

# FIRE



INTERNATIONAL

Campaigning For A Safer World

February 1996 No. 150

## All-Wheel Independent Suspension UNSURPASSED OFF-ROAD MOBILITY



*"Maneuver through soft or flooded fields, steep slopes, uneven ground, loose sand or drifting snow to reach the accident scene faster and safer than any other vehicle."*

E-One's Titan® HPR (High Performance Rescue) transports firefighters to the accident scene faster and more safely than any other vehicle. The Titan® HPR's unique independent suspension is designed specifically for adverse terrain, high-speed turns and side-slope stability.

No other truck can match the Titan's® performance. It maneuvers through soft or flooded fields, steep slopes, uneven ground, loose sand or drifting snow at off-road speeds of up to 56 kph. Superb off-road handling, remarkable stability, and unbelievably smooth ride makes it the choice for the U.S. Air Force, which has specified a P-23 military version of this revolutionary vehicle.



Subsidiary of Federal Signal Corporation  
1601 S.W. 37th Ave. • Ocala, FL 34474, U.S.A.  
Tel: 352-237-1122 • Fax: 352-237-1161

© EMERGENCY ONE, INC.





J.G. Goldammer

# World wildfire initiatives

*Leading international wildfire expert JOHANN GOLDAMMER, of the Fire Ecology Research Group at the Max Planck Institute for Chemistry in Freiburg, Germany, traces progress made in international co-operation over wildfires in the last decade, and outlines plans for the future.*

**U**ncontrolled wildfires and prescribed fires occur in all vegetation zones of the world. It is estimated that fires annually affect up to:

- 10-15 million hectares of boreal and temperate forest and other lands
- 20-40 million hectares of tropical rain forests due to forest conversion activities and escaped agricultural burnings
- 500-1,000 million hectares of tropical and subtropical savannas, woodlands, and open forests' so said a proposal for a possible role for the United Nations, which continued: "Only a minor part of these fires is caused by nature – ie lightning. Most of today's fires are caused by human activities. Some burning practices still follow the traditional rules of rural populations, and many ecosystems are well adapted to fire. The majority of fires, however, is in conflict with land-use priorities and other considerations, leading to:
  - Ecological problems (vegetation degradation, erosion, loss of biodiversity)
  - Socio-economic problems (loss of

human lives, loss of values at risk, especially in the wildland/residential interface, economic losses)

– Environmental phenomena (affecting air quality and the global carbon cycle, contribution to elevated concentration of trace gases and aerosols, with consequences on the regional and global climate).

"Wildfire disasters sometimes occur as a consequence of other natural disasters (e.g. after earthquakes, volcano eruptions), and fires may lead to subsequent natural disasters (e.g. landslides and flooding after soil exposure).

"On an international basis no system is available to monitor the extent and the consequences of vegetation fires on a global scale. Most countries in the developing world do not have adequate infrastructures, experience and hardware to manage wildfire disasters.

"Although bilateral assistance agreements exist and a number of field projects in fire management are carried out through national and international organisations, there are no facilities and/or

mechanisms available to provide the necessary disaster management assistance on an international level on a permanent and quick-response base. Besides the ECE/FAO Team of Specialists on Forest Fire, which has a restricted mandate and a regionally restricted area of influence, or some ongoing and planned regional fire research campaigns under the International Geosphere-Biosphere Programme (IGBP) scheme, neither the United Nations system nor any other organisation is providing adequate structures and mechanisms with international (global) responsibilities in fire management.

"In order to take the first necessary steps for clarifying the global importance of wildfires and for building international structures and mechanisms for mutual fire management support, it is recommended to entrust the ECE (United Nations) Economic Commission for Europe/FAO Team of Specialists on Forest Fire, in close co-operation with FAO, UNESCO, IDNDR, and UNDRO, to develop a plan for the establishment of a UN-sponsored Global



B.J. Stocks

**MAIN PICTURE: FIRE IN AN OPEN AFRICAN TREE SAVANNAH – THESE ECOSYSTEMS ARE BURNED REGULARLY AT INTERVALS BETWEEN ONE AND FIVE YEARS. THE VEGETATION IS WELL ADAPTED TO FIRE. HOWEVER, FIRE NEEDS TO BE MANAGED IN ORDER TO AVOID DETRIMENTAL EFFECTS ON TREES AND GRASSES THAT ARE ECONOMICALLY IMPORTANT FOR THE RURAL POPULATIONS. ABOVE: FIRE IN A NORTHERN (BOREAL) CONIFEROUS FOREST IN CENTRAL SIBERIA. FIRE BEHAVIOUR, FIRE EFFECTS AND EMISSIONS DIFFER CONSIDERABLY FROM SAVANNAH FIRES, MAINLY DUE TO THE LARGER PROPORTION OF BURNING LIVE (GREEN) MATERIALS AND SMOULDERING COMBUSTION.**



# Wildfire Terminology

*Most of the wildland fire management terms defined in the following are taken from the United Nations' Wildland Fire Management Terminology (FAO 1986). An updated version of this terminology is under preparation and will be available in 1996/97. This list was compiled by JOHANN GOLDAMMER, Leader, FAO/ECE/ILO Team of Specialists on Forest Fire.*

**Aerial Fuels** — The standing and supported forest combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, bark, and vines.

**Backfire** — A fire set along the inner edge of a control line to consume the fuel in the path of a forest fire and/or change the direction of force of the fire's convection column.

**Broadcast Burning** — Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, as a silvicultural treatment, or both.

**Bump-up Method** — A progressive system of building a fireline on a wildfire without changing relative positions in the line. Work is begun with a suitable space between workers, such as five metres. Whenever one worker overtakes another, all of those ahead move one space forward and resume work on the incomplete part of the line. The last worker does not move ahead until the work is complete in his space. Forward progress of the crew is co-ordinated by a crew leader.

**Centre Firing** — A method of broadcast burning in which fires are set in the centre of the area to create a strong draft; additional fires are then set progressively nearer the outer control lines as indraft builds up so as to draw them in toward the centre.

**Control a Fire** — To complete a control line around a fire, any spot fires and any interior islands to be saved; the control lines; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

**Counter Fire** — Fire set between main fire and backfire to hasten spread of backfire. Also called draft fire. The act of setting counter fires is sometimes called front firing or strip firing. In European forestry synonymous with backfire.

**Crown Fire** — A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

**Drip Torch** — A hand-held apparatus for igniting prescribed fires by dripping flaming fuel on the materials to be burned. The device consists of a fuel fount, burner arm, and igniter. The fuel used is generally diesel or stove oil with gasoline added.

**Early Burning** — Prescribed burning early in the dry season before the leaves and undergrowth are completely dry or before the leaves are shed, as an insurance against more severe fire damage later on.

**Firebreak** — Any natural or constructed discontinuity in a fuelbed used to segregate, stop, and control the spread of fire or to provide a control line from which to suppress a fire.

**Fire Danger Rating** — A fire management system that integrates the effects of selected fire danger factors into one or more qualitative or numerical indices of current protection needs.

**Fire Hazard** — A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree both of ease of ignition and of fire suppression difficulty.

**Fire Management** — All activities required for the protection of burnable forest values from fire and the use of fire to meet land management goals and objectives.

**Fire Retardant** — Any substance except plain water that by chemical or physical action reduces the flammability of fuels or slows their rate of combustion, e.g., a liquid or slurry applied aerially or from the ground during a fire suppression operation.

**Forest Residue** — The accumulation in the forest of living or dead mostly woody material that is added to and rearranged by human activities such as forest harvest, cultural operations and land clearing.

**Fuelbreak** — Generally wide (20 - 300 metres) strips of land on which the native

vegetation has been permanently modified so that fires burning into them can be more readily controlled. Some fuelbreaks contain narrow firebreaks which may be roads or narrower hand-constructed lines. During fires, these firebreaks can quickly be widened either with hand tools or by firing out. Fuelbreaks have the advantages of preventing erosion, offering a safe place for firefighters to work, low maintenance, and a pleasing appearance.

**Ladder Fuels** — Fuels that provide vertical continuity between strata. Fire is able to carry from surface fuels into the crowns of trees or shrubs with relative ease and help assure initiation and continuation of crowning.

**Mass Fire** — A fire resulting from many simultaneous ignitions that generates a high level of energy output.

**Mopping up** — Making a fire safe after it has been controlled, by extinguishing or removing burning material along or near the control line, felling snags, trenching logs to prevent rolling, etc.

**One Lick Method** — A progressive system of building a fire line on a wildfire without changing relative positions in the line. Each worker does one to several 'licks', or specified distance to make room for the worker behind.

**Preattack Planning** — Within designated blocks of land, planning the locations of fire lines, base camps, water supply, sources, helispots, etc.; planning transportation systems, probable rates of travel, and constraints of travel on various types of attack units; and determining construct particular fire lines, their probable rate of line construction, topographic constraints on line construction, etc.

**Prescribed Burning** — Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spreads required to attain planned resource management objectives.

**Prescribed Fire** — A fire burning within prescription. The fire may result from either planned or unplanned ignitions.

**Shaded Fuelbreak** — Fuelbreaks built in timbered areas where the trees on the break are thinned and pruned to reduce the fire potential yet retain enough crown canopy to make a less favorable microclimate for surface fires.

**Smoke Management** — The application of knowledge of fire behaviour and meteorological processes to minimise air quality degradation during prescribed fires.

**Surface Fire** — Fire that burns only surface litter, other loose debris of the forest floor, and small vegetation.

**Values-at-Risk** — Any or all of the natural resources or improvements which may be jeopardised if a fire occurs.

**Wildfire** — Any fire occurring on wildland except a fire under prescription.

**Wildland/Residential Interface** — That line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

## Useful addresses

### The UN Platform:

Johann G. Goldammer, Fire Ecology Research Group, Max Planck Institute for Chemistry, Biogeochemistry Department, c/o University of Freiburg, D-79085 Freiburg, Germany.

### FAO/ECE/ILO Seminar on Forest, Fire and Global Change:

Mr Jorge Najera, Timber Section, UN-ECE Trade Division, Palais des Nations, CH-1211 Genève 10 (Fax: +41 22 9170041).

### Exposition: (USA)

Richard L. Stauber, NIFC, 3905 Vista Avenue, Boise, Idaho 83705, USA (Fax: +1 208 3368220).

(Canada) Tom Johnston, Canadian

Interagency Forest Fire Centre, 210-301 Weston Street, Winnipeg, Manitoba R3E 3H4, Canada (Fax: +1 204 9562398)

### (Other countries)

International Association of Wildland Fire, 103 E. Main, PO Box 328, Fairfield, WA 99012, USA (Fax: +1 509 2832264).

### FireNet:

Entry points to FireNet's first node are: For subscribers: <listserver@life.anu.edu.au>

WWW protocol: [http://life.anu.edu.au/landscape\\_ecology/firenet/firenet.html](http://life.anu.edu.au/landscape_ecology/firenet/firenet.html)

### Timber Section, UN-ECE Trade Division,

Palais des Nations, CH-1211 Genève 10, Switzerland



# Wildfire Terminology

*Most of the wildland fire management terms defined in the following are taken from the United Nations' Wildland Fire Management Terminology (FAO 1986). An updated version of this terminology is under preparation and will be available in 1996/97. This list was compiled by JOHANN GOLDAMMER, Leader, FAO/ECE/ILO Team of Specialists on Forest Fire.*

**Aerial Fuels** — The standing and supported forest combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, bark, and vines.

**Backfire** — A fire set along the inner edge of a control line to consume the fuel in the path of a forest fire and/or change the direction of force of the fire's convection column.

**Broadcast Burning** — Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, as a silvicultural treatment, or both.

**Bump-up Method** — A progressive system of building a fireline on a wildfire without changing relative positions in the line. Work is begun with a suitable space between workers, such as five metres. Whenever one worker overtakes another, all of those ahead move one space forward and resume work on the incomplete part of the line. The last worker does not move ahead until the work is complete in his space. Forward progress of the crew is co-ordinated by a crew leader.

**Centre Firing** — A method of broadcast burning in which fires are set in the centre of the area to create a strong draft; additional fires are then set progressively nearer the outer control lines as indraft builds up so as to draw them in toward the centre.

**Control a Fire** — To complete a control line around a fire, any spot fires and any interior islands to be saved; the control lines; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

**Counter Fire** — Fire set between main fire and backfire to hasten spread of backfire. Also called draft fire. The act of setting counter fires is sometimes called front firing or strip firing. In European forestry synonymous with backfire.

**Crown Fire** — A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

**Drip Torch** — A hand-held apparatus for igniting prescribed fires by dripping flaming fuel on the materials to be burned. The device consists of a fuel fount, burner arm, and igniter. The fuel used is generally diesel or stove oil with gasoline added.

**Early Burning** — Prescribed burning early in the dry season before the leaves and undergrowth are completely dry or before the leaves are shed, as an insurance against more severe fire damage later on.

**Firebreak** — Any natural or constructed discontinuity in a fuelbed used to segregate, stop, and control the spread of fire or to provide a control line from which to suppress a fire.

**Fire Danger Rating** — A fire management system that integrates the effects of selected fire danger factors into one or more qualitative or numerical indices of current protection needs.

**Fire Hazard** — A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree both of ease of ignition and of fire suppression difficulty.

**Fire Management** — All activities required for the protection of burnable forest values from fire and the use of fire to meet land management goals and objectives.

**Fire Retardant** — Any substance except plain water that by chemical or physical action reduces the flammability of fuels or slows their rate of combustion, e.g., a liquid or slurry applied aerially or from the ground during a fire suppression operation.

**Forest Residue** — The accumulation in the forest of living or dead mostly woody material that is added to and rearranged by human activities such as forest harvest, cultural operations and land clearing.

**Fuelbreak** — Generally wide (20 - 300 metres) strips of land on which the native

vegetation has been permanently modified so that fires burning into them can be more readily controlled. Some fuelbreaks contain narrow firebreaks which may be roads or narrower hand-constructed lines. During fires, these firebreaks can quickly be widened either with hand tools or by firing out. Fuelbreaks have the advantages of preventing erosion, offering a safe place for firefighters to work, low maintenance, and a pleasing appearance.

**Ladder Fuels** — Fuels that provide vertical continuity between strata. Fire is able to carry from surface fuels into the crowns of trees or shrubs with relative ease and help assure initiation and continuation of crowning.

**Mass Fire** — A fire resulting from many simultaneous ignitions that generates a high level of energy output.

**Mopping up** — Making a fire safe after it has been controlled, by extinguishing or removing burning material along or near the control line, felling snags, trenching logs to prevent rolling, etc.

**One Lick Method** — A progressive system of building a fire line on a wildfire without changing relative positions in the line. Each worker does one to several 'licks', or specified distance to make room for the worker behind.

**Preattack Planning** — Within designated blocks of land, planning the locations of fire lines, base camps, water supply, sources, helispots, etc.; planning transportation systems, probable rates of travel, and constraints of travel on various types of attack units; and determining construct particular fire lines, their probable rate of line construction, topographic constraints on line construction, etc.

**Prescribed Burning** — Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to attain planned resource management objectives.

**Prescribed Fire** — A fire burning within prescription. The fire may result from either planned or unplanned ignitions.

**Shaded Fuelbreak** — Fuelbreaks built in timbered areas where the trees on the break are thinned and pruned to reduce the fire potential yet retain enough crown canopy to make a less favorable microclimate for surface fires.

**Smoke Management** — The application of knowledge of fire behaviour and meteorological processes to minimise air quality degradation during prescribed fires.

**Surface Fire** — Fire that burns only surface litter, other loose debris of the forest floor, and small vegetation.

**Values-at-Risk** — Any or all of the natural resources or improvements which may be jeopardised if a fire occurs.

**Wildfire** — Any fire occurring on wildland except a fire under prescription.

**Wildland/Residential Interface** — That line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

## Useful addresses

### The UN Platform:

Johann G. Goldammer, Fire Ecology Research Group, Max Planck Institute for Chemistry, Biogeochemistry Department, c/o University of Freiburg, D-79085 Freiburg, Germany.

### FAO/ECE/ILO Seminar on Forest, Fire and Global Change:

Mr Jorge Najera, Timber Section, UN-ECE Trade Division, Palais des Nations, CH-1211 Genève 10 (Fax: +41 22 9170041).

### Exposition: (USA)

Richard L. Stauber, NIFC, 3905 Vista Avenue, Boise, Idaho 83705, USA (Fax: +1 208 3368220).

(Canada) Tom Johnston, Canadian

Interagency Forest Fire Centre, 210-301 Weston Street, Winnipeg, Manitoba R3E 3H4, Canada (Fax: +1 204 9562398)

### (Other countries)

International Association of Wildland Fire, 103 E. Main, PO Box 328, Fairfield, WA 99012, USA (Fax: +1 509 2832264).

### FireNet:

Entry points to FireNet's first node are: For subscribers: <listserver@life.anu.edu.au>

WWW protocol: [http://life.anu.edu.au/landscape\\_ecology/firenet/firenet.html](http://life.anu.edu.au/landscape_ecology/firenet/firenet.html)

### Timber Section, UN-ECE Trade Division,

Palais des Nations, CH-1211 Genève 10, Switzerland



# Wildfire Terminology

*Most of the wildland fire management terms defined in the following are taken from the United Nations' Wildland Fire Management Terminology (FAO 1986). An updated version of this terminology is under preparation and will be available in 1996/97. This list was compiled by JOHANN GOLDAMMER, Leader, FAO/ECE/ILO Team of Specialists on Forest Fire.*

**Aerial Fuels** — The standing and supported forest combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, bark, and vines.

**Backfire** — A fire set along the inner edge of a control line to consume the fuel in the path of a forest fire and/or change the direction of force of the fire's convection column.

**Broadcast Burning** — Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, as a silvicultural treatment, or both.

**Bump-up Method** — A progressive system of building a fireline on a wildfire without changing relative positions in the line. Work is begun with a suitable space between workers, such as five metres. Whenever one worker overtakes another, all of those ahead move one space forward and resume work on the incomplete part of the line. The last worker does not move ahead until the work is complete in his space. Forward progress of the crew is co-ordinated by a crew leader.

**Centre Firing** — A method of broadcast burning in which fires are set in the centre of the area to create a strong draft; additional fires are then set progressively nearer the outer control lines as in draft builds up so as to draw them in toward the centre.

**Control a Fire** — To complete a control line around a fire, any spot fires and any interior islands to be saved; the control lines; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

**Counter Fire** — Fire set between main fire and backfire to hasten spread of backfire. Also called draft fire. The act of setting counter fires is sometimes called front firing or strip firing. In European forestry synonymous with backfire.

**Crown Fire** — A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

**Drip Torch** — A hand-held apparatus for igniting prescribed fires by dripping flaming fuel on the materials to be burned. The device consists of a fuel fount, burner arm, and igniter. The fuel used is generally diesel or stove oil with gasoline added.

**Early Burning** — Prescribed burning early in the dry season before the leaves and undergrowth are completely dry or before the leaves are shed, as an insurance against more severe fire damage later on.

**Firebreak** — Any natural or constructed discontinuity in a fuelbed used to segregate, stop, and control the spread of fire or to provide a control line from which to suppress a fire.

**Fire Danger Rating** — A fire management system that integrates the effects of selected fire danger factors into one or more qualitative or numerical indices of current protection needs.

**Fire Hazard** — A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree both of ease of ignition and of fire suppression difficulty.

**Fire Management** — All activities required for the protection of burnable forest values from fire and the use of fire to meet land management goals and objectives.

**Fire Retardant** — Any substance except plain water that by chemical or physical action reduces the flammability of fuels or slows their rate of combustion, e.g., a liquid or slurry applied aerially or from the ground during a fire suppression operation.

**Forest Residue** — The accumulation in the forest of living or dead mostly woody material that is added to and rearranged by human activities such as forest harvest, cultural operations and land clearing.

**Fuelbreak** — Generally wide (20 - 300 metres) strips of land on which the native

vegetation has been permanently modified so that fires burning into them can be more readily controlled. Some fuelbreaks contain narrow firebreaks which may be roads or narrower hand-constructed lines. During fires, these firebreaks can quickly be widened either with hand tools or by firing out. Fuelbreaks have the advantages of preventing erosion, offering a safe place for firefighters to work, low maintenance, and a pleasing appearance.

**Ladder Fuels** — Fuels that provide vertical continuity between strata. Fire is able to carry from surface fuels into the crowns of trees or shrubs with relative ease and help assure initiation and continuation of crowning.

**Mass Fire** — A fire resulting from many simultaneous ignitions that generates a high level of energy output.

**Mopping up** — Making a fire safe after it has been controlled, by extinguishing or removing burning material along or near the control line, felling snags, trenching logs to prevent rolling, etc.

**One Lick Method** — A progressive system of building a fire line on a wildfire without changing relative positions in the line. Each worker does one to several 'licks', or specified distance to make room for the worker behind.

**Preattack Planning** — Within designated blocks of land, planning the locations of fire lines, base camps, water supply, sources, helispots, etc.; planning transportation systems, probable rates of travel, and constraints of travel on various types of attack units; and determining construct particular fire lines, their probable rate of line construction, topographic constraints on line construction, etc.

**Prescribed Burning** — Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spreads required to attain planned resource management objectives.

**Prescribed Fire** — A fire burning within prescription. The fire may result from either planned or unplanned ignitions.

**Shaded Fuelbreak** — Fuelbreaks built in timbered areas where the trees on the break are thinned and pruned to reduce the fire potential yet retain enough crown canopy to make a less favorable microclimate for surface fires.

**Smoke Management** — The application of knowledge of fire behaviour and meteorological processes to minimise air quality degradation during prescribed fires.

**Surface Fire** — Fire that burns only surface litter, other loose debris of the forest floor, and small vegetation.

**Values-at-Risk** — Any or all of the natural resources or improvements which may be jeopardised if a fire occurs.

**Wildfire** — Any fire occurring on wildland except a fire under prescription.

**Wildland/Residential Interface** — That line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

## Useful addresses

### The UN Platform:

Johann G. Goldammer, Fire Ecology Research Group, Max Planck Institute for Chemistry, Biogeochemistry Department, c/o University of Freiburg, D-79085 Freiburg, Germany.

### FAO/ECE/ILO Seminar on Forest, Fire and Global Change:

Mr Jorge Najera, Timber Section, UN-ECE Trade Division, Palais des Nations, CH-1211 Genève 10 (Fax: +41 22 9170041).

### Exposition: (USA)

Richard L. Stauber, NIFC, 3905 Vista Avenue, Boise, Idaho 83705, USA (Fax: +1 208 3368220).

(Canada) Tom Johnston, Canadian

Interagency Forest Fire Centre, 210-301 Weston Street, Winnipeg, Manitoba R3E 3H4, Canada (Fax: +1 204 9562398)

### (Other countries)

International Association of Wildland Fire, 103 E. Main, PO Box 328, Fairfield, WA 99012, USA (Fax: +1 509 2832264).

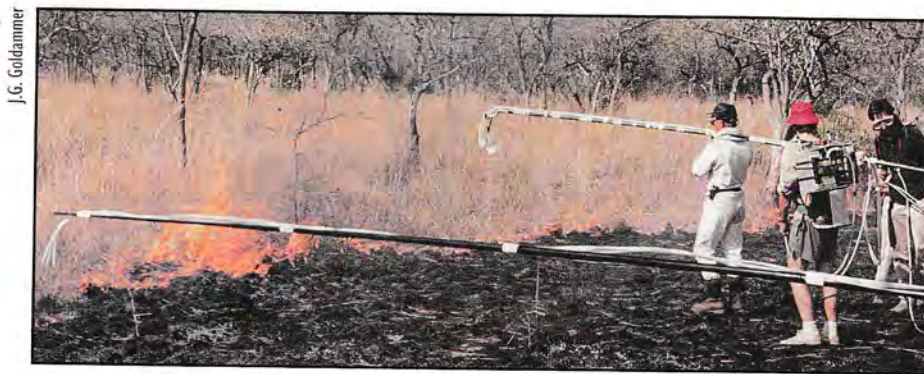
### FireNet:

Entry points to FireNet's first node are: For subscribers: <listserver@life.anu.edu.au>

WWW protocol: [http://life.anu.edu.au/landscape\\_ecology/firenet/firenet.html](http://life.anu.edu.au/landscape_ecology/firenet/firenet.html)

**Timber Section, UN-ECE Trade Division,** Palais des Nations, CH-1211 Genève 10, Switzerland





ABOVE: ONE OF THE INTERNATIONAL FIRE RESEARCH PROGRAMMES, THE SOUTHERN AFRICAN FIRE-ATMOSPHERE RESEARCH INITIATIVES (SAFARI), CONCENTRATED ON RESEARCH OF EMISSIONS FROM AFRICAN SAVANNAH FIRES. RIGHT: THE SMOKE COLUMN OF THE 'BOR FOREST ISLAND FIRE EXPERIMENT', THE FIRST EAST-WEST INTERDISCIPLINARY FIRE EXPERIMENT IN THE FRAME OF THE 'FIRE RESEARCH CAMPAIGN ASIA-NORTH' (FIRESKAN). THE MAIN OBJECTIVE OF THIS EXPERIMENT WAS THE ESTABLISHMENT OF LONG-TERM ECOLOGICAL OBSERVATION SITES AND THE INVESTIGATION OF THE CHEMICAL COMPOSITION OF THE SMOKE PLUME.



### ► Continued from page 19

Fire Research and Management Facility which includes a Global Vegetation Fire Information System and the capabilities to provide support on request to any nation in fire management and prevention and management of wildfire disasters."

These words of the proposal for a possible role for the United Nations, submitted by the ECE/FAO team of specialists on forest fire at the World Conference on Natural Disaster Reduction, held in Yokohama, Japan, in May 1994, as part of a mid-term review of the International Decade for Natural Disaster (IDNDR) activities.

International co-operation among wildland fire scientists and managers has increased considerably since the early 1990s and platforms have now been developed to develop links and to share knowledge around the world. The United Nations has seized the initiative and implemented a system that provides the first continuously ongoing effort in international co-operation of wildland fire scientists, managers and policy makers.

The conference at Yokohama was the first of its kind to be held on a global level and was expected to provide a platform for the exchange of experiences between Decade partners at national, regional, and international levels. The ECE/FAO Team of Specialists on Forest Fire brought the fire issue onto the table of policy makers by submitting the abovementioned proposal and by discussing the fire issue in the Technical Committees.

The UN system has also formed a special fire group within the FAO committee on Mediterranean forestry questions – Silva Mediterranea. The International Tropical Timber Organisation (ITTO), a body formed within the UN system, has established an expert panel to develop Guidelines for the Protection of Tropical Forests Against Fire, which is to be released by the ITTO Council this year.

The Timber Section of UN-ECE Trade Division in Geneva has started to be active within the ECE region (North America, Europe, and the former USSR). With the support of the FAO/ECE/ILO team of specialists on forest fire, Geneva organised a series of seminars to which target groups were invited. The seminars so far have been on: Forest fire prevention and control (Warsaw, Poland, 1981); methods and equipment for the prevention of forest fires (Valencia, Spain, 1986); and forest fire prevention, land use and people (Athens, Greece, 1991).

Following the five-yearly schedule, the next seminar will be held this year, hosted by the Government of the Russian Federation, through the Minister of Forestry. This seminar is to concentrate on Forest, Fire and Global Change and will be held from August 4-10, 1996, in Shushenskoye, Krasnoyarsk Region. The objective of the seminar is to help participants to better understand the role of natural vs. accidental fire in global ecosystems, with special emphasis on the ECE region.

The aim will be to develop assessments

on the extent of land areas affected by fire (forest and other land); assessments of damage caused by wildfires; and methodologies to improve and standardise assessments of fire inventories and fire impacts. The seminar also aims to clarify the role of forest fires in: Land-use and land-cover changes; maintaining biodiversity; global carbon, nutrient and water cycles; forests affected by industrial and radionuclid pollution; and ecosystems affected by climate change.

It is expected that the output from this conference will prepare international agreements that will help to develop a standardised fire inventory system, establish mechanisms to collect and evaluate fire inventory data on a global scale, develop an internationally accepted statement on fire management policy and establish mechanisms for international co-operation in fire management on a regular base and in disaster management assistance.

An exhibition and meeting of fire management specialists and equipment producers will be organised in tandem with the FAO/ECE/ILO seminar. The joint convention of both meetings was considered to be advantageous because it would bring together the five key groups that are crucial for further joint strategic development, namely: producers, users, researchers, policy makers and funding agencies.

Equipment producers are also being invited to exhibit and demonstrate ground equipment, explosives, aerial delivery of extinguishants and personnel, intelligence and decision-support equipment, communication systems, global positioning/navigation systems, etc. in order to keep those who are involved in fighting forest and bush fires completely up-to-date with the technology that is now available to help them in their task.

After launching the first scientific periodical *Journal of Wildland Fire*, the former editorial body, the Fire Research Institute (USA), was transformed into the International Association of Wildland Fire in 1992. The major activities of this association are to provide the latest information on wildland fire issues through the journal as well as through *Wildfire* (a quarterly magazine), *Current Titles in Wildland*

*Fire* (a monthly bulletin available on disk or printed that lists new articles, videos and books on wildland fire), a continuously updated *International Directory of Wildland Fire* (master list of 30,000 people working in that field), and an *International Bibliography of Wildland Fire* (with more than 45,000 citations on wildland fire).

IAWF co-sponsors fire conferences, sells and distributes publications and provides free access to databases by telephone, fax or e-mail.

### PUBLICATIONS

*International Forest Fire News (IFFN)* is the official carrier of information which is shared with all interested non-ECE member countries and is edited by the leader of the FAO/ECE/ILO team of specialists. The Timber Section, UN-ECE Trade Division, collects and published forest fire statistics from the member countries. The latest issue of forest fire statistics has been published for 1992-1994 and FAO Headquarters in Rome has published the first issue of *Global Wildland Fire Statistics*.

The International Geosphere-Biosphere Programme (IGBP) provides the base for interdisciplinary fire research programmes. One of the operational IGBP core projects is the International Global Atmospheric Chemistry (IGAC) Project. One of the activities of its foci (Focus 2: "Natural Variability and Anthropogenic Perturbations of the Tropical Atmospheric Chemistry") is oriented towards investigating the impact of biomass burning on the atmosphere and biosphere ("Biomass Burnig Experiment" [BIBEX]).

Since 1990 several major interdisciplinary international research campaigns have been conducted or are in the planning and implementation stage.

Quick information and a communication platform is provided by an electronic network on Internet (FireNet).

AREAS COVERED BY REGIONAL FIRE RESEARCH CAMPAIGNS DURING THE DECADE 1990 – 2000. A MEDITERRANEAN CAMPAIGN IS NOT YET PLANNED.

