



United Nations
International Strategy for Disaster Reduction



Global Fire Monitoring
Center (GFMC)



UNECE / FAO Team of Specialists
on Forest Fire

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UNISDR Wildland Fire Advisory Group / Global Wildland Fire Network
Coordinator / Secretariat:
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**International Working Group on Cooperation in
Wildfire Preparedness and Response**
(IWG-CWPR)

Proposal

**Building Resilience of Nations and Communities within the
UNECE Region to Wildfire Emergencies and Disasters**

FINAL DRAFT – 11 November 2013

Executive Summary

In the light of apparent and anticipated future changes of wildland fire regimes and wildfire risk in the UNECE region and at the global level, and the observed increase in vulnerability of ecosystems and society to wildfires, appropriate fire and land management solutions are required to reduce the risk and impacts of wildfire. Allied to this, there is a need to ensure that appropriate preparedness and response capacity exists within all 56 UNECE Member States and globally. The transboundary environmental consequences of wildland fires can be severe, e.g. the cross-border movement of wildfire smoke pollutants, and the impacts of vegetation fire emissions on the composition and functioning of the global atmosphere are a major issue, as is when wildfires cross borders from one States territory to another. The negative transboundary consequences of wildfire highlights the need for governments to establish a greater focus on territorial cooperation and inter-State cohesion to minimize the impact of wildfire on the UNECE region and beyond. Improved territorial cooperation between national agencies, international organizations, non-government organizations and civil society would bring operational and strategic benefit helping solve anticipated and avoidable social, economic and environmental crisis.

Globally a number of bilateral and multilateral legal agreements as well as voluntary multilateral cooperative efforts reveal a rich experience of cross-boundary cooperation in fire management. Within the United Nations Economic Commission for Europe (UNECE) the UNECE/FAO Team of Specialists on Forest Fire was established in the early 1980s to foster cooperation in fire management between the Member States. Since the early 1990s, the Global Fire Monitoring Center (GFMC) became responsible for the leadership of the Team and gradually expanded the scope of work to the global level. With the creation of the Global Wildland Fire Network (GWFN) in the early 2000s, a systematic approach towards international cooperation in fire management was initiated and became functional through voluntary cooperation within the Global Wildland Fire Network with its 14 Regional Wildland Fire Networks. A decade ago an informal International Wildland Fire Summit developed a number of recommendations aimed at streamlining cooperation in fire management at the global level. Yet, these recommendations have remained largely overlooked by national and international political and policy-making bodies.

A decade of experience in defining cooperative solutions in fire management between countries globally has identified that while there have been advances in fire management in some countries, there are still barriers preventing the sharing of scientific and technical knowledge and good practice between wildfire agencies in different States. These barriers have resulted in some wildfire agencies being unintentionally excluded from the technical information and advancements that they could utilize to develop greater national resilience and preparedness for large wildfire incidents. It is often the lack of resilience of a State to manage its own wildfire situation that results in the need for unplanned international emergency assistance.

There is a political belief that the extent and the severity of the consequences of wildfire emergencies can be mitigated by providing improvised international firefighting assistance to the affected country. Indeed, such interventions are generally perceived positively as such missions provide humanitarian assistance and political support. However, experience reveals that international interventions, which are limited to wildfire emergency response, provide little benefit to the countries involved and do not address the underlying causes of the problem, often resulting in a dependence on future international assistance.

Given that some countries already possess advanced wildfire knowledge, and have the technologies and expertise to manage wildfire risk effectively, the priority of future international exchange should be to establish a mechanism that encourages this understanding to be shared between territories, enabling all countries to develop effective wildfire reduction strategies and providing the structure for more effective collaborative efforts during wildfire disaster situations.

In order to allow a coordinated, systematic approach for international cooperation in fire management, the GFMC and the UNISDR Wildland Fire Advisory Group, which represents the interests and the members of the Global Wildland Fire Network, including the UNECE/FAO Team of Specialists on Forest Fire, have been preparing the convention of a "UNECE/FAO Regional Forum on Cross-boundary Fire Management". This preparatory work began in 2010.

The aim of the Forum is to elaborate recommendations to the UNECE member states to develop an agreement on international cooperation aimed at enhancing fire management capability within the region. In addition, the Forum is seeking participation from other regions of the world in order to initiate a more coordinated approach to cooperative fire management at the international level.

The Forum will be co-sponsored by the UN International Strategy for Disaster Reduction (UNISDR), the Council of Europe (CoE) through its Euro-Mediterranean Major Hazards Agreement (EUR-OPA), and the Organization for Security and Cooperation in Europe (OSCE), and will be held at the United Nations, Geneva, 28-29 November 2013.

In preparation for the Forum, the "International Working Group on Cooperation in Wildfire Preparedness and Response" (IWG-CWPR) was formed and tasked with investigating and identifying opportunities for multilateral communication and cooperation within the UNECE Region to improve the safety, efficiency and effectiveness of wildfire emergency preparedness and response activities. The Working Group operated in cooperation and complementarity with the International Fire Aviation Group (IFAWG). The collaborative approach of these two groups of experts has resulted in the development of a proposal which will better suit the international community's needs for wildfire preparation and disaster response.

The IWG-CWPR analyzed examples of good practice from within the UNECE Region and identified skills, knowledge and expertise that all wildfire agencies should possess and utilize. It was identified that wildfire management agencies must have the ability to:

- Assess and manage wildfire risk using appropriate safety systems.
- Gather intelligence from all available sources, utilizing existing state-of-the-art information technology and data, e.g. fire early warning/danger rating, satellite derived and other real- to near-real time information sources to support decisions;
- Predict likely fire behaviour and potential fire spread across the landscape, as influenced by the weather, topography and fuel types;
- Implement appropriate incident management systems for wildfires, including an appropriate incident command system;
- Identify and allocate the resources required and understand the capabilities and limitations of available resources, including ground and aerial resources;
- Develop and implement appropriate wildfire suppression plans which utilize safe and effective tactics;

The IWG-CWPR identified that wildfire management agencies in some countries exhibit the skills mentioned above which has enabled them to more successfully manage wildfire incidents and emergencies and maintain greater resilience. Consequently, they are more capable than other countries at reducing the potential impact of wildfires.

The IWG-CWPR have concluded that to meet current and future global wildfire challenges, it is absolutely necessary to establish an International Wildfire Support Mechanism (IWSM), for the UNECE Region, with the future potential to expand to other regions globally, that will assist nations to improve their capacity and resilience to wildfire. The mechanism will provide a platform/framework from which to cascade improved knowledge, good practice, experience and training throughout the global wildfire community for the benefit of all. The IWSM would initially consist of a number of wildfire institutions and wildfire specialists who already have significant experience in:

- Development of effective domestic wildfire risk management and response capability;
- Effective and efficient response to major domestic wildfire emergencies and disasters.

The creation of the IWSM will be a catalyst for stimulating the sharing of knowledge and experience across the region, establishing a mechanism to enable all wildfire agencies to benefit from the membership of a wildfire community dedicated to increasing international collaboration and cooperation. A significant strength of this proposal is that existing personnel could be trained to a required standard and could become part of the IWSM.

The IWG-CWPR proposes that the primary aim of the IWSM should be the reduction of wildfire disaster situations within the UNECE Region. In order to achieve this, it is proposed that three strategic objectives should be set. The successful achievement of each of these strategic objectives requires the completion of a number of priority actions. The three proposed strategic objectives are:

- Development and adoption of a holistic approach to fire management and wildfire risk reduction within the UNECE Region and, potentially, globally.
- Development and strengthening of institutions and mechanisms to build national and international capacities and resilience to, and increase knowledge and understanding of, wildfire within the UNECE Region and, potentially, globally.
- Facilitation of a nurturing and sustainable culture of knowledge exchange and continual improvement for wildfire practitioners and policymakers within the UNECE Region and, potentially, globally.

This proposal complements and builds upon other work completed at an international scale with regards to disaster management. In particular, this proposal aligns with the priority areas identified within the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. If this proposal is adopted, its main expected outcome is a substantial reduction in the loss of life and damage to societies, economies and the environment as a result of wildfire disasters.

Background and Rationale

In the light of apparent and anticipated future changes of wildland fire regimes and wildfire risk in the UNECE region and at the global level, and the observed increasing vulnerability of ecosystems and society to wildfires, appropriate fire and land management solutions are needed to reduce wildfire risk and impacts. Allied to this, there is a need to ensure that appropriate preparedness and response capacity exists within all 56 UNECE Member States and globally.

The transboundary consequences of wildland fires can be severe, e.g. the transboundary transportation of wildfire smoke pollutants, the borderless transport and impacts of vegetation fire emissions on the composition and functioning of the global atmosphere, and border-crossing wildfires. The transboundary nature of wildfire impacts highlights the need for governments, national agencies, international organisations, non-government organizations and civil society collaboratively increase their efforts to address these newly arising problems.

Considering the willingness of global society to share expertise and resources in fire management, it is recommended that international cooperation in fire management should be systematically streamlined and strengthened. The development of agreed voluntary principles and procedures on cross-border cooperation will enhance inter-operability, efficiency and effectiveness in fire management between nations and regions. In doing so, it will contribute greatly towards the achievement of UNECE's major aim of promoting pan-European economic integration, whilst at the same time lowering each nation's preparatory costs.

Between the 1960s and the early 1980s, initiatives began to seek the exchange expertise and human and technical resources in fire management between nations at regional levels, e.g. within North America and the UNECE region. Large fire episodes in the 1980s, e.g. the escalating use of fire in land-use change in the tropical regions of Asia and the Americas, drew attention to the global impact of forest fires and other vegetation fires. Besides the initiation of International Wildland Fire Conferences in the late 1980s, the following decade saw numerous initiatives by the UN system and other international organizations addressing wildland fire at an international level. In 2001 the Working Group on Wildland Fire was created under the Inter-Agency Task Force for Disaster Reduction of the UN International Strategy for Disaster Reduction (UNISDR), followed by the creation of the Global Wildland Fire Network and the UNISDR Wildland Fire Advisory Group, an advisory body to the UN system and international organizations. An informal International Wildland Fire Summit held in 2003 recommended strengthening collective action and acceptance of international standards in fire management.

However, besides a noted increase of bilateral agreements and cooperative activities, often but not exclusively developed between nations sharing common borders, the need has been recognized to develop standards as a basis for inter-operability in fire management between nations and regions. These common standards need to promote common language and definitions, common methodologies and common operational procedures in fire management, as well as qualification, competency, and certification of human resources. These required standards should also establish a common approach to the identification of different types of wildfire management resources according to their functionality, capabilities and limitations.

In November 2013 the UNECE/FAO Forum on Cross-boundary Fire Management, co-sponsored by the UN International Strategy for Disaster Reduction (UNISDR), the Council of Europe (CoE) and the Organization for Security and Cooperation in Europe (OSCE), will be held at the United Nations, Geneva (28-29 November 2013). The aim of the Forum is to elaborate recommendations to the UNECE member states to develop an agreement on international cooperation to enhance fire management capability in the region. In addition, the Forum is seeking participation from other regions in the world in order to allow the initiation of a coordinated approach in cooperative fire management at the international level.¹

In preparation for the Forum, the "International Working Group on Cooperation in Wildfire Preparedness and Response" (IWG-CWPR) was formed and tasked with investigating and identifying opportunities for multilateral communication and cooperation within the UNECE Region to improve the safety, efficiency and effectiveness of wildfire emergency preparedness and response activities. The Working Group operated in cooperation and complementarity with the International Fire Aviation Group (IFAWG)² and, as a consequence, did not address aerial firefighting operations. The collaborative approach of these two groups of experts has resulted in the development of a proposal which will better suit the international community's needs for wildfire preparation and disaster response.

This proposal complements and builds upon other work completed at an international scale with regards to disaster management. In particular, this proposal aligns with the priority areas identified within the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. If this proposal is adopted, its main expected outcome is a substantial reduction in the loss of life and damage to societies, economies and the environment as a result of wildfire disasters. The proposal recommends a number of sustainable measures that can be implemented to build capacity and resilience of nations within the UNECE Region and globally to wildfires. It also outlines a number of actions that can be implemented to strengthen effective preparedness of the international community to wildfire emergencies and to reduce the number of future wildfire disasters. Essentially, the proposal offers a mechanism in which members of the international community can cooperate to their mutual economic, social and environmental benefit.

1. Introduction

In November 2013 the UNECE/FAO Forum on Cross-Boundary Fire Management at the United Nations, Geneva (28-29 November 2013) will elaborate recommendations to the UNECE Member states for developing agreements on transboundary cooperation in fire management. The Forum will be prepared and led by the Global Fire Monitoring Center (GFMC) and members of the UNECE/FAO Team of Specialists on Forest Fire. In preparation for the Forum, two groups of wildfire specialists were established.

- The International Working Group on Cooperation in Wildfire Preparedness and Response (IWG-CWPR) was formed in January 2013 to develop a proposal outlining how to build national resilience to wildfires within the UNECE Region through the development of a culture of preparedness. This group included representatives from the UNECE member states of France, Germany, Spain, the United Kingdom and the United States of America.

¹ <http://www.fire.uni-freiburg.de/intro/UNECE-Fire-Forum-2013-Draft-Outline.pdf>

² www.ifawg.org

- The International Fire Aviation Working Group (IFAWG), which emerged from the recommendations of the two international conferences in 2007 and 2008 and which works under the umbrella of the UNISDR Wildland Fire Advisory Group, was tasked with producing final draft voluntary guidelines and Standard Operating Procedures (SOPs) aimed at enhancing safety, efficiency and effectiveness of aerial firefighting operations at national and multinational incidents. This group includes representatives from UNECE member states (Canada, Germany, Italy, Russia, Spain, U.S.A.) and other regions (Australia, Chile, South Africa, South Korea).

The two groups worked in close cooperation with one another to ensure that overlapping issues were considered and addressed. However, this document only presents the proposals made by the IWG-CWPR. The final draft guidelines developed by the IFAWG are presented separately, but should be considered as complementary to this proposal.

This proposal will be shared with the participants of the Forum, including those from other regions of the world.

1.2 Differentiating between wildfire emergencies and disasters

For the purpose of this proposal and to provide clarity, the IWG-CWPR has defined two key terms:³

Wildfire emergency – A wildfire incident that requires action(s) to be taken to prevent or minimize loss of life, damage to property or damage to the environment.⁴ The responsible agency(ies) remains in control of the emergency, but in certain circumstances this control may only be maintained through the timely request of external or international assistance.

Wildfire disaster – A wildfire emergency that exceeds the ability of the responsible agency to remain in control of the situation and which has the potential to/will result in substantial human, material, economic and/or environmental losses.

2. Rationale for enhancing cooperative efforts for Fire Management in the UNECE Region

2.1 Potential increase in wildfire risk and disasters in the UNECE Region

The White Paper “Vegetation Fires and Global Change” (GFMC, 2013) states that globally fire regimes are altering in parallel with and under the influence of socio-economic developments, land-use change and climate change. This trend is increasing the vulnerability of society to the direct and secondary effects of wildfires. These, as well as the transboundary consequences of wildfires, are prompting countries and international organizations to define their common interests to enhance sustainable and integrated fire management capacities. In particular, it is in the common interest for nations to become more efficient in the sharing of resources, scientific and technical expertise, and finding solutions to problems. The transition from informal information exchange and networking to a more systematic and collaborative approach is more necessary than ever.

If predicted changes to fire regimes across the UNECE Region occur, the number and severity of wildfire incidents will increase, which could potentially lead to an increase in wildfire emergencies and wildfire disasters. This situation may be compounded by the current economic trends which have resulted in budget reductions for wildfire agencies in many countries. This means that many agencies are facing a future where they will be required to attend a greater number of larger and more complex

³ It is not the intention of the IWG-CWPR to replace existing terminology. These two terms are simply included here for the sole purpose of providing an appropriate context for the arguments contained within this document.

⁴ Based on the definition of a “wildfire incident” included in the European Glossary for Wildfires and Forest Fires (EUFOFINET, 2012)

wildfire incidents yet operate with fewer resources. This will increase the need for wildfire management agencies to become more effective and knowledgeable.

The IWG-CWPR have concluded that to meet current and future global wildfire challenges, it is absolutely necessary to establish an **International Wildfire Support Mechanism (IWSM)** that will assist nations to improve their capacity and resilience to wildfire. The mechanism will provide a platform/framework from which to cascade improved knowledge, good practice, experience and training throughout the global wildfire community for the benefit of all.

There are also compelling economic arguments for the formation of the IWSM. For example, the mechanism could assist UNECE countries to build a culture of shared preparedness and the establishment of a more informed collaborative international approach based on the cross-border and interagency exchange of specialist knowledge and understanding. This cooperative and supportive approach would enable greater efficiency and cost reduction, irrespective of the scale of a nation's wildfire problems. It will also enable countries to build their own national capacity and resilience to wildfires, therefore enhancing efficiency at both the national and regional scales.

2.2 Different approaches to Wildfire Preparedness across the UNECE Region

Many nations within the UNECE Region have developed their own approach to addressing the risk of wildfire and, as a result, the lack of commonality in approaches severely reduces interoperability between wildfire agencies. The preparatory actions taken by a State are generally, but not universally, determined by the level of the perceived risk that wildfires pose to its community, economy and environment. The IWG-CWPR identified four key different types of approach to wildfire preparedness across the UNECE Region. These four different approaches are now summarized in the following sub-sections.

2.2.1 Countries dependent upon a traditional approach to wildfire risk reduction

Designated national wildfire agencies have often developed a localized response, normally in isolation from other international wildfire agencies and without due consideration to good practices that have been developed elsewhere. Current understanding and suppression methods are often based on historic experience and traditional fire fighting techniques, and the policies that are implemented often do not take into account broader national or international good practice. Those agencies that possess only a limited understanding of wildfire, and which are restricted by tradition, can often be quickly overwhelmed by fires that display unfamiliar behaviour which is beyond their understanding and consequently their capacity of control. This localized and 'traditional' approach to wildfire risk management is a key reason why many countries within the UNECE Region have a low resilience to wildfires and are subject to wildfire emergencies and disasters.

2.2.2 Countries that have assigned responsibility for wildfire risk reduction to Fire and Rescue Services

In many countries Fire and Rescue Services (FRSs) have been given the mandatory responsibility to extinguish all fires, including wildfires, and these agencies are often focused on urban fire fighting and tend to rely heavily on their traditional and extensive structural fire fighting skills and experience when dealing with wildfire. With a wide portfolio of other emergency responsibilities, many have not developed a specific understanding of the wildfire environment and/or effective fire fighting techniques, and some do not even provide specific wildfire training to personnel. FRSs are also constrained by the fact that many have only a tentative connection with land managers/agencies and seem to exert little influence on land management policies on risk management and reduction. The occasional nature of wildfires in some areas further exacerbates those challenges already noted and it is, to some extent, understandable that many Fire Services will concentrate on preparing for those risks they most frequently face. The outcome, however, is that many are poorly prepared and equipped for large and persistent wildfires when they do occur.

2.2.3 Countries that have developed a holistic approach to wildfire risk reduction

In other countries, particularly those that suffer from frequent and significant wildfires, statutory responsibility for wildfire suppression has been given to agencies that have specifically been formed and tasked with managing and reducing national wildfire risk. With a clear mandate, many of these agencies have successfully developed an excellent understanding of wildfire science allowing the subsequent development of systems that are specific to wildfire suppression and control. These agencies are generally well organized, well prepared, and efficient and have a highly trained and specialized workforce. They rarely require international assistance and when this is required, it is normally pre-planned and arranged through 'mutual aid' bilateral or multilateral agreements. These agencies are sometimes well-positioned to exert a strong influence on other land management and government agencies and are able to initiate effective risk reduction and fire prevention programmes. In summary, these agencies have developed a holistic and more comprehensive approach to addressing the risks posed by wildfires.

2.2.4 Wildfire agencies that fail to recognize their own limitations

Another common cause of wildfire incidents that escalate to emergency and disaster situations is that some wildfire agencies fail to recognize their own limitations. This results in the potential for the suppression agency to underestimate the scale of the incident and/or to make ineffective and inappropriate judgments in relation to the management of the incident, causing the agency to lose control and/or become overwhelmed by the situation(s). This situation is likely to occur when an agency is faced by unusual fire behaviour that is beyond its experience/understanding and which cannot be brought under control using its normal fire fighting methods. When an agency fails to recognize its own limitations it will typically respond by committing increasing amounts of resources to a situation that is beyond its capacity to control. Consequently, resources may be sent into dangerous positions and/or may be utilized ineffectively. Agencies that maintain an awareness of their own limitations have a better understanding of fire behaviour and will only commit resources at times and places where the fire is within their threshold of control and they can safely succeed in their task(s).

2.3 Current barriers and difficulties regarding international assistance for wildfire incidents

Because of the complex nature of wildfire incidents, the IWG-CWPR concluded that the international mobilization of wildfire suppression personnel and equipment is fraught with practical difficulties. In summary, the key difficulties that currently exist within the UNECE Region include:

1. The existence of different fuel types, fire regimes and fire magnitudes in different countries;
2. Different institutional fire management capabilities of UNECE Member States due to different levels of multi-generation accumulated expertise;
3. The use of different and sometimes incompatible incident management systems;
4. Different strategic approaches in fire management and applied tactics and operational systems in wildfire response
5. Training systems that do not provide sufficient knowledge and understanding of the complexities involved in managing wildfire and the incompatibility of some existing training programmes;
6. Lack of interoperability of equipment;
7. Lack of pre-planning and preparedness for emergency situations which may escalate to a level requiring international assistance;
8. Difficulties in the identification and supply of the resources actually required;
9. Absence of a common language and terminology for wildfire across the whole region;
10. The time taken to effectively mobilize and deploy resources over large distances.

The lack of urgency shown in consideration of whether international assistance will be required can greatly affect the efficacy of subsequent responses. Wildfires are dynamic, grow quickly and are different from many other disasters requiring international intervention in the sense that the situation can change very rapidly. Only wildfire management agencies that are able to understand their own

limitations and the potential of a fire(s) will be able to request international assistance in a timely manner. This necessitates a collaborative approach to risk assessment and management. In order to achieve this, all countries need to identify, assess and continually monitor risk to ensure international assistance is requested at an early stage of any wildfire emergency to help prevent a worsening situation. Apart of traditional fire risk indices, such as fire-danger rating forecasts or fire-weather based early warning systems, the different causative agents of wildfires, particularly human-caused wildfires, as well as advanced systems allowing to predict expected wildfire behaviour and size, and the thresholds of control (that are dependent on national fire management capabilities), need to be considered.

The timing of requests for international assistance is crucial to enable an appropriate and timely response. Timely requests and responses enable the international deployment of resources that reinforce on-going operations to support the host nation.

There is also considerable scope and potential for the provision of international assistance during the investigative and post-fire recovery phases of a wildfire. This type of assistance is not currently facilitated by an existing international mechanism and could provide significant opportunities to overcome current issues and prevent the reoccurrence of similar events.

Another key factor limiting international assistance and cooperation is that there are currently few internationally recognized standards for wildfire management. Likewise, there is currently no single common language for wildfire management within the UNECE Region. Indeed, even within some UNECE countries there appears to be an absence of national standards and accepted terminology. Although there have been attempts to develop common standards through previous international collaboration projects in the Eurasian part of the UNECE Region (for instance, EuroFire, Fire Paradox, EUFOFINET, FIRE 4/5), there is currently no evidence of widespread adoption and implementation. The absence of common standards presents difficulties for establishing effective multi-agency cooperation within individual UNECE member states and barriers to international cooperation and assistance between UNECE countries.

There is currently a willingness from some States within the UNECE region to provide assistance for wildfire incidents, as evidenced by the existence of international mechanisms such as the EU Civil Protection Mechanism and bilateral agreements between some UNECE countries. Many requests for international assistance are unplanned and unexpected, which means that responses tend to be ad-hoc. There is a danger that responses made on an ad-hoc basis may be reactive and tokenistic and/or may not provide the assistance that is really needed. There is also sometimes a lack of assurance that resources provided via international assistance are managed efficiently and used to maximum effect. The current reactive approach also greatly limits the ability of countries to assist each other through preparatory actions that can help to enhance resilience, such as the cross-border mobilization of resources to high risk areas to help prevent the onset of extreme wildfire events.

2.4 Essential skills necessary to improve wildfire management within the UNECE Region

The IWG-CWPR analyzed examples of good practice from within the UNECE Region and identified skills, knowledge and expertise that all wildfire agencies should possess and utilize. It was identified that wildfire management agencies must have the ability to:

1. Assess and manage wildfire risk using appropriate safety systems.
2. Gather intelligence from all available sources, utilizing existing state-of-the-art information technology and data, e.g. fire early warning/danger rating, satellite derived and other real- to near-real time information sources to support decisions;
3. Predict likely fire behaviour and potential fire spread across the landscape, as influenced by the weather, topography and fuel types;
4. Implement appropriate incident management systems for wildfires, including an appropriate incident command system;
5. Identify and allocate the resources required and understand the capabilities and limitations of available resources, including ground and aerial resources;

6. Develop and implement appropriate wildfire suppression plans which utilise safe and effective tactics.

The IWG-CWPR identified that wildfire management agencies in some countries exhibit the skills mentioned above which has enabled them to more successfully manage wildfire incidents and emergencies and maintain greater resilience. Consequently, they are more capable than other countries at reducing the potential impact of wildfires.

At a strategic level, similar skills, expertise and understanding are required to ensure a coordinated national response that maintains national resilience. The assembled specialists/experts of the IWG-CWPR agreed that in some countries within the UNECE Region the agencies that have responsibility for managing and suppressing wildfires do not have some or all of these skills at the local and/or national level. This skills and capability gap poses a potential threat to local, national and regional resilience. The IWG-CWPR also identified that in some countries wildfire agencies seem to have a limited and basic knowledge of the wildfire phenomena and of the methods and techniques that can be used to control it. This lack of understanding can result in even well-resourced agencies being unable to effectively manage relatively insignificant fire events. In many cases, it is the lack of understanding of the wildfire environment and resulting fire behaviour, not the availability of adequate resources, which results in a fire developing into a disaster situation. There is a further complication that even where specialist knowledge exists within firefighting agencies, these agencies may lack influence to the extent that their knowledge and expertise is not used to inform the development of national policy.

The IWG-CWPR concluded that relevant actors and decision-makers must have an understanding of the environment within which they are expected to operate and must appreciate the limitations of the available resources; if they do not, they may be quickly overwhelmed. Understanding a fire's potential to grow and spread across the landscape is fundamentally important, and enables the formation of a suppression plan that maximizes the timely deployment and effectiveness of available resources. For this reason the IWG-CWPR believes that the achievement of a substantial reduction in wildfire disasters is possible but that this is inextricably dependent upon suppression agencies further developing their intellectual capacity to manage wildfires. This would be best achieved agencies working collaboratively with other national and international wildfire agencies to agree and adopt best practice. Furthermore, the IWG-CWPR believes that through a collaborative national effort and the issuance of more timely requests for international assistance, the likelihood and impact of wildfire emergencies and disasters can be reduced.

3. Introducing the Concept of an International Wildfire Support Mechanism

3.1 Overview of the proposed International Wildfire Support Mechanism

While each State within the UNECE Region has primary responsibility for the management of wildfire risk within its territory, an enabling international environment is vitally important for stimulating and contributing to a more coordinated and cohesive regional approach to the prevention, preparedness and finally response to wildfire emergencies. Capacity building in wildfire prevention and response preparedness must have highest priority.

The IWG-CWPR has identified that there is presently no formal arrangement or mechanism in place to facilitate and embed a knowledge exchange and preparedness culture across the entire UNECE Region. The IWG-CWPR therefore proposes the establishment of an **International Wildfire Support Mechanism (IWSM)** for the UNECE Region, with the future potential to expand to other regions globally. The IWSM would initially consist of a number of wildfire institutions and wildfire specialists who already have significant experience in:

- Development of effective domestic wildfire risk management and response capability
- Effective and efficient response to major domestic wildfire emergencies and disasters

Some of the institutions and specialists will also have developed the expertise and experience to enable them to provide a range of support for wildfire emergencies outside of their own country.

The creation of the IWSM will be a catalyst for stimulating the sharing of knowledge and experience across the region, establishing a mechanism to enable all wildfire agencies to benefit from the membership of a wildfire community dedicated to increasing international collaboration and cooperation. A significant strength of this proposal is that existing personnel could be trained to a required standard and could become part of the IWSM.

3.2 Guiding principle for the formation of the International Wildfire Support Mechanism

The title of this document presents the key guiding principle behind the formation of the IWSM. This guiding principle is for countries and communities within the UNECE Region and beyond to build resilience to wildfire emergencies and disasters through international cooperation and collaboration. This would primarily be achieved through the development of national capacity.

3.3 Interim host and advisory group for the International Wildfire Support Mechanism

It is proposed that the initial creation of the mechanism must be overseen and driven by an interim host and secretariat. The secretariat will in turn need to be supported by an advisory group. The advisory group should consist of wildfire specialists, experienced practitioners and policy experts. The individuals involved will be dedicated to facilitating and stimulating the exchange of information and dissemination of good practice between countries in the UNECE Region.

The initial success of the mechanism will be dependent upon the provision of adequate funding and the involvement of wildfire management agencies that currently implement, and are willing to share, good practice – particularly those that are prone to wildfire emergencies and those that are most likely to provide international assistance and necessary expertise required to develop more effective international collaboration and assistance. These agencies could cascade their knowledge and understanding to, and share their experience with, other wildfire agencies within the UNECE Region, during the preparation, response and post-fire recovery phases. This process will act as a catalyst for expanding the mechanism within the UNECE Region and for building an international community of wildfire specialists. This community would formulate common standards and procedures for use across the UNECE Region, which will further improve future international cooperation and collaboration. Members of this community will also be able to benefit from lessons learned across the Region which they could use to continually improve their understanding, capabilities and resilience to wildfire.

4. Proposed Aim, Objectives and Priority Actions of the International Wildfire Support Mechanism

4.1 Primary aim of the proposed International Wildfire Support Mechanism

The IWG-CWPR proposes that the primary aim of the IWSM should be:

“The reduction of wildfire disaster situations within the UNECE Region”

It is also proposed that the IWSM can only achieve this aim through the establishment of a network of similarly trained, skilled and experienced wildfire organizations across the UNECE region which will facilitate the dissemination of knowledge and understanding to wildfire agencies. The IWSM would be ideally placed to support the development of a regional programme of wildfire risk reduction and establish a commonality of response within UNECE member states and beyond. This process is needed to strengthen national and international attempts to reduce wildfire emergencies and disasters and will provide a framework for establishing a sustainable approach to reducing the need for emergency international assistance.

The mechanism should also utilize the expertise and experience generated from existing mechanisms, including current bilateral agreements and other forms of cooperation on fire management between nations.

In order to achieve the primary aim of the IWSM, it is proposed that three strategic objectives should be set. The successful achievement of each of these strategic objectives requires the completion of a number of priority actions. The three strategic objectives and their associated priority actions are now presented.

4.2 Strategic Objective 1 – A holistic approach

The first strategic objective is:

“Development and adoption of a holistic approach to fire management and wildfire risk reduction within the UNECE Region and, potentially, globally.”

The proposed priority actions for Strategic Objective 1 are:

- 1 Assessment of current fire regimes, and potential future changes to fire regimes, across the UNECE Region to better understand wildfire risk.
- 2 Review the effectiveness of national strategies and real capabilities for wildfire management to identify opportunities for improvement.
- 3 Encouragement and promotion of the benefits of a multi-agency approach to wildfire risk reduction.
- 4 Establishment of vulnerability reduction programmes, building capacity through knowledge transfer, to reduce wildfire risk.

4.3 Strategic Objective 2 – Capacity building

The second strategic objective is:

“Development and strengthening of institutions and mechanisms to build national and international capacities and resilience to, and increase knowledge and understanding of, wildfire within the UNECE Region and, potentially, globally.”

The proposed priority actions for Strategic Objective 2 are:

- 1 Identify and promote best practice in wildfire prevention and fire management at the landscape level.
- 2 Facilitate information sharing and knowledge exchange.
- 3 Standardization of international wildfire terminology within the UNECE Region.
- 4 Promote the adoption of a common organizational system based on the Incident Command System (ICS).
- 5 Establish a training programme for member states based on common standards of competencies. This may include accreditation, certification and/or training centres.
- 6 Prepare for, firstly, effective national response and, secondly, international response.
- 7 Lead the changes which will allow for improved monitoring of risk and better establishment of early warning systems.
- 8 Provide experts who can assess the various human resource and capacity arrangements within member states.

4.4 Strategic Objective 3 – developing a culture of knowledge and resource exchange

The third strategic objective is:

“To facilitate a nurturing and sustainable culture of knowledge exchange and continual improvement for wildfire practitioners and policymakers within the UNECE Region and, potentially, globally.”

The proposed priority actions for Strategic Objective 3 are:

- 1 Develop a learning culture and sharing of good practice.
- 2 Foster and promote collaborative involvement of national wildfire agencies and actors.
- 3 Identify and disseminate good practice.
- 4 Establish a system within the IWSM for the sharing and dissemination of lessons identified.
- 5 Establish agreed standards, competencies, procedures and protocols to improve safety, efficiency and effectiveness of wildfire management organizations.
- 6 Facilitate an international exchange programme to develop experience and expertise.
- 7 Establish a framework and governance for the IWSM.
- 8 Guide pre-planning activities for wildfire emergency situations through the facilitation of international collaboration and the development of mutual aid agreements.
- 9 Develop a robust and timely international response for wildfire emergencies within the UNECE Region.

5. Key Functions of the International Wildfire Support Mechanism

It is proposed that the IWSM should perform an advisory and support role in relation to two key elements of wildfire management:

- Prevention and Preparedness
- Response to wildfire incidents

5.1 Prevention and preparedness

The IWSM will need to:

1. Facilitate the exchange of knowledge, understanding and lessons learned.
2. Facilitate networking between wildfire specialists within the UNECE Region.
3. Provide advice to wildfire agencies from UNECE Member States on:
 - Prevention activities
 - Preparedness activities
 - Intervention activities
4. Develop common role descriptions for different wildfire specialists.
5. Develop an inventory of good practice initiatives to support wildfire agencies within the UNECE Region.
6. Evaluate the relative strengths and vulnerabilities of existing wildfire management approaches currently adopted by UNECE Member States and provide advice on potential improvements to adapt and strengthen response to wildfire.
7. Identify actions to assist wildfire-prone and “at risk” countries to develop resilience, capability and capacity.
8. Develop procedures for reviewing national progress towards improvements.
9. Collaboratively develop common standards, a common language and common Standard Operating Procedures (SOPs) for wildfire agencies within the UNECE Region.
10. Develop common training programmes for wildfire agencies within the UNECE Region.
11. Support regional mechanisms and capacities for early warning systems and provide support to States through more coordinated international assistance for wildfire emergencies.

12. Encourage and promote the participation of wildfire-prone and “at risk” countries in the work of the IWSM.
13. Maintain awareness of new ideas, concepts and approaches within the professional wildfire environment and to use these advances to continually inform the development and improvement of advice provided, common standards, Standard Operating Procedures, training programmes and risk reduction.
14. Encourage and promote the development and improvement of bilateral and multilateral mutual aid agreements within the UNECE Region.

5.2 National response to wildfire incidents

Initial response to wildfire emergencies could be made by IWSM qualified specialists from within the country affected, if available. If the affected country’s specialists require additional support, or are unavailable, IWSM qualified members that have the skills/expertise and past experience to fulfill the requirements of the mission could be mobilized from other countries within the UNECE Region.

5.3 International cooperation and collaboration for wildfire incidents

As has been outlined earlier in this proposal, there are presently a number of barriers to the provision of international assistance for wildfire incidents. To provide an example, the length of time it takes to mobilize personnel and equipment for travel over large distances to another country presents logistical difficulties. There are also significant difficulties in mobilising large numbers of wildfire firefighters and their equipment to other countries where they have little or no experience of local fire behaviour patterns that result from local fuel, weather and topographical conditions.

Although it is perfectly feasible for neighbouring countries to agree arrangements for cross border assistance, it becomes increasingly difficult to provide unplanned emergency assistance as distance increases.

The IWG-CWPR proposes that these and other existing barriers to international assistance could be overcome if assistance were sent in the form of a small group or team of well-trained and experienced individuals with specialist knowledge and understanding of the particular fire regime. Small teams of advisors can be rapidly deployed to countries experiencing wildfire emergencies to provide advice and support. For example, these teams could provide objective assessments on prevention and preparatory activities. They could also be requested to provide specific technical advice to Incident Commanders and/or Coordination Centres during on-going wildfire emergencies. The benefits of this type of assistance cannot be overestimated. This proposed approach provides a cost effective, efficient means of providing meaningful and timely advice and assistance through the mobilization of specialists from within the UNECE Region who have the relevant knowledge and experience of different operational environments. This type of innovative response will help the host nation to improve its management of the situation, strengthening its resilience and, importantly, reducing the need for further substantial international assistance.

The IWG-CWPR proposes that the IWSM could provide a more robust national and international response to wildfire incidents. The emphasis of the mechanism will be on the improvement of wildfire preparedness, resilience, and fire fighting capacity within each individual UNECE country. It will also provide a mechanism for UNECE countries to develop collaborative plans, particularly through the development of bilateral and multilateral mutual aid agreements, in order to reduce the need for unplanned emergency international assistance. Once fully developed, the IWSM for the UNECE Region could potentially provide other UN Regions with emergency assistance and/or help and advice in developing similar mechanisms for wildfire management, thus providing the foundation for an enhanced global response to wildfire.

The IWG-CWPR proposes that IWSM wildfire specialists deployed to provide national or international assistance during wildfire emergencies will:

1. Provide support to national wildfire agencies through technical advice on logistical, strategic and tactical issues;
2. Evaluate the effectiveness and resilience of local fire fighting plans, and whether they are achievable within the limitations of local or national capacity;
3. Evaluate whether incidents are adequately and appropriately resourced;
4. Evaluate whether national assets are used most effectively;
5. Assess when external assistance is required and, if they exist, instigate the activation of bilateral and multilateral mutual aid agreements at the appropriate time;
6. Ensure that any international assistance received is managed and coordinated effectively, and that the benefit of any international support received is maximized.

In relation to the provision of technical advice, IWSM wildfire specialists will advise Incident Commanders and/or Coordination Centers on:

1. Assessment of risk and identification of appropriate risk management approaches, including safe systems of work and the implementation of appropriate safety protocols.
2. Identification of the potential impact of a wildfire(s) on society and the environment.
3. Development of appropriate Fire Suppression Plans.
4. Appropriate, efficient and effective resourcing of incidents and the subsequent management of resources.
5. Application of efficient and effective tactics, including the coordination of ground and aerial resources.
6. Provide advice to a host country on when and what international assistance might be required and encourage specific and timely requests for international assistance.
7. Production of post-mission reports and communication of lessons learned to the host country, the mechanism and to existing national and international disaster management agencies.

When mobilized, IWSM wildfire specialists will have the knowledge, skills, training and expertise necessary to provide advice for the particular mission.

5.4 International assistance involving the deployment of equipment and large teams of personnel

It is the opinion of the IWG-CWPR that international assistance through the deployment of equipment and large teams of personnel is most effective when arranged via bilateral or multilateral agreements. Existing bilateral agreements with regards to wildfire have been highly successful, for instance the agreements between the USA and Canada, between Spain and Portugal, and between Spain and France. The common factors contributing to the success of these existing bilateral agreements include:

- The use of compatible incident management systems⁵ and procedures by the two countries involved.
- Interoperability of equipment used (particularly communication equipment) and the standardization of how resources are typed or categorized.
- Preplanning of arrangements so that countries are prepared for making and receiving requests for assistance.
- Reduction in deployment times due to the shorter distances involved.

Bilateral and multilateral agreements can be important disaster prevention tools as they provide countries with a means to plan for emergency situations and to obtain international assistance before disaster situations occur. It is therefore recommended that the mechanism, where applicable and

⁵ Including, but not limited to, preparedness systems, resource management systems, communication systems and incident command systems.

appropriate, should promote the development of bilateral and multilateral agreements for assistance between countries to facilitate the exchange of equipment and/or personnel.

During previous wildfire emergencies involving pre-planned bilateral and multilateral deployments, language barriers, which often present difficulties for cross-border assistance, have been overcome through the use or adoption of commonly understood command and communication systems, such as the Incident Command System (ICS). It is therefore proposed that the IWSM will promote the adoption of ICS across the UNECE Region.

6. Developing a sustainable model for the International Wildfire Support Mechanism (IWSM)

It is the proposal of the IWG-CWPR that the mechanism should be created according to a sustainable model. This means that the group should not be onerous to administer or expensive to maintain, but it will require some financial support from a central agency. However, the IWG-CWPR believes that the relatively small financial investment which is needed to create and maintain the IWSM would bring substantial efficiencies and cost savings for wildfire management within the UNECE Region. Also, following the provision of initial funding required to build and establish the IWSM, the IWG-CWPR has identified potential opportunities for some activities to be made financially self-sustaining in the longer term.

The sustainable model proposed here will involve the formation of small groups or clusters of national experts within each participating UNECE country with the ultimate goal of developing strong wildfire management agencies in all UNECE Member States. The number of specialists required within each country will depend upon individual countries' national assessments of risk and capacity. These experts will first and foremost be national assets, adding considerable resilience to their own state's wildfire management capacity. Furthermore, these national IWSM specialists will be trained to provide advice within their country to develop and enhance wildfire prevention and preparedness activities aimed at reducing risk, cost and vulnerability to wildfire disasters. National IWSM specialists will also be utilised to provide tactical advice and support at local and national wildfire emergencies. As part of the IWSM, national specialists will also be available to be mobilised to provide advice and support to other countries.

IWSM specialists will be part of an international wildfire community, which will provide the opportunity for them to join a network and share knowledge and experience with other members across the UNECE Region through a formalized approach. This international community will provide the means for specialists to proactively provide support, coaching and mentoring to others.

6.2 Communication and terminology

It is proposed that the IWSM will define an internationally acceptable vocabulary and will ensure that this is provided in an appropriate range of languages. The mechanism will also explore the potential for the development of common symbolism to improve the efficiency and effectiveness of communication between parties from different countries. In addition, this vocabulary/terminology and symbolism will be integrated within the common training and standards that the IWSM will adopt and promote.

6.3 Common competencies for wildfire specialists within the UNECE Region

The IWSM will need to identify and define, through agreement, the competencies and qualification procedures that wildfire practitioners will require to enable them to participate within the mechanism. It is proposed that the IWSM will need to evaluate the EuroFire Competency Standards⁶ and also explore, among other, the potential for emulating the very successful INSARAG certification system.⁷

⁶ <http://www.euro-fire.eu/>

⁷ <http://www.insarag.org/>

7. Conclusions and Recommendations

7.1 Conclusions of the IWG-CWPR

Following an assessment of current issues and future trends in fire management within the UNECE Region, the IWG-CWPR has identified that there are many different types of regime within the region which places wildfire management agencies under different pressures and which pose different challenges; however, there is a significant variation in the level of understanding and preparedness exhibited by different wildfire management agencies across the region. Some agencies and countries are apparently more or less prepared than others. In many cases, the less prepared nations are those that will require emergency international assistance. The IWG-CWPR concludes that if this situation persists then there will be many states that will require emergency international assistance in the future to help prevent and/or recover from wildfire disasters. The IWG-CWPR also predicts that, as a result of climate change and the current economic conditions, there will be an increase in requests for emergency international assistance in the near future.

The IWG-CWPR is of the view that it is timely to build and enhance capacity and resilience to wildfires within the UNECE Region and these proposals represent an excellent opportunity to do so. The source of many problems within the UNECE region is not quantity of resources but knowledge and understanding of how to most appropriately utilize resources. The IWG-CWPR has identified the existence of high levels of knowledge and understanding within some UNECE countries and this could form the foundation of a culture of preparedness and knowledge and good practice exchange. The knowledge and understanding required to effectively manage wildfire risk and reduce wildfire disasters already exists within the UNECE Region. In order to benefit from this existing knowledge and expertise, there is a need for mechanism which can facilitate and stimulate the exchange of knowledge and good practice.

7.2 Recommendations of the IWG-CWPR

The IWG-CWPR recommends that there is an urgent need to establish a culture of preparedness in wildfire disaster risk reduction throughout the UNECE Region. This will necessitate a proactive approach to planning and preparedness and a need for closer collaboration and cooperation between international partners. It will also necessitate that UNECE countries are encouraged to share knowledge and good practice with one another.

The ultimate goal of developing a culture of preparedness within the UNECE Region is to build capacity and resilience of individual nations to wildfires for the purpose of avoiding wildfire disasters. The achievement of this goal will, in the long-term, lead to the development of strong self-sufficient wildfire management organizations that are capable of cooperating and collaborating through pre-planned and pre-arranged agreements with other organizations during wildfire emergencies. The establishment of a culture of joint cooperation and mutual collaboration within the UNECE wildfire community will represent a significant achievement.

The IWG-CWPR has concluded that capacity and resilience to wildfires within the UNECE Region can be built and enhanced through the achievement of three key strategic objectives which should be assigned to an International Wildfire Support Mechanism. These three strategic objectives are:

1. Development and adoption of a holistic approach to fire management and wildfire risk reduction within the UNECE Region and, potentially, globally.
2. Development and strengthening of institutions and mechanisms to build national and international capacities and resilience to wildfire within the UNECE Region and globally.
3. Facilitation of a nurturing and sustainable culture of knowledge exchange and continual improvement for wildfire practitioners and policymakers within the UNECE Region.

A key benefit of establishing a more collaborative approach that builds capacity and resilience across the region is that it will reduce the need for states to require emergency international assistance. Another significant benefit of this approach is that when assistance is required it will be pre-planned

and agreed through bilateral and multilateral agreements, rather than through current unplanned ad-hoc responses.

While this approach is new and highly innovative, there would be significant benefits and synergies to linking and harmonizing the IWSM with existing mechanisms. The IWG-CWPR proposes that the IWSM has not been conceived to replace existing emergency/disaster response mechanisms but to complement them by significantly improving resilience and response to wildfires within the UNECE Region.

The IWG-CWPR has identified that the successful formation of the IWSM will require the completion of the following process:

- **Stage 1** – The appointment of a secretariat and the establishment of a reporting line to the UNECE.
- **Stage 2** – Convention of a meeting of stakeholders to form a steering group/advisory group for the IWSM. The invitations will be broad and inclusive.
- **Stage 3** – Establishment of a decision-making process for the IWSM.
- **Stage 4** – Development and approval of a communication strategy which will promote the principles of the IWSM.
- **Stage 5** – Creation of an evaluation process to monitor progress against the strategic objectives of the IWSM.

The four attached Annexes provide further contextual details about particular aspects of this proposal:

- **Annex 1** – Proposed Governance of the IWSM
- **Annex 2** – Development of National and International Management and Administration Infrastructure
- **Annex 3** – Development of an integrated National and International Framework for Training IWSM Specialists
- **Annex 4** – Preparedness Considerations for the IWSM

7.3 Presentation of this proposal to the UNECE/FAO Forum on Cross-boundary Fire Management

This proposal and the recommendations outlined above have been prepared for presentation to UNECE Member States and discussion by participants of the UNECE/FAO Forum on Cross-boundary Fire Management, organized by the Global Fire Monitoring Center (GFMC) and co-sponsored by the UN International Strategy for Disaster Reduction (UNISDR), the Council of Europe (CoE) and the Organization for Security and Cooperation in Europe (OSCE), on 28-29 November 2013 in Geneva, Switzerland. The aim of the Forum is to elaborate recommendations to UNECE Member States to develop an agreement on international cooperation to enhance fire management capability in the region.

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ANNEXES

Annex 1

Governance of the International Wildfire Support Mechanism (IWSM)

The governance of the IWSM would be established via a three stage process. The first stage would require an agreement on an organization to act as a focal point/umbrella organization for the IWSM. The focal point/umbrella organization would then appoint a Secretariat. During the final initiation stage, the Secretariat would be tasked with creating an Advisory Group to seek agreement on the development of management and administrative protocols for the IWSM. Once these protocols have been established, the Secretariat will support the Advisory Group to implement the IWSM's activities. The Secretariat would in turn report and be responsible to the focal point/umbrella organization.

In summary, some of the important governance and strategic issues that will need to be addressed will include:

- Identification of a suitable umbrella organization / international focal point
 - A potential role could be with the UNEP / OCHA Joint Environment Unit
- Appointment of a Secretariat (including an option for an Interim Secretariat)
 - Who – An initial interim solution could be offered by the project, which is facilitating the preparation, organization and follow-up of the UNECE/FAO Regional Forum on Cross-boundary Cooperation in Fire Management (until 31 July 2014)
 - Role
 - Responsibilities
 - Accountable to whom
 - Financing
- Formation of an **IWSM Advisory Group** by the Secretariat in collaboration with the umbrella organization / international focal point
 - Who – recruitment of wildfire agencies and individuals
 - Role
 - Size of the group
 - Responsibilities and accountability
- Promotion of the concept and proposal of the IWSM to countries within the UNECE Region

Annex 2

Development of National and International Management and Administration Infrastructure

The effective governance of the group and management of its activities will be dependent upon the production of appropriate documentation and other written material. This will include both operational guidance and administrative protocols.

The Secretariat, in consultation with the Advisory Group, will define and supervise the development of the following administrative protocols for:

- Management and organizational systems
- Finance
- Recruitment
- Communications – for example, the establishment of a website and associated protocols and the establishment of networking and stakeholder collaboration protocols
- Logistics – for example, rosters and rota systems
- Records and reports
- Host and donor country arrangements

The Advisory Group, which will be facilitated and supported by the Secretariat, will define and supervise the development of the following operational guidance:

- Standard Operational Procedures (SOPs)
- Identification/development of an agreed glossary of terminology by the IWSM
- Identification of an official language(s) to be used by the IWSM
- IWSM Guidance Manual(s)
- IWSM Operational Handbook

The following topics should be addressed within the operational guidance:

- Safety protocols
- Incident command system (such as ICS)
- Aerial and ground tactics
- Host and donor country responsibilities
- Team member roles and responsibilities
- Communication systems and protocols
- Reports and record keeping

Annex 3

Development of an integrated National and International Framework for Training IWSM Specialists

In order to form the IWSM and to support countries and organizations in the process of national wildfire capacity building, the Secretariat, supported by the Advisory Group, will develop and assist in the delivery of training of national wildfire specialists within the UNECE Region.

To develop a comprehensive training system, it will be necessary for the Secretariat and Advisory Group (SAG) to consider a number of key issues. Firstly, the SAG will need to identify the knowledge, expertise and experience necessary for national wildfire specialists to perform their role as national assets to provide advice on improvements to national resilience and capacities for preventing, preparing for and responding to wildfires. Secondly, the SAG will need to identify the knowledge, expertise and experience necessary for national wildfire specialists to function effectively as part of the IWSM to share good practice between countries in the UNECE Region. Finally, the SAG will need to identify the knowledge, expertise and experience necessary for national wildfire specialists to operate effectively as a multinational team during international prevention, preparedness and response missions.

Following the SAG's identification of the knowledge, expertise and experience required to establish a training framework, the SAG would need to achieve the following key objectives:

- Agree and define appropriate standards and competencies.
- Agree and define a suite of training modules aimed at wildfire specialists operating at different hierarchical levels.
- Establish a suitable validation and certification process.
- Facilitate a collaborative exchange programme between UNECE countries to provide specialists with experience of different fire regimes and operational conditions.
- Organize a programme of national and multinational wildfire exercises and other training events.
- Provide supporting training material and documentation.

Annex 4

Preparedness considerations for the IWSM

The Secretariat, supported by the Advisory Group, will need to prepare the IWSM to be capable of responding to national and international requests.

In preparation for the development of effective national preparedness activities, national wildfire specialists will need to identify and address wildfire risk and, supported by the Secretariat, implement adequate measures to manage that risk so as to improve national resilience. The support provided by the Secretariat might include arranging deployment of other wildfire specialists from within the IWSM to provide additional advice and guidance.

To enable the IWSM to provide international support, the Secretariat will need to ensure appropriate arrangements are in place to coordinate the mobilization and deployment of specialists from within the IWSM who have the specific knowledge and expertise required for the mission. Such deployments can be complex, and it will be necessary for the Secretariat to ensure that specialists within the IWSM have the appropriate skills and training to perform missions that they are deployed to undertake. The Secretariat will also need to establish systems and responsibilities for the overall management of international deployments. In particular, the Secretariat will need to establish its responsibilities and the responsibilities of donor and host countries.

It is suggested that some of the key responsibilities for the Secretariat will be:

- Preparedness
 - Advocate and promote national and international preparedness and capacity building for wildfire.
 - Facilitate and coordinate the development of internationally agreed standards and guidance material for wildfire.
 - Address any logistical issues.
 - Act as a focal point and coordinator for the IWSM.
- Mobilization of international teams for international missions for prevention, preparedness and incident response
 - To coordinate an effective and efficient system for the mobilization and deployment of international teams of wildfire specialists.
- Operational missions
 - To provide support to international teams deployed to emergency and non-emergency situations.
 - To coordinate requests for additional support from other UN and international agencies, as required.
- Demobilization of international teams
 - To coordinate an effective and efficient system for the demobilization and post-mission evaluation and reporting of international teams of wildfire specialists.

It is also suggested that the Secretariat will need to ensure that host countries requesting assistance through the IWSM will have responsibility for the following:

- Establishing a national focal point for national wildfire specialists
- Establishing a process to request international assistance from the IWSM for non-emergencies, such as for missions involving the development of national preparedness, capacity and resilience for wildfire.
- Establishing a process to request international assistance in a timely manner from the IWSM before or during wildfire emergencies.
- Providing assistance to enable rapid entry of international teams of specialists into the country
- Providing appropriate support and logistics to incoming international teams.

In preparation for international missions, the Secretariat will need to consider the political and cultural sensitivities that may be encountered by deploying international teams across national borders. These issues should be addressed through the training and exchange programmes that will be organized through the training framework and, where possible, specialists with prior experience of working within specific regions/countries should be utilized. Prior to deploying teams on international mission, the Secretariat should also brief IWSM specialists of any specific political and cultural sensitivities that may be encountered within the host country.