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Framework for the Development of the International Wildland Fire Regime

Rationale, Status and Future Activities

Status: 1 May 2004

Authors: Global Fire Monitoring Center (GFMC) in cooperation with FAO, ISDR and GOLDF

1. Introduction: Purpose of this document

Over the past decade a growing trend of excessive fire application in land-use systems and land-use change, and occurrence of wildfires of extreme severities has been observed in many regions of the world. Some of the effects of wildland fires are of transboundary nature, e.g. the consequences of smoke pollution on human health and safety, loss biodiversity, or consequences of destabilization at landscape level leading to desertification or flooding at transnational scale. The depletion of terrestrial carbon by fires burning under extreme conditions in some vegetation types, including organic terrain in peatland biomes, is one of the driving agents of disturbance of global biogeochemical cycles, notably the global carbon cycle. This trend is calling the international community to commonly address this problem. The development of informal partnerships, joint projects and formal agreements between government and non-government institutions are essential to enable nations to develop sustainable fire management capabilities. United Nations agencies, programmes and conventions, as well as governments and civil society are calling for developing synergies aimed at enhancing efficiency and international cooperation in wildland fire management. The development of an International Wildland Fire Regime would replace “soft”, non-binding arrangements.

This Paper provides

- a brief global situation assessment (including an annex with references)
- a list of major international actors involved in, or having expressed the intent of support, building an international alliance (UN, non-UN international organizations, NGOs, science community, civil society, and governments) to address global wildland fire problems
- a list of major international events up to 2004 manifesting the interests of the international community
- framework and activities to support the development of the International Wildland Fire Regime (2004-2005)

2. Rationale: Global Wildland Fire Status and Trends

- Between the mid 1990s and 2004 significant changes have been noted in the occurrence and impacts of wildland fire in some regions of the world:
- Extended droughts triggered by the El Niño – Southern Oscillation (ENSO) phenomenon first experienced in Indonesia in 1983 and again in 1997-98 favoured excessive application of fire

in land-use change and occurrence of large wildfires in the tropics, resulting in above-average emission pulses of greenhouse gases and near-ground smoke pollution affecting human health and security.

- Uncontrollable wildfires in the USA between 2000 and 2003 are considered to be a consequence of earlier fire exclusion policies and regional climate change.
- The CIS countries and other countries in transition suffered institutional shortcomings which resulted in widespread wildfires, particularly in the Russian Federation, the Balkans and Central Asia.
- Radioactive emissions from fires burning in forests contaminated by the Chernobyl disaster and other nuclear accidents in the Ukraine, the Russian Federation and Belarus continue to constitute a high threat to human health and security.
- Abandonment of the rural space in the Southern European countries involves less intensive utilization of vegetation biomass, thus resulting in increasing severities of fires with subsequent land degradation and secondary disasters.
- Increasing vulnerability of residential areas at the wildland-urban interface has been noted in North America and Australia where wildfires in the past decade have caused extremely high economic losses.
- The international community has responded to the increasing destructivity of wildland fires around the globe by drafting protocols, agreement guidelines and common terminology for enhancing international cooperation in wildland fire management.
- The Global Fire Monitoring Center (GFMC) and the FAO are instrumental to facilitate cooperative efforts and support UN policies through the ISDR Global Wildland Fire Network and the ISDR Wildland Fire Advisory Group.

Summary of global wildland fire trends:

- Trends are determined by local to national socio-economic and political developments; needs have emerged to integrate fire management with the aim of distributing management responsibilities from governments to local populations
- Globalisation of markets determine fire use and fuel loads
- Increasing fire severity observed in many regions as a consequence of coupled direct and indirect impacts of human interference and environmental change
- Other regions experiencing the consequences of fire suppression or reduced fire use, with consequences on biodiversity, carrying capacity, landscape patterns, etc.
- Alarming trend of fire-induced carbon transfer from the terrestrial sphere to the atmosphere, especially from drained or climatically altered wetlands

3. Formation of the Global Wildland Fire Alliance towards the development of an International Wildland Fire Regime

In the following the most important international organizations, institutions and other entities are listed that are currently contributing (or recently have contributed) to promoting the agenda of cooperation in the wildland fire arena at international level.

3.1 Facilitation

- Global Fire Monitoring Center (GFMC): Founded in 1998; support of UN institutions through its host institution (Fire Ecology Research Group) since the late 1980s, coordinating the facilitation through membership and mandate of:
 - UN International Strategy for Disaster Reduction (UN-ISDR): Working Group on Wildland Fire (2001-2003) and UN-ISDR Wildland Fire Advisory Group (since 2004), serving as inter-agency advisory body to the UN (chaired by the GFMC)
 - Global Wildland Fire Network: Programme facilitated by the GFMC, as an inter-agency programme of the ISDR, funded by the German government and FAO

3.2 United Nations agencies, programmes and conventions mandated to address wildland fire

- FAO: Promotion of international cooperation in wildland fire management; technical cooperation programmes (TCP) in the field, and information dissemination through seven Regional Forest Commissions; Global Forest Fire Assessments (FRA 2000 and 2005) jointly with GFMC; Fire Management Guidelines for Temperate and Boreal Forests jointly with GFMC; Wildland Fire Management Terminology update jointly with GFMC, promotion of Community-Based Fire Management (CBFiM); information dissemination and international documentation with global reactivation since 1998.
- Regional teams of wildland fire experts:
 - ECE / FAO / ILO Team of Specialists on Forest Fire
 - North American Forestry Commission, Fire Management Working Group
 - FAO *Silva Mediterranea*, Forest Fire Working Group
- WHO: Development of Health Guidelines for Vegetation fire events (currently no active position)
- WMO: Early warning of El Niño, fire weather, smoke transport
- UNESCO: Disaster reduction programmes (currently no specific programme)
- UNEP/OCHA: Joint UNEP/OCHA Environment Unit; Advisory Group on Environmental Emergencies (AGEE), WSSD Type II Partnership on Environmental Emergencies (GFMC member, FAO maintaining a Fire Alert Web Page to relay national fire emergency requests)
- ITTO: Guidelines for Fire Management in Tropical Forests, support of national fire management programmes, including CBFiM
- UNU: Establishment of the Institute for Environment and Human Security (2004), with wildland fire module (first UN inter-agency activity in 2004: Joint GFMC / ISDR / FAO / OCHA / UNU / NEPAD Advanced Wildland Fire Management Training Workshop for SADC Countries)
- UN Conventions: Agreement with the secretariats of the three Rio Conventions on cooperation with GFMC/ISDR, at the Workshop "Forests and Forest Ecosystems: Promoting Synergy in the Implementation of the Three Rio Conventions" (Viterbo, April 2004)
- Convention on Biodiversity (CBD): Member of the ISDR-IATF Wildland Fire Advisory Group (since 2003)
- Convention on Combat of Desertification (CCD): collaborative arrangement with GFMC started in 2004
- Framework Convention of Climate change (FCCC): collaborative arrangement with GFMC started in 2004

- UN Forum on Forests (UNFF): Member of the ISDR-IATF Wildland Fire Advisory Group (since 2003)

3.3 Non-Governmental Organizations

- IUCN-TNC-WWF: Global Fire Partnership founded in September 2003; strategic meeting with international participation (May 2004) International Technical Committee for the Prevention and Extinction of Fire (Comité Technique International de Prévention et d'Extinction du Feu - CTIF): Reactivation of the Commission on Forest Fires (September 2003), First Conference: *Experiences from 2002-2003 Wildland Fire Seasons: Are we prepared for the challenges ahead?* (Austria, October 2003); Development of a Forest Fire Control Handbook for European Fire Services (by GFMC)
- Global Observation of Forest and Land Cover Dynamics (GOFC/GOLD) Fire Monitoring and Mapping Implementation Team: Global Forest Fire Assessment by spaceborne assets (to be involved in FRA 2005)

4. Precursor activities to support the International Wildland Fire Regime (before 2004)

- International Decade of Natural Disaster Reduction (IDNDR): The decade (1990s) promoted synergies between international groups and entrusted the GFMC to coordinate the programme "Early Warning of Wildland Fire and Related Hazards"
- ECE/FAO Conference Forest, Fire and Global Change (Russian Federation, 1996): Elaboration of a proposal for international cooperation in wildland fire management
- FAO Consultations on Public Policies and Cooperation (1998, 2001)
- International Wildland Fire Conferences in Vancouver (1997) and Sydney (2003)
- International Wildland Fire Summit (2003): Agreement on principles, international strategies and participatory fire management

5. Framework and activities to support the International Wildland Fire Regime (2004-2005)

In 2004 international cooperation is addressed by a number of regional conferences and consultations:

- Northeast Asia (Korea, March 2004): Foundation of the Regional Northeast Asia Wildland Fire Network, hosted by the Korean Forest Service
- Eastern Mediterranean, Near East, Balkans, Central Asia (Turkey, April 2004): Consolidation of the Regional Wildland Fire Networks for the Balkans, Eastern Mediterranean / Near East, Western and Central Asia, hosted by the Forest Service of Turkey (see "Antalya Declaration on Cooperation in Wildland Fire Management in the Balkans, Eastern Mediterranean, Near East and Central Asia"); Turkey to host a Regional Wildland Fire Advisory Group, and Bulgaria to host the Balkans Network.
- Baltic Region (Finland, May 2004): Regional Baltic Wildland Fire Meeting (follow-up to ECE/FAO BALTEX FIRE 2000), hosted by the Ministry for Interior, Finland; consolidation of the Regional Baltic Wildland Fire Network and the regional work of the ECE/FAO Team of Specialists on Forest Fire
- South America (Brazil, June 2004): Foundation of the Regional South America Wildland Fire Network, meeting hosted by the University of Paraná, Curitiba, co-sponsored by FAO, GFMC, USFS, UNEP, TNC and others

- Central America (Costa Rica, October 2004): consolidation of cooperation in Mesoamerica / Caribbean, formalizing the Regional Central America and Caribbean Wildland Fire Networks (in prep.)

Furthermore the following international consultations will be held in 2004-2005

- Western Hemispheric Wildland Fire Conference (Costa Rica, October 2004): Meeting of the FAO Regional Forestry Commissions of North America, Latin America and the Caribbean. Objective (among other): endorsement of the regional networking concepts prepared in Brazil and Costa Rica; recommendation for the ministerial meeting 2005.
- UN World Conference on Disaster Reduction (Japan, January 2005): The conference will review the Yokohama Strategy and Plan of Action (of 1994), including its wildland fire component, define WSSD-related specific activities and provide an inter-governmental platform to adopt an agenda for the frame 2005-2015. Global Wildland Fire Network and UN-ISDR Wildland Fire Advisory Group to contribute and seek an endorsable statement for the FAO ministerial conference
- International Ministerial Meeting (FAO Rome, March 2005): Representatives of agencies and / or ministers responsible for forestry endorse a proposal directed to the United Nations concerning a coordinated effort in international cooperation in wildland fire management. Mid-term goal: UN General Assembly Resolution on Cooperation in Wildland Fire Management

With the recommendations of the Ministerial meeting and a possible UN GA resolution the way would be paved from a “soft” framework towards the development of an international regime, e.g. binding agreements or a convention.

ANNEX - References

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<http://www.fire.uni-freiburg.de/summit-2003/Summit%20Background%20Paper%20Global%20Situation.pdf>

Global Fire Monitoring Center (GFMC)

<http://www.fire.uni-freiburg.de/>

FAO Wildland Fire Websites and FAO Global Forest Fire Assessment 1990-2000

http://www.fire.uni-freiburg.de/programmes/un/fao/Wp55_eng.pdf

UN-ISDR Wildland Fire Advisory Group

<http://www.unisdr.org/eng/task%20force/ff-working-groups4-eng.htm>

Global Wildland Fire Network

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

International Wildland Fire Summit

<http://www.fire.uni-freiburg.de/summit-2003/introduction.htm>

E/FAO International Forest Fire News (IFFN)

<http://www.fire.uni-freiburg.de/iffn/iffn.htm>

Convention on Biological Diversity

<http://www.fire.uni-freiburg.de/programmes/un/cbd.htm>

Joint UNEP/OCHA Environment Unit / WSSD Partnership for Environmental Emergencies

<http://www.reliefweb.int/ochaunep/>

<http://www.reliefweb.int/ochaunep/tools/wssd.htm>

WHO: Health Guidelines on Vegetation Fire Events

http://www.who.int/peh/air/vegetation_fires.htm

International Tropical Timber Organization (ITTO) Wildland Fire Websites

<http://www.itto.or.jp/live/index.jsp>

http://www.fire.uni-freiburg.de/programmes/itto/itto_start.htm

Global Observation of Forest Cover / Global Observation of Landcover Dynamics (GOFc/GOLD) -
Fire Mapping and Monitoring

<http://gofc-fire.umd.edu/>

Crutzen, P.J., and J.G. Goldammer (eds.) 1993. Fire in the environment: The ecological, atmospheric, and climatic importance of vegetation fires. Dahlem Workshop Reports. Environmental Sciences Research Report 13. John Wiley & Sons, Chichester, 400 p.

Ahern, F., J.G. Goldammer, and C. Justice (eds.). 2001. Global and regional vegetation fire monitoring from space: Planning a coordinated international effort. SPB Academic Publishing bv, The Hague, The Netherlands, 302 p.



Conference on Forest Fire Management and International Cooperation in Fire Emergencies in The Eastern Mediterranean, Balkans and Adjoining Regions of the Near East and Central Asia

Antalya, Turkey, 30 March - 3 April 2004

**Antalya Declaration
On Cooperation in Wildland Fire Management in the Balkans, Eastern Mediterranean, Near East
and Central Asia
Antalya, 1 April 2004**

The Conference:

- Recalling the rationale and recommendations of the World Summit for Sustainable Development (Johannesburg – 2002) concerning the international endeavours to secure sustainable development of the global vegetation resources,
- Expressing concerns about the increasing occurrence and destructiveness of forest fires in the regions between the Balkans, Eastern Mediterranean, Near East and Central Asia,
- Recognizing that the reasons for this development are due to increasing population pressure in many countries, increasing socio-economic problems of rural populations, increasing vulnerability of humans and the occurrence of extreme fire seasons that can possibly be explained by climate change,
- Recognizing the endeavours of the United Nations Economic Commission for Europe (UN-ECE) to address the fire problems in the Northern Hemisphere, notably through the work of the UN-ECE/FAO Team of Specialists on Forest Fire since 1993,
- Endorsing the endeavours of the International Strategy for Disaster Reduction (ISDR) and its Wildland Fire Advisory Group in supporting to harmonize and strengthen efforts by the United Nations agencies and programmes, as well as other international organizations including non-government organizations, to reduce the negative impacts of wildland fires on the environment,
- Endorsing the goal of the Food and Agriculture Organization (FAO) of the United Nations to promote and strengthen bilateral and multilateral agreements for cooperation in fire management,
- Recognizing and supporting the goals and joint endeavours of the UN Convention on Biological Diversity (CBD), the Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), the UN Forum of Forests (UNFF) and the Ramsar Convention on Wetlands, to protect the global vegetation resources and the global atmosphere from negative influences by vegetation fires, as well as the promotion of knowledge and techniques to utilize the beneficial role of fire in ecosystem management,
- Endorsing the recommendations of the International Wildland Fire Summit (Sydney – 2003) concerning common international standards for fire management and the strategy for strengthening international cooperation in wildland fire management,

- Supporting the objectives of the ISDR Global Wildland Fire Network and its Secretariat, the Global Fire Monitoring Center (GFMC), to systematically enhance the intra- and inter-regional cooperation in wildland fire management throughout the world,
- Welcoming the availability of the government of Turkey -- the host country of this conference -- and the delegates of participating nations to actively cooperate to share experience and resources in wildland fire management
- Concluding from the national case studies and analyses on the wildland fire situation in the participating countries, as well as from the discussions held at the conference, that the majority of countries in the region are available to establish and strengthen a regional dialogue on cooperation in wildland fire research and management
- Expressing the intent to jointly overcome the currently existing gaps and deficits in
 - Early warning systems of wildland fire
 - Spaceborne fire monitoring systems
 - Decision-support systems for fire management
 - Wildland fire research
 - Training / capacity building in wildland fire management
 - Transnational agreements and operations for bilateral and multilateral assistance in wildland fire emergency situations

Recommends the following Antalya Plan of Action for the region between the Balkans, Eastern Mediterranean, Near East, Western and Central Asia:

(1) The countries participating at the conference encourage governments to develop or strengthen, and international organizations to support

- Bilateral and multilateral agreements on cooperation in wildland fire management, based on international standards as proposed by the FAO and the International Wildland fire Summit
- Introduce the Incident Command System (ICS) as the international standard for all wildland incident management participating in international or interagency agreements and exchanges.
- Regional systems for early warning and satellite monitoring of wildland fires
- Cooperative regional wildland fire research projects and programmes
- Decision-support systems
- Training / capacity building in wildland fire management

(2) To regularly conduct follow-up activities aimed at further promoting collaborative efforts and procedures

- Multilateral wildland fire emergency exercises, starting with the multinational exercise EASTEX FIRE 2004 in Bulgaria and the tri-national exercise in Croatia in 2004
- Regional workshops aimed at further defining priority issues to be jointly addressed, especially considering the needs of collaboration with countries of the region that were not represented at the conference

(3) To develop arrangements to support collection and dissemination of wildland fire information, facilitation of regular regional dialogue and joint projects between the countries, and to technically support countries in need of aerial assets for wildland fire suppression by the creation of

- A Regional Fire Monitoring Center, hosted by the Government of Bulgaria
- A Regional Advisory Board of Senior Fire Officers, hosted and facilitated by the Government of Turkey in Antalya

- Special regional mobile airborne fire response units, based on Public-Private Partnership arrangements, e.g., those companies participating at the conference (Russian Irkut Corporation [fixed-wing aircraft – BE-200] and UT Air [helicopter assets])

(4) To inform national governments about the need to prepare statements in favour of enhancing international cooperation in wildland fire management at the following forums:

- The forthcoming Meeting of the three Rio Conventions (UN CBD, UN CCD, UN FCCC) (Viterbo, Italy, April 2004)
- The forthcoming 16th Session of the FAO Near East Forestry Commission, with regard to establishing networking structures in Western Asia (May 2004)
- The World Conference on Disaster Reduction (WCDR) (Kobe-Hyogo, Japan, January 2005)
- The FAO Ministerial-Level Meeting, devoted to wildland fire management and international cooperation (Rome, Italy, March 2005)

Participating Countries:

Bulgaria, Croatia, Cyprus, Germany, Greece, Hungary, Israel, Italy, Kazakhstan, Macedonia, Poland, Russian Federation, Turkey, Ukraine.

International Organizations: ECE, FAO, ISDR Global Wildland Fire Network

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Contribution to and Themes of the World Conference on Disaster Reduction (WCDR)

Kobe, Hyogo, Japan, January 2005

Proposal by the Global Fire Monitoring Center (GFMC)

1. Proposal for the Post-WCDR Inter-Governmental Process

The GFMC proposes to

- ♦ formally establish a process leading towards the development of an “International Disaster Reduction Regime” which would represent a move from “soft” agreements to internationally binding agreements (GA Resolution, UN Convention).
- ♦ secure financing mechanisms for the Kobe follow-up process 2005-2015.

2. Joint Contribution of the Global Fire Monitoring Center and the German Foreign Office to the theme “Wildland Fire”

Inter-Governmental Process

The Global Fire Monitoring Center (GFMC) in its function as coordinator of the ISDR Wildland Fire Advisory Group and the Global Wildland Fire Network, in envisaged cooperation with the FAO and the three Rio Conventions, will introduce and call for cooperation on:

- ♦ Development of the International Wildland Fire Regime