



UNITED NATIONS



WORKING GROUP 4 WILDLAND FIRE

Global Fire Monitoring Center (GFMC), Freiburg, Germany

**WG-4 report presented to the
Inter-Agency Task Force on Disaster Reduction
Seventh Meeting
Geneva, 10-11 April 2003**

Geneva-Freiburg, 7 April 2003

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1. Report of the Chair: Calendar of Activities between March and August 2002

Between the 6th and 7th meetings of the IATF no formal meeting for WG-4 has been held. Instead, a number of WG-4 activities have been carried out i.a.w. the WG-4 work programme and related initiatives. The calendar of activities is attached in Annex I.

Much of the work that has been achieved between October 2002 and March 2003 was done in cooperation between the GFMC and individual WG-4 members, e.g., preparation of the final draft of the WG-4 Brochure for Policy Makers (with Brian Stocks, cf. para. 4), consolidation of the Global Wildland Fire Network and preparation of the Handbook for Fire Management in Subsahara Africa (with Neels de Ronde, cf. para. 3), preparation of the final version of the FAO Guidelines for Forest Fire Management in Temperate and Boreal Forests (with Mike Jurvélius, Neels de Ronde, Eduard Davidenko), consolidation of cooperation with the GOFCC-GOLD Fire Implementation Team (with Chris Justice), and preparation of the International Wildland Fire Summit (with Denny Truesdale, Gary Morgan, Rick Sneeuwjagt, Eduard Davidenko, Ricardo Velez, Roberto Martínéz Domínguez and Neels de Ronde, cf. para. 5).

2. WG-4 Membership

Mr. Dietrich Schwela, representative of the WHO in the WG-4 Core Group, retired by end of March 2003. He will start a new assignment with the Joint Research Center (JRC), Ispra, by mid of April 2003. We thank Mr. Schwela for his enthusiastic engagement in the work of WG-4. Since WHO will not have a replacement person who will continue to work in the field of wildland fire emissions and human health, the chair of Wg-4 will consult with the WHO and the Inter-Agency Task Force if Dieter Schwela could continue to serve WG-4 as a expert consultant. This recommendation should be forwarded to the WHO through the ISDR Secretariat.

3. Global Wildland Fire Network

The consolidation process and setbacks in building the Regional Wildland Fire Networks are summarized in Annex II.

4. WG-4 Brochure for Policy Makers

The brochure is making progress. Between November 2002 and March 2003 the GFMC has been supported by WG-4 member Brian Stocks to produce a final draft of the WG-4 brochure for policy makers. It was a challenging task to produce a text that would be readable for policy makers, thus not exceeding ca. 20 pages. The final draft for comments by WG-4 members has been distributed in the first week of April 2003. At this stage it will be too premature to be presented to the members of IATF (the ISDR Secretariat has received a copy of the draft brochure).

5. International Wildland Fire Summit

A third and fourth meeting of the International Liaison Committee (ILC) of the 3rd International Wildland Fire Conference and the International Wildland Fire Summit have been held in November 2002 (Portugal) and in March 2003 (Australia).

Conference: WG-4 members R. Sneeuwjagt and G. Morgan are responsible for preparation of the conference programme. A number of invited papers will be presented by WG-4 members (E.P. Davidenko, J.G. Goldammer, M. Jurvélius, C. Justice, D. Murdiyarso, S.J. Pyne, R. Vélez, B.J. Stocks).

Summit: Within the next four weeks the list of invitees representing national authorities responsible for wildland fire management will be compiled. Four key papers prepared by ILC members will constitute key documents for the Summit outcome. One of these papers is a strategic paper to define post-Summit process. The paper will be co-authored by WG-4 / ILC members Denny Truesdale and J.G. Goldammer.

Following earlier decisions by WG-4 it is aimed to use the WG-4 brochure to provide the rationale and background for the International Wildland Fire Summit and to advertise this important event. The summit will provide an excellent opportunity to present the views of the ISDR in general and of WG-4 in particular to the heads of wildland fire management agencies and programmes and to policy makers attending the summit.

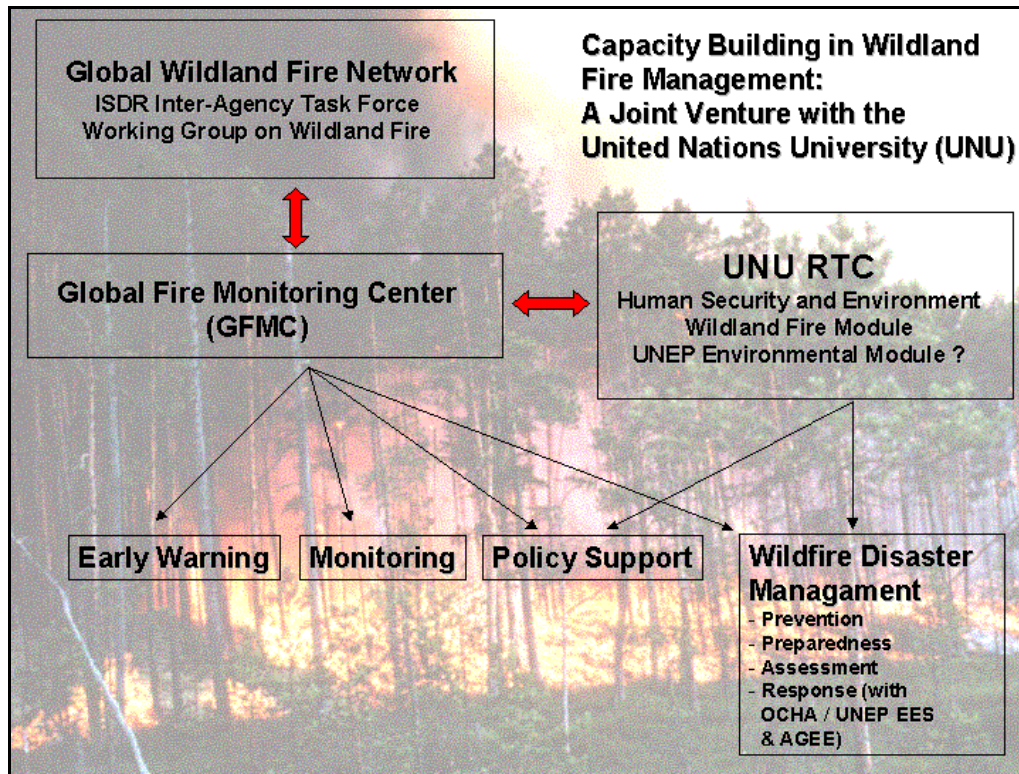
The Chair of the International Liaison Committee of the conference and summit, Mr. Gary Morgan (who is serving also as a representative of SOPAC in WG-4) will write a letter to the Chairman of the IATF, Mr. Kenzo Oshima, concerning a high-level co-sponsorship by the UN.

Since a large number of WG-4 members will attend the conference it is envisaged to call for a WG-4 side meeting at the conference, date to be determined (see para. 8).

A link to the conference website (<http://www.wildlandfire03.com/home.asp>) has been included in the ISDR homepage. The website does not yet include information on the Summit (participation by invitation only).

6. United Nations University Research and Training Center (UNU-RTC) “Human Security and Environment”

The UNU-RTC “Human Security and Environment” has been established in January 2003. However, the RTC is not yet fully functioning. A number of international wildland fire experts have indicated the interest to participate in designing a high-level capacity-building module “Wildland Fire” for the RTC. The RTC would serve as the “academic arm” of the Global Wildland Fire Network. The graph on the following page illustrates the relationships between the currently ongoing initiatives.



7. Advisory Group on Environmental Emergencies (AGEE)

UNEP and OCHA have established the international Advisory Group on Environmental Emergencies (AGEE) as their most important cooperation and support mechanism for the response to environmental disasters. The AGEE is an international forum that brings together environmental experts from around the world to share information, expertise and lessons learned for improved response to environmental emergencies worldwide, and in particular in developing countries. The Joint UNEP/OCHA Environment Unit serves as the secretariat to this group. The Advisory Group meets bi-annually to share experiences and new approaches in the field of response to environmental disasters, as well as to review the work of the Joint Unit, and to provide advice and guidance on areas for development and future activities

Building on the interface agreement between the Joint UNEP/OCHA Environment Unit and the Global Fire Monitoring Center (GFMC) and the joint efforts to activate the Type II Partnership "Integrated Approach to Prevention for and Response to Environmental Emergencies in Support of Sustainable Development" the GFMC / WG-4 Chair will attend the upcoming 5th AGEE meeting in Geneva, 14-15 May 2003. The meeting will be convened by WG-4 member V. Sakharov, Deputy Chief, OCHA Emergency Services Branch, and Chief of the Environmental Emergencies Section (EES).

8. Timetable for WG-4 April to November 2003

WG-4 activities between April and October 2003 include:

- Production of the WG-4 brochure for policy makers and the Fire Management Handbook for Subsahara Africa
- Development of a draft *Wildland Fire Module* for the UNU RTC *Human Security and Environment*
- Financial support to capacity building in Subsahara Africa
- AGEE meeting, May 2003
- 3rd Int. Wildland Fire Conference and Summit, October 2003, and WG-4 side meeting around the International Wildland Fire Summit (all WG-4)
- Support in the preparatory process of the Early Warning Conference II (EWC-II), including technical support of regional preparatory conferences
- Participation at EWC-II

9. Early Warning Conference

The Working Group is supporting the preparation of EWC-II by providing advice to the regional preparatory conferences and the main event in October. A background paper '*Early Warning (EW) of Wildland Fires and Related Environmental Hazards: Are there progresses since the completion of the IDNDR EW Programme and the Early Warning Conference I (EWC-I, Potsdam 1998)?*' has been submitted by WG-4 to the Organizing Committee of EWC-II (Annex III).

WG-4 and GFMC envisage to carry recommendations from the dedicated conferences to EWC-II:

- Fourth International Workshop on Remote Sensing and GIS Applications to Forest Fire Management (Ghent, Belgium, 6-7 June 2003). This workshop will focus on the use of satellite remote sensing to detect wildland fire precursors.
- Workshop on International Collaboration in Fire Weather Research (Melbourne, Australia, 9-10 October 2003). This workshop aims to improve international cooperation in improving meteorological indices for fire danger rating and forecasting.

10. Annexes

Annex I:

GFMC / WG-4 Calendar between end of October 2002 and March 2003

29 October 2002

Third National Bulgarian Round Table on Fire Management, Bulgarian-Swiss Forestry Programme (BSFP) and Global Fire Monitoring Center (GFMC); Sofia, Bulgaria.

30-31 October 2002

International Conference on Disasters, Emergency and Fire Situations, National Fire and Emergency Safety Services; Foundation of the Regional Balkan Wildland Fire Network; Sofia, Bulgaria.

4 November 2002

Meeting with the FAO Fire Management Officer and representatives of the Steering Committee and International Liaison Committee (ILC) in preparation of the 3rd International Wildland Fire Conference (Sydney, Australia, September 2003); FAO, Rome, Italy.

6 November 2002

33rd Meeting of the International Tropical Timber Committee (ITTC), Committee for Reforestation and Forest Management (CRF), on cooperation between ITTO and GFMC and preparation of the 3rd International Wildland Fire Conference and Summit; ITTO, Yokohama, Japan.

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

8 November 2002

National Round Table on Fire Management, Guatemala, facilitated by the Project "Prevención y Control Local de Incendios Forestales" (PRECLIF), in cooperation with GFMC, GTZ and the "Red Comunitaria de América Central para la Gestión de Riesgo", Guatemala.

15-17 November 2002

Meeting of the International Liaison Committee (ILC) in preparation of the 3rd International Wildland Fire Conference and International Wildland Fire Summit (Sydney, Australia, September 2003); Coimbra, Portugal.

26 November – 4 December 2002

WG-4 member Brian J. Stocks, at GFMC for preparation of the Wildland Fire Brochure for Policy Makers; GFMC.

2-3 December 2002

Global emissions modelling workshop in the frame of the German Climate Research Programme DEKLIM; Max Planck Institute for Chemistry, Mainz, Germany.

4-6 December 2002

Conference "The Future of Disaster Risk: Building Safer Cities", organized by the Disaster Management Facility (The World Bank); WG-4 presentation on "Transboundary Smoke-Haze Pollution from Wildfires and Land Clearing Fires: Impacts on Human Security" Washington, D.C., U.S.A. http://www.proventionconsortium.org/conferences/washington_agenda.htm

22 January 2003

Meeting of European National Platforms and Focal Points for ISDR, by invitation of the German Committee for Disaster Reduction (DKKC) within the ISDR; Bad Honnef, Germany.

24 January 2003

Visit and Briefing of the Fire Management Expert Delegation, People's Republic of China, on WG-4 and GFMC; GFMC.

7 February 2003

Meeting of the INSARAG Fire Group (INSARAG Regional Group Africa/Europe). Preparation of the INSARAG Regional Group Africa/Europe Meeting (Netherlands, 16-17 April 2003); GFMC.

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

<http://www.reliefweb.int/undac/events.html>

26-27 February 2003

All-Russian Forestry Congress, Moscow. 26 February: Round Table on “Key Ways of Protection of Forests from Fire in the Russian Federation”; Plenary meeting and GFMC / WG-4 side meeting with WG-4 members E.P. Davidenko and J.G.Goldammer; State Kremlin Palace, Moscow, Russian Federation

[http://www.fire.uni-](http://www.fire.uni-freiburg.de/iffn/country/rus/IFFN%20Russia%202002%20Fire%20Report.pdf)

[freiburg.de/iffn/country/rus/IFFN%20Russia%202002%20Fire%20Report.pdf](http://www.fire.uni-freiburg.de/iffn/country/rus/IFFN%20Russia%202002%20Fire%20Report.pdf)

17-18 March 2003

GOFC/GOLD Executive Committee Meeting; Joint Research Center, Ispra, Italy.

<http://www.fao.org/gtos/gofc-gold/index.html> and <http://gofc-fire.umd.edu/>

26-29 March 2003

Meeting of the International Liaison Committee (ILC) in preparation of the 3rd International Wildland Fire Conference and International Wildland Fire Summit (Sydney, Australia, October 2003); Sydney, Australia.

Annex II

Update on the Global Wildland Fire Network

Introductory Remark

In the following short notes are given on recent developments and setbacks in building the Regional Wildland Fire Networks within the Global Wildland Fire Network. For detailed information see: <http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html>

Regional South East Asia Wildland Fire Network (ASEAN)

The ASEAN Secretariat has nominated Focal Points for the network (one representative for each ASEAN member country).

Regional Sub Sahara Africa Wildland Fire Network (Afrifirenet)

Membership in the network is increasing (70 by March 2003: from Namibia, Botswana, South Africa, Zimbabwe, Moçambique, Nigeria, Sudan, The Gambia, Benin, Tanzania, Ethiopia, Burkina Faso and Uganda). GFMC and Afrifirenet partners have been active to build the "Wildland Fire Training Center Africa". However, the International Training Course for Fire Management for Sub Sahara Africa (planned for May 2003) has been postponed or must be cancelled due to lack of donor support. The Handbook for Fire Management in Sub Sahara Africa is in the final process of production. The NEPAD Secretariat has been contacted for cooperation.

Regional Baltic Wildland Fire Network

Main activity envisaged during the last year was the preparation of the "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, 15-19 April 2003). The conference was aimed to support building the Balkan and Central Asia Regional Wildland Fire Networks. Due to the Iraq crisis the conference has been postponed to 29 March to 3 April 2004. Please note this new date!

Regional Balkan Wildland Fire Network

Initial agreements were made with Bulgaria to facilitate the establishment of the Regional Balkan Wildland Fire Network (see Annex I).

Regional Mesoamerica Wildland Fire Network

The Mesoamerican Group has decided to formally endorse its membership in the Global Wildland Fire Network. A Memorandum of Understanding (MoU) is currently prepared between the Mesoamerican Permanent Technical Group on Forest Fires (Grupo Técnico Mesoamericano Permanente sobre Incendios Forestales), represented by Mr. Ronaldo Herrarte, President of the Coordinating Council of the Sistema Nacional de Prevención y Control de Incendios Forestales (SIPECIF), Guatemala, and Executive Coordinator of the Presidency of Guatemala, and the Global Fire Monitoring Center (GFMC),

Regional Mediterranean Wildland Fire Networks

FAO *Silva Mediterranea* will convene a meeting in June 2003 to prepare a pan-Mediterranean cooperation agreement for forest fire management, including fire emergency assistance. As a subsidiary body of FAO *Silva Mediterranea* is part of the global network.

Regional Australasia Wildland Fire Network

Following a discussion with representatives of the Australian Fire Authorities Council (AFAC) at the occasion of the preparatory meeting for the International Wildland Fire Summit in Melbourne, March 2003, AFAC will discuss formally joining the network.

Regional North America Wildland Fire Network

The Fire Management Working Group of the North American Forest Commission (NAFC) constitutes the official network between the North American countries. Discussions are underway on the *modus operandi* of the group within the global network.

Regional Central Asia Wildland Fire Network

The postponement of the regional conference in Turkey to 2004 (see: Baltic Network) did not yet allow to create efficient network structures. However, communication between the GFMC and the Central Asian countries is consolidating. The conference in 2004 will now be considered as a follow-up regional conference to the International Wildland Fire Summit (cf. para. 5).

Regional South America Wildland Fire Cooperation

In South America there is not yet a clearly defined networking structure. However, Brazil has indicated to expand its currently ongoing wildland fire early warning and monitoring support to all of South America.

Annex III

Early Warning (EW) of Wildland Fires and Related Environmental Hazards: Are there progresses since the completion of the IDNDR EW Programme and the Early Warning Conference I (EWC-I, Potsdam 1998)?

Brief summary assessment by Johann G. Goldammer
Global Fire Monitoring Center (GFMC) & UN-ISDR Working Group of Wildland Fire

The Global Fire Monitoring Center (GFMC) was founded in 1998 and became operational one month after the EWC-I, at a time when it became obvious that there is a need for the application and improvement of existing methods and technologies and the development of new, innovative technologies to generate, disseminate and apply information on early warning for wildland fire. Among other tasks, the GFMC facilitates the access and application of early warning systems at global, regional and national / local levels. The following statements are given from the GFMC perspective.

1. Technologies in place

Early warning of wildland fire and related hazards include a variety of methodological approaches and systems to identify precursor developments and assess / predict the escalation of the wildland fire theatre.

(a) Assessment of Fire Hazard. Ground measurements and to a certain extent also satellite-generated information allows to determine the amount of fuels (= combustible materials) available for wildland fire. This is important because dryness and fire risk alone do not determine the extent and severity (= severity of impact) of fire.

(b) Prediction of Fire Risk. Methods exist for observing / tracking lightning activities as source of natural ignition (ground-based lightning detection systems; spaceborne monitoring of lightning activities). Modelling / predicting human-caused fire starts is possible by application of logistic models.

(c) Prediction of Fire Danger. This term is used for the readiness and ease of vegetation to burn. EW systems include meteorological danger indices and spaceborne information on vegetation dryness (intensity and duration of vegetation stress) and soil dryness. Prediction of inter-annual climate variability / drought, particularly related to ENSO, is important for preparedness planning in many countries.

(d) Assessment of Smoke Pollution. *In situ* air quality monitoring systems allow tracking of fire smoke pollution and issue alerts (warnings to populations). Surface wind prediction allows prediction of smoke transport from fire-affected regions to populated areas. Satellite imageries can depict smoke transport.

(e) Prediction of Wildfire Spread: Airborne and spaceborne monitoring of active fires allows the prediction of movements of fire fronts to areas with values at risk. The technologies used include airborne instruments to monitor fire spread in situations of reduced visibility (smoke obscured) or to cover large areas. A large number of orbiting and geostationary satellites are available to identify active fires.

2. Application

Most industrial countries have systems in place to address the above-mentioned issues. In countries where fire occurrence and fire smoke pollution is of minor importance such systems are not in use or restricted to the prediction of fire danger (item 1.c).

The majority of developing countries and countries in transition do not have in place most of the systems.

3. Policies, Gaps and Trends

At national level many countries in the developing world are seeking technical and scientific cooperation with donor countries to develop locally applicable EW systems. There is a new trend to support decentralized approaches such as the use of “simple” EW indices to be used at local (community) level.

At international level it has been recognized that the EW component in fire research and development has received less attention than fire monitoring.

Consequently, it has been decided to push R&D in early warning of wildland fires. The World Weather Research Programme (WWRP) is currently preparing a new international collaborative activity.

A focussed scientific workshop will be convened in 2003 to address the contribution of remote sensing to EW of wildland fire. The results will be brought to the 3rd International Wildland Fire Conference and Summit (October 2003). The recommendations from this international conference will be brought to the Early Warning Conference-II (October 2003).

The UN-ISDR Working Group on Wildland Fire through the GFMC and in collaboration with the UN-ISDR Working Group on Early Warning is monitoring and facilitating international collaborative efforts in EW of wildland fire. On request the GFMC also supports countries in the development, adaptation and application of EW systems.

4. Information Sources and References

Global Fire Monitoring Center (GFMC) website:

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

Global, Regional and National Fire Weather and Climate Forecasts:

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

Regional and Global Vegetation Fire Emissions:

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

Wildland Fire Monitoring:

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

IDNDR Report on Early Warning for Fire and Other Environmental Hazards

http://www.fire.uni-freiburg.de/programmes/un/idndr/idndr_co.htm

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

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

World Health Organization (WHO), Health Guidelines for Vegetation Fire Events

<http://www.fire.uni-freiburg.de/programmes/un/who/who.html>

UN-ISDR Working Group on Wildland Fire:

<http://www.unisdr.org/unisdr/WGroup4.htm>

Wildland Fire Meetings in 2003, including EW of Wildland Fires:

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

State-of-the-art Synthesis Volume on Spaceborne Wildland Fire Monitoring, dedicated to the ISDR:

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.