

Fire Cooperative Arrangements in the Mediterranean – Successes and Short-Comings

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1.- Abstract.

The international coordination, the technological transfer and the capitalization of the experience, as well as the cooperation and the support protocols and technical attendance help to correct the differences among countries. The historical evolution in the programs of fire management and their differences among the countries, examples of international cooperation already carried out and others project in realization and the analysis of shortcomings and deficiencies with proposals of solutions will be studied and shown in the paper. In this work is showing like guide, the considerations in the agreements of international collaboration based on recommendations and improvements in the professionalism, and the firefighter's training, the application of specific incidents command system for forest fire emergencies, the incorporation of modern ground and air resources, the standarización of the technical specifications of tools and equipment, the knowledge of the behavior and the firefighter's movement in the fires with safety conditions, as well as the collaboration and specialists' exchange, material resources and experience.

The European mediterranean countries, are inside the areas of the world that present characteristic common in the forest fires problem, being these among other the following ones: the increment of number of fires, the abandonment of the forest areas as residence area and economic development, the fire like traditional tool in the agrarian activities, cattlemen and forest, the growing phenomenon of human immigration from countries not included in the European Union, the populational growth and the interface fires problem in forest areas without protection measures and the meteorological severity, they constitute among other the causes that analyzed and studied through the statistical databases is showing the origin of the fires.

In general they are reasons directly associated with the economic development of the affected countries, those that have propitiated changes in the habits in the rural society. The appearance in the scenario of the XX century, of the growing impact of the forest fires and the biggest sensibility and the population's concern to the defense and protection of the nature has ended up producing answers on the part of the official institutions and responsible administrations in different times and degrees of commitments in the organization and modernization of the prevention, detection and suppression systems of forest fires. In this way the countries mediterranean Europeans have gone developing strategies and methods of organization of the resources for the fight against the fires with differences as much in quantity as in quality.

Although the spread conditions and behavior of the fire present great similarity in the mediterranean countries, the applied solutions for the control and suppression of the fires at the present time show important differences. In some countries has ended up reaching very high professionalty levels and efficient technological developments, while in other countries, well for mistaken decisions, well for lack of economic resources or perhaps for a delay in

assisting to the problem of the forest fires, the situation comes determined by a lack of clear objectives that implies the descoordinación of efforts among the responsible administrations. Such a situation can end up generating situations of economic waste, absence of performances sure and mainly faulty immediate solutions for each fires season, lacking plans of fire management with clear and objective future to obtain.

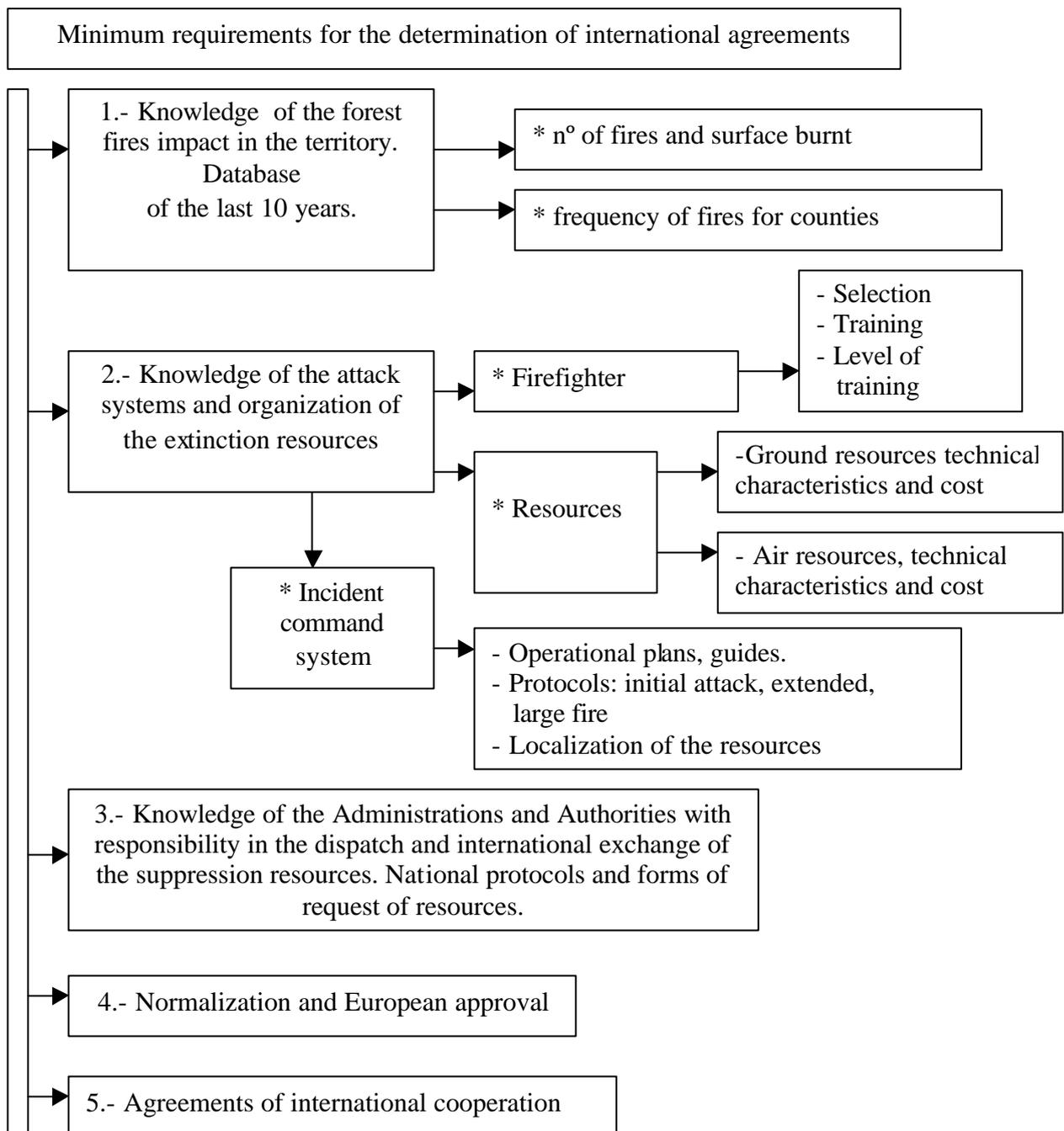
The international cooperation impelled by the authorities and the administrations responsible for the defense against the forest fires, is today a necessity to be able to have plans of fight that facilitate the help in the management and modernization of the programs of protection of the forest ecosystems against the fires.

2.- Objectives.

To begin the analysis of the problem of the forest fires in the countries of the mediterranean and to reach an effective international cooperation, it is important to know the current professional and technological evolution of the fight plans against the forest fires that have the affected countries. To design helps cooperation protocols, so much among border countries, like among non border countries, without knowing the current state of organization to fight against the forest fires, it can generate mistakes that hinder the application of the agreements. For it is very important the establishment of the objectives and of the previous steps that must be able to elaborate plans and effective cooperation agreements.

The application in each one of the affected countries of different systems of organization of the resources for the forest fires suppression, makes more difficult the elaboration of cooperation protocols. So sometimes the responsibility of the fight against the fires depends on the Civil Protection Departments being in this common case the responsibility of suppression is of the firemen, while that the responsibility depends of the Forest and the Environment Departments, the suppression planning is made by firefighter. The difference among the organization methods, suppression tools and dispatch resources systems between both, is more complicated to find the common positions that facilitate the integration of different types of resources so much in the plans attack as in the definition of the hierarchy positions.

In accordance with that indicated previously is necessary to make the differentiated study of the defense plans against forest fires of the countries located in the mediterranean region, extending this analysis to the countries not included in the European Union. The general knowledge that we can obtain, allows to define with clarity the priority in the objectives. It is important not to forget that the determination of the content of the programs of help and international cooperation must go directed from the point of view of the integration of the suppression and prevention actions. Exclusive elaboration of agreements for the exchange and dispatch resources and materials for the suppression, they impede the advance process and combined modernization of the countries in the defense plans against forest fires. In this way is showing the following chart that allows to know the sequence of actions in the determination of the objectives for the elaboration and application of collaboration agreements:



Linked with the previous requirements and being part of the objectives that are necessary to get an effective cooperation, we can indicate the actions of prevention directed to:

- The attendance in the definition and elaboration of defense plans
- The attendance in the definition of training programs on prevention and suppression forest fires methods
- The statistical administration of databases of forest fires
- The diffusion and exchange of the legal norms among the countries of the mediterranean region

- The capitalization of the experience reached by the countries in the fight against the forest fires

3.- Antecedents.

From the beginning when it was necessary to combat the forest fires in order to protect the nature and to avoid the damages in the forest ecosystems, along of the time the better knowledge of the problem has allowed to apply the most efficient preventive strategies. In the attention to the problem, factors like the dispersion in the causes of the fires, the difference between the public or private property of the forest, the absence of specific methodologies for the defense against the fires, represented a time in which the fight performances were without operative planning, and knowledge dimension of the problem.

The search of an effective organization was not equally in the different countries that at the present time that now have the permanent incidence of forest fires. We can say that when the problem was intensified, the social conscience it evolved and the economic development reached by the different country, the concern of the forest administration, the research institutions and the university, they were more interested to establish the protection programs and defense in the territory against the forest fires. The decade of the years sixty of the XX century, represent the beginning of the scientific knowledge in the management of the defense against the fires of the forest systems in the mediterranean countries.

The importance of focusing the defense against the fires based on the analytic knowledge of the territory and not in a disproportionate growth of the resources and equipment of alert and extinction, it has been included in the numerous congresses and technical meetings that have taken place favored by the forest administrations, research centers and other implied institutions.

The defense of the forest ecosystems against the fires, occupies levels of high-priority attention at the present time in the management of the natural ecosystems. The necessity to establish programs and performance protocols for the fight against the fires is presented as fundamental strategy for getting the organization that the suppression actions require. Along the last four decades the methods for the detection and extinction, the knowledge on the dynamics of the behavior of the fire and the resources used in the combat of the forest fires, they have experienced substantial improvements, based of the accumulated experience and the multiple carried out research programs.

Although the evolution of the organization methods are showing at the present time with easiness, one cannot say the same thing when is carried out a retrospective study on the history of the organization models developed and applied. Neither the easiness of information transfer, neither the current conscience social and government toward the problem of the forest fires, keeps resemblance some with the first intents of the suppression resources organization in the countries of the mediterranean area. It is important to manifest that all organized model for the combat of the forest fires, requires of an advanced social, economic and cultural development, as previous factor that allows and at the same time facilitate the attentions that the establishment of an efficient operational system requires. In this situation we can say that it has ended up marking differences in the beginning from the political of attention to the problem of the fires among the different countries of the mediterranean. Difficultly improvements could be gotten in the fight programs, if the administrations and

institutions with responsibilities don't facilitate and they prioritize budgetary assignments that allow the development of the professional model of firefighter with training, specialized equipment, resources and of effective protocols for dispatching resources (Incidents Command System).

Sometimes drastic solutions in mistaken addresses provide the false impression about to have the solution of the problem of the forest fires(for exemple; only big helitanker, or big airtanker, forgetting the training, ground resources and equipment). The recommendation goes in the way of avoiding such performances, in order to get the good application of the budgets dedicated to the modernization and develop of the means required for the suppression.

The operative structure of a system for the extinction of forest fires can be defined as that organization that measuring according to the previous knowledge of the characteristics of the forest ecosystems to protect, with the base of a specific and qualified training of the firefighter, with a hierarchical structure of control, with specific material and equipment for the suppression, including the advanced technological incorporations that facilitate the administration of the ruled protocols and defined for the dispatch and organization of the resources in the extinction works.

The international cooperation so much in what refers to the country that provides resources like for the one that receives it, it requires of professional guarantees based on trained personnel's, specialized and experienced in the fight against forest fire and in the use of material and resources integrated as effective tools in the operational plans.

Along the last thirty years they have left taking place in different countries of the mediterranean ones, international meetings directed to facilitate the exchange of experiences and work methods, with the purpose of improving the material resources so much, as the extinction methods. These meetings favored by international organisms as the FAO, they have facilitated the development of work groups as the Committee Mediterranean Silva, through of conferences, workshops and meetings have been impelled which have facilitated a better international understanding of the problem of the forest fires along the time, allowing it to build starting from the reached experiences, the first agreements of collaboration and international exchange of resources for the control and extinction of forest fires.

Between the main meetings and international conference is showing for chronological order, the following ones:

- 1975, FAO organizes in Rome the World Consultation on Forest Fires”
- 1977, FAO/UNESCO conference on the forest fires in the Region Mediterránea, St. Maximin (Francia).
- 1986, Seminar FAO/UNESCO/OIT, on Methods and Equipment for the Prevention of Forest Fires, Valencia (España).
- 1990, European Conference on Forest Protection Reolution nº 3: Decentraliced Data Base, Strasbourg (Francia)
- 1990, Desing of a “common core” for a CEE Forets Fire Data Base, Bruxelles (Belgica)
- 1991, Workshop FAO/Silva Mediterranea/CIHEAM, Proposal for the general adoption of the CEE “common core”, Chania (Grecia).

- 1993, Workshop FAO/Silva Mediterranea/CIHEAM, Exploring possibilities and difficulties to adopt the CEE “common core”, Montpellier (France).
- 1996, International Course FAO/Silva Mediterranea/CIHEAM on Forest Fire Data Base, Zaragoza (España).
- 1998, Workshop FAO/Silva Mediterranea/CIHEAM, improving regional capabilities for the Forest Fire Data Base implementation, Hamamet (Tunez).
- 1999, Workshop FAO/Silva Mediterranea/CIHEAM, improving regional capabilities for the Forest Fire Data Base implementation, Rabat (Marruecos).
- 2003, Workshop FAO/Silva Mediterranea/CIHEAM, on multilateral assistance against forest fire, Zaragoza (España).

The meeting before indicated held in Zaragoza (June of the 2003), represents the first approach among the countries of the Mediterranean region, to find a common method that helps to define the content and the allotment of competitions among the countries for the establishment of a multilateral attendance of fight against the forest fires. The participants were, officers with direct responsibility in forest fire suppression in the Mediterranean countries, also participation of companies operating in the mediterranean basin, representatives of FAO and the European Commission was invited to participate in the workshop.

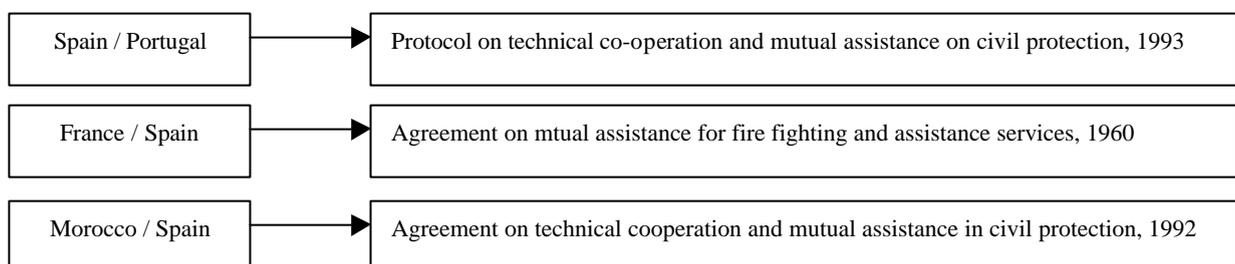
The objectives of the workshop were:

- To study procedures to coordinate the existing mutual Agreementes and common legal and logistical tools to make effective, when hended, the multilateral assistance against forest fires within the Mediterranean Basin by sharing resources.

The subject considered in the wokshop, fueron:

- Data bases on forest fires how necessary tools for know the regional and national problem
- Inventory of exixting bilateral agreements
- Appraising of fire danger
- Inventory of available resources for multilateral assistance
- Logistics for multilateral assistance
- Standars to facilitate multilateral assistance

In July 2001, the FAO Representatives were requested to locate internacional agreements on forest fires with a view to updating the list of those already available within FAO. In January 2002, a second request was made to the FAO representatives for assistance in locating new agreements that might have been signed or drafted since the previous request, as well as any in country fire agreements that may exist. The international agreements and the national legislation identified through this review, were clustered into two categories of forest fire legal documents, a) international agreements, including emergency response agreements and b) national legislation. The result of the search and classification of the information was published by FAO with the title: "Legal Frameworks for Forest Fire Management: International Agreements and National Legislation", in this work, is showing the references to the international agreements to assist the emergencies for fires forest undersigned among some countries fonterizos located in the mediterranean region.



The existence of the agreements previously indicates has allowed the help among mediterranean country, sending resources(airtanker and firefigther brigade) to certain forest fires of special importance and graveness. The attainment of the objectives included in the established agreements is considered as a success in the development of the international program of fight against the forest fires. In the following chart we can see some data of these interventions:

Year	Country to request assistance	Assistance Country	Date	Resources sent
1998	Morocco	Spain	14,15, june	2 CL-215T
1999	Portugal	Spain	18, june	1 CL-215T
2001	France	Spain	7, september	1 CL-215T, 1 BRIF, 3 ACT
2001	Portugal	Spain	20, august	3 CL-215T

*BRIF: is a high professional level of firefighter brigade with helicopter

ACT: is a airtanker

With the information contributed by the study and inventory of international agreements, it could be proven the state of deficiencies in protocols of international cooperation among the countries of the Mediterranean. This situation of deficiency is increased every summer, because is possible to see the lacks of methods for the dispatch and exchange of resources, taking place collapses, delays and legal impediments for authorization lack to cross the border, among other problems. Such a situation was the main reason that impelled the preparation and realization of the first workshop in the Mediterranean region (Zaragoza, June 2003) to define the procedures of multilateral collaboration in the fight against the forest fires. The participants in this workshop agree on the need to improve the technical tools and pcedures available presently in the countries of the Mediterranean Basin to facilitate operations of bilateral and multilateral assistance against forest fires.

4.- Shortcomings and improvements in the elaboration of agreements.

The effectiveness in the bilateral and multilateral cooperation, it can be minimum, and consequently insufficient, when they are not completed a group of requirements should be considered indispensable. The lack of agreements of international collaboration has been reasons for those that in certain big fires happened during the last ten years in countries of the Mediterranean region, have not been possible to lend the requested help. Among these we can show the following ones:

Year	Country to request assistance	Assistance Country	Date	Resources
1998	Greece	Spain	July	Programmed and cancelled
1999	Turkey	Spain	19, august	Programmed and cancelled
2001	Algeria	Spain	24,june	Programmed and cancelled
2001	Greece	Spain	6, april	Programmed and cancelled

The ignorance of the administration protocols in each one of the countries in connection with the dispatch and movement of the resources in the fight against of the forest fires, represents an important deficiency, to be able to confirm the dispatch of resources and collaboration in the suppression plans. In this way the main shortcomings that can limit and sometimes to

disable the benefit of help by means of the dispatch of resources among countries so much border as having separated territorially they are the following ones:

- Absence of fight plan against forest fires
- Absence of systems for the command of incidents
- Lack of protocols of dispatch of resources in attack initial and extended attack
- Ignorance of the extinction methods for the control and suppression of forest fires
- Lack of coordination of resources in the attack protocols
- Ignorance of the technical and operational characteristics of the resources
- Confusion in the identification of the competent authorities in the management of the permits for the reception of resources
- Confusion in the suppression boss's identification
- Lack of attendance and technical support to the sent resources

On the other hand another series of aspects are indispensable to be able to guarantee that the resources sent to the country that has requested them, be attended and covered before accidental events, such as accidents, reclamations, etc. The deficiencies of technical, logistical, economic as legal, they should be previously recognized for both parts, in documents of agreements always signed in dates previous to the beginning of the forest fire season.

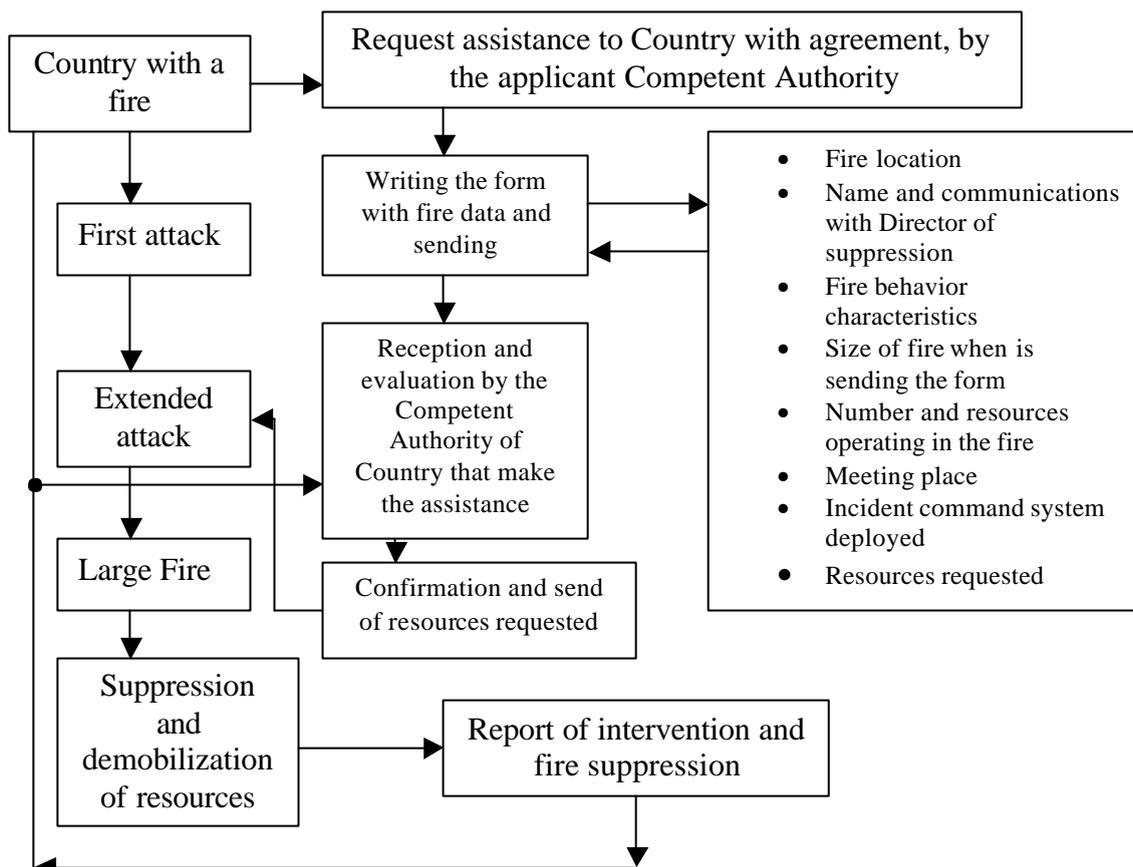
As solution to the detected problems and that they can be reasons of shortcomings in the international help to cooperate in the fight against the forest fires, are "the protocols for mutual attendance among countries border and multilateral attendance among countries to long distances". Sometimes the border countries have requested resources and for the complications in the concession of the corresponding authorizations, the effective intervention of the resources has taken a long time more than three of hours. This situations has happened among countries that have protocols of mutual cooperation, like it is the case of Spain and Portugal. For it and with the experience of the problems to obtain the permits for the dispatch of resources, when several administrations of both countries intervene so much to request the help like to dispatch the requested resources, it is very important to facilitate to the maximum the step. For it is recommended it that in the elaboration of the agreements of attendance among border countries, be considered the following thing:

To prepare the assistance in the border area, before the fire season starts each country will designate a Competent Authority with residence in that area or with direct responsibility on it.

- When the Competente Authority of a country needs to request assistance through resources of the adjacent country, it send a request with a specific forms, that it have all data about the fire conditions, (geographical position, province, municipality, time data of fire start, size of fire at the moment of to request, topography, number and kind of resources are in the fire, number and kind of resources to request, name of chief of fire, number of cellular phone, radio frequency, and meeting place where will arrival the resources sent.
- On the arrival to the place indicated in the request, the resources will be put under the authority of the Director of suppression (chief of fire).
- The mobilisation of resources of one country to another will be made through direct contact among those local competent officers.

- If the fire is located less than 1 km of the border and if a high risk exists that it moves from one country to the other according to the conditions of fire spread, the country under risk is authorised to mobilise its resources within the entire border area in order to contain the fire. The country under risk establishes simultaneously contacts with the Competent Authority in the border area of the country from where the fire is spreading.
- Annually each country will make a mutual assistance plan to be sent officially to the other, with the following minimum content (extract of “Draft Protocol for Mutual Assistance Between Bordercountries Against Forest Fires” presented by Spain to Forest Fire Expert Group of Europe Union, 8 april 2003):
 - Competente authority chosen for request outside the border area (name, address, telephones, fax, electronic mail). When the plan has a competent authority for each section of the border area, also is required the same data.
 - Communications for detection in border area
 - Communications in the fire (radio frequency, telephones, etc.)
 - Resources that can be mobilised for mutual assistance
 - Each country will be subscribe previously to the fire season a civil liability insurance for the interventions of the resources requested from the neighbour country.
 - The expenditure generated by lodging and feeding of the mobilised personnel or by fuel, equipment or necessary materials, will be in the charge of the applicant country.
 - The applicant competent Authority will make a report of the fire and the Head of the sent resources will make a report of intervention. Both report will be exchanged as soon as possible between the responsible administration of both country.

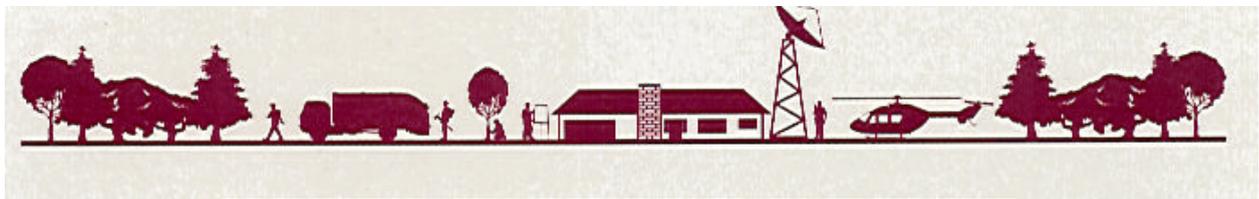
Finally and to facilitate the sequence of the procedures that should be considered in the mutual attendance among countries for the fight against the forest fires, we can show it in following chart:



5.- Conclusions .

The defense against forest fires must evolve with the experience of the years, facilitating information and recommendations that help to progress in the best use in the resources, in the incorporation of advanced technologies, in the professional of the firefighter brigade and in the effective management of the suppression protocols. The technical transfer, the fight methods, the equipment, the experience and the costs in the administration of the resources, as well as the programs of training and training among the countries help to the mutual development avoiding the distancing among the work methods and consequently help to the encouragement of the cooperation agreements and exchange of resources in the fight against the forest fires among the countries.

It is not necessary to consider the mutual cooperation exclusively, in the exchange of resources for the suppression of fires. The projects of international cooperation focused to the prevention of fires and the firefighter's training, they can be a bridge of great importance for the elaboration of agreements and specific protocols to facilitate the collaboration in the suppression of forest fires. An example of this activity inside the Mediterranean region is the project of interregional cooperation among the Spain and Morocco that it has allowed the realization of important activities directed from Spain toward Morocco since 1997, such as: the elaboration of the Plan of Defense against Forest Fires of the Region of the Rif (north of Morocco), the realization of training courses in technical of suppression of forest fires and the delivery of suppression equipment. This cooperation has allowed to know the organization and structure of the suppression system better, favoring the improvements in the agreements of collaboration and mutual attendance in the fight against the forest fires.



Mediterranean Basin Agreements to Protection Against Forest Fire