



Regional South America Wildland Fire Network
Foundation Meeting, Curitiba, Brazil, 17 June 2004

Outline and Preliminary Agenda of the Network Foundation Meeting


Date of 5th Draft: 19 May 2004

1. Rationale and Overall Objective of the Network

During the last decade socio-economic developments, land-use change and climate variability in the South American continent have resulted in widespread change of fire regimes and an increasing occurrence of destructive wildfires affecting highly vulnerable human populations and ecosystems. Limited resources for efficient wildland fire management in most South American countries have prompted governments, non-government organizations and international organizations to seek common procedures and agreements for bilateral and multilateral cooperation in sharing expertise, capacity building and resources in fire management. The strategic goals of the Global Wildland Fire Network (GWFN) and the recommendations of the International Wildland Fire Summit (Sydney, Australia, 8 October 2003) are in line with the visions of the South American countries and the community of wildland fire scientists. Therefore it has been suggested to use the 3^d South American Symposium on Wildland Fire Control and the 7th Joint Technical Meeting FUPEF/SIF/IPEF on Wildland Fire Control, 14 to 17 June 2004, Curitiba, Brazil, as an opportunity and a springboard for the foundation of the “Regional South America Wildland Fire Network”.

The Network Foundation Meeting is currently being prepared jointly by the Federal University of Paraná and UN-ISDR Wildland Fire Advisory Group (through the Global Fire Monitoring Center [GFMC]). It is envisaged that a future Regional South America Wildland Fire Network will closely interact with the Regional Mesoamerica Wildland Fire Network, Regional Caribbean Wildland Fire Network [in prep.], the North American Forestry Commission, Fire Management Working Group, and the Global Wildland Fire Network.

The recommendations of the Network Foundation Meeting will be presented to the participants of the Western Hemispheric Wildland Fire Conference, scheduled for 23 October 2004 in Costa Rica. The conference will be a one-day event co-sponsored by FAO's Latin America and Caribbean Forestry Commission and the North American Forest Commission. It will be held at the same venue as the 23rd session of the Latin America and Caribbean Forestry Commission in San José, Costa Rica, on the Saturday immediately following the meeting of the Commission.

	<p>The initiative of the South American wildland fire community to create a regional network aims at enhancing international cooperation in wildland fire management in the frame of the Global Wildland Fire Network (GWFN). The initiative is supported by government agencies, non-government organizations, and the United Nations.</p> <p>GWFN Website: http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html Int. Wildland Fire Summit: http://www.fire.uni-freiburg.de/summit-2003/introduction.htm Curitiba Meeting: http://www.fire.uni-freiburg.de/course/meeting/meet2003_14.htm</p>
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2. Host of the Network Foundation Meeting in the frame of the 3rd South American Symposium on Wildland Fire Control and the 7th Joint Technical Meeting FUPEF/SIF/IPEF on Wildland Fire Control

Host of the Network Foundation Meeting will be the organizers of the 3rd South American Symposium on Wildland Fire Control and the 7th Joint Technical Meeting FUPEF/SIF/IPEF on Wildland Fire Control. This event, which has been taken place since 1993, has become one of the most important forums on debates about the problem of wildland fires in Brazil and the other countries of South America. During the debates, the invited speakers, representatives of national and international wildland fire control entities will present tendencies and new technologies for the control of fires and will provide inputs for the Network Foundation Meeting.

3. Sponsors of the Network Foundation Meeting

The following list of sponsors is a draft list and subject to correction and modification after its first circulation. The sponsor contributions as listed below have been taken from numerous messages, meetings and telephone calls within sponsor organizations and between sponsor organizations and the GFMC.

UN-ISDR / GWFN / Wildland Fire Advisory Group / GFMC

The UN International Strategy for Disaster Reduction (ISDR) through the Global Fire Monitoring Center (GFMC) is facilitating communication and information flow between regional wildland fire networks under the umbrella of the Global Wildland Fire Network (GWFN). Some regional networks are actively supported by the GFMC. The GWFN is an ISDR outreach programme. The ISDR Wildland Fire Advisory Group has been established in November 2003 as an advisory body to the ISDR Secretariat and the Inter-Agency Task Force for Disaster Reduction (IATF/DR)¹. Regional activities of the GWFN in 2004 are partially funded by the government of Germany, including support of the network foundation meeting in Curitiba and follow-up meetings in Central America and the Caribbean.

FAO

The Food and Agriculture Organization of the United Nations (FAO), through the Forest Fire Management Officer (FORM) and the FAO Forestry Commissions of North America and Latin America / Caribbean, is actively working in Latin America and preparing a regional Technical Cooperation Programme (TCP). The TCP will involve three subregional studies (Central America & México, Caribbean, South America) and one regional synthesis study on the wildland fire situation in the three subregions. These studies will be presented at the hemispheric wildland fire conference of the FAO Forestry Commissions of North America and Latin America / Caribbean (23 October 2004, Costa Rica). The overall goal of the TCP is to enhance Sub-regional and regional networking and cooperation in wildland fire management.

UNEP

The United Nations Environment Programme (UNEP), through the Regional Office for Latin America and the Caribbean, Division of Early Warning and Assessment, have conducted a

¹ The mandated functions of the UN Inter-Agency Task Force for Disaster Reduction (IATF/DR) are (a) to serve as the main forum within the United Nations system for devising strategies and policies for the reduction of natural hazards; (b) to identify gaps in disaster reduction policies and programmes and recommend remedial action; and (c) to provide policy guidance to the ISDR secretariat; and to convene ad hoc meetings of experts on issues related to disaster reduction

regional wildland fire study (“Spreading like Wildfire – Tropical Forest Fires in Latin America and the Caribbean - 2002) and intend to support the Network Foundation Meeting by supporting participation of representatives from national Ministries for Environment.

GOFC-GOLD

Global Observations of Forest and Land Cover Dynamics (GOFC/GOLD) is a project of the Global Terrestrial Observing System (GTOS) programme, which is sponsored by the Integrated Global Observing Strategy (IGOS). The main goal of GOFC/GOLD is to provide a forum for international information exchange, observation and data coordination, and a framework for establishing the necessary long-term monitoring systems. The GOFC/GOLD-Fire Mapping and Monitoring Theme is aimed at refining and articulating the international observation requirements and making the best possible use of fire products from the existing and future satellite observing systems, for fire management, policy decision-making and global change research. The South American Regional GOFC/GOLD Network RedLaTIF is coordinated by scientists from the University of Alcalá (Spain) and the Argentinean Space Agency (CONAE), in collaboration with the Amazonian Proarco system led by Brazilian Ministry of Environment (IBAMA).²

US Forest Service

The United States Department of Agriculture, Forest Service (USFS), is a sponsor of the 3rd South American Symposium on Wildland Fire Control and the 7th Joint Technical Meeting FUPEF/SIF/IPEF on Wildland Fire Control. The USFS is an active supporter of a number of technical and scientific wildland fire cooperation projects in Latin America through its international programme. The USFS will attend the Network Foundation Meeting and support participation of delegates.

TNC

The mission of The Nature Conservancy (TNC) is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Conservancy works in 30 countries, including the Americas, Asia-Pacific, Australia and China. TNC sponsors a Fire Initiative, an organization-wide effort aimed at working with diverse partners to take practical action in ecosystems where altered fire regimes (too much, too little or the wrong kind of fire) pose major threats to people and ecosystems. TNC is a member of the Global Fire Partnership (with WWF-International and IUCN). The Conservancy sponsors the Latin American-Caribbean Fire Management Network that is linking scientists and decision-makers with on-the-ground managers and communities in pursuit of solutions to common fire-related challenges. TNC will attend the Network Foundation Meeting and may also support participation of delegates.

4. Participation at the Network Foundation Meeting

All participants of the 3rd South American Symposium on Wildland Fire Control and the 7th Joint Technical Meeting FUPEF/SIF/IPEF on Wildland Fire Control are invited to attend the Network Foundation Meeting. In addition representatives of the Regional Mesoamerica Wildland Fire Network and representatives from the Caribbean will be invited.

² See: <http://www.geogra.uah.es/redlatif/index.html> and http://gofc-fire.umd.edu/projects/proarco_pages/principal.htm

5. Preparation of the Network Foundation Meeting: Circulation of a Questionnaire

In order to facilitate the tight schedule of the 1-day network foundation meeting an informal questionnaire has been prepared and will be circulated in the second half of May 2004. Registered participants of the meeting are encouraged to provide information and views on topics to be addressed by the network, as well as proposals for regional cooperation.

6. Draft Agenda of the Network Foundation Meeting

A first draft agenda has been developed and is attached in Annex I. It is envisaged to give the floor to supporting organizations and their sponsored participants and allow an open discussion about the objectives and procedural arrangements of the network. A discussion shall be held with representatives of the Regional Mesoamerica Wildland Fire Network and the Caribbean region, about synergies between the regions.

A Drafting Committee consisting of the sponsors will prepare (pre-meeting) a draft concept and declaration aimed at presentation at the Western Hemispheric Wildland Fire Conference, scheduled for 23 October 2004 in Costa Rica.

This document and the questionnaire are also published on this website:

http://www.fire.uni-freiburg.de/course/meeting/meet2003_14.htm

ANNEX I

Draft Agenda of the Network Foundation Meeting

Date of Meeting: 17 June 2004, 08:00 – 13:30 hrs

Venue: Auditório do Centro de Ciências Florestais e da Madeira da Universidade Federal do Paraná

Time	Topic	Speaker
08:00-08:30	Opening: The ISDR Global Wildland Fire Network	ISDR / GFMC Johann G. Goldammer
08:30-08:45	FAO's Wildland Fire Management Programme in Latin America	FAO Carlos Marx Carneiro
08:45-09:00	UNEP Initiatives in Wildland Fire in Latin America	UNEP Kaveh Zahedi
09:00-09:15	The Nature Conservancy Wildland Fire Programme in Latin America	TNC Ron Myers
09:15-09:30	Regional Wildland Fire Early Warning and Monitoring	IBAMA / GOFC-GOLD Joao Raposo Pereira
09:30-09:45	US Projects in Regional Wildland Fire Management	USFS / USAID / OFDA Denny Truesdale
09:45-10:10	Current wildland fire networking arrangements in Mesoamerica / Central America	Mesoamerica Agreement / SIPECIF, Guatemala Josué Iván Morales Dardón, CCAD / MINAE-SINAC, Costa Rica / INAB Guatemala Alberto Vásquez and Miguel Antonio López
10:10-10:25	Proposal for future networking arrangements in the Caribbean	Universidad de Pinar del Río. Marcos Pedro Ramos
10:25-10:40	Proposal for future networking arrangements in South America	Universidade Federal do Paraná C. Batista
10:40-11:00	Coffee Break	
11:00-11:30	Evaluation of the Network Questionnaire	GFMC Johann G. Goldammer Claudia Scholz
11:30-12:30	Discussion	"
12:30-13:00	Drafting the Curitiba Resolution	"
13:00-13:30	Finalization of Curitiba Resolution	"
13:30	End of Meeting	
Afternoon	Informal follow-up discussions during the field demonstration and farewell Churrasco	

ANNEX II

The following pages contain the Framework for the Development of the International Wildland Fire Accord (agreed between GFMC, ISDR Wildland Fire Advisory Group and FAO, May 2004)



Framework for the Development of the International Wildland Fire Accord

Rationale, Status and Future Activities

Status: 5 May 2004

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

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. This paper proposes the development of an International Wildland Fire Accord to reinforce and strengthen international cooperation in wildland fire management.

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 Accord (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 Accord

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 Accord (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 Accord (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
- ECE/FAO conference on Cooperation in Wildland Fire Management in the Eastern Mediterranean, Near East, Balkans, Central Asia (Turkey, 30 March – 2 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 Committee on Forestry (March 2005).
- High-level meeting at FAO Committee on Forestry (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 FAO Committee on Forestry and a possible UN GA resolution, more in-depth consideration could be given to an International Wildland Fire Accord that would reinforce and strengthen international cooperation.

ANNEX - References

Wildland Fire Advisory Group. 2003. Vegetation fires globally. An analysis for policy makers prepared for the (UN-ISDR Inter-Agency Task Force for Disaster Reduction and the International Wildland Fire Summit. ECE/FAO International Forest Fire News (IFFN) No. 29

<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>

ECE/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 (GOFD/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.