also contribute to the implementation of Sendai Framework:

- Goal 1: Healthy and active life
- Goal 2: Knowledge and skills for a high quality of life and work
- Goal 3: Decent life for all
- Goal 4: Culture and language as main factors of national identity
- Goal 5: Economic stability
- Goal 6: Competitive and socially responsible entrepreneurial and research sector
- Goal 7: Inclusive labour market and high-quality jobs
- Goal 8: Low-carbon circular economy
- Goal 9: Sustainable natural resource management
- Goal 10: Trustworthy legal system
- Goal 11: Safe and globally responsible Slovenia
- Goal 12: Effective governance and high-quality public service

In Slovenian Development Strategy 2020-2030 within the Goal No. **11: Safe and globally responsible Slovenia**, it is emphasized: The strengthening of connections with local communities and direct contacts with citizens are significant components in the prevention of security events with harmful consequences.

Based on the **Slovenian Development Strategy 2020-2030** Slovenia's future development will be strongly dependent on its ability to respond and adapt to global trends and challenges. The trends indicate profound changes, particularly in demographics, pressures on ecosystems, and competition for global resources and economic development. Cooperation and connectedness at the global, European and national level, as well as cross-border cooperation, are therefore becoming increasingly important.

The current paradigm of economic growth in combination with the growing global population, particularly in developing countries, and the resulting growing number of consumers with changed consumption habits increases the environmental load. In some places we have already exceeded the planet's capacity, and therefore global competition for resources is also increasing. Pressures on the harmonisation of interests in cross-cutting areas with respect to individual natural resources (water – food – energy – ecosystems) and in the area of the ownership of and access to natural resources are constantly increasing. All of this increases the probability of continued tensions in various parts of the world. From this perspective, achieving the goals of the Paris Climate Agreement is very important.

Slovenia also has excellent natural features, coastal and sea resources and a high level of biodiversity, but due to the inappropriate use of natural resources (particularly in the areas of

urbanisation, farming and water management) the status of the preservation of species and their ecosystems is deteriorating.

Target 9 from the Slovenian Development Strategy 2020-2030 aims at **Sustainable natural resources management**. Ecosystems and their services are crucial to the survival, health and quality of life of present and future generations. Natural resources are the basis of economic development, offer opportunities for new investment and employment, and improve the standard of living and quality of life. As with other types of resources, the increasing or decreasing of the value of natural resources increases or decreases the long-term social benefits or costs. In the last 50 years, due to increased demand for food, water, wood, fibres, minerals, land and fuels, we have changed ecosystems faster and more profoundly than in any other comparable period of human history.

The sustainable protection and planned use of natural resources are critical to the longterm preservation of the quantity and quality of our natural resources, which are one of the key pillars of ensuring a healthy living environment and food production, and carrying out economic activities with high value added and creating high-quality jobs. Among the greatest challenges is the harmonisation of the various legitimate but conflicting interests of individual groups of stakeholders. Furthermore, both the national and global perspectives apply to the sustainable management of natural resources. Slovenia has a wealth of certain natural resources, but despite this it is dependent on imports, and therefore it is also responsible for their effective management outside of its borders.

High-quality natural resources are also essential to ensuring a high level of in-country supply of high-quality food and water, which are strategic goods. In Slovenia, we are facing a longterm decline in the production of various food categories, which increases our vulnerability. Furthermore, agricultural productivity is also heavily dependent on natural conditions, which in recent years has caused production fluctuations and resulting fluctuations in in-country supply. Our dependence will be all the greater due to the negative effect of climate change on food-production systems and the fact that the amount of arable land in Slovenia is decreasing, and also due to urbanisation. In addition to the fact that the agricultural system is dependent on natural resources, farming can also have negative impacts on the environment

We will achieve this goal by:

- a) introducing an ecosystem-based approach to the management of natural resources and by moving past the sectoral way of thinking, among other ways through the timely harmonisation of national and cross-border interests in cross-cutting areas with regard to water – food – energy – ecosystems, which will also have to change and adapt in the future due to the consequences of climate change;
- b) effectively managing surface water and groundwater, coastal and maritime resources, and achieving their good status;
- c) ensuring the sustainable development of forests as ecosystems from the perspective of their ecological, economic and social functions; Slovenia's development goals 41
- d) preventing excessive pollution of all components of the environment;
- e) preserving a high level of biodiversity and quality of natural features and strengthening ecosystem services;
- f) sustainably managing soil and preserving soil ecosystem services, preventing further soil degradation and rehabilitating degraded soil;

g) sustainably protecting and preserving high-quality farmland and promoting agricultural practices in order to increase in-country supply with local sustainable supply, particularly the production of organic foods, which have a positive impact on human health;

h) providing a high-quality living environment along with responsible and effective land use management, priority use of functionally degraded areas, on the basis of harmonised priority and counterbalancing tasks, including in the light of more harmonised regional development;

i) creating management systems at all levels in order to provide the most effective adaptation to climate changes and the optimal exploitation of the resulting opportunities

## 4. Prospective assessment and recommendations

### Understanding

**The Ministry of Agriculture, Forestry and Food and the Agency for Agricultural Markets and Rural Development** plan to raise farmers' awareness of the need for risk management and timely action and adaptation to climate change and in the effective transfer of knowledge and innovative risk management approaches (production and processing technology). The Ministry also proposes broader awareness raising, information and education campaigns.

The **Ministry of the Environment and Spatial Planning – The Environment Agency** of the Republic of Slovenia proposes: Integration of satellite data into monitoring, improvement of early warning, forecasts, Improvement of cross-sectoral cooperation at local and national level and integrated management of water resources (droughts, floods).

**Ministry of the Environment and Spatial Planning – Directorate for Water:** Integration of new knowledge, dissemination and consumption of good practices, products developed in the context of projects, development projects, innovation, methodologies, clear instructions, the same approaches.

Ministry of the **Environment and Spatial Planning - Slovenian Nuclear Safety Administration** : Organisation of (international) lectures and workshops on understanding the concept of risks, types and complexity of risks, how to analyse risks, assess risks. In practice, risk is repeatedly confused with the concept of threat.

### **Ministry of the Environment and Spatial Planning – Environment Agency of the Republic of Slovenia:**

NUV III: In the debate, the preparation of measures linking drought monitoring to sectorial action (measures not yet defined)

- Possible transfer and adaptation of the Strategy for drought management in the Danube region to the national level, to the Slovenian situation – there is currently no legal obligation for this step. According to the water directive, drought management is a recommendation for EU countries.

- In practice, the need for a protocol for proactive management of the ai post (link monitoring to action), which is not included in the current Slovenian legislation.

- The number and strength of the drought of the drought is increasing, so over time the need to prioritize water use will be cross-cutting.

- The risk assessment may be updated every few years if necessary. This could be due to climate scenario renewal, for example

## Governance

Slovenia will continue to follow the needs of the changing world that we live in and will continue to adopt the legislation accordingly. As already mentioned the new DRR Strategy for Slovenia 2023-2030 is in preparation. Active participation in all national and international levels will continue, among which we would like to emphasize Slovenian cooperation in the Union Civil Protection Mechanism and UN DRR. A national platform for DRR will continue with its work gathering all important stakeholders, among which governmental bodies, civil-society, local communities representatives, academia, business and media.

### Local and Inclusive Governance

Local people's knowledge of the risks in their local environment has always been highly valued and used. Representatives of local communities actively participate in the preparation and changes of legislation and other activities and other activities on the topic of disaster risk reduction at the national level, mainly through their three already mentioned associations.

Women's and youth empowerment and leadership in disaster risk reduction should be promoted in parallel to their empowerment in other sectors. A holistic approach to the women's and youth empowerment in all area of the society should be used.

The International Atomic Energy Agency (IAEA) is for example also focusing on the increased involvement of women in the field of nuclear safety, which is increasingly drawing attention to women's involvement and participation in this area.

**The Ministry of Interior** suggests a systemic approach by the state to address these issues would be crucial; at present, the matter is dispersed between the state and critical infrastructure operators and operators. The latter is a huge requirement in several areas that do not have common criteria.

Ministry of the **Environment and Spatial Planning - Slovenian Environment Agency** stresses the need for a necessary legal basis for systematically integrating risks into decisions. Cross-sectorial cooperation is also useful, as in the case of the preparation of risk assessments led to the ACPDR .

Ministry of **Environment and Spatial Planning - The Slovenian Nuclear Safety Administration** proposes to unify the system for all countries, as there is a perceived inconsistency between countries already in terms of the critical infrastructure sectors, which raises a number of questions.

## Financing

In Slovenia according to the law annual plans for DRR investments are made cross-sectorial with a plan for DRR investments coordinated by Administration for Civil protection and Disaster Relief.

### Planned investments in DRR in 2023 and 2024 (to be confirmed and adopted)

Year	Amount in EUR
2023	106.820.387
2024	92.950.183



The significant increase of the investments in DRR for the years 2023 and 2024 is due to additional budget from the Cohesion funds and from the EU Recovery and resilience plan. The main target will be to address the climate-related risks in all phases of DRR cycle.

Investing in disaster risk reduction should be seen also as a business opportunity as well as a contribution to the society and humanity as a whole. Business and industry are already aware of the importance of the investment in DRR, also from the point of view of the safety and security of their business process.

The international support has been already available in the past period and could be surely used and strengthened in the future. In Slovenia as a relatively small country there one of the problems is also the availability of enough human resources to conduct a certain task.

## **Preparedness**

It is necessary to define as clearly as possible tasks and responsibilities on the horizontal (sectoral- state authorities) and vertical lines (level - local, regional, state, transnational level), for standby time and for the duration of the response in the case of nuclear and radiological disasters.

In the field of the work cycle of the **Slovenian Nuclear Safety Administration** , the Government shall appoint an inter-service commission on a proposal from the Minister responsible for protection against natural and other disasters and the Minister responsible for the environment and spatial planning. The Commission is set up to monitor the implementation, planning, coordination and evaluation of the national plan. The members are representatives of ministries, representative of the Slovenian Army, representative of the Posavje region municipalities and representative of the Krško Nuclear Power Plant.

However, the basic document defining the responsibilities and responsibilities of all actors involved in the event of a nuclear or radiological accident is the Nuclear or Radiological Accident Protection and Rescue Plan. All actors define planning and preparation tasks and response tasks. As a general rule, each authority shall also ensure that its equipment and other resources are regularly inspected for use in the event of an accident or other incident. The documents shall be amended in this respect period, and may also be subject to compliance with new requirements, needs and circumstances. In the field of nuclear and radiological disasters, national regulation is also adapted to international guidelines, recommendations and requirements.

## **Partnerships**

**Ministry of environment and spatial planning - Environment Directorate:** According to the IPCC's findings, the most reduction of future extreme weather events and the risks of natural disasters would reduce greenhouse gas emissions, and in this context implement the Paris Agreement as fully as intended. This will increase resistance the most after 2030.