



Hot and Dry Spring and Summer 2011: Wildland Fires in the UNECE Region

An interim review of forest fires and other wildland fire events in 2011 in the UNECE region by the Global Fire Monitoring Center (GFMC) – published on behalf of the UNECE/FAO Team of Specialists on Forest Fire¹ and the UNISDR Global Wildland Fire Network²

Introductory Note

Since 2008 the GFMC is systematically collecting data for compiling and publication of Annual Global Wildland Fatalities Reports. These reports are primarily based on evaluation of online publications by the media and by reports received from correspondents of the Global Wildland Fire Network. These reports may not provide a complete global picture of deadly fatalities or injuries of firefighters, military or civilians. There is still a lack of information on widespread fatalities and injuries in developing countries. However, the reports are serving as a first attempt for setting up and collating global statistics, which would allow identifying hotspots and trends.

The latest report published by GFMC on 31 July 2011 is covering the year 2010 in which 278 people were killed by wildland fires (2008: 345 fatalities; 2009: 374).³ The report shows, however, that indirect effects of wildland fires may exceed the number of fatalities and injuries directly attributed to wildfires. The severe fire episode in the Western Russia in July-August 2010 revealed the threats of extreme air pollution combined with extreme heat on human health and premature mortality. According to official government sources about 56,000 more people died in Russia in July-August 2010 as compared to the two months in 2009. In August 2010 Moscow's Health Department reported that deaths had nearly doubled in the city to about 700 a day. Although concrete statistical data are lacking it is very likely that the combination of both the unprecedented heat wave and the severe smoke pollution are responsible for this death toll.

In addition to the fatalities reports the GFMC is processing global information on wildland fires that are considered to significantly affect ecosystems, environment and society. Starting with 2011 the GFMC is also adding information on fire damages on selected assets, e.g. homes, infrastructures, livestock, croplands, etc. burned.

Together with the traditional and advanced scientific knowledge on the natural role of fire, and the benign use of fire in ecosystem management, GFMC provides a portal of information for decision makers in fire management, and policy makers, including the UNECE member states.

Wildfires in the UNECE Region in 2011

The 2011 fire season started early in some regions of North America and Eurasia. Between the beginning of the year up to July 2011 dry spells with high meteorological fire danger created conditions for extended wildfires or single extreme fire events all over the UNECE region between the Western Provinces of Canada and the Far East of the Russian Federation.

¹ <http://www.fire.uni-freiburg.de/intro/team.html>

² <http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html>

³ http://www.fire.uni-freiburg.de/media/bulletin_news.htm



International Forest Fire News (IFFN) is an activity of the UNECE/FAO Team of Specialists on Forest Fire and the Global Fire Monitoring Center (GFMC). IFFN is published on behalf of UNECE Timber Committee and the FAO European Forestry Commission and is serving the UN-ISDR Global Wildland Fire Network (GWFN). Since June 2005 the IFFN/ GFMC Bulletin is providing short news and global fire update information to members of Regional Wildland Fire Networks and partners. GFMC Website: <http://www.fire.uni-freiburg.de>
Website of archive of the Bulletin: http://www.fire.uni-freiburg.de/media/bulletin_news.htm

North America

Dry late winter and spring conditions in parts of the USA saw massive grass fires starting a few days after the beginning of the New Year. Most severely hit by was the State of Texas where wildfires successively consumed large areas of grasslands, forests and other lands all over the last seven months. Currently Texas is battling its worst fire season in state history. Texas Forest Service and local firefighters have responded to 16,368 fires that have burned a record-setting 3,438,910 acres (1,391,677 ha) since fire season began on 15 November 2010. Six of the state's 10 largest wildfires occurred in April 2011. Currently, all but six of the state's 254 counties have burn bans. More than 2,300 structures, including 601 homes, have been lost.

In Southern Georgia the Okefenokee National Wildlife Refuge and the Okefenokee Swamp are currently still affected by the Honey Prairie Fire which was started by lightning on 28 April 2011, and by 30 July 2011 about 303,107 acres (122,663 ha) had burned. This fire emitted large smoke plumes to the Atlantic Ocean.

In New Mexico the Las Conchas Fire started on 26 June 2011. The fire, which threatened the Los Alamos Nuclear Facility and spread the fears of radioactive contamination, similar to wildfires burning in the Chernobyl Exclusion Zone of Ukraine. The Las Conchas Fire was 100% contained as of the evening of 1 August 2011. The massive Wallow Fire that is raging through eastern Arizona and neighboring New Mexico has burned so much additional land that it has become the largest fire in Arizona's history. By early June 2011 the fire had burned 538,049 acres total (217,742 ha), involving 16 injuries, and destroyed 32 residences and four commercial properties.

Canada suffered a number of extreme events. On 16 May 2011 an out-of-control wildfire has burned at least half of a Slave Lake, a Canadian town in Alberta of about 7,000 inhabitants, forcing all of its residents to evacuate. The fire was carried by strong wind transporting glowing embers into town from a wildland fire nearby. In the end more than 400 homes and businesses were destroyed, including high-rise office buildings, and 52 lots were damaged. The current estimates of insurance losses are exceeding \$CAD 700 million (ca. €513 million).

In the remote regions of Saskatchewan and Ontario massive wildfires and smoke pollution led to the evacuation First Nation communities. Hatchet Lake First Nation in Saskatchewan evacuated 1,100 people in late May, and forest fires in northwestern Ontario forced more than 3,000 people out of their communities.

Northwestern and Mediterranean Europe

Most striking was the spring fire season in the Atlantic part of Western Europe where massive and largely unprecedented wildfires hit forests, gorse and moor lands in the United Kingdom and Ireland. Smoke plumes and active fires depicted by satellite imagery indicated that the extended drought in Western Europe created conditions suitable for fires that often were difficult to control. One of the most extended wildfires occurred in Northern Ireland in early May 2011, affecting 30,000 hectares west of Donegal. During the same days more than 1000 gorse and forest fires hit Northern Ireland.

Belgium suffered one of the most the extended wildfires in the Hohes Venn-Eifel nature reserve, which burned more than 1000 hectares and is considered the worst fire since 60 years.

In the Mediterranean Europe the wildfire season of 2011 so far was moderate with average amounts of wildfires burning in Portugal, Spain, Italy and Greece. However, a small grass fire in Cyprus, which hit an ammunition storage site, became the most disastrous event in the region. On 11 July 2011 a brush fire triggered the explosion of the Iranian explosives that were confiscated in 2009 and stored at the munitions dump of Evangelos Florakis naval base in Zygi. Two containers caught fire and a series of explosions followed, according to police. The blast killed Cyprus' navy chief, the base commander and four other base personnel and six fire fighters who were battling a bush fire that preceded the explosion. More than 60 other people were injured. The damaging of the island's biggest power station Vasiliko, which supplied about 60% of the island's electricity, is still resulting in severe shortage of electricity supply.

Southeast Europe / Caucasus Region

With the exemption of a large wildfire hitting the Croatian island of Brac on 15 July 2011, the Balkans experienced limited amounts of fire. Several forest fires and wheat field fires were recorded in the South Caucasus region, e.g. in Azerbaijan in July 2011. This region is experiencing an increasing threat of wildfires as a consequence of climate change. On the Balkan Peninsula and the South Caucasus wildfires are particularly dangerous in territories contaminated by land mines and unexploded ordnance (UXO) stemming from past armed conflicts. The Environment and Security (ENVSEC) Programme, co-sponsored by UNECE, UNEP, OSCE and other international organizations, has entrusted the GFMC to support the South Caucasus states Armenia, Azerbaijan and Georgia to develop national fire management policies and building fire management capacity by 2013.

Eastern Europe and Russia

Large forest fires are a common phenomenon in the Russian Federation, with weather-dependent fluctuations from year to year. "Hotspots" of large fires occurrences are wandering through the territory of Russia spanning about 160 degrees longitude, nine time zones and a vast diversity of ecosystems. Satellite monitoring reveals wildfires affecting several million hectares of protected forests, non-protected forests (in which fires are monitored only but not managed) and other vegetation types, e.g. extended spring fires burning the cured grass cover of the previous year over vast terrains. The fires burning in Western Russia in 2010 affected densely populated cultural landscapes and resulted in high losses of infrastructures, settlements and human lives, as well as in severe air pollution of the metropolitan areas of Moscow or Nizhny Novgorod. The fires burning in 2011 so far have mainly affected remote territories in Central Siberia (Yakutia) and the Far East (Khabarovsk), but also the northwestern part of the country (Arkhangelsk region).

While the lack of control of fires in Western Russia in 2010 was largely attributed to the consequences of decentralization in forestry from central to regional levels, legal and administrative reforms are now underway to improve regional fire management capability. The responsibility for fire management lies with the regions, financed by the Federal budget. However, some regions like Arkhangelsk and Yakutia underestimated the needs for requesting Federal investments. Short-term co-financing from regional resources or obtaining additional Federal resources could not meet the demands to adequately respond to the fires arising this year.

Procedures for outsourcing of aerial firefighting response to private contractors and the intent to build Federal reserves of finances and firefighting resources are currently developed.

The prevention of future peat bog fires involves cleaning of burned peat areas before watering and restoring wetland conditions. In Moscow region only 19,000 ha of wetlands need to be restored, an endeavor that will take up several years.

By addressing the importance of the involvement of civil society in the prevention and combat of wildland fires, notably in the defense of rural assets, the government is seeking to strengthen voluntary fire services. The public involvement of non-government organizations is becoming an essential part of the momentum that has been generated during last year's fire crisis to enhance the participation and responsibility of civil society in fire protection.

The way ahead in the UNECE region:

Enhancing fire management capabilities by international cooperation

In early 2012 the "UNECE / Council of Europe Regional Forum on Cross-boundary Fire Management" will be organized at the United Nations in Geneva by the Global Fire Monitoring Center (GFMC) and the Secretariat of the UNECE/FAO Forestry and Timber Section, and co-sponsored by the Secretariat of the Euro-Mediterranean Major Hazards Agreement (EUR-OPA), Council of Europe.

The conference will elaborate recommendations to UNECE and CoE member states to take advantage of recent insights and solutions of contemporary and expected future wildfire problems. Main focus of the conference will address the situation in countries in which progress of enhancing fire management capabilities is limited, e.g. as a consequence of political and administrative transition as

well as difficult economic conditions, or countries with significant or extraordinary fire situations, which would benefit from the experience of their neighbor countries.

The outcomes of the forum shall be regarded as complementary and value-added to existing agreements and mechanisms. The Forum has been planned as a contribution to the “UN International Year of Forests” (2011) to further the objectives of the international forest and climate regimes and shall contribute to the evolving of an “international wildland fire regime” as envisaged by the UNISDR Global Wildland Fire Network.

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