



The Global Fire Situation:

Challenges and Opportunities to Enhance International Cooperation in Wildland Fire Management

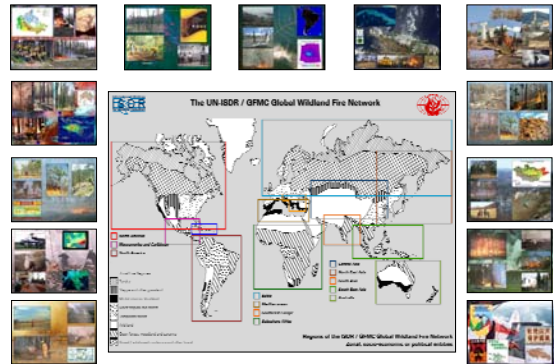
Johann G. Goldammer
Global Fire Monitoring Center (GFMC)



UN International Strategy for Disaster Reduction (ISDR)
Wildland Fire Advisory Group
Global Wildland Fire Network

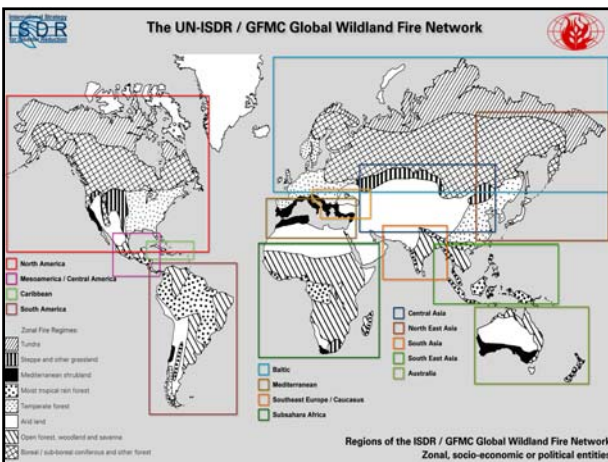


With Imageries by: NASA, Hoffmann, Rücker, GFMC Archive



UNISDR Regional Wildland Fire Networks

North America – Mesoamerica – South America – Caribbean – Mediterranean
Southeast Europe / Caucasus – Sub-Sahara Africa – South Asia – Southeast Asia
Australasia – Northeast Asia – Central Asia – Baltic

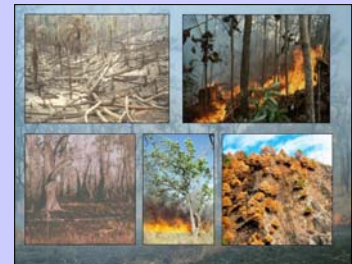


Regional South East Asia Wildland Fire Network

A facet-rich Fire Region



- Equatorial rain forest
- Seasonal monsoon forests
- Peat-swamp biomes
- Mountainous pine fire climax
- Degraded grass savannas



Regional South East Asia Wildland Fire Network

Association of South East Asian Nations (ASEAN)

ASEAN Agreement on Transboundary Haze Pollution



Signed: June 2002
In Force: Nov 2003



Regional South East Asia Wildland Fire Network

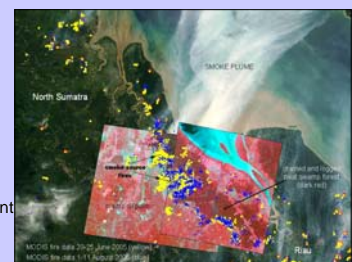
Association of South East Asian Nations (ASEAN)

ASEAN Agreement on Transboundary Haze Pollution



Results / Impacts:
Limited to negligible

Conversion burnings ongoing in full swing, fuelled by the international demands for biofuels – establishment of palm oil plantations



Regional South East Asia Wildland Fire Network

Association of South East Asian Nations (ASEAN)

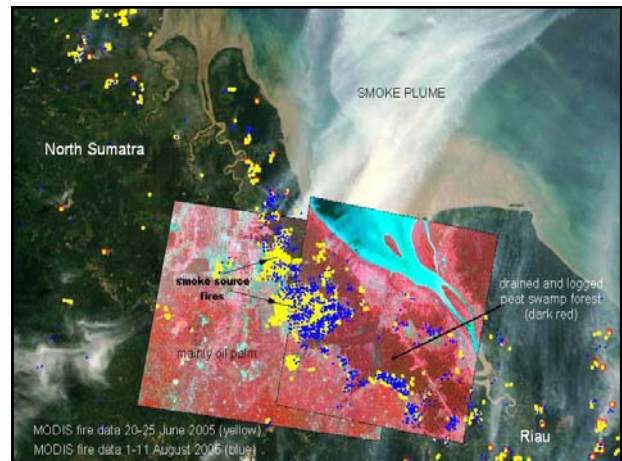
ASEAN Agreement on Transboundary Haze Pollution



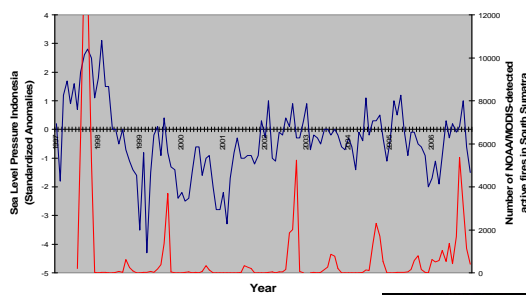
Results / Impacts:
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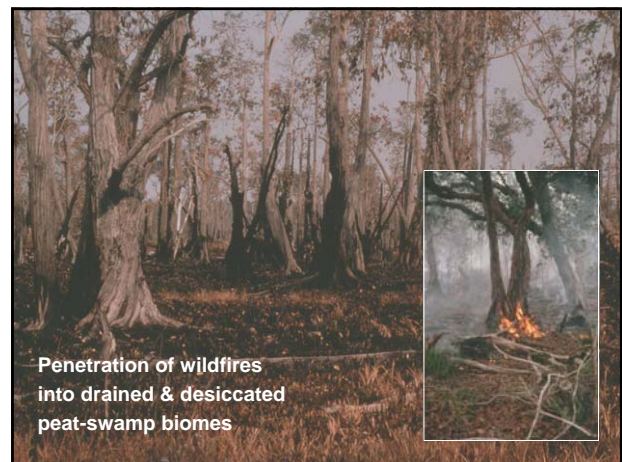
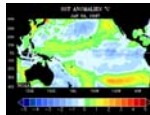
Indonesia 3rd-ranking in
net emissions of carbon



ENSO and Fire Activity in South Sumatra



Return intervals of inter-annual
extremes:
Response of ENSO to global
warming?

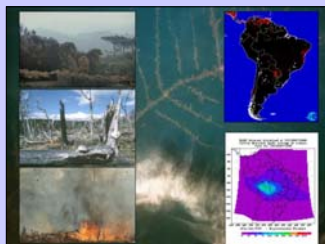


Penetration of wildfires
into drained & desiccated
peat-swamp biomes

Regional South America Wildland Fire Network

A similar facet-rich Fire Region

- Equatorial rain forest
- Cerrado / Cerradao
- *Araucaria* and *Nothofagus* forests
- Degraded grass savannas



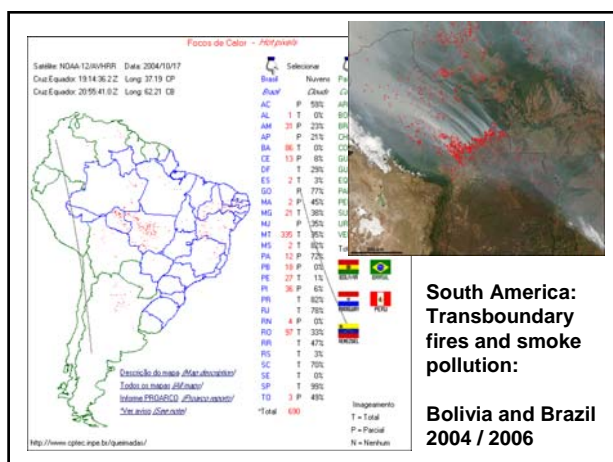
Regional South America Wildland Fire Network

The Networking Process



Foundation: 17 June 2004
Curitiba, Brazil





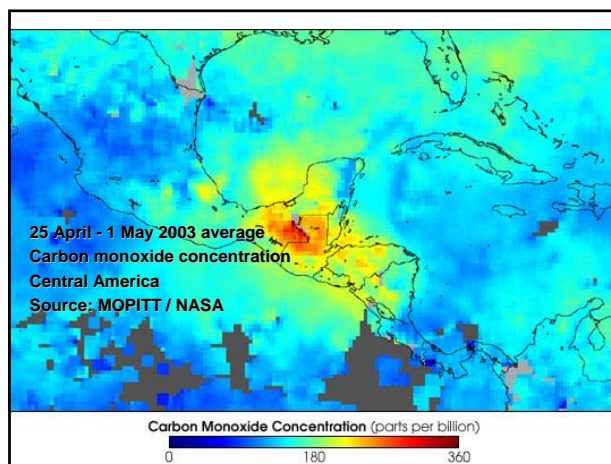
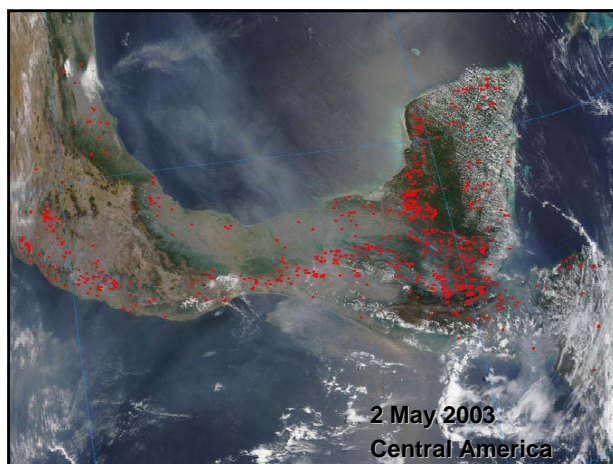
Regional Mesoamerica Wildland Fire Network

Mesoamerica Regional Agreement

Signed: July 2002

Estrategia Centroamericana para el Manejo del Fuego, 2005-2015

Endorsed and published by CCAD (Comision Centroamericana de Ambiente y Desarrollo) in 2006



Regional Caribbean Wildland Fire Network

Foundation

June 2005
Dominican Republic

Same year:
Coordinated response to fires in DR burning in early March 2005

Inter-Regional Cooperation

Pan-American Wildland Fire Conference

San José, Costa Rica
23 October 2004

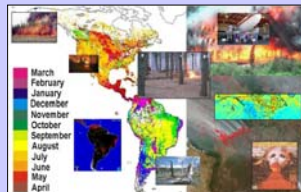
March
February
January
December
November
October
September
August
July
June
May
April

Inter-Regional Cooperation

Development of three sub-regional Strategies on Cooperation in Wildland Fire Management

- Caribbean (Dominican Republic, May-June 2005)
- Mesoamerica (Panamá, May 2005)
- South America (Brazil, June 2005)

Regional Strategy: Finalized in November 2005



Regional South Asia Wildland Fire Network

Foundation Meeting: April 2007

Participating countries:

- Nepal
- Bhutan
- India
- Sri Lanka
- Pakistan



Regional South Asia Wildland Fire Network

Regional Issues

- Seasonal climate and flammability
- Widespread fire use inside forests
- Fuels and fire behaviour
- Soil denudation
- Erosion, flash floods, large-scale flooding
- Atmospheric pollution

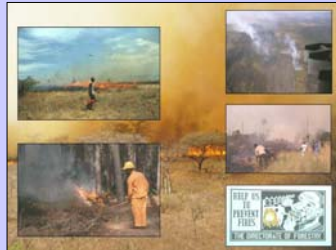


Regional Subsahara Wildland Fire Network

Afrifirenet - partnering with SAFNet

Afrifirenet
Founded: July 2002

Carried on:
Working on Fire



Savanna fires – annual occurrence on more than 100 million hectares



Priorities defined since the late 1990s

Development of National to Regional Forest Fire Management Strategies through Round Tables on Forest Fire

- Namibia 1999
- Ethiopia 2000
- Sub-Sahara Region 2004 (FAO-GFMC-Afrifirenet)



Priority: Community-Based Fire Management



Regional Subsahara Wildland Fire Network

Activities 2004-2007

Joint UN Inter-Agency
Training Course in
Advanced Fire Management,
with UNEP/OCHA
(June 2004)

Training Course for Instructors
in Community-Based
Fire Management (CBFiM)

ICS Training



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ICS Training



Regional North America Wildland Fire Network

FAO North American Forestry Commission (NAFC)
Fire Management Working Group (established 1962)



Regional Partner of the
Global Wildland Fire
Network since 2004

Close cooperation with
Australasia

Participation at the
Pan-American
Wildland Fire Conference
2004



Increasing Occurrence of uncontrollable Megafires:

A consequence of increasing fuel availability and drought



Regional Australasia Wildland Fire Network

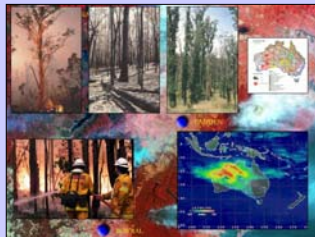
Australasian Fire Authorities Council (AFAC)



Since 1993: Australia, New Zealand
Pacific Region

AFAC Decision of
7 October 2004:

AFAC Regional Partner
in the Global Wildland Fire
Network



Increasing vulnerability at the Residential Perimeters

Australia: January 2003
Suburban fires in Canberra
Loss of 474 houses with a
total insurance damage of
\$AUS 285 Million.

U.S.A.: October 2003
Suburban fires in
California: Loss of 3640
homes, 33 commercial
properties, and 1141 other
structures causing a total
damage of more than \$US
2 billion, with possible
insurance claims estimated
to top \$US 10 billion.



Regional Mediterranean Wildland Fire Network

Towards Developing a Pan-European Network
Transiting from FAO *Silva Mediterranea*



Regional Mediterranean Wildland Fire Network

Towards Developing a Pan-European Network
Transiting from FAO *Silva Mediterranea*



Strategic Meetings
on Regional Cooperation
in Fire Management

2003-2004

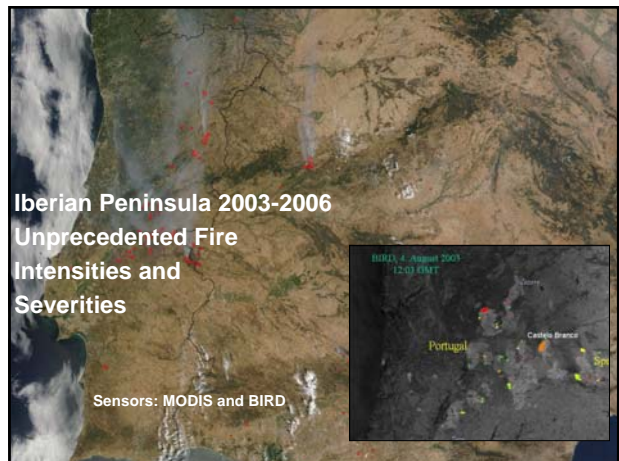
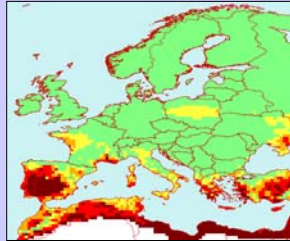


Regional Mediterranean Wildland Fire Network

Towards Developing a Pan-European Network

Transiting from FAO *Silva Mediterranea*

European Forest Fire
Information System
(EFFIS)



Regional Baltic Wildland Fire Network

Core Activity Region within the UN-ECE Region:
FAO / ECE Team of Specialists on Forest Fire



Active since the 1980s

Established by the
UN-ECE/FAO Team of
Specialists on Forest Fire



Regional Baltic Wildland Fire Network

Core Activity Region within the UN-ECE Region:
FAO / ECE Team of Specialists on Forest Fire



Regional Consultations:

Russia 1996
Poland 1998
Finland 2000
Finland 2004



Regional Baltic Wildland Fire Conferences

1996 Russian Federation
Forest, Fire and Global Change

1998 Poland
First Baltic Conference on Forest Fires

2000 Finland
*Baltic Exercise in Fire Information and
Resources Exchange - BALTEX FIRE 2000*

2004 Finland
*Baltic Wildland Fire Meeting:
Towards increasing efficiency of
regional cooperation in
wildland fire management*



Germany, UK, Denmark, Sweden, Finland:

New Approaches in maintenance and restoration of biodiversity and ecosystem functioning by application of prescribed fire



Consequence of transboundary wildland fire smoke pollution

11 May 2006 – Media Release by the UK Department for Environment, Food and Rural Affairs (DEFRA)

The Meteorological Office said that the easterly air-flows which have brought the particles to the UK are likely to remain over the next few days and that this will not change until Saturday. Until then, the levels of PM10 may depend on how quickly the fires are brought under control.

The UK government is pushing for a revision of the United Nations Convention on Long Range Transboundary Air Pollution to prevent similar occurrences in the future, a DEFRA spokesman said.

Regional Southeast Europe / Caucasus Wildland Fire Network

A Region in transition

Network
Founded: 2002



Regional Southeast Europe / Caucasus Wildland Fire Network

A Region in transition

Regional Consultation and Conference on Cooperation in Fire Management in Eastern Mediterranean, Balkans, Near East and Central Asia

Antalya, Turkey
30 March – 3 April 2004



Regional Southeast Europe / Caucasus Wildland Fire Network

A Region in transition

Antalya Declaration on Cooperation in Wildland Fire Management

Implementation:
Assistance provided by Turkey to Georgia and Syria (Oct 2004 – August 2006)



Regional Southeast Europe / Caucasus Wildland Fire Network

Eastern European, Near East and Central Asian States Exercise on Wildland Fire Information and Resources Exchange (EASTEX FIRE 2005)

20-22 April 2005, Haskovo Region, Bulgaria

Participation: Albania, Bosnia and Herzegovina, Bulgaria, Greece, Macedonia, Romania, Serbia and Montenegro, Turkey



Regional Northeast Asia Wildland Fire Network

Culturally and ecologically facet-rich region



Network foundation: March 2004

Host: Korea Forest

Service (with UNISDR)

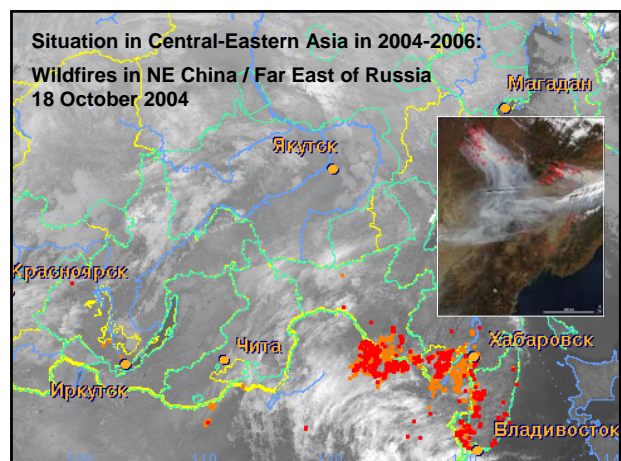
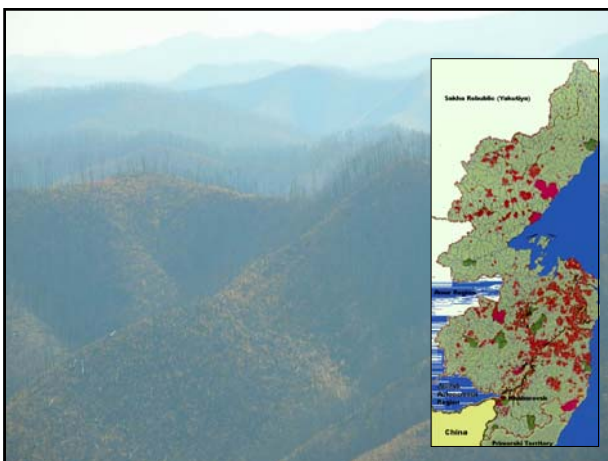
Members:

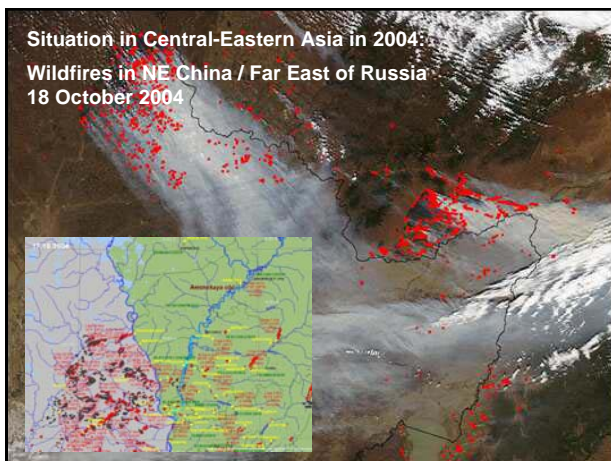
South Korea

Japan

China

Russia (Far East)





Regional Central Asia Wildland Fire Network

An initiative of the UN-ECE / FAO Team of Specialists on Forest Fire

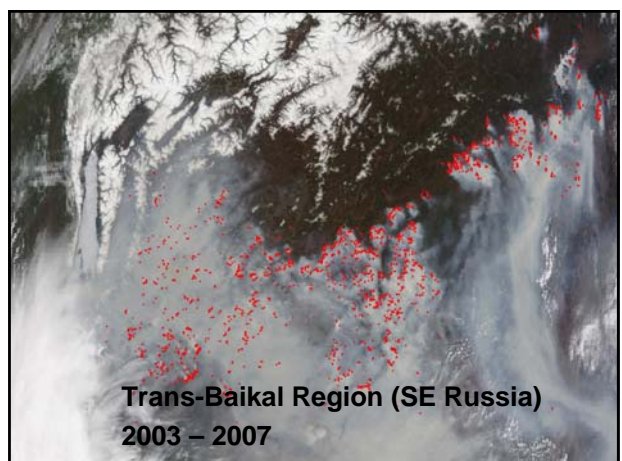
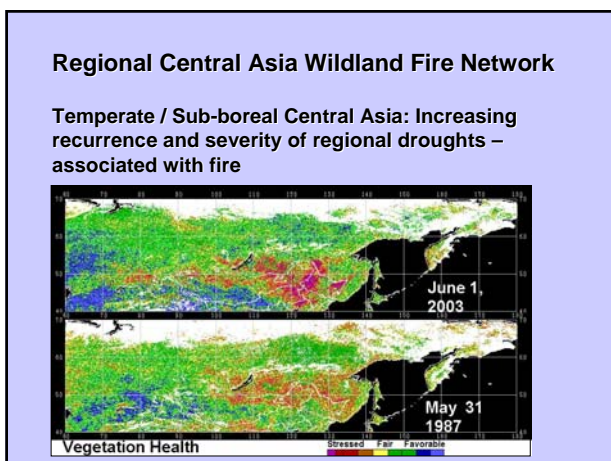
Endorsed by the
Central Asia
Forestry Congress
Bishkek, Kyrgyzstan
25-27 November 2004

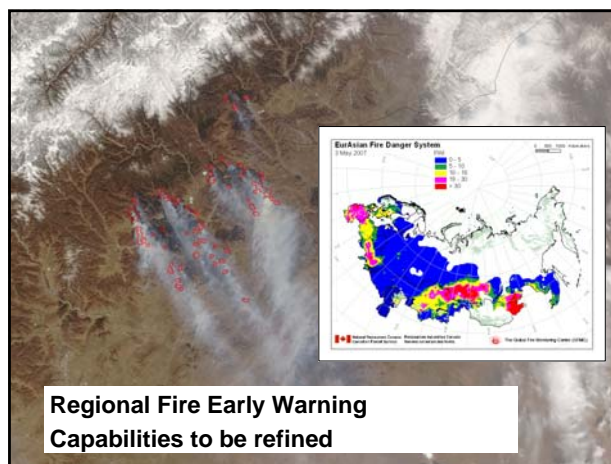
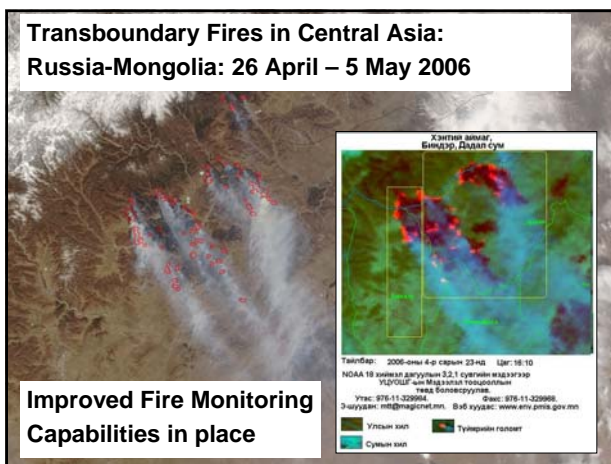
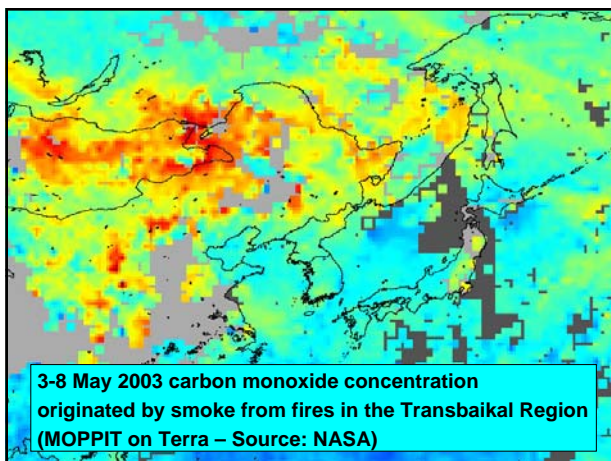
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25-27 November 2004

Regional Network Consultation
Irkutsk, Russian Federation
8-9 September 2005





Consequences of Central Asian Fires at Global Level

Increase radiation of radio-caesium observed in Canada 2003:
A consequence of the extended vegetation fires in Kazakhstan

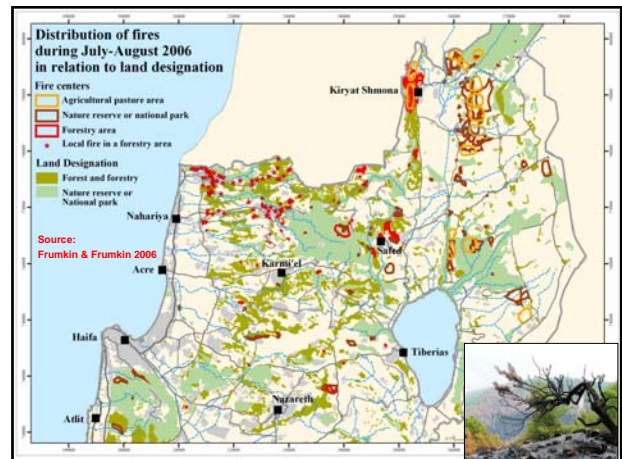
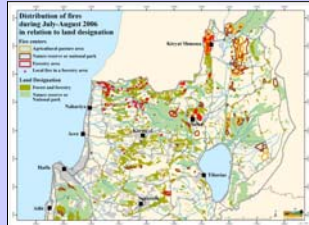
Similar problems in Belarus / Russia:

Radioactive fire emissions from the Chernobyl accident site

Conflicts and Fire

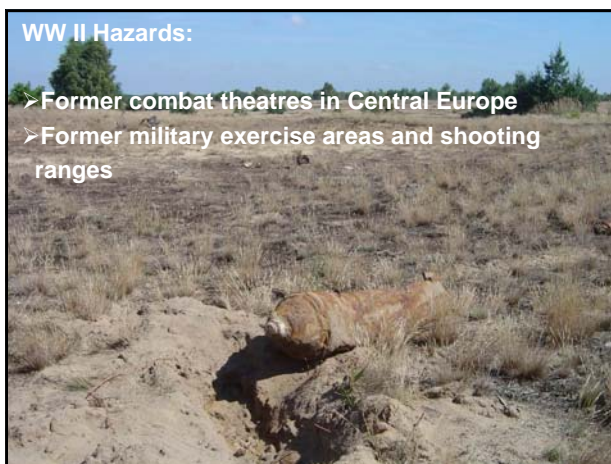
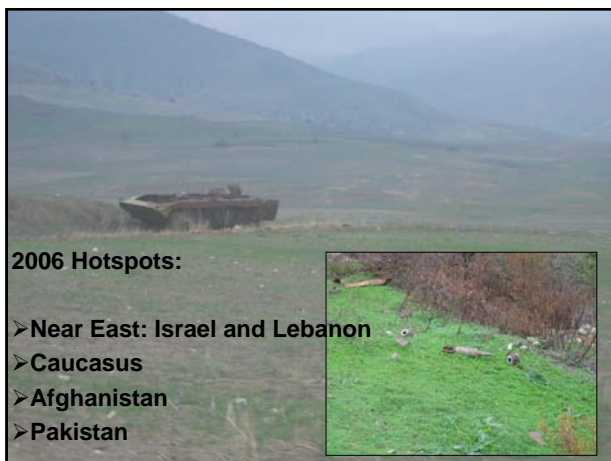
Lebanon-Israel conflict 2006

Source:
Frumkin & Frumkin 2006



Source: Frumkin & Frumkin 2006









The Way Ahead



The Global Wildland Fire Network and the UNU Mandates: Conclusions of Sevilla 2007

(1) Environment

- The fire community to contribute to the implementation programmes of the three Rio Conventions (CBD, FCCC and CCD)
- Nairobi Work Programme (UNFCCC): Adaptation and response to climate change
- Cooperate with the World Bank's Forest Carbon Partnership Facility (FCPF)





The Way Ahead



(2) Science, Technology and Society

- The fire community to closely cooperate with and benefit from the Global Observing System Strategy (GTOS) and its GOFC/GOLD (Global Observation of Forest Cover/Global Observation of Landcover Dynamics) project
- Development of the Global Wildland Fire Early Warning System, with emphasis on "people-centred" early warning system I.a.w. the Hyogo Framework of Action





The Way Ahead



(3) Development and Poverty Reduction

- Focus on community involvement

(4) Governance

- Support and consider your organization to be part of the Fire Management Actions Alliance – to promote the implementation of the key code of ethics and code of conduct – The Fire Management Voluntary Guidelines



The Way Ahead



(5) Peace and Human Security

- Support regions with disputed territories / unresolved conflicts
- Reduce the threats to human health and security caused by smoke pollution from vegetation fires



The Way Ahead



Thanks for your attention