



United Nations  
International Strategy for Disaster Reduction

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**UNISDR**  
**Wildland Fire Advisory Group**  
and  
**Global Wildland Fire Network**

Coordinator and Secretariat:

Global Fire Monitoring Center (GFMC), Freiburg, Germany<sup>1</sup>

**The International Fire Aviation Working Group  
(IFAWG)**

**Charter:**

**Rationale, Mandate and Work Programme**

**05 January 2012**

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**INTERNATIONAL FIRE AVIATION WORKING GROUP (IFAWG)**

**Terms of Reference and Operation**

**1. MISSION STATEMENT**

Identify and facilitate opportunities for multilateral communication and cooperation to improve the safety, efficiency and effectiveness of aerial fire management.

**2. TERMS OF REFERENCE**

The "Fire Aviation Working Group" (IFAWG) will work under the framework of the UNISDR *Wildland Fire Advisory Group* (WFAG) / UNISDR Global Wildland Fire Network (GWFN) as an advisory committee with the following principal objectives:

- Sharing of relevant information, especially information that will support the promotion and improvement of safety in the sector;
- Providing a conduit or facilitation mechanism for the sharing of resources between jurisdictions;
- Identifying of opportunities for harmonization of operating practices and establishment of consistent standards, where appropriate; and recommend or initiate suitable harmonization action, including the development of voluntary guidelines.
- Providing advice and guidance to nations and the United Nations regarding fire aviation through the UNISDR Wildland Fire Advisory Group / Global Wildland Fire Network.

**3. MEMBERSHIP**

- 3.1 One member nominated by the responsible agency or fire aviation center from each nation or jurisdiction where fire aviation supports the management of landscape fires.
  - Nations/jurisdictions may combine to nominate members to act on behalf of a group of jurisdictions.
  - Deputy members may be nominated to deputize for or assist members.
- Other co-opted members as agreed by the Working Group or the Wildland Fire Advisory Group (WFAG) from time to time.

### 3.2 Membership (as at January 2013)

<b>Nation/jurisdiction</b>	<b>Member</b>
Australia	National Aerial Firefighting Centre (NAFC)
Canada	Canadian Interagency Forest Fire Centre (CIFFC)
Chile	National Forestry Cooperation (CONAF)
Italy	Inaer Italia, Safety and Quality Management
Russian Federation	National Aerial Forest <i>Fire Center</i> <i>Avialesookhrana</i>
South Africa	Working on Fire
South Korea	Forest Aviation Safety Division, Korea Forest Aviation Headquarters
Spain	Forest Fire Service of Spain, Headquarters
U.S.A.	Fire and Aviation Management, U.S. Department of Agriculture, Forest Service
Secretariat: GFMC	Global Fire Monitoring Center (GFMC)

## 4. OPERATION

### 4.1 Communication and meetings

- The IFAWG and any subject-specific task forces or teams will meet as agreed by the Group or as required by the WFAG. Where practical the Group will aim to meet at least once per year in conjunction with appropriate International Aerial Firefighting conferences or at an International Wildland Fire Conference.
- The IFAWG will aim to establish an internet website to support communication and collaboration and exchange of documents.
- The IFAWG and any subject-specific task forces or teams will regularly communicate and cooperate through e-mail, website traffic and telephone and video conferences.
- The IFAWG will normally interact with the Global Wildland Fire Network at the International Wildland Fire Conferences.

### 4.2 Protocols

- As an advisory group, the IFAWG will normally form a position by consensus.
- For meetings and teleconferences, the Secretariat will Chair or provide a Chair unless otherwise determined by the Group.

### 4.3 Reporting

- The IFAWG will report on its activities to the WFAG once per year or as required by the WFAG.

### 4.4 Action

- The IFAWG will develop an action plan to guide actions and priorities. The action plan will be periodically reviewed
- The IFAWG may establish task forces for specific projects or subjects.

### 4.5 Secretariat

- The initial Secretariat function will be at the GFMC and may transit or rotate to participating entities as needs or priorities arise.

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**INTERNATIONAL FIRE AVIATION WORKING GROUP (IFAWG)**

**ACTION PLAN**

**Version 1.0** (As discussed and agreed at the inaugural IFAWG meeting in Freiburg 26 June 2010)

- a) Develop a web access portal to begin to share information.

To initially include:

- Information about the IFAWG (Mission, Terms of Reference, Action Plan, Contacts)
  - Aviation Safety information
  - Links to key agencies and stakeholders
- and extended in due course to include:
- Data regarding:
    - Aircraft usage
    - Safety occurrences

*Note: At the June 2010 individual members undertook to examine issues associated with possibly hosting a web portal.*

- b) Develop voluntary guidelines to assist with harmonization, standardization and promotion of best-practice.

Priorities for development of voluntary guidelines:

- Standard terminology
- Pilot competency criteria and training standards
- Competencies for support positions (i.e., fire agency personnel managing and supporting aviation operations)
- Protective clothing and equipment for aircraft crews
- Flight following and reporting
- Approaches to management of fatigue

- c) Create comparison matrices for operations and safety issues. These matrices will identify gaps between countries and will facilitate the bridging requirements for safe exchange of aviation resources

- d) Share standards and best practices for operations and training allowing developing and existing programs to “cherry pick” the best offerings of participating entities to enhance their own programs. *Note: This approach does allow for harmonization of standards over time.*

- e) Share lessons learned.

- f) Create standard reporting criteria for accidents and incidents.  
*(for inclusion and adoption through voluntary guidelines, not to replace or superimpose national reporting; aiming to minimize reporting burden).*

- g) Develop statistical data collection standards that would facilitate the collection and analysis of mission statistics and safety incidents in the future.
- h) Identify areas where standardization and harmonization of operating practices may be of benefit.  
*Note: some areas may be out of the realm of influence due to regulatory requirements. There are certainly opportunities for standardization, for example the Incident Command System and Automated Flight Following data standards. Pragmatically, only those areas that have a good chance for success need be identified. Harmonization would generally be achieved through the voluntary guideline process.*
- i) Examine the benefits of the creation of a wider, inclusive “Aerial Firefighting Association”. If appropriate, initiate or catalyze formation.

## Background

### The UNISDR Global Wildland Fire Network and Wildland Fire Advisory Group

In keeping with the work of the Working Group on "Fire and Related Environmental Hazards" established under the IDNDR programme on Early Warning, the presentations and recommendations of the IDNDR Programme Forum 1999, and in accordance with the Framework for the Implementation of the United Nations International Strategy for Disaster Reduction (UNISDR), the World Conservation Union (IUCN) and its associated partner, the Global Fire Monitoring Center (GFMC) as well as the UN-FAO/ECE/ILO Team of Specialists on Forest Fire, suggested, in 2000, to create an interagency "Working Group on Wildland Fire".

This proposal was in line with several declarations made in international conferences during the 1990s and intended to bring together both the technical members of the fire community and the authorities concerned with policy and national practices in wildland fire management to realise their common interests of fire risk management and disaster reduction at global scale. The UNISDR Inter-Agency Task Force for Disaster Reduction (IATF) at its second meeting on 11 October 2000 agreed to establish the Working Group on Wildland Fire (Working Group 4 [WG-4]).

Through the Working Group it was envisaged to establish an interagency and inter-sectoral forum of UN and other international agencies and programmes, and mechanisms of information and task sharing in the field of reducing the negative impacts of fire on the environment and humanity.

One of the priority fields of activity to be addressed by WG-4 was:

- Establishment of, and operational procedures for, a global network of regional- to national-level focal points for early warning of wildland fire, fire monitoring and impact assessment, aimed at enhancing existing global fire monitoring capabilities and facilitating the functioning of a global fire management working programme or network.

At the 2<sup>nd</sup> meeting of WG-4 (3-4 December 2001) it was decided to give priority to the establishment of the "Global Network of Regional Wildland Fire Networks".

The envisaged timeframe for setting up the network was January 2002 - July 2003. The 3<sup>rd</sup> Global Wildland Fire Conference and the International Wildland Fire Summit (Sydney, 3-6 and 8 October 2003) was used as a platform to convene representatives from regional networks under the parent body, the UNISDR Global Wildland Fire Network (GWFN).<sup>2</sup>

The strategy agreed by the Summit ("Strategy for Future Development of International Cooperation in Wildland Fire Management") includes the following agreement:

*"The Regional Wildland Fire Networks will be consolidated, developed and promoted through active networking in information sharing, capacity building, preparation of bilateral and multilateral agreements, etc. This process will be facilitated through regional Wildland Fire Conferences and Summits in cooperation with the International Liaison Committee and the UN-ISDR Working Group on Wildland Fire".<sup>3</sup>*

At the International Wildland Fire Summit a meeting was held with the regional fire management groups mandated under the auspices of the UN (UNISDR Working Group on Wildland Fire, ECE/FAO/ILO Team of Specialists on Forest Fire, Fire Management Working Group, FAO North American Forestry Commission [NAFC] and the Forest Fire Group of FAO *Silva Mediterranea*). This was the first joint meeting of the four UN groups. A key output of the joint meeting was the recommendation to maintain a body under the auspices of the UN to enable the international community to maintain a unifying platform for the UN and jointly with non-UN groups and agreements.

To support the work of the GWFN the IATF accepted the proposal to create a *Wildland Fire Advisory Group* (WFAG) under the auspices of the UNISDR. The WFAG represents an advisory body to the UN system aimed at providing technical, scientific and policy-supporting advice to the UN family through

<sup>2</sup> <http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html>

<sup>3</sup> For details of the preparation and outcomes of the International Wildland Fire Summit see: <http://www.fire.uni-freiburg.de/summit-2003/introduction.htm>

the UNISDR and the IATF, and acting as a liaison between the United Nations system, the Global Wildland Fire Network and its supporting partners. The participation and support from following bodies is essential: UN agencies and programmes, other international organizations, non-government organizations, government agencies, inter-governmental institutions and agreements, civil society, academia, the International Liaison Committee (ILC) of the series of International Conferences on Wildland Fire and the Global Fire Monitoring Center (GFMC) (to act as convener and secretariat).<sup>4</sup>

Following the International Wildland Fire Summit of 2003 the WFAG worked hand in hand with the International Liaison Committee (ILC) of the series of International Conferences on Wildland Fire to prepare the next conference - the 4<sup>th</sup> International Wildland Fire Conference, hosted by Spain in 2007. During that conference a thematic workshop was held on Aviation Management on 17 May 2007. The aim of the session was to identify opportunities for multilateral cooperation to improve the safety, effectiveness and efficiency of aerial fire fighting. The recommendations encompassed:<sup>5</sup>

- the need to continue to identify opportunities for sharing of information and resources;
- the need to establish frameworks to properly evaluate the net benefit (including accounting for benefits of prevention of losses) of application of aerial means;
- the need to ensure that aerial operations are managed, supervised and supported to a high standard, and are properly integrated with other aspects of fire operations;
- the establishment of a formal network to facilitate the continued sharing of information, with a priority on safety-related information
- the need to standardise approaches to integrated management of aerial means.

One year later the first International Aerial Firefighting Conference was convened in Athens, Greece, 21-22 October 2008. The conference brought together the aerial fire community and those working on the ground.

By summarizing the presentations and discussions of the Conference the GFMC elaborated on the repeatedly stressed need for the development of internationally agreed standards and protocols for international cooperation in fire management including aerial firefighting operations. These requests are in line with several international initiatives, such as the recommendations of the 2003 International Wildland Fire Summit on the use of the Incident Command Systems (ICS) as standard for cooperation in fire emergencies, or the development of bilateral agreements that could take advantage of existing ones or a template adopted by the Summit. The recommendations of the Summit are carried on by the UNISDR Global Wildland Fire Network.

GFMC also directed the attention to the *Rosersberg Initiative* of the United Nations international Advisory Group on Environmental Emergencies (AGEE), which aims at strengthening the global regime that governs environmental emergency response and preparedness. The initiative is currently addressing (a) advocacy for and training on environmental emergencies, including wildfires, (b) analysis of relevant international and regional arrangements that govern the response and response preparedness to environmental emergencies and, based on this analysis, recommendations changes and improvements for the international environmental response area; and (c) review of operational aspects of environmental emergencies with the aim of developing best practice guidance for use by national authorities.

Participants of the conference expressed strong support for continuing the formation of cooperative mechanisms. This would ultimately lead to establish two groups that would attend to interests of the aerial firefighting community. The first group would be relatively compact and streamlined - probably based around representatives or key contact points from participating jurisdictions (government or semi-government people, nominated by their country / jurisdiction). This notional / anticipated group could be designated "Fire Aviation Working Group". The second group would be more inclusive, and would provide for membership of all interested parties, including from the supplier industry, and would be more of an "association". This anticipated group could be designated "Aerial Firefighting Association". The "Fire Aviation Working Group" could fit in the UNISDR framework as an advisory committee. The second group needs some more thinking but might be best formed either independently or perhaps in conjunction with an existing group like the International Association of Wildland Fire.

<sup>4</sup> [www.gfmc.org](http://www.gfmc.org) or <http://www.fire.uni-freiburg.de/>. For a full text of the yearly updated status paper of the Global Wildland Fire Network see: <http://www.fire.uni-freiburg.de/GlobalNetworks/RationaleandIntroduction.html>

<sup>5</sup> The full text of the Communiqué is available in Annex 1 of this paper and online at: <http://www.fire.uni-freiburg.de/sevilla-2007/groups/Session-Aviation-Communique.pdf>

During 2009 and 2010 the GFMC, on behalf of the WFAG, convened a number of teleconferences of interested parties to develop draft terms of reference for an International Fire Aviation Working Group (IFAWG). Further work was undertaken at various side meetings to international aerial firefighting conferences and meetings.

As a result, an initial core group met formally at the GFMC offices in Freiburg, Germany on 26 June 2010 and endorsed a mission, terms of reference and action plan for the IFAWG (see separate record of meeting).

On 27 June 2010 the endorsed mission, terms of reference and action plan were presented to a meeting of the WFAG.



# Workshop on Aviation Management

4<sup>th</sup> International Wildland Conference in Seville, Spain  
Wednesday 17 May 2007

## Communiqué

### Summary

The aim of this session was to identify opportunities for multilateral cooperation to improve the safety, effectiveness and efficiency of aerial fire fighting.

A number of opportunities were identified for cooperation, including:

- the sharing of information, especially related to safety of operations;
- sharing of physical resources, including aircraft and specialist personnel.

The principal barriers identified included:

- lack of standardisation of operating procedures
- differing approaches to regulatory aspects of aviation

The session agreed on a statement of intent to continue communication, cooperation and collaboration in the field of aerial fire-fighting.

The session made a number of recommendations to the Conference, encompassing:

- the need to continue to identify opportunities for sharing of information and resources;
- the need to establish frameworks to properly evaluate the net benefit (including accounting for benefits of prevention of losses) of application of aerial means;
- the need to ensure that aerial operations are managed, supervised and supported to a high standard, and are properly integrated with other aspects of fire operations;
- the establishment of a formal network to facilitate the continued sharing of information, with a priority on safety-related information
- the need to standardise approaches to integrated management of aerial means.

### Report of the session

The aim of the session was to explore avenues for future multi-lateral cooperation in the aerial suppression of wildland fires, with the objective of improving global performance in the safety, effectiveness and efficiency of aerial fire fighting means.

An emphasis was placed on examining the opportunities for international exchange of information, particularly (but not exclusively) relating to the safety of aerial operations.

The session identified a number of opportunities for cooperation and collaboration:

- the exchange of information, in particular information that will enable the fire and aviation communities to pro-actively identify and treat safety issues;
- the exchange of physical resources, in particular:
  - within and between regions, to reduce duplication and to provide capacity to address surges in demand;
  - between jurisdictions or locations with complementary fire seasons, primarily to provided enhance commercial opportunities, and to improve viability of investment in new technology and equipment; and to alleviate skills management and personnel retention issues associated with seasonality of work.

A number of barriers to cooperation and sharing of resources were also identified for potential treatment, including

- language
- lack of coordination mechanisms or coordinating bodies;
- differences between countries in the approach to the regulation of aviation activities and difficulties in cross-jurisdiction recognition of regulatory compliance;
- differences in standards of operation, including the training and certification of personnel.

Common themes emerging from discussion in the session, included:

- the considerable benefit that would flow from a more structured, formal approach to sharing of information relating to the safety of aerial operations, including “lessons learnt” and the ability to identify trends requiring remediation;
- the issues posed by climate change, and by demographic changes (particularly in the expanding wildland urban interface).
- the need for proper analysis of benefits of aerial suppression, with could extend to include accounting for the prevention of emissions of ‘greenhouse’ gases through effective reduction in the extent of forest fires;
- the critical importance of a high standards of management, supervision and support for aerial operations;
- the importance of security of contracts (length of term of contract) for service providers, in order to support investment in modern equipment;
- the importance of applying standardised approaches to management and support of aerial operations (for example use of ICS, standard communications technology and protocols) to under-pin opportunities for sharing of resources.

#### **Agreed Statement of Intent:**

The workshop considers that in the current and predicted global fire environment the use of aerial means to support the suppression of fires may, in appropriate circumstances, offer benefits in community safety, security of the environment and fire suppression efficiency.

The workshop notes the recommendation of the FAO Fire Management Global Assessments of 2006 that “countries collaborate within and between regions, sharing knowledge and experience ....International and regional collaboration should be considered at Technical workshops and high-level meetings....to promote collaboration.”

The fire-aviation community intends to continue to communicate, cooperate and collaborate to improve the global performance of the means of aerial fire fighting in safety, effectiveness and efficiency.

#### **Agreed recommendations:**

The workshop recommends to the 4<sup>th</sup> International Wildland Fire Conference that:

1. Agencies and service providers note that there are opportunities for the sharing of aerial resources – information, people and aircraft - between and within global regions.
2. Agencies and organisations with responsibility for forest fire prevention and control establish frameworks to analyse the opportunities for appropriate application of aerial means where there is net benefit (including accounting for the benefits of prevention of losses).
3. Agencies and organisations with responsibility for forest fire prevention and control note that experience around the world has demonstrated that aerial means must:
  - a. be managed, supervised and supported to a high standard, and
  - b. be properly integrated with other aspects of fire operationsto ensure effectiveness and efficiency.
4. That an examination be made of the possibility of establishing a formal network of parties with an interest in aerial firefighting means, in order to facilitate the continued sharing of information. As a priority, such a network should provide means for the timely and regular sharing of information which may positively impact the safety of aerial operations. Arrangements should include provision for regular meetings of persons involved.
5. Agencies and organisations utilising aircraft in forest fire control consider opportunities to apply of standardised approaches to the integrated management of aerial means, such as the application of the Incident Command System, and the application of common communications technology and protocols.



**International Fire Aviation Working Group: Second Meeting**  
5<sup>th</sup> International Wildland Conference in Sun City, South Africa  
8 May 2011

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## Conclusions and Recommendations

### Background

The International Fire Aviation Working Group (IFAWG) is an advisory committee of the UNISDR Wildland Fire Advisory Group (WFAG) / UNISDR Global Wildland Fire Network (GWFN).

The International Fire Aviation Group was formed following a workshop on Fire Aviation at the 4th International Wildland Fire Conference in Seville, Spain in 2007 to identify and facilitate opportunities for multilateral communication and cooperation to improve the safety, efficiency and effectiveness of aerial fire management, principally through:

- Sharing of relevant information, especially information that will support the promotion and improvement of safety in the sector;
- Providing a conduit or facilitation mechanism for the sharing of resources between jurisdictions;
- Identifying of opportunities for harmonisation of operating practices and establishment of consistent standards, where appropriate; and recommend or initiate suitable harmonisation action, including the development of voluntary guidelines.
- Providing advice and guidance to nations and the United Nations regarding fire aviation through the UNISDR Wildland Fire Advisory Group / Global Wildland Fire Network.

The full Charter of the Group is available at [www.ifawg.org](http://www.ifawg.org).

The IFAWG met in conjunction with the Fifth International Wildland Fire Conference in South Africa in May 2011.

The Group discussed the increasingly valuable role being played by aerial means in supporting fire and forest management, in particular in gathering intelligence and information to support operations, in rapid intervention to incipient wildfires and in fire prevention and risk reduction operations. The group also noted concerns regarding reported incidences of ineffective and potentially unsafe application of aerial means. The group reinforced the importance of:

- Safe operating practices;
- Deployment decisions to be made as part of a risk-based framework that properly considers costs and benefits of deployment;
- Aerial means to be applied as part of a fully integrated approach, working in conjunction with ground-based operations.

The group also considered opportunities for improving the sharing of aircraft and support resources between jurisdictions. It was noted that effective sharing of resources internationally offered potential to utilise relatively expensive and specialised resources in the most efficient and effective manner. The group considered that in order to improve the potential for sharing resources it was necessary to:

- Further develop bi-lateral and multi-lateral agreements that set out pre-planned deployment and operating arrangements; and to
- Develop and implement consistent standards and operating practices for international deployment.

The meeting closely considered the development of voluntary guidelines containing standards and consistent operating practices, noting that such guidelines would have the benefits of:

- Identifying best management practices that agencies could adopt to optimise safe and effective aerial operations; and
- Facilitating the development of common standards and operating practices to support safe and effective deployment of aircraft and support resources between jurisdictions.

The group therefore initiated a significant project to identify appropriate standards and best-management practices that will underpin development of voluntary guidelines.

The IFAWG recommends to conference participants the inclusion of the following in the conference statement.

### **Recommendations**

The conference acknowledges the valuable supporting role played by aerial means in fire and forest management. The conference also acknowledges and supports the benefits of sharing aircraft and support resources between jurisdictions. The conference recommends that:

- Agencies and groups develop methodologies to ensure that aerial means are safely applied as part of an integrated approach to fire and forest management, and are deployed according to assessed risk and sound economic principles.
- Agencies continue to develop bi-lateral and multi-lateral agreements that set out pre-planned arrangements and operating practices to facilitate safe and effective deployment of aerial means between jurisdictions.
- Agencies and groups work together to develop voluntary guidelines regarding standards and operating practices for aerial means, in order to promote best management practices and in order to support safe and effective deployment of resources between jurisdictions; and that agencies support the International Fire Aviation Working Group's project to identify appropriate standards and best-management practices on which to base the development of voluntary guidelines.