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y la
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Needs and Opportunities for International Cooperation in Forest Fire Preparedness

Introduction

1. Fire is an important land management tool, but careless or criminal use of fire may have catastrophic impacts. Wildfire is a major cause of forest degradation and may result in loss of human life, economic devastation, social disruption and environmental deterioration. Each year, fires destroy millions of hectares of valuable timber, other forest products, and environmental services provided by forests.
2. The frequency, intensity and extent of damage from wildfire can be reduced through effective fire management, including fire prevention, fire preparedness and fire suppression. FAO urges countries to involve local communities in the management and protection of their forests. Where people have a direct interest in protecting their forest resources, haphazard or unplanned wildfire started by people are significantly reduced. One key to successful wildland fire management is the raising of public awareness to enhance capabilities in fire prevention, detection and preparedness.
3. Countries benefit if they develop the capability to manage forest fire as an integral part of their approach to forest management. In many ecosystems, good forest management practices help to reduce the extent and severity of unplanned fire. In other ecosystems, managed fire plays a positive role. The key is fire preparedness.
4. Fire does not respect national boundaries, and many countries lack the capability to act alone to manage fire effectively, especially in the case of large fire emergencies. Effective international cooperation is an important component in regional and global strategies to improve the management of fire.

Global trends in forest fire

5. Many countries and regions are witnessing seasons with more abundant and severe fires than previously experienced in modern history; yet this might be followed by one or two seasons with below-average fire activity. Typically there is a wide variation in fire from year-to-year

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depending on regional weather patterns. During a wet year, vegetation will increase and fuels will accumulate, increasing the likelihood of severe fire during the subsequent fire season.

6. Extended droughts triggered by the El Niño - Southern Oscillation (ENSO) phenomenon were first experienced in Indonesia in 1983, and again in 1997 – 98. Smoke blanketed large areas of Southeast Asia, disrupting air and sea navigation and causing serious health problems. Similar problems were experienced in South and Central America and in Mexico. In the western United States, the most severe forest fires in modern history occurred between 2000-03, a consequence of both regional climate variation with an extended drought, and earlier fire exclusion policies. Portugal and Alaska also experienced record-setting fires in 2003 and 2004 respectively.

7. These are the “headline fires”, but widespread fires in many parts of the world do not reach the international press. Africa leads the world in the number of fires and area burned almost every year. For example, in 2000 it is estimated that 175 million hectares of forest, savannah and grasslands were burned south of the equator in Africa. Many fires were intentionally set to clear land for agriculture, and many of these fires went out of control to burn much larger areas than were originally intended.

8. Globally more than 350 million ha of forests were burned in 2000 of which 95 percent were caused by human activities. The continued expansion of agriculture and other forms of land conversion activities in developing countries; the increased use of forests for recreational purposes and tourism in both developed and developing countries; and the continued expansion of cities and suburbs in almost all countries, are among the factors that are contributing to the increasing global awareness of wildland fire.

9. It is not possible to state conclusively that there is a long-term upward trend in fire at the global level, since historical data are available for only a small minority of countries. However, the problems experienced by individual countries and regions are such that an increasing number of national and local governments are elevating fire as a priority issue requiring increased policy attention and increased allocation of resources.

Community-based fire management and public participation

10. Sustainable forest management will only be achieved if local communities are involved in management practices. The majority of today’s forest fire stems from fire uses *outside* the forest. The sustainable management of forests requires the participation of the local population in landscape level management of wildland fire adjacent to forest areas.

11. Successful fire management produces direct benefits to local communities. Only when local communities understand that they will benefit from protecting their forests, will they do everything to prevent forest fire. A village in China, for example, has had no uncontrolled fire for over 35 years, ever since a policy was adopted that provided income from the forest to villagers. A study in India showed that the level of a rural community’s dependency on surrounding forests relates directly to participation in fire management. In the Gambia, community forestry practices have resulted in a drop in damaging and unwanted fire; increased participation and access to forest ownership have led to more effective fire prevention and suppression (FAO 2003).

12. Community-based fire control activities in the United States have been highly successful. The number and severity of forest fire was dramatically reduced during the second half of the 20th century due to a combination of successful awareness-raising campaigns, fire prevention programmes, and investments in fire suppression. However, successful no-burn policies resulted in a dangerous accumulation of fuels in many wildland-urban interface areas, resulting in an increase in catastrophic fires in the last ten years. Today, tens of thousands of citizens are involved in programmes to clear vegetation around housing and other structures, and initiatives have been launched to reduce fuels by mechanical means or by prescribed burning programmes.

13. The most effective programmes are those that emphasize fire prevention and fire preparedness. This includes improving knowledge of fire impacts (positive and negative) on food security (e.g. non-wood forest products) and rural livelihoods, including linkages between use of fire in agriculture and wildfire in forests and woodlands. Bulgaria, Burkina Faso, Guatemala, Mozambique, Namibia and Syria have increased public involvement in wildland fire management through intensified public awareness campaigns. As a result, in Burkina Faso and Namibia the number of wildfire dropped significantly.

14. In most countries, effective law enforcement against arsonists or shifting cultivators is an important part of the solution.

15. Many countries are adopting fire strategies that increasingly address the reasons and root causes of wildfire. Investments that address the underlying causes of fire are generally more cost-effective than investments in fire suppression technologies and resources, which are often only used during a few months each year. FAO supports national efforts to develop policy, legal and institutional frameworks to strengthen the active role of local institutions in forest fire management, and to address direct and underlying causes of fire.

The benefits of international cooperation

16. The extent to which knowledge about effective fire management is shared among countries has in the past been very limited. In recent years, this has been changing rapidly. The catalyst for this change started with bilateral cooperation between bordering countries. The benefits from sharing knowledge and resources became so apparent that regional cooperation has vastly increased. It is only a matter of time before the benefits that result from international cooperation are extended to the global level.

17. There are many examples of bilateral cooperation across borders where two countries have shared resources to suppress forest fire. As a few examples among many, Mexico, the United States of America and Canada have been exchanging firefighters and equipment across borders to fight fires since the 1960s. Spain and Portugal have a similar history and, in 2004, Spain and France sent aerial assistance to Morocco. Most recently, Turkey provided assistance to Syria. Similar examples can be found in Central America, Southeast Asia, South America, and southern Africa.

18. These efforts are increasingly facilitated by bilateral mutual assistance agreements which can extend beyond the fire season to include training and institutional strengthening at other times of the year. In a recent study, FAO found over 60 examples of bilateral assistance agreements among countries in different regions.

19. The benefits from bilateral cooperation can be multiplied through multilateral agreements at the regional level, and perhaps even extended to the global level. A global expert consultation organized by FAO in 1998 concluded that countries need to:

- formulate fire management policies that are linked to land use practices;
- maintain flexibility in policy implementation, updating policies as needed;
- define clear objectives with a realistic implementation plan;
- involve all stakeholders in the process;
- address land uses that impinge on forests, addressing the causes of deforestation;
- establish land use policies that include incentives to encourage fire prevention (FAO 1999).

20. In 2001, FAO convened a follow-up global expert meeting to consider the international implications of national actions. The experts recommended actions on:

- the development of human resources and mechanisms to support cooperation on forest fire management at bilateral, regional and international levels;
- the establishment of mechanisms for inter-country agreements among groups of two or more countries, aimed at coordinating efforts to establish norms and to share resources, personnel and equipment in situations of emergency.
- establishing a database on “Legal Frameworks for Forest Fire Management; International Agreements and National Legislation” (FAO 2001).

Progress towards strengthened international cooperation on forest fire

21. Given the diversity of responsibilities within and outside the UN system, an international platform was created to facilitate a global policy dialogue. A *Working Group on Wildland Fire* was established in 2001 within the Inter-Agency Task Force for Disaster Reduction under the United Nations International Strategy for Disaster Reduction (ISDR). This Working Group has been responsible for planning most of the activities described below.

22. The World Summit for Sustainable Development (WSSD) in Johannesburg, South Africa, 2002, provided the groundwork for an action programme to reduce the negative effects of wildland fire on the environment and humanity. This led to an International Wildland Fire Summit in Sydney, Australia, in October 2003. The theme of the summit was “Fire Management and Sustainable Development: Strengthening International Cooperation to Reduce the Negative Impacts of Fire on Humanity and the Global Environment”. The Sydney Summit was attended by 92 people from 34 countries and 12 international organizations. Actions proposed by the participants included:

- enhancing international cooperation in wildland fire management through agreements on common principles, procedures and a common global strategy. Several modalities exist for international cooperation, such as voluntary agreements, UN General Assembly resolutions, and international conventions;
- requesting assistance from the United Nations and its specialised agencies to lead the implementation of the outcomes of this strategy, including securing funding support of the establishment of regional networks, conferences and summits; and
- establishing a Global Wildland Fire Network to facilitate the regional and global dialogue.

23. As a direct follow-up to these initiatives, the Government of Spain has offered to host a 4th International Wildland Fire Conference in May 2007.

24. As a consequence of these global initiatives, a number of regional efforts have been launched such as regional declarations on fire adopted at regional conferences in the Balkans, Northeast Asia, the Mediterranean, Central Asia, the Baltic region, Southern Africa, South America, Central America and Caribbean regions (FAO 2004b).

25. In Costa Rica the Pan-American Conference on Wildland Fire organized by FAO on 23 October 2004 brought together 27 heads of national forestry agencies from throughout the Western Hemisphere. The Conference adopted a declaration calling for the establishment of bilateral and multilateral agreements on cooperation in integrated fire management, and the development of an international accord for cooperation in the prevention and management of wildland fire.

FAO activities in forest fire management

26. FAO recommends that each country analyze its fire situation and develop a strategy for preventing and managing wildland fire and its impact on forest resources. But many countries

lack the capacity or resources to implement an effective programme unilaterally. In addition, even countries that have sufficient resources or fire management capacity can achieve synergies by working together to resolve fire-related problems.

27. Hence, the cornerstone of the FAO fire management programme is to promote international cooperation among countries affected by forest fire. FAO has developed guidelines for countries on how to establish agreements to assist each other in response to fire emergencies and to exchange resources. Agreements may be established at the bilateral, regional, or even at global level. Further information is available at www.fao.org/forestry/fire

28. FAO is directly assisting Bulgaria, Cape Verde, Guatemala and Syria to develop forest fire control policies and legislation and participatory management approaches through the Technical Cooperation Programme.

29. In 2004 FAO together with partners, the Global Fire Monitoring Center (GFMC) and The Nature Conservancy (TNC) trained Instructors from Ethiopia, Ghana, Guatemala, Namibia, Sudan, South Africa, Syria, Tanzania and Zimbabwe on community-based fire management approaches.

30. FAO serves as a global information centre on wildland fire management. FAO assists the ISDR regional wildland fire networks to develop the capacity to disseminate global, regional and local fire management information. FAO also maintains a global database on fire policy and legislation.

31. However, all cooperative fire efforts may be in vain unless international guidelines on fire management for different forest conditions are prepared and used. Effective information-sharing also includes the continuous updating of the FAO Global Wildland Fire Terminology. International cooperation in fire emergencies calls for an internationally accepted Incident Command System (ICS). Harmonized terminology and procedures are essential for multi-national exercises to be successful. This requires training, such as that which took place in 2004 in Croatia and France; or the training provided by the USA to Brazilian and Mexican firefighters.

The future role of FAO

32. The role of FAO could be enhanced to:

- (i) advocate the importance of fire management within the context of an integrated approach to forest management;
- (ii) promote awareness that forest management is an effective means of fire prevention;
- (iii) underscore the role of fire as a management tool in both agriculture and forestry;
- (iv) advise countries on legislation and policies to address forest fire prevention and suppression;
- (v) monitor and manage information on fire;
- (vi) mobilize partners and resources to form partnerships and networks;
- (vii) advocate community participation in fire management; and
- (viii) advocate the development of an international accord for cooperation in the prevention and management of wildland fire.

Options for the future

33. The Committee on Forestry may wish to consider among other options:
- (i) the importance for countries to adopt programmes which lead to improved land management, public awareness and fire preparedness;
 - (ii) the importance for countries to develop national strategies for integrated wildland fire management;
 - (iii) the potential for increased cooperation among countries at the regional and global levels to share knowledge and resources in support of forest fire management, including in information and early warning systems, fire prevention and control;
 - (iv) how best to implement the recommendations from the Ministerial Meeting on Forests, 14 March 2005, immediately before the 17th Session of COFO;
 - (v) provide guidance on the role of FAO in implementing the above actions, noting that FAO addresses agriculture, rural development and forests; and that FAO has a history of assisting countries with forest fire management and serving as a venue for international dialogue on forest fire; and
 - (vi) request FAO, in collaboration with other international partners, to facilitate the development of an international accord for cooperation on forest fire.

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