



Risk assessment in the event of massive forest fires

Fire - definition and classification of fires

Fire - uncontrolled combustion in space and time associated with a threat of property, life and health, arises from thunderstorms, intentionally or breach of technological discipline at the premises of wood, textile, chemical, etc. Industry, working with synthetic fibers, rubber products, dyes, explosive, flammable and combustible materials, emitting highly toxic substances.

Typical of forest fires is rapid growth in large areas of turbulence and transfer of sparks over long distances and the formation of new outbreaks that creates a real threat to the life of the teams participating in the Firefighting activities, and animals as well. Combustion products is highly polluting. Most likely areas for forest fires are plantations of Class I fire hazard. These are mainly coniferous plantations and deciduous trees growing on very dry and dry soils.

Fires occur for various reasons and can not be predicted, causing significant losses of material values, environmental pollution, and often die, and people.

Fires can be divided into several groups according to the sectors in which they arise, namely:

- fires in residential and public buildings with a mass of people reside;
- fires in industrial facilities;
- fires in facilities for the production and storage of petroleum products and other chemicals;
- fires in objects of transport - airport facilities, major railway junctions;
- fires in forest and field arrays.

Risk Identification

The forests in the Municipality of Stara Zagora, are divided according to the degree of fire risk into three classes:

(the same scale is used on the regional level analysis)

The first class of high fire danger are assigned departments with a total area of 72.0 ha (5.9%)





The second grade with an average fire risk are assigned departments with a total area of 569.3 ha (46.2%).

The Third grade with low fire hazard are assigned departments with a total area of 590.6 ha (47.9%).

The majority of forests with high and medium fire risk due to the large proportion of dry and very dry habitats and concentration of coniferous plantations on land in a certain area.

Territory

The forest area in Stara Zagora is 169,288 hectares, which is located on the territory of 11 municipalities. It includes forests and lands on the southern slopes of Central Stara Planina, Sredna Gora northwestern spurs of the Sakar Mountain, Chirpan Heights and single scattered forest complexes in the plane. The landscape is very varied - flat, low mountainous and rugged mountain. The altitude of the region varies from 105 m at the Maritsa River to 2276 m at Mount Triglav in Stara Planina.

Forests in high-risk class 1 / coniferous forests / holding area 86,205 ha, representing 50.25% of the entire forest. The greatest likelihood of forest fires in the municipality of Kazanlak, Gurkovo, Maglizh of, Nikolaevo, Pavel Banya, Galabovo, Bratya Daskalovi and Stara Zagora.

Arable land in high-risk occupy 1.1 million acres, the most extensive in the Municipalities of Stara Zagora, Chirpan and Radnevo.

Danger of contamination of the environment and the health of the population creates random burning of stubble.

Sources causing forest fires

Sources of heat, which could be possible causes of fires in forest areas are railways, landfills, vehicles and agricultural equipment Testing plowing and reaping.

As another factor may be considered: tourists, hunters, fishermen, indigenous peoples, herders of cattle farming.

Uncultivated lands round covered with dry grass, which is flammable and poses a grave danger to the emergence and spread of fires.

Risk Analysis

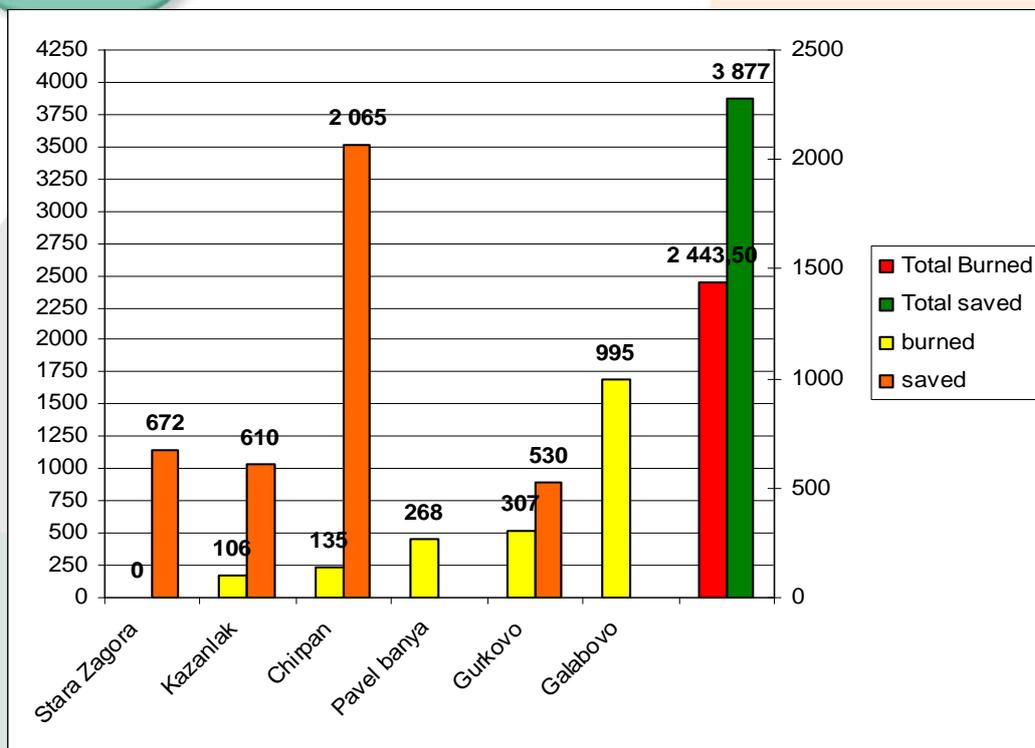
The analysis of the causes of forest fires in recent years shows that the main cause is carelessness, negligence and breach of basic fire safety rules of working in close proximity to forests citizens. It is believed that the fire is the best tool for cleaning the fields and meadows of dry vegetation and debris.



In recent years in the SFE - Stara Zagora collapsed fires and ignitions. This is due to the increased security of the employees in the woods.

Forest Fires 2010- 2012

№	Forest fires	Period of 2010 - 2012	
		Burned (da)	Saved (da)
1.	Stara Zagora	632.5	672
2.	Kazanlak	106	610
3.	Chirpan	135	2 065
4.	Pavel banya	268	
5.	Gurkovo	307	530
6.	Galabovo	995	
	Total burned	2 443.5	
	Total saved		3 877



Risk Evaluation

The region of Stara Zagora is threatened by forest fires. This will increase with the expected climate change. Particularly vulnerable are coniferous trees planted on natural habitats of deciduous forests with different dominant species of oak and hornbeam on the southern slopes .

MEASURES TO PREVENT OR REDUCE THE RISK OF FIRE

- Mapping of endangered plants using a standard classification;
- Development of a risk scale;
- Regulating the fuel using mechanical cutters for clearing the forest;
- Improving diversity in endangered areas;
- Improving fire resistance of crops / hallways, break crops, pruning /;
- Restoration of old and new fire zones;
- Treatment to prevent possible development of fires;
- Improving access to fire: recovering roads/ trails for fire trucks
- Research, analysis, evaluation and prediction of the risk of massive forest and field fires;



- Planning of eventual safety measures in case forest and field fires

PROTECTION OF POPULATION

- Warning population;
- Rescue operations;
- Medical assistance in emergency situations;
- Providing information about the damages caused by forest fire to the local population;
- Providing training of the forces authorized to react in case of forest fire and the population as well;
- Search and rescue operations;
- Providing food, water, clothing and heating materials to people in need;

