



Advanced Seminar

### Wildfires and Human Security

## “Fire Management on Terrain Contaminated by Radioactivity, Unexploded Ordnance (UXO) and Land Mines”

Kyiv / Chornobyl, Ukraine, 6-8 October 2009

Conducted by the Global Fire Monitoring Center (GFMC) in the frame of the activities of the Council of Europe (CoE) and the joint project “Enhancing National Capacity on fire Management and Risk Reduction in the South Caucasus” (Environment and Security Initiative [ENVSEC], the UNISDR Regional Southeast Europe / Caucasus and Central Asia Wildland Fire Networks and the UNECE / FAO Team of Specialists on Forest Fire

### Background: Threats Arising from Wildfires burning on Contaminated Territories

In several countries of Eurasia forests and other lands are contaminated by various types of industrial chemical and radioactive pollution and residuals of armed conflicts, e.g. unexploded ordnance and landmines. Wildfires occurring in such contaminated terrain are resulting in secondary damages, such as chemical and radioactive air pollution and explosion of unexploded ordnance (artillery grenades, bombs) and landmines on active or abandoned mined areas.

The territories most affected by radioactive pollution have been contaminated by the consequences of the failure of the Chernobyl Nuclear Power Plant in 1986. Wildfires burning on contaminated terrain in the Chernobyl Exclusion zone in Ukraine, in Belarus or in Russia involve the lifting of radionuclides deposited on vegetation and organic layers.

Unexploded ordnance is found on several hundred thousands hectares of forests and other lands throughout Western, Eastern and Southeastern Europe. Remnants of World War I battles along the frontlines of 1917 in Southern Macedonia have repeatedly created problems, e.g. during the fire season of 2007 when more than 70 incidents of explosions of ammunition triggered by forest fires were noted.

In Germany the battlegrounds of the final phase of the Second World War in Brandenburg State around Berlin are still highly contaminated by hundreds of thousand of tons of unexploded artillery grenades and bombs. In addition, former military exercise areas and shooting ranges, some of them dating back to the early 1900s, some established after the war, are posing high risk to civilian populations and especially firefighters.

Hosts:

National University of Life and Environmental Sciences of Ukraine

Ministry of Ukraine of Emergencies and Affairs of Population Protection from the Consequences of Chernobyl Catastrophe

Co-Sponsors / Supporters:

Global Institute for Sustainable Forestry Yale University, U.S.A., and the Chopivsky Family Foundation, U.S.A.



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In Southeast Europe, notably in former armed conflict grounds in former Yugoslavia, active land mines are limiting access, forest and fire management in large areas. In Bosnia and Herzegovina alone more than 200,000 ha of forests are contaminated by land mines. Land mines are also found in the disputed territories in the Southern Caucasus, The combat grounds in and around the Nagorno-Karabakh region represent one of the major Unexploded Ordnance (UXO) polluted terrains worldwide. During the armed conflict in Georgia in August 2008 a number of forest fires occurred as a consequence of military activities in several sites of the country.

Besides radioactive pollution and explosives there are other threats related to environmental pollution and fires, e.g. the lifting of mercury deposited in organic terrain.

In addition, the air pollution generated by vegetation fire smoke (VFS) is a phenomenon, which has influenced the global environment and society significantly since the Middle Ages. In the recent decades, increasing application of fire as a tool for land-use change has resulted in more frequent occurrence of extended fire and smoke episodes with consequences on human health and security. Some of these events have been associated with droughts that are attributed to inter-annual climate variability, or possible consequences of regional climate change. In metropolitan or industrial areas, the impacts of VFS may be coupled with the emission burden from fossil fuel burning and other technogenic sources, resulting in increasing vulnerability of humans. The transboundary effects of VFS pollution are a driving argument for developing international policies; to address the underlying causes for avoiding excessive fire application and to establish sound fire and smoke management practices and protocols of cooperation in wildland fire management at international level.

## **The Seminar**

The seminar will be conducted in October 2009 and will invite decision makers, planners and academics from East, South East Europe and South Caucasus. Participants will be briefed and at the same time contribute to identify regional problems, expertise, and solutions of managing land and fires in forests and other lands contaminated by unexploded ordinance, land mines and radioactivity. Fire smoke pollution and precautionary/protective measures will also be addressed. This first seminar of this kind worldwide will give emphasis on the East / SE Europe / Caucasus region in which UXO, land mines and radioactive contamination are dating back to World War I (Macedonia), recent armed conflicts (Balkans, Southern Caucasus) and radioactive accidents (Ukraine - Chernobyl).

A preparatory Meeting was held for the 2009 Regional Training Course: Fire Management on Terrain contaminated by Unexploded Ordnance (UXO), Land Mines and Radioactivity. The meeting took place at the Ministry of Agriculture, Forestry and Water Economy, Skopje, and was jointly organized by the Global Fire Monitoring Center (GFMC) and the UNISDR Regional Southeast Europe / Caucasus Wildland and Central Asia Wildland Fire Networks. It resulted in recommendations submitted to the Council of Europe, Secretariat of the Euro-Mediterranean Major Hazards Agreement, the Organization for Security and Co-operation in Europe (OSCE) and the Environment and Security Initiative (ENVSEC). These organizations provided some funds for preparing and logistically supporting the seminar, as well as travel costs for participation of delegates from the Caucasus region.

## **Goals of the Seminar**

The overall goal of this Seminar is to:

- Inform national decision makers (through attending delegates) of member states of the Council of Europe (particularly member states of the Euro-Mediterranean Major Hazards Agreement), countries belonging to the Economic Commission for Europe (ECE) and / or one of the UNISDR Regional Wildland Fire Networks, as well as international organizations, on the threats of wildfires burning in contaminated terrain
- Exchange experiences on prevention and control of wildfires in contaminated terrain
- Demonstrate the risk of catastrophic consequences of wildfires burning in radioactively contaminated terrain in Ukraine, Belarus and Russia as a consequence of the failure of the Chernobyl nuclear power plant in 1986
- Inform participants on secondary risks of forest fires and other vegetation fires, notably the consequences of smoke pollution on human health and security
- Conclude on the need for action at national and international levels

## Participants

The Seminar participation is by invitation only. An invitation will be sent to the member states of the Council of Europe (CoE) through the Secretariat of the Euro-Mediterranean Major Hazards Agreement suggesting the participation of national agencies responsible for forest fire prevention and control, disaster management and / or civil protection.

Participants shall include decisions makers, planners and / or trainers of fire schools / academies. Participants will be briefed and at the same time contribute to identify regional problems, expertise, and solutions of managing land and fires in forests and other lands contaminated by UXO, land mines and radioactivity. Fire smoke pollution and precautionary / protective measures will also be addressed.

Other participants are from the UNECE / FAO Team of Specialists on Forest Fire and members of the UNISDR Global Wildland Fire Network.

Participants from the CoE / UNECE region who have experience and special cases of wildfires burning in contaminated terrain are encouraged to contribute a presentation on the issue, including options for fire management solutions.

## Organizers

The seminar is cosponsored by the Council of Europe, Secretariat of the Euro-Mediterranean Major Hazards Agreement, the Organization for Security and Co-operation in Europe (OSCE) and the Environment and Security Initiative (ENVSEC) and will be organized jointly by:

- Global Fire Monitoring Centre (GFMC) / United Nations University (UNU) in conjunction with the Nations Economic Commission for Europe (UNECE) / Food and Agriculture Organization (FAO) Team of Specialists on Forest Fire <sup>1</sup>
- UNISDR Regional Southeast Europe / Caucasus Wildland Fire Network <sup>2</sup>
- OSCE / ENVSEC
- European Centre on Forest Fires (ECFF)

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

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