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GIURGIU COUNTY COUNCIL

SUMMARY

**"Joint strategy for intervention and preventive action
against forest fires in the Giurgiu-Ruse area",
within the project
" Partnership for Overcoming the Disasters for a safe
region ",
project code ROBG-427, financed by
INTERREG V-A RO-BG program**

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**BENEFICIARY:
GIURGIU COUNTY**

**ELABORATED BY:
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THE PREAMBLE

This summary was extracted from a strategy that establishes harmonized integrated tools for the prevention of risk management in case of forest fires, which should be in accordance with the specific objective 3 of the project, "S.O. 3 - Development of a common mechanism for forest fire interventions in the area of cross-border cooperation Giurgiu - Ruse". This strategy is the result of a perfect collaboration of all five partners who developed all these activities together. The competences of all five partners from Romania and Bulgaria, related to public administration, research and education, disaster prevention and management, non-governmental organizations, were used in a collaboration that has already proven to be particularly effective since the project's preparation stage.

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1. PARTNERS IN THE FRAMEWORK OF THE PROJECT AND AUTHORITIES WITH ATTRIBUTIONS IN THE FIELD

1.1. Partners in the project

This strategy is the result of a collaboration of the five partners involved in the project who developed the related activities together. The competences of all five partners from Romania and Bulgaria, related to public administration, research and education, disaster prevention and management, non-governmental organizations, were used in a collaboration that has already proven to be particularly effective since the project's preparation stage.

Partners involved:

- Giurgiu County
- Bulgarian Red Cross (CRB)
- Red Cross Giurgiu Branch
- University of Ruse "Angel Kanchev"
- Business and Innovation Cluster Ruse+ (inactive partner)

The project was developed starting from the current state of the connections between Giurgiu County and Ruse district at the cross-border level. These relationships were constantly strengthened due to several projects implemented in partnership that developed a common database for institutions specialized in interventions in emergency situations (the Giurgiu Emergency Situations Inspectorate and the Ruse Civil Protection and Fire Department), but they did not establish common procedures and a common intervention strategy. Also, in the case of forest fires, no study, no assessment, and no common means of prevention have been established yet. Thus, the need for better cooperation between the relevant authorities in Romania and Bulgaria was identified to improve forecast accuracy, preparedness, and the ability to intervene in a coordinated manner.

1.2. Authorities with responsibilities in the field

The following institutions and bodies, involved in the management of fire risks and emergency situations, have been identified:

A. Romania

- MINISTRY OF INTERNAL AFFAIRS
- General Inspectorate for Emergency Situations
- County Inspectorates for Emergency Situations
- Structures of the Romanian Police
- Structures of the Romanian Gendarmerie
- General Aviation Inspectorate
- National Directorate of Forests - ROMSILVA (forest areas of state), and the Forest Guard (control of forestry areas),
- MINISTRY OF NATIONAL DEFENSE
- MINISTRY OF HEALTH



- National Meteorological Administration
- Giurgiu County, Local Authorities

B. Bulgaria

- Council of Ministers
- The Disaster Risk Reduction Council within the Council of Ministers
- General Directorate of Fire Safety and Civil Protection
- Ruse district governor
- City mayor

2. ASSESSMENT OF VULNERABILITIES AND DANGERS THAT MAY BE GENERATED BY FOREST FIRES IN THE GIURGIU - RUSSIAN CROSS-BORDER COOPERATION AREA. ANALYSIS OF THE EXISTING SITUATION AND IDENTIFICATION OF THE MAIN DEFICIENCIES

2.1. Fire types and causes

A forest fire is an uncontrollable fire that destroys large areas of land. Fires are usually caused by lightning, human negligence, or intentional actions.

Forest fires can be classified as follows:

- a) Coronation fires
- b) Litter fires
- c) Fires under the foliage blanket (underground)
- d) Knockdown fires
- e) Combined fires - under the blanket of foliage (underground), litter and canopy

The main causes that can lead to forest fires are:

- a) Natural:
 - lightning;
 - self-ignition (underground peat fires);
- b) Accidental:
 - electric arcs at medium and high voltage networks, produced during periods of strong wind;
 - the electric arcs produced when the collectors of the electric locomotives contact the contact network;
 - sparks produced by vehicle breakdowns or fires;
 - malfunctions of the installations and means used in the exploitation or maintenance of forests;
 - malfunctions or errors in the economic processes that use fire in the forest area for different purposes (grill production, etc.);
 - tracer, incendiary or lighting munitions that reach the forest area as a result of firing in ranges, during dry periods, etc.;
- c) Negligence:
 - setting fire in the forest, for various purposes, without complying with the rules of fire prevention:
 - sanitization of pastures, stubble or areas from which the woody mass was exploited



- using open fire and the propagation of fires in the forest floor;
- randomly thrown cigarettes;
 - lanterns, fireworks and firecrackers used for recreational purposes, etc.;
- d) Intentional action.

2.2. Damage caused by forest fires

Regarding the importance of the damage, we must say that, through its effects, the forest fire is a factor of destruction both for people and their activities and for the environment.

In short, the consequences of forest fires show that the negative effects are multiple:

1. Ecological:

- deforestation and soil erosion;
- changing the water flow, disrupting the heat and water balance of the ecosystems;
- destruction of unique habitats of rare, protected and endemic species, limitation of biological diversity;
- deterioration of the sanitary condition of forests;
- reduction of CO₂ absorption capacity.

The damage in terms of biodiversity loss and soil erosion is practically irreversible.

2. Economic:

- waste of forest resources after many years of investment - loss of wood. It is found that a percentage of approximately 68% of conifer fires and 15% of hardwood forest fires are peak, permanently damaging forests and thus requiring artificial regeneration;
- the additional allocation of funds to limit harmful consequences;
- reduction of land productivity and deterioration of growing conditions;
- decrease in income.

3. Social:

- deterioration of the microclimate and economic activity conditions;
- disruption and reduction of the recreational value of the landscape, the decline of tourist businesses.

3. COMPLETE BILINGUAL INVENTORY OF THE AREAS THAT MAY BE AFFECTED BY FOREST FIRES IN THE GIURGIU-RUSE CROSS-BORDER COOPERATION AREA

3.1. Giurgiu County

According to the statistical data provided by the Giurgiu County Statistics Directorate, the forest occupies an area of 37905 ha. The forest areas consisting of forests and other lands with forest vegetation is mostly administered by four forest districts (Bolintin, Comana, Ghimpați, Giurgiu), the rest being administered by other agents: the Autonomous Roads and Bridges Authority, the National Society CFR, military units and private individuals.

The most vulnerable areas to fires are:

- Balaria Forest, Ghimpați Forest, in the territory of which there are oil wells, some in operation, others in conservation;



- Rusii lui Asan Forest, Bolintin Vale Forest, which is crossed by high-voltage electric lines and the Bucharest-Pitesti highway.

At the level of Giurgiu County, in the last 10 years, a number of twenty-one forest fires were recorded, affecting an area of approximately 30.24 ha. From the total of these fires, a number of six fires that affected an area of 18.6 ha were located in the cross-border cooperation area Giurgiu - Ruse (UTA Slobozia, UAT Gogoşari, UAT Giurgiu).

3.2. Ruse District

The total forest territory of the Ruse district is 75,441 ha, and the forested proportion of the forest territories is 70,737 ha, with a forest cover of 25.24% of the district surface. By category, forest territories are divided into coniferous species - 5.33%, hardwood forest - 88.43% and non-forested areas - 6.24%. Areas of class I fire danger represent 6.0% of the total forest territory.

Analyzing the situation of fires in the Ruse region over a period of seven years (2014 ÷ 2018), it can be seen that, percentage-wise, the fires that occurred are mainly concentrated in the following industries developed in the region: "Residential-community and household service" - 46, 8%, "Forestry and agriculture" - 23.6% and "Manufacturing industry" - 3.2%. As it can be seen from the data above, the second in percentage is the "Forestry and agriculture" branch.

4. GIS MAP WITH THE INVENTORY OF AREAS THAT MAY BE AFFECTED BY FOREST FIRES

GIS is a system used to create, store, analyze and process spatially distributed information using computers. Specific to a geographic information system is the way the managed information is organized, thus there are two types of information: one graphic, which indicates the spatial distribution of the studied elements, and another in the form of a database to store the attributes associated with these elements. The information are managed in the form of layers so that selecting and overlaying the data is done easily, thus helping in easy interpretation of the data.

The University of Ruse "Angel Kanchev", based on the research and mapping activities of the Giurgiu-Ruse area within the project, developed a complete inventory of the areas that can be affected by forest fires in the cross-border cooperation area Giurgiu - Ruse. These data were introduced by the University of Ruse "Angel Kanchev" into the GIS system for forest fire modeling (Geographic Information System for Forest fire modeling), thus using the laboratory equipped for this purpose within the project.

5. MANAGEMENT OF EMERGENCY SITUATIONS AT THE LEVEL OF THE CROSS-BORDER REGION GIURGIU - RUSE

Based on the JOINT PROCEDURE REGARDING THE MANAGEMENT OF EMERGENCY SITUATIONS PRODUCED IN THE ROMANIAN-BULGARIAN CROSS-BORDER AREA signed by the two states on 19.03.2013, the present strategy includes the following work procedure for



the management of joint interventions for emergency situations at the level of the Giurgiu-Ruse cross-border region.

No.	Activity	Responsible	Deadline
1.	Receiving the notification about the occurrence of an emergency on the territory of the partner state.	IGSU / DGPPC	
2.	Early warning of the forces and means provided for in the Intervention Common Plan.	IGSU / DGPPC	Upon receipt of the notice
3.	Request for additional information.	IGSU / DGPPC	When required
4.	Request for support.	Applicant	When required
5.	Analyzing the possibility of granting support. Confirmation of the granting of support and communication of the forces that can be available, in relation to the operational situation recorded at the national level.	IGSU / DGPPC	Up to 60 minutes after receiving the notification
6.	The logistical preparation of the mission.	ISUJ / DRPPC	Right after receiving approval
7.	Informing the competent authorities about crossing the state border for intervention actions / missions in the partner state, according to the Procedure for crossing the state border in emergency situations.	ISUJ / DGPPC	Immediately after receiving approval
8.	Transmission of the mission order to subordinate structures.	IGSU / DGPPC	Up to 30 minutes after the pre-alert
9.	Movement of forces and means and crossing the state border.	ISUJ / DRPPC	Up to 60 minutes from early warning
10.	Receiving the mission and communication availability regarding execution.	The commander of the intervention detachment	Upon arrival at the venue intervention/base of operations
11.	Making available the arrived forces in support of the necessary accessories execution of the mission and ensuring the compatibility of the equipment intervention (e.g. portable hydrants, reductions, etc.).	The commander of the intervention	Upon arrival at the venue Intervention / base of operations



12.	Ensuring the means of communication, according to the Common Procedure regarding the provision of communications in emergency situations.	The commander of the intervention	Upon arrival at the venue Intervention / base of operations
13.	Execution of entrusted missions, according to own intervention procedures.	The commander of the intervention detachment	During the mission
14.	The request for additional forces and means in support.	The commander of the intervention detachment	When required
15.	Completion of the intervention and preparation of the mission report.	The commander of the intervention detachment	Upon completion of the mission
16.	Movement of forces and means in the base of operations.	The commander of the intervention detachment	Upon completion of the mission / order of the intervention commander
17.	Ensuring the reserve of forces and means to replace the resources in the area, in the case of long-term intervention actions.	The commander of the intervention detachment	When required
18.	Transmission of the mission report to the action commander, through the liaison officer.	Liaison officer / Commander of the intervention detachment	At the completion of the mission or periodically during the mission
19.	Transmission of mission reports to the National Operational Center.	Liaison officer / Commander of the intervention detachment	At the completion of the mission or periodically during the mission
20.	Restoring the operational capacity.	The commander of the intervention detachment	Upon completion of the mission
21.	Information on the availability of execution of a new intervention.	The commander of the intervention detachment	Immediately
22.	Termination of the mission at the request of the host country or upon receipt of the mission termination order.	The commander of the intervention detachment	Upon request / order receipt



6. EUROPEAN OBJECTIVES AND NATIONAL OBJECTIVES FOR THE CREATION OF A COMMON INFRASTRUCTURE FOR INTERVENTION IN FOREST FIRES WITHIN THE GIURGIU - RUSSIA CROSS-BORDER REGION

Between 2007 and 2019, 30% of all requests for assistance through the EU Civil Protection Mechanism were in response to wildfires or forest fires. The European Union Civil Protection Mechanism coordinates pan-European assistance and ensures that all EU Member States and Mechanism participating States receive timely information in times of crisis and emergency. Upon its activation by any country worldwide, the Mechanism ensures rapid deployment of existing resources and personnel customized to fit everyone's emergency needs. The center monitors forest fire risks and emergency situations in Europe, supported by national and European monitoring services - one such body being The European Forest Fire Information System - EFFIS. Every year, at the start of the forest fire season, the Center engages with the national authorities of the EU Member States and participating states to exchange information on the state of prevention, preparedness and response activities and maintains close contact with the national authorities throughout the fire season forestry.

7. PROPOSED PRIORITIES, MEASURES AND INDICATIVE ACTIONS FOR EFFICIENT COOPERATION AND STRATEGIC OBJECTIVES FOR THE NEXT PERIOD

From the point of view of prevention, it must be considered that trees naturally have a very long-life cycle, depending on the species. When it comes to monocultures or semi-natural forests, which represent the largest share of forest in the Giurgiu - Ruse cross-border area, most of the problems and complexities of today's forest planning depend on the choices made in the past. For the same reason, the choices made today will be decisive for the future. Whether for the existing forest or for future forest management, forest management has a crucial importance on the vulnerability of a forest to wildfires. Thus, when developing forest management plans, this must be considered.

Ideally, the tree species chosen for planting should be best adapted to present and future climate conditions. In general, if site conditions permit, hardwood species tend to be more fire resistant. Moreover, by interspersing species, they tend to be less vulnerable to wildfires compared to single-age forests and mono-species forests, because these configurations are more complex and the structure can slow the spread of fire through the different wildfire behavior of different species.

Considering the objectives of the project, the following indicative activities are proposed regarding the improvement of forest fire risk management:

- Including the issue of protection against forest fires and other natural calamities in the development strategy of potentially affected communities;
- Carrying out risk-specific protection works;
- Optimizing the activities of the structures that ensure the performance of protection activities in relation to the identified risk;
- Development of research in the field;



- Training the population regarding the rules of behavior in case of emergency situations (floods, heavy snowfalls, fires);
- Exercises and the application of plans with forces and means of intervention;
- Training of decision-making factors;
- Conclusion of comprehensive agreements on humanitarian assistance in case of risk between localities that have concluded twinning agreements;
- Creation and updating of a computerized database regarding the risks of floods, snow, fires and the real capacities of the intervention structures;
- Testing of standardized operating procedures.
- Proposal for the use of the single database for risk management for better coordination and effective response, created by the project ROBG 417 RISK REGISTRY.

Examples of good practice that can be replicated at the level of the cross-border cooperation area Giurgiu - Ruse

FORFIREX 2019 - the first national simulation exercise in Romania - can be considered an example of good practice. More than five hundred firefighters, foresters and employees of institutions with attributions in the management of forest fires participated in the period 23-27 September 2019, in the national exercise "ForFirEx 2019", held in several mountain areas in the counties of Caraş-Severin and Hunedoara (Poiana Mărului and Lunca Cernii). The exercise began on Monday, September 23, when several outbreaks of litter fires were recorded amid the prolonged drought. The scenario included a large-scale situation in which the intervention capabilities available in Caraş-Severin and Hunedoara counties are exceeded. For the management of the event, the on-site supplementing of resources from neighboring counties and the establishment of operational coordination points in the affected areas were disposed. The situations in which the rescuers and the authorities were placed were among the most complex, requiring integrated intervention to organize the air-ground intervention in difficult areas, the creation of extinguishing devices with several motor pumps to transport water in hard-to-reach areas, the supply of tanks with the help of helicopters, as well as the rescue of missing or lost people in hard-to-reach areas. Logistical support camps were also created to ensure the accommodation and feeding of the forces deployed in the area, and evacuation actions and accommodation of local residents from areas possibly affected by fires were simulated. During the exercise were used firefighting vehicles with high capacity, ambulances, camps and mobile hospitals, accessories for release, uncovering and removal of trees or other obstacles, helicopters, drones, special vehicles and 4x4 cars, search-rescue dogs, as well as other specialized equipment.



8. Bibliography:

- *DECISION NO. 1313/2013/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013 on a Union civil protection mechanism*
- *IFRC - DISASTER RISK MANAGEMENT POLICY FROM PREVENTION TO RESPONSE AND RECOVERY*
- *EC Directorate-General for Environment - Land-based wildfire prevention - Principles and experiences on managing landscapes, forests and woodlands for safety and resilience in Europe*
- *The national response concept in case of forest fires - Romania*
- *The documents (WP) developed within the project*
- *JOINT PROCEDURE REGARDING THE MANAGEMENT OF EMERGENCY SITUATIONS PRODUCED IN THE ROMANIAN-BULGARIAN CROSS-BORDER AREA initialed by the two states on 19.03.2013*



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