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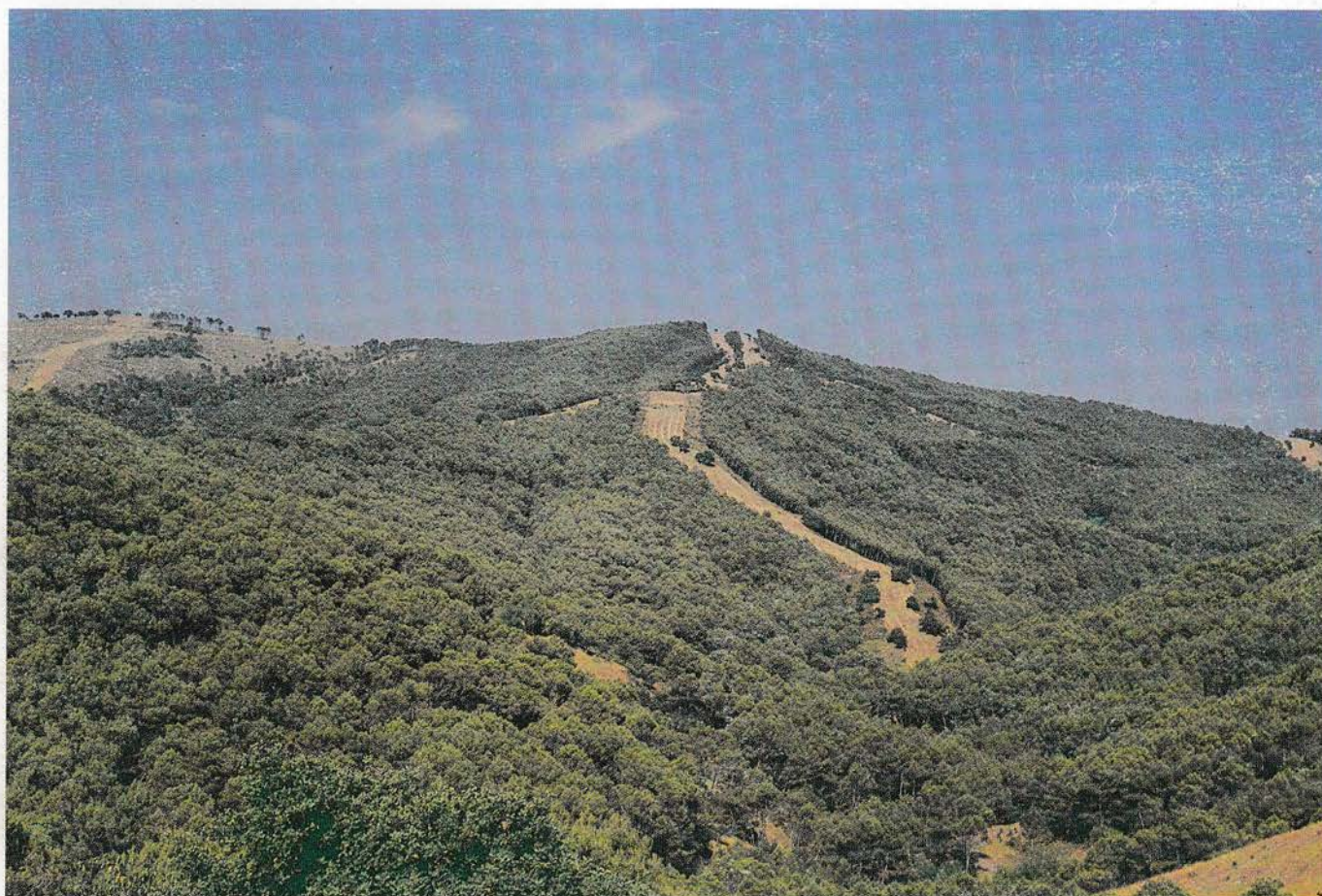
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**ORGANIZACION DE LAS NACIONES  
UNIDAS PARA LA ALIMENTACION  
Y LA AGRICULTURA**



# **DOCUMENTOS DEL SEMINARIO SOBRE METODOS Y EQUIPOS PARA LA PREVENCIÓN DE INCENDIOS FORESTALES**



**ICONA**

**Instituto Nacional para la Conservación de la Naturaleza.**



**MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACION.**



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**SEMINARIO SOBRE METODOS Y EQUIPOS PARA LA PREVENCION  
DE INCENDIOS FORESTALES**

**SEMINAR ON METHODS AND EQUIPMENT FOR THE PREVENTION  
OF FOREST FIRES**

**SEMINAIRE SUR LES METHODES ET MATERIELS A UTILISER POUR PREVENIR  
LES INCENDIES DE FORÊT**

**СЕМИНАР ПО МЕТОДАМ И ОБОРУДОВАНИЮ,  
ПРИМЕНЯЕМЫМ В БОРЬБЕ С ЛЕСНЫМИ ПОЖАРАМИ**

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## INDICE — TABLE OF CONTENTS

	Página (Page)
Presentación .....	7
Informe del Seminario .....	9
<i>Report of the Seminar</i> .....	14
<i>Rapport du Seminaire</i> .....	20
Prevención de incendios forestales y cooperación internacional <i>Fire loss prevention and opportunities for international co-operation</i>	
Los incendios forestales en los países de la Región Mediterránea .....	39
<i>Forest fires in Mediterranean countries</i> .....	50
<i>Les incendies de forêts dans les pays de la Région Méditerranéenne</i> .....	60
R. Vélez (España) (Spain)	
Urban wildland fire problems: an opportunity for international co-operation .....	72
J. F. Marker (Estados Unidos) (United States of America)	
Action de la Communauté Economique Européenne pour la protection de la forêt contre les incendies .....	74
R. Troisgros (CEE) (EEC)	
Création d'une base européenne de données sur les incendies de forêt .....	76
M. Tondelier (Francia) (France)	
Predicción del peligro de incendios <i>Fire danger appraisal, including danger rating systems</i>	
Predecir para prevenir .....	79
<i>Predicting to prevent</i> .....	85
R. Vélez (España) (Spain)	
L'apport des statistiques dans la prévention des incendies .....	89
D. Alexandrian (Francia) (France)	
Contraste de estimadores de humedad del combustible forestal fino muerto en masas arboladas de Galicia .....	94
J. A. Vega y M. Casal (España) (Spain)	
Inflammabilité, teneur en eau et turgescence relative de quatre espèces forestières méditerranéennes .....	98
J.-Ch. Valette (Francia) (France)	
Relación entre la intensidad del viento y la incidencia de grandes incendios en el Levante español .....	108
R. Currás, M. Guara y E. Laguna (España) (Spain)	
Aproximación al desarrollo de una planificación integrada en la predicción y disminución del peligro de incendios forestales .....	114
M. A. Catalina, J. M. Moreira, A. Ramos y F. Rodríguez (España) (Spain)	
Empleo de unidades móviles de meteorología y transmisiones en la extinción de incendios forestales .....	117
<i>Use of mobile weather and transmission units in forest fire control</i> .....	121
R. Villaescusa (España) (Spain)	

	Página (Page)
Estudio de la combustibilidad de diversas asociaciones vegetales .....	124
L. M. Elvira y C. Hernando (España) (Spain)	
Selvicultura para reducir el peligro de incendios <i>Silvicultural methods to reduce fire hazard</i>	
Silvicultural methods to reduce fire hazard .....	126
T. Karlikowski (Polonia) (Poland)	
Methodes sylvicoles propres a reduire les risques d'incendie .....	130
J. H. Moreira da Silva (Portugal)	
La ordenación del combustible forestal y sus conexiones con la gestión de los recursos forestales ..	132
J. A. Vega (España) (Spain)	
Les materiels mechaniques de debrousaiement .....	135
B. Chevalier (Francia) (France)	
The importance of fuel management for eliminating large forest fires in Turkey .....	143
H. Canakçioğlu y A. Küçükosmanoglu (Turquía) (Turkey)	
Observaciones sobre la evolución de montes incendiados en la provincia de Valencia .....	147
J. Ruiz del Castillo (España) (Spain)	
El pirofitismo de la vegetación mediterránea ibérica, sus consecuencia sobre la ordenación forestal y algunas medidas preventivas .....	157
R. Currás, E. Laguna y M. Guara (España) (Spain)	
Ecological and management aspects of livestock grazing and prescribed burning in Mediterranean warm coniferous forest .....	168
L. Liacos (Grecia) (Greece)	
Analysis of fire preventive silvicultural interventions based on the evolution of the concept af «allo- wable burned area» .....	176
G. Bovio y G. Bovo (Italia) (Italy)	
Información y educación para reducir el riesgo de incendios <i>Public information and education to reduce fire risk</i>	
Public information and education for forest fire prevention .....	180
G. Calabri (Italia) (Italy)	
Recomendaciones básicas para las campañas de prevención de los incendios de origen humano ...	184
<i>Basic recommendations for prevention campaigns directed towards man-made forest fires</i> .....	187
R. Vélez (España) (Spain)	
Hypothesis as to the causes of forest fires in Puglia .....	190
V. Leone, D. Mazzucca y F. Vita (Italia) (Italy)	
Human activities as underlying causes of forest fires in Mediterranean Regions of Italy .....	195
M. Lopinto (Italia) (Italy)	
Seguridad y capacitación. a) Prevención de accidentes <i>Safety and training. a) Prevention of accidents in forest fires</i>	
Protective equipment for the wildland firefighter .....	199
A. Jukkala y S. Putnam (Estados Unidos) (United States of America)	
Seguridad y capacitación. b) Preparación del personal para la extinción <i>Safety and training. b) Training of personnel in forest fires</i>	
Seguridad y adiestramiento del personal en los incendios forestales .....	203
<i>Safety and training of personnel in forest fires</i> .....	208
R. Vélez (España) (Spain)	
Capacitación del personal en prevención y extinción .....	212
A. Lozano (España) (Spain)	
Legislación sobre prevención y extinción <i>Legislation and regulations relevant to forest fire prevention and control, including methods     to enforce them</i>	
Legislation and regulations related to forest fire .....	217
J. G. Goldammer (Alemania Federal) (Federal Republic of Germany)	
Los incendios forestales en Galicia: la integración del campesino en el sector como factor de pre- vención .....	226
J. Sánchez (España) (Spain)	
INFOVA - Plan de coordinación en la lucha contra incendios forestales en la Comunidad Valenciana ..	231
R. Cal (España) (Spain)	



	<b>Página</b> <i>(Page)</i>
Los grandes incendios por comarcas en el Levante español: relaciones entre el incendio y algunos factores socioeconómicos y naturales .....	243
<b>R. Currás, M. Guara y E. Laguna</b> (España) ( <i>Spain</i> )	
Colaboración de las Diputaciones provinciales con los Ayuntamientos en la prevención de incendios forestales: detección, vigilancia y persuasión .....	247
<b>M. A. Villamuera</b> (España) ( <i>Spain</i> )	
Vigilancia móvil para la prevención <i>Use of patrols in the prevention of forest fires</i>	
Le guet armé dans la prevention des incendies de foret .....	252
<b>B. Chevalier</b> (Francia) ( <i>France</i> )	
Vehículo de patrullaje de incendios forestales .....	257
<i>Forest fire patrol vehicle</i> .....	261
<b>F. Rodero</b> (España) ( <i>Spain</i> )	
Patrolling and extinguishing fires in Poland .....	264
<b>R. Leja</b> (Polonia) ( <i>Poland</i> )	
Programas de investigación sobre prevención de incendios <i>Overview of research programmes concerning forest fire prevention</i>	
Prioridades de investigación sobre prevención de incendios forestales .....	266
<b>J. A. Vega</b> (España) ( <i>Spain</i> )	

# LEGISLATION AND REGULATIONS RELATED TO FOREST FIRE PREVENTION AND CONTROL

J. GOLDAMMER\*

## INTRODUCTION

In December 1983, a four-part enquiry on forest fire prevention and control was circulated to all the countries of the ECE region. In Part III of the enquiry the countries were asked to provide information on legislation and regulations related to forest fire prevention and control (FFPC). Seven questions covered the field of legal, administrative, technical and forest management practices, and a list of relevant publications was requested:

1. Which agency has the prime responsibility for forest fire prevention and/or control?
2. Are there any regional differences in rules and regulations governing FFPC within the country?
3. Can access to forests be legally prohibited during the forest fire season (entering the forest, smoking, camp fires, logging operations, etc.)?
4. Are there any requirements regarding fuel management alongside roads and/or railroads?
5. Do laws related to forest fires contain provisions regarding vegetative species, spacing, treatment of forest residues, fuel management and other forest management practices related to fire prevention?

6. Are there any special requirements for equipment (e. g. exhaust systems of chainsaws and other forest equipment, brake systems of trains, use of certain types of power device?)
7. What are the penalties for starting a forest fire? How effectively are relevant laws enforced?
8. List relevant publications (provide copies, if possible).

Replies to this enquiry were provided by 20 countries of the ECE region (Europe, URSS and North America) by the end of 1985, and by a total of 22 countries (1) by the end of 1986. Some countries contributed with extensive information and material, others replied with brief answers like «yes» or «no» or covered only a part of the enquiry.

The results of the enquiry were circulated in 1986, and the countries which had replies to the enquiry were invited to check the information contained in the paper and to inform the author or the secretariat of necessary changes or additions. No comments had been received when the paper was finalized at the end of 1986.

To facilitate a comprehensive synopsis, the information has been put together in tables 1-7. The literature is listed in the Annex.

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TABLE 1  
PRIME RESPONSIBILITY FOR FOREST FIRE PREVENTION AND/OR CONTROL

Group	Country	Detailed Information
1 Ministry of Agriculture Forest Service	Austria	P & C: MA (federal level). Provinces: own regulations. C: Fire Service in co-operation with FS.
	Cyprus Hungary	P & C: MA.
	Israel	P & C: FS within 4 territorial regions and their districts. Training on national and regional levels in co-operation with local fire brigades and other institutions.
	Italy	P & C: State Forest Corps, depending on MA. The regions with special statutes have their own Forests Corps (see Table 2).
	Spain	P & C: MA-ICONA on public forest land and on private forest land on request. Intervention of other agencies co-ordinated by MI (changes underway: see Table 2).
	Turkey	P & C: FS.
	URSS	P & C: FS and other forestry enterprises, organizations and installation entrusted with forest management.
	Yugoslavia	P & C: in co-operation with communal conferences.
2 Ministry of Interior	Finland	P & C: MI.
3 Responsability shared by MA & MI	Austria	See Group 1: C: Fire Service in co-operation with FS.
	France	P: MA-FS. C: MI-Direction de la Sécurité civile.
	Germany, Federal Republic of	P: MA-FS in all States. C: State of Hesse FS. All other States: MI-Fire Service. Depending on the size of the fire: in co-operation with other local bodies and the disaster control organization.
	Ireland	P: FS. C: FS and Local Authority Fire Services.
	Netherlands	P: Industrial Board for Forestry and Tree Growing and the General Inspection Service of the Department of Agriculture and Fisheries.
	Poland	P: FS. C: FS in co-operation with Fire Service.
	Portugal	P: FS. C: Fire Service. All activities in prevention, detection and control are co-ordinated by the National Civil Protection Service. Special Forest Fire Commissions are established on municipal, district and regional level.
	Switzerland	P: FS. C: Fire Service.
4 FS with other services	United Kingdom	P: Forestry Commission. C: Autonomous Local Authority Fire Services in co-operation with the Home Office in England and the Scottish Home and Health Department in Scotland and the Department of the Environment in Northern Ireland.
5 Local or Municipal Fire Service	Norway Sweden	P & C: Local Fire Services.
6 Depending on ownership	USA	P & C: Federal agencies (such as Forest Service, Bureau of Land Management, National Park Service) on Federal Land. State agencies on state and private lands within each State. Co-operative agreements among all agencies at the Federal, State and local level.

P = prevention.  
C = control.  
FS = Forest Service.  
MA = Ministry of Agriculture, Forest Service.  
MI = Ministry of Interior (or Inner Affairs).



TABLE 2  
REGIONAL DIFFERENCES IN RULES AND REGULATIONS GOVERNING FOREST FIRE PREVENTION AND CONTROL  
(FFPC) WITHIN THE COUNTRY

Group	Country	Detailed Information
1  No regional differences	Cyprus	
	Finland	
	German Democratic Republic	
	Hungary	
	Ireland	
	Israel	
	Netherlands	
	Norway	
	Poland	
	Portugal	The country is subdivided into zones of risk where special measures of FFPC can be taken.
	Sweden	
	United Kingdom	
	Yugoslavia	Regulation of the Republic and the provinces contain the same outline, with modifications according to the specific regional conditions.
2  Federal or basic law with modalities in the states	France	Federal law (code forestier), regulations on modalities within the state (départements: arrêté préfectoral), e. g. the establishment of forest fire brigades in the Landes region.
	Italy	Basic forest law (of 1923): forest protection based on provincial «Prescrizioni di massima e di polizia forestale». Law No. 47 (of 1975) and regional laws attribute competences on FFPC to national, regional and local bodies. Since 1977 most competences have been transferred to the regions. The state is responsible for the use of aircraft, organization and training of the State Forest Corps.
3  Differences between administrative regions	Austria	States have own regulations (see Table 1).
	Germany, Federal Republic of	All legal provisions of FFPC are laid down by the Federal States. Within the States: no further differentiation (see literature).
	Spain	Transfer of functions from the national organization to the regional governments is on the way. A central service for co-ordination, training, airborne fire control and technical development will remain on a national basis.
	USA	Many differences regionally and between individual states (see literature).
4  Differences between geographic or climatic regions	Switzerland	North of the Alps: Federal Forest Office. South of the Alps: Tessin Forest Service.
	Turkey	Since the main fire problem areas are concentrated in the western and southern parts of the country, rules and regulations differ from the other parts. The forested land is subdivided in 5 areas of jurisdiction concerning FFPC.
	USSR	Differences according to the forest vegetation and the nature of local forestry operations.



TABLE 3

LEGAL AUTHORIZATIONS TO PROHIBIT ACCESS TO FORESTS DURING THE FIRE SEASON (ENTERING THE FOREST, SMOKING, CAMPFIRES, LOGGING OPERATIONS, ETC.). THE REPLY OF SOME COUNTRIES WAS NOT SPECIFIED AND DID NOT PROVIDE DETAILED INFORMATION. RELEVANT COUNTRIES MAY BE CATEGORIZED UNDER GROUP 1 OR 5

Group	Country	Detailed Information
1 Access to forests	Finland	Forest operations can be reduced.
	France	
	German Democratic Republic	
	Ireland	
	Poland	
	USSR	
2 Open fires, smoking	Austria	Smoking restricted.
	Hungary	Within the forest and its neighbourhood.
	Norway	Generally prohibited between 15 April and 15 September. Slash burning needs permission. Logging operations can be stopped occasionally.
	Netherlands	
	Sweden	
	Switzerland	In some Cantons only. A federal regulation is under preparation.
3 Access to forests & open fire	Yugoslavia	Camping is permitted on specifically determined sites.
	Cyprus	The lighting of a fire in the forest or within a distance of half a mile from the forest edge may be prohibited.
4 Access to forests, open fire, smoking	Germany, Federal Republic of	In nearly all States access can be prohibited (exemption: Bavaria). The lighting of a fire in the forest or within a distance of 100 m from the forest edge is prohibited, smoking between 1 March and 31 October (exceptions may be granted).
	Spain	
	Italy	Limit of access and prolongation of the other limitations according to the fire danger index.
	Portugal	Additionally it may be prohibited to blast mines and to use engines, stoves and incinerators producing sparks or embers. Minimum distance of open fires from the forest edge: 100 m or more.
	United Kingdom	During the fire season it is in addition prohibited: to burn brush in the forest or within a distance of 300 m from the forest edge; to burn debris in the forest or within a distance of 100 m from the edge unless separated therefrom by a 100 m wide fuelbreak; to use fireworks in the forest or within a distance of 500 m from the edge; to use illuminated balloons within the national territory. Permission to conduct military exercises in forest lands has to be requested 15 days in advance.
	USA	Contract for work in the forest can include conditions relating to forest fire precautions.
5 Access cannot be prohibited	USA	Various federal and state laws and regulations (see literature).
	Turkey	After a fire the entrance and exits of a forested area may be controlled.
	Netherlands	Permission for campfires, etc. is not given.

TABLE 4  
**REQUIREMENTS REGARDING FUEL MANAGEMENT ALONGSIDE ROADS AND/OR RAILROADS (REDUCING FIRE RISK  
 BY REMOVING OR ALTERING THE FUEL)**

Measures provided	Country	Remarks
Yes	Austria	RR.
	German Democratic Republic	RR, R.
	Germany, Federal Republic of	RR, to be carried out by the German Federal Railway.
	Italy	RR and R: recommended. Woods are forbidden at a distance less than 50 m from nearest rail.
	Poland	R (if necessary): trees within 20 m should be pruned (1,5 m), other flammable material removed. RR (duty): fire barriers along railway have to be constructed.
	Portugal	RR and R: minimum width of strips to be cleared: 10 m. Also referring to power lines.
	Spain	Fuel management programme in regions declared as «danger zones». Subsidies are granted to private forest owners.
	Sweden	RR.
	Turkey	RR, R.
	United Kingdom	RR: railroad company has the right to enter adjoining land to take precautions.
None	Yugoslavia	RR and R: width of fire barriers 3-8 m.
	Cyprus	
	Finland	
	France	
	Hungary	
	Ireland	
	Netherlands	
	Norway	
	Switzerland	

RR = Railroads.  
 R = Roads.



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Yes	Austria	RR.
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	Sweden	RR.
	Turkey	RR, R.
	United Kingdom	RR: railroad company has the right to enter adjoining land to take precautions.
None	Yugoslavia	RR and R: width of fire barriers 3-8 m.
	Cyprus	
	Finland	
	France	
	Hungary	
	Ireland	
	Netherlands	
	Norway	
	Switzerland	

RR = Railroads.

R = Roads.

TABLE 5

**REGULATIONS AND PROVISIONS RELATED TO FOREST FIRE PREVENTION REGARDING VEGETATIVE SPECIES, SPACING, TREATMENT OF FOREST RESIDUES, FUEL MANAGEMENT AND OTHER MANAGEMENT PRACTICES (IN ADDITION TO TABLE 4)**

Provisions	Country	Remarks
1	German Democratic Republic	
Fire barriers (firebreaks, fuelbreaks, greenbelts, pruning)	Germany, Federal Republic of	Detailed regulations are given by 4 States (Bavaria, Hesse, Lower Saxony, North-Rhine Westphalia).
	Austria	See Table 4.
	Finland	Prescribed burning.
	France	Thinning slash and generally reducing the fire hazard, including clearances around structures.
	Hungary	Establishment of mixed stands of coniferous and deciduous trees.
	Italy	Regional plans can provide the establishment of less combustible species. Grazing for hazard reduction has been admitted by the law of 1975.
	Netherlands	Heaps of coniferous branches and litter higher than 1,5 m have to be reported.
	Poland	Hardwood species as fire barriers.
	Portugal	Afforestation and reforestation with resinous trees (especially pines and eucalyptus) exceeding 100 Ha have to be subdivided by fire barriers consisting of less flammable broadleaved trees. Natural stands of broadleaved trees have to be preserved. Prescribed burning must be carried out by Forest Service specialists exclusively. Vegetation clearance (brush control) obligatory within a radius of 50 m around houses and other installations.
	Spain	Fuel management is compulsory. Some measures are described accurately (e. g. in case of logging residues, agricultural burnings, urban residues depositories, safety strips between forest and houses, etc.). Subsidies are granted (see Table 4).
	Sweden	See Table 4.
	USA	Different measures are provided: see literature list of guides.
	USSR	Regulations are laid down by the USSR State Committee for Forestry (binding on all enterprises, institutions and organizations).
	Yugoslavia	Forest hygiene and preventive measures are laid down in the forest order regulations.
2	Cyprus	Part of forest planning.
No legal provisions available	Ireland	
	Norway	
	Turkey	
	United Kingdom	



TABLE 6

**SPECIAL REQUIREMENTS FOR EQUIPMENT. E. G. EXHAUST SYSTEM OF CHAINSAWS AND OTHER FOREST EQUIPMENT (SPARK ARRESTER), BRAKE SYSTEMS OF TRAINS, USE OF CERTAIN TYPES OF POWER DEVICES**

Provisions	Country	Detailed Information
<b>1</b>		
Requirements obligatory	German Democratic Republic	E. g. exhaust systems of internal combustion engines.
	Poland	Vehicles not equipped with spark arresters are not allowed to undertake any forest operation during periods of high fire risk.
	Portugal	Industrial installations within the forest have to be equipped with spark arresters. Vehicles and machines (industry, forest operations) have to be equipped with spark arresters and adequate mufflers.
	Spain	Requirements for chimneys of houses built in the forest. Safety strips (firebreaks) required around installations, operating engines, etc.
	USA	See literature: Spark Arrester Guide, Digest of State Forest Laws, Fire Prevention Field Guides.
	USSR	Operation of equipment without spark arrester or with defective fuel system is forbidden.
	Yugoslavia	According to Yugoslav standards (IUS).
<b>2</b>		
No special requirements	Austria	
	Cyprus	
	Finland	
	France	
	Germany, Federal Republic of	
	Hungary	
	Ireland	
	Italy	
	Netherlands	
	Norway	
	Sweden	
	Switzerland	
	Turkey	
	United Kingdom	

TABLE 7  
PENALTIES AND LAW ENFORCEMENT

Country	Penalties
Austria	Penalties up to Sch 60,000 or 4 weeks confinement. Enforcement strictly observed.
Cyprus	Penalties up to £ 750 or imprisonment not exceeding 1 year (or both). Laws are effectively enforced.
Finland	Penalty depends on the degree of deliberateness of setting the fire (fine, imprisonment, compensation).
France	Penalty depends on the severity and character (negligence or arson) of the case (civil or criminal liability). Non-systematic application, responsible person mostly unknown.
German Democratic Republic	Penalties depend on circumstances and consequences ranging from reprimand, fines, to imprisonment. Laws are effectively enforced.
Germany, Federal Republic of	According to general regulations of the Penal Code, penalties range from a fine to imprisonment of 3 years for «causing a fire danger», a fine or imprisonment up to 5 year for «negligent causing of a fire» and imprisonment between 6 months and 10 years for «arson». Laws are properly implemented.
Hungary	Penalties depend on the severity of the case. Severe case: criminal liability. Infringements of regulations: administrative sanctions.
Ireland	First offence: fine not exceeding £ 50. Second offence: fine not exceeding £ 100. Third or subsequent offence: fine not exceeding £ 200. Recovery of damages if negligence is proved.
Italy	Penalties according to the criminal code: 1 to 5 years imprisonment for unpremeditated fire, 6 month to 2 years for damage following a fire, and 3 to 7 years imprisonment for arson. Penalties are augmented if forests or woods are affected. Infringements of forest regulations: administrative sanctions. Law enforcement scarce.
Netherlands	Penalties according to the criminal code: imprisonment up to 12 years if goods are endangered, up to 15 years if there is a risk of life (to other people), and up to 20 years of lifelong if the fire has caused death of a person.
Norway	Fine or imprisonment up to 1 year for starting a forest fire.
Poland	Depending on the degree of misdemeanor: compensation (civil liability) or prison up to 8 years (criminal liability).
Portugal	Depending on the severity of the case: 3 to 15 years imprisonment for arson (or 6 to 30 years, depending on the motive), up to 3 years for negligence (or up to 5 years, plus 100 to 200 days if a person is affected). Three to 10 years imprisonment for impeding and up to 10 years for hindering fire suppression activities. Persons of diminished responsibility found guilty of starting a forest fire may be taken into custody during the forest fire season. Failure to observe FFPC regulations is punishable by fines up to 4.000 Escudos. These laws are consistently enforced but the number and size of forest fire is still increasing.
Spain	The Forest Fire Law includes a list of different cases of carelessness. Fines up to Pts 500,000. Imprisonment for arson (criminal code). Fines for carelessness are effective mainly against agricultural burnings but negative for co-operation in suppression. Investigation of arson fires is not very effective; very few cases are settled.
Sweden	Fines can be imposed.
Switzerland	Responsability is with the States (Cantons). Possibility of reclaiming damages from the culprit.
Turkey	Fine or imprisonment between 6 months and 1 year. Law enforcement is very effective.
United Kingdom	Contravening the Forestry Commission Bye-Law (prohibition to light fire in FC land): fine up to £ 50. Arson: heavier penalties. Breaching laws relating to straw and stubble burning: fine up to £ 1,000. Similar legislation exists in Northern Ireland.
USA	Detailed information: see literature. Example: State of Pennsylvania: penalty for fire maliciously set is a felony, and persons convicted are subject to a fine not exceeding \$ 5,000 and imprisonment not exceeding 10 years. National forests, parks and public property: fine not more than \$ 500 or imprisonment up to 6 months (or both). Enforcement effectiveness varies depending upon the agency. In addition, the responsible party may be held liable for forest fire suppression costs and damages.
USSR	Persons found guilty of starting a forest fire incur criminal or administrative and civil liability for the damage caused to forestry operations. The relevant measures are enforced effectively.
Yugoslavia	Fines and imprisonment depend on the severity of damage. Arson: criminal liability. Law enforcement is primarily of an educational character.



## ANNEX

### Literature and other sources

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## PORTUGAL

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## SPAIN

## SWEDEN

## TURKEY

## UNITED KINGDOM

## USA