Forest fires in Hungary

2016.

(Reported by: National Food Chain Safety Office, Forestry Directorate)
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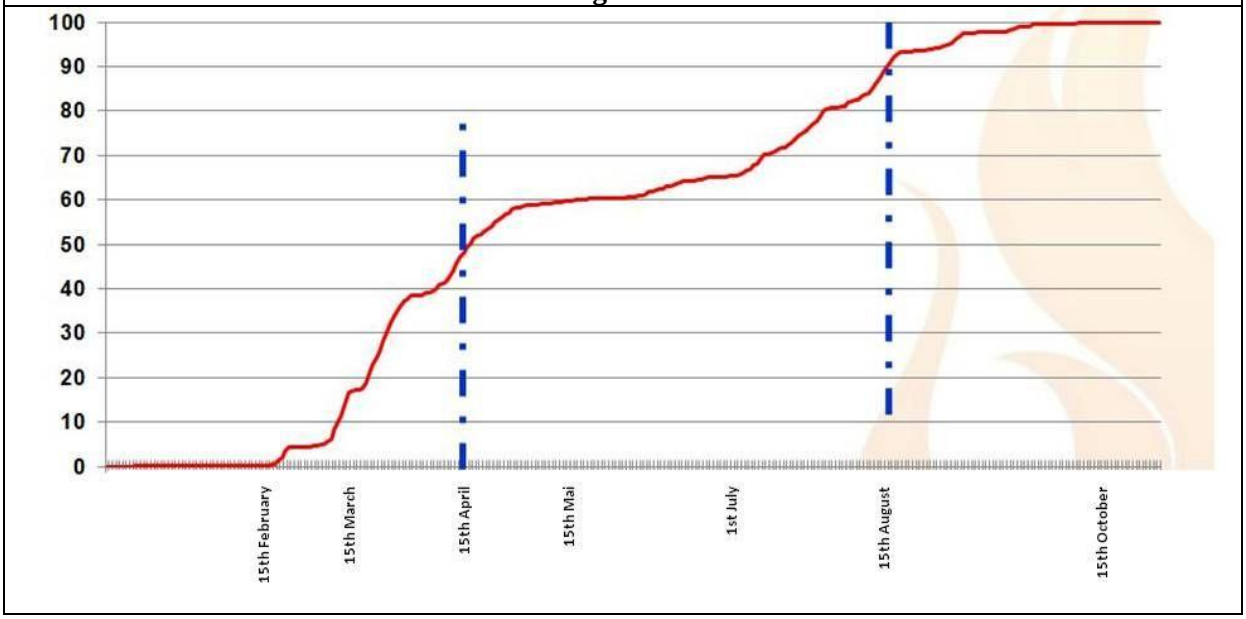
Fire danger in 2016 fire season

FWI derived data and values were reported throughout the whole fire season by Forestry Directorate (FD). FD has been using JRC's data service to monitor the daily fire danger situation.

Fire danger was low at beginning of the 2016 fire season. Compared to previous years precipitation was abundant than usual. Start of agricultural activities was delayed to end of March due to cold and wet conditions. Spring was characterised by low average seasonal temperature with high rainfall level and reduced level of agricultural burning activity. Cummulative fires count shows the tendencies experienced in latest years that one of most endangered forest fire period starts in mid of March every year. (figure 1.)

Figure 1.



Despite an uneven distribution of precipitation over the summer months, the average precipitation was higher than mean annual trend. Due to moderate level of fire danger there were only some short days when the FWI values reached the "extreme" level in summer. A fire ban was ordered in sandy area in the pine forest stands of Great Hungarian Plain. It took for a short time only 8 days.

Fire occurrences and affected surfaces

Forest fires data are collected in a strong cooperation with disaster management authority. Data collected on the spot by fire fighters are uploaded to the database weekly and if needed it can be done day-to-day. Forest fires data are prepared and analysed with a GIS method and checked on the spot by forest authority.

Gathered fire data are processed and evaluated by size, date, cause, duration of fires and they are compared with traditions in forest management processes and behaviour of visitors and hikers in forest land area.

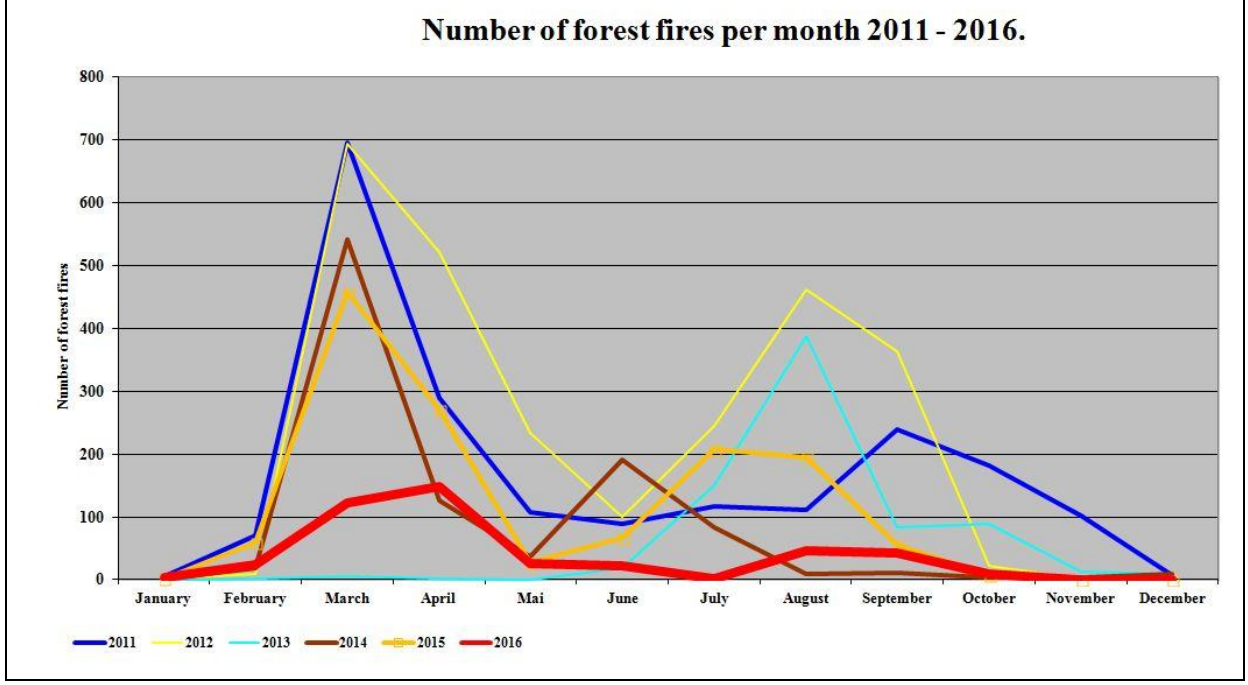
Table 1.				
Year	**Number of wildfires**	**Forest fires in Hungary**		**Wildfires in other land**
		Number of fires	Total burned area (ha)	Number of fires
2011	8.436	2.021	8.055	6415
2012	21.581	2.657	14.115	18.924
2013	4.602	761	1.955	3.841
2014	5.783	1.042	4.454	4.741
2015	5.318	1.069	4.730	4.249
2016	**2.677**	**452**	**974**	**2.225**

974 hectares were affected by 452 forest fires in Hungary in 2016. Compared with 1069 fire events in 2015 and 2657 fire events in 2012 it shows positive trend over several years.

The reasons can be found in climate extremities and active communication on forest fires in our FIRELIFE project. We have been focusing on direct communication with those target groups which can be involved more deeply through personal contact.

Figure 2. represents the tendencies experienced in latest years that there are two most endangered forest fire periods during every year.

Figure 2.

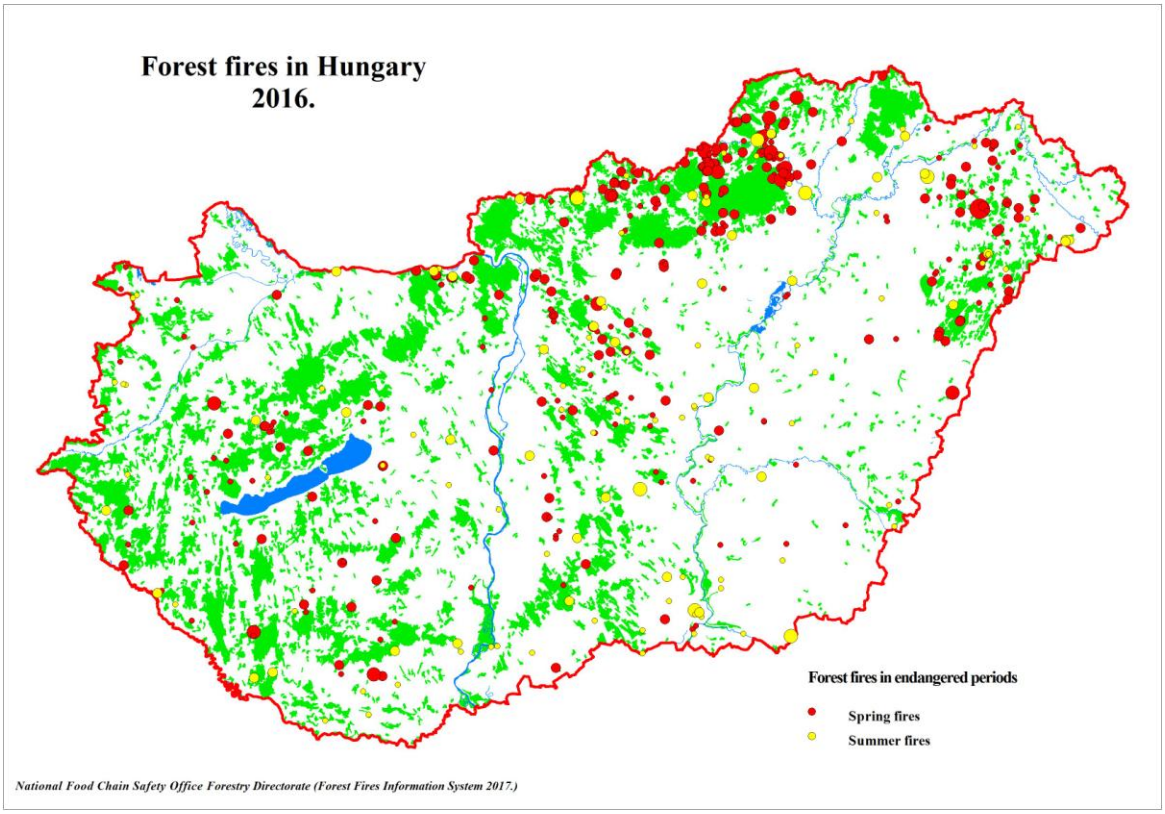


"Traditional" grassland use includes burning methods in early spring, which can accidentally spread to nearby forest. These fires usually burn between February and April, after snow-break. Though burning has lost its importance by these days, it prevails as a traditional early spring grassland management method. Negligently lighted and unattended grass land fire may spread forest lands nearby. Vegetation is not green yet in this period of the year, and in addition a great amount of dry leaves and dry herbs is located on the ground, that can easily burn in flames.

Spring vegetation fires usually burn with low or medium intensity in broadleaf forests, juvenile growths, shrubs and grasslands. Fire totally or partially consumes forests and causes serious harms. 40 % of spring fires burn in northern areas (Borsod-Abaúj-Zemplén County, Heves County, Nógrád County) which indicates these areas as high forest fire danger zones. In these areas not only traditional grassland management methods, but other social-economic factors add to forest fire danger. Unlike spring fires, summer fires usually burn in the Great Hungarian Plain.

Map 1. shows places of forest fires in Hungary in endangered periods of the year.

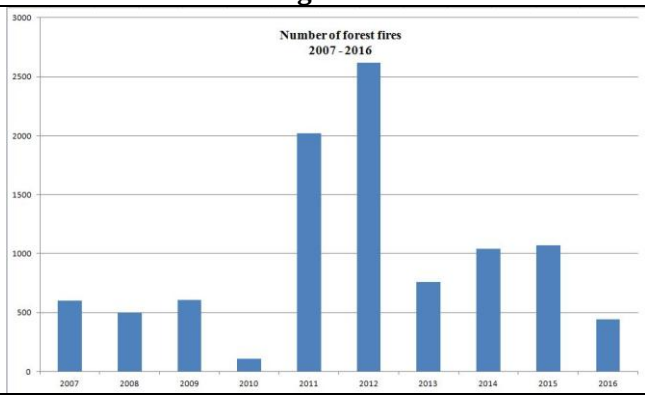
Map 1.

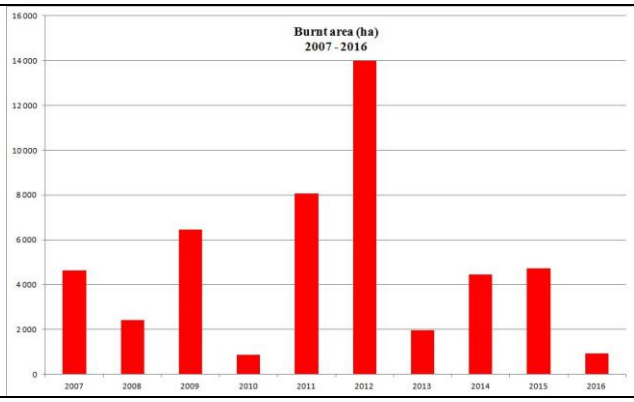


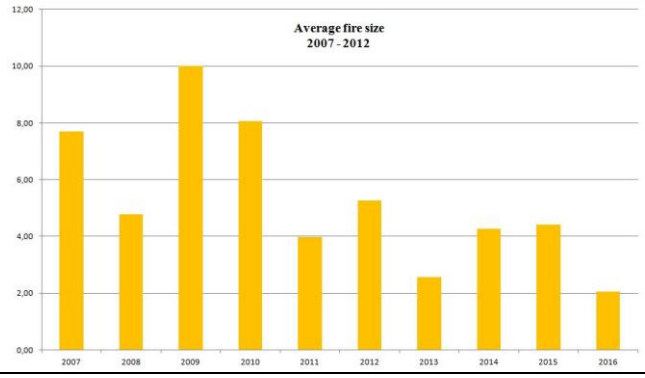
All of forest fires were surface fires in 2016 fire season, when surface litter and other dead vegetal parts and smaller shrubs burnt down. There was no large fire. The average rate of fires smaller than 1 hectare is almost 50 %. Small fires are usually low intensity surface fires where dry grass and small twigs are burning. The average total burnt area was 2,2 hectares in 2016, which is smaller than in previous years. In 2016 there were only one fire event when more than 50 hectares were burnt.

The yearly trends in terms of number of fires and burnt areas during last 10 years are shown in Figure 2.

Figure 2.







99 % of forest fires are human induced (negligence or arson). Most fires are induced by (adults' and infants') negligence and only a small proportion of fires are caused by arsonists. Typical forest fire causes are the incorrectly extinguished fires of hikers, and the illicit agricultural fires, throwing cigarette butt and sometimes slash burning.

Analyzing the statistics we can see that total of 218 hectares of forest land were burned or affected by fire during 2016. In addition, more than 489 hectares of grass vegetation and 267 hectares of other wooded land were destroyed in forest fires. (Table 3.)

Table 3.

Burnt fuel types in forest fires	Total burnt area (ha)
Forested land	218

Other wooded land	267
Other land	489
Total:	974

Fire fighting means

Fires were usually extinguished in less than an hour after alarming. Fire service arrived to fire in 30 minutes in average. Small fires are extinguished within half an hour.

There were no casualties among fire fighters and civilian people during fire fighting in 2016. Fire service equipment was not heavily damaged. No death or personal injury occured during fire fighting last year. Neither Fire Service nor Forest Authority served mutual assistance last year.

Fire prevention activities and fire information campaign

There is a cooperation agreement between Fire Service and Forest Authority. National Fire Prevention Committee established by the government has been monitoring all fire prevention activities. Forest fire prevention activities are implemented by forest authority in the frame of a FIRELIFE project. Our project (duration 2014-2018) started in 2014 which was the first one in Hungary and won the support of LIFE "information and communication" programme.

The aim of the project to enhance effective, proactive and continuous forest fire prevention activity in Hungary. As 99% of forest fires are human caused in our country, targeted and on time communication can effectively cut the number of forest fires. The active communication on forest fires attracts greater media which can significantly help to reach the aims of the project. The key goal of the project is to disseminate useful and adequate information to the public on forest fire prevention. Our strategy includes two main fields: communication campaigns using PR, marketing tools and trainings.

Every items of communication campaigns helped in reaches upper goals through 2016:

- our participation in countrywide and regional information events with FIRELIFE adventure course, reaching the target groups of children,wilder public,farmers, hobby gardeners andsmokers;
- contact with the media through workshops, press releases, with the help of publishing articles in the relevant offline media in order to reach the people on country and on regional level as well;
- direct communication with those target groups which can be involved more deeply through personal contact, for example the farmstead owners and hikers;
- online information transfer and campaigns with the help of our website,our and NÉBIH Facebook profile ;
- The printing services and outsourcing of outdoor tables were realized in 2016. 1930 tables were completed in different sizes and types. Most of them were allocated to national parks, zoos, state forestry, private forest owners and farmers.
- 112.000 pieces information (A1 placards, A5/LA4 leaflets, publications) have been produced in 2016. This quantity were dealt out to specified targetgroups. In 2017, reinstatement will be required.
- Two publications were made for the target group of children furthermore; 15.000 pieces of storybook and 11.500 pieces of sticker booklet, which were sent for students and kindergarten children.
- Building of professional and mutually beneficial cooperations with professional organizations and enterprises, through which we can reach our target group: Forestry and Hunting Associations, National Directorate General for Disaster Management, Educational Research Institute, Decathlon Hungary, STIHL Group, Hungarian Scout Association.

  FIRELIFE project website: www.erdotuz.hu