

Fatigue Risk Management Systems (FRMS)

Checklist for Member Associations

Executive Summary

The Council of the International Civil Aviation Organisation (ICAO) on 13th June 2011 adopted proposals for the amendment to ICAO Annex 6 to the Convention on International Civil Aviation – Operation of Aircraft Part I – International Operations – Aeroplanes. The new Standards and Recommended Practices (SARPs) come into effect on 30th October and will be applicable on 15th December 2011 and include revised and new requirements for fatigue management.

The SARPs in Chapter 4.10 require States to establish regulations for the purpose of managing fatigue with the aim of ensuring that flight and cabin crew members are performing at an adequate level of alertness which is a current requirement. Regulations for flight time, flight duty period, duty period and rest limitations will now be required to be based on scientific principles and knowledge. A new provision is provided requiring States to establish optional Fatigue Risk Management System (FRMS) regulations if the State chooses to authorise operators to use an FRMS to manage fatigue.

States authorising FRMS are required to establish a process that ensures that an FRMS provides a level of safety equivalent to, or better than, prescriptive flight time limitations.

FRMS implemented correctly should enhance safety and additionally permit an operator flexibility to conduct operations beyond prescriptive limits. This is accomplished through an effective reporting system that is encouraged by management to identify fatigue hazards that are then assessed, managed and monitored to reduce fatigue-related risk.

However, improper implementation of FRMS that exploits operational flexibility and profit to the detriment of the improved safety outcomes required will erode safety standards. IFALPA therefore urges all Member Associations to be proactive in robustly monitoring the development and implementation of FRMS regulations by those regulatory authorities who elect to authorize the use of FRMS by operators. Member Associations must also closely monitor the implementation of FRMS by operators and the oversight of FRMS by regulators to ensure the safety objectives intended are actually achieved.

IFALPA's involvement in FRMS

IFALPA has been involved with the Fatigue Risk Management System approach to fatigue management from an early stage and developed its own guidance material for prescriptive fatigue management regulations, ultra-long operations and Fatigue Risk Management Systems.

The Federation participated fully in FRMS in the three Flight Safety Foundation ultra-long range (ULR) workshops, between 2001 and 2005, that were established to provide a way forward for flights that would operate outside the normal prescriptive flight time limitations of 16 hours flight time or 18 hours duty time.

IFALPA has been an active participant of the ICAO FRMS Task Force since its establishment in November 2009 to ensure that the interests of professional pilots and the highest level of safety were properly promoted at all times.

IFALPA is a member of the industry FRMS Forum which was established in 2009 specifically to help the commercial aviation industry develop FRMS processes through sharing their knowledge and experience. More specific information on the FRMS Forum can be found at www.frmsforum.org

IFALPA has worked with ICAO and IATA as a member of the ICAO FRMS Task Force to assist in the development of Standards and Recommended Practices (SARPs) for FRMS and the provision of comprehensive supporting guidance material for operators and regulators.

IFALPA will continue to actively participate in all relevant forums to improve the management of fatigue risk thereby contributing to our goal of improving aviation safety worldwide.

Challenges for FRMS implementation

The FRMS approach to fatigue management is still in its infancy and requires considerable resources at both the operator and regulatory level. Appropriate resources must be provided to ensure the goal of an equivalent or enhanced level of safety is actually attained.

FRMS is not fully understood by many Regulators and the implementation of performance based regulations such as FRMS may be beyond the capability of some regulators.

All stakeholders (regulators, operators and pilots) need to make themselves fully conversant with the specific requirements for FRMS detailed in ICAO Annex 6 and the supporting guidance material. The real challenge for FRMS is the need for regulators, employers and employees to have a sufficiently in-depth knowledge and understanding of the causes and consequences of fatigue that enable them to meet their responsibilities in relation to FRMS.

FRMS can only be effective where the organisational culture openly encourages reporting of fatigue-related hazards in a manner that is non-punitive to the reporter.

Already IFALPA is aware of FRMS programmes that have been initiated by operators without the involvement of their pilot representatives; pilot involvement from the outset as a stakeholder at both the regulatory and company level is essential.

A proper balance between the competing goals of reducing fatigue risk and the productivity gains offered by increased operational flexibility is essential.

The over use or overreliance of bio-mathematical models could degrade fatigue management and safety. No operational decisions should ever be made solely based on a fatigue model threshold.

Checklist for Member Associations

Fatigue Risk Management Systems (FRMS) have already been implemented in a number of different countries around the world and your State could be affected soon. It is vital that Member Associations make themselves aware of any current or proposed FRMS initiatives in their State by either contacting their national regulator or employer if an FRMS programme has already been established or is proposed in your State.

Your Association should:

- ▶ Review your State's regulations for prescriptive fatigue management regulations to assess whether these regulations are based on scientific principles and knowledge. Guidance for the development of prescriptive fatigue management regulations is contained in Attachment A to ICAO Annex 6 Part I. Additionally, IFALPA has developed its own guidance for prescriptive regulations which can be found [here](#). Prescriptive regulations based on scientific principles and knowledge form the baseline from which the actual level of safety achieved using an FRMS can be measured.
- ▶ Become knowledgeable regarding ICAO Standards and Recommended Practices (SARPs) for Fatigue Management contained in section 4.10 Fatigue Management of ICAO Annex 6 Part I to the Convention on International Civil Aviation.
- ▶ Review the comprehensive guidance material provided in the following documents:
 - ICAO/IATA/IFALPA FRMS Implementation Guide for Operators (click [here](#) to access)
 - ICAO Doc 9966 FRMS Manual for Regulators (Click [here](#) to access)
- ▶ Establish Subject Matter Experts (SMEs) within your Association if your regulatory authority plans to establish FRMS regulations or has any intention to authorize FRMS or ULR operations.
- ▶ Where an intention to authorise FRMS is determined, ensure as a minimum the following:
 - Prescriptive fatigue management regulations, based on scientific principles and knowledge, have been implemented;
 - The proper implementation and approval of FRMS regulations as required Annex 6 Part I and intent of the guidance material contained in ICAO Doc 9966;

- The requirements for implementation and approval of FRMS are fully understood by all parties; That each operator's Fatigue Safety Action Group (FSAG) or equivalent such group, includes pilot representative(s) from your Association;
- Keep a record and audit trail of all correspondence/ letters/ communications and follow up every point with correspondence, outlining any safety concerns related to your State's proposed FRMS regulations, or the implementation and / or oversight of FRMS;
- Report any deficiencies in the FRMS programme to the company's FSAG, or equivalent committee, so that any deficiencies noted are included as a part of the airline's audit;
- Advise the media of your objectives, always be constructive and offer a safe alternative;
- Lobby your politicians and the regulators and make them accountable for their legislation; Liaise with IFALPA for any additional information or support required regarding FRMS.

An FRMS programme must

- ▶ Gain top-level endorsement from senior airline management if it is to be successful.
- ▶ Include pilot representatives as key stakeholders from the outset, at both the regulatory and operator level, where an intention to develop FRMS exists.
- ▶ Comply with the requirements of ICAO Annex 6 Part I Chapter 4.10 and Appendix 8 to ICAO Annex 6 Part 1 – *Fatigue Risk Management System Requirements*
- ▶ Be data-driven by encouraging voluntary reporting of fatigue-related hazards within an open 'effective safety reporting culture'.
- ▶ Have outcomes that are measurable to ensure the safety objectives intended are achieved.
- ▶ Have effective oversight by the national regulatory authority.

Liason

FRMS is still in its infancy and your Member Association's input is vital to ensuring its success. Consider joining the FRMS Forum where you can learn from other industry participants and share your own experiences. Some Member Associations are already actively involved with FRMS implementation in their own regions and are members of the FRMS Forum and can offer valuable advice. For more information about the FRMS Forum click [here](#)

For further information or support contact Rick Brennan at rickbrennan@ifalpa.org or Mike Jackson at mikejackson@ifalpa.org

Additional Information

Click [here](#) for The IFALPA Briefing Leaflet *Fatigue Management Information update*

Click [here](#) for The IFALPA Briefing Leaflet *10 things you should know about Fatigue Risk Management Systems*