Air Crew Fatigue Fact Sheet

“What Scientific Evidence?”

EU & international law require EU air crew fatigue rules to be based on scientific evidence:

- EU-OPS Reg. 1899/2006 (Art. 8[a] + related recitals) mandates the EU to carry out a medical and scientific evaluation of the current EU fatigue rules and to amend them “on the basis of the results of this evaluation” and to do so “without delay”.
- EASA’s Basic Regulation 216/2008 (Art.22[2]) requires EASA’s future fatigue rules to take “into account the latest scientific and technical evidence” on air crew fatigue.
- The new ICAO Annex 6 (applicable as of Nov. 2009) requires ICAO members’ fatigue rules to be “based upon scientific principles and knowledge, where available”. All EU Member States are member to ICAO (International Civil Aviation Organisation).

However, is there sufficient scientific evidence available to comply with these requirements?

- The scientific evaluation of the EU’s fatigue rules (“moebus Report”) has been carried out by 10 renowned scientists from Europe’s most respected fatigue research institutes. It was commissioned by EASA according to its public procurement rules and selection criteria “to guarantee a high level of knowledge, competence and independence, so that their conclusions can provide for a strong scientific basis …”. (quote from EASA tender)
- Rather than collecting new empirical data, carrying out in-flight fatigue monitoring, the Moebus Report’s authors compiled and assessed relevant existing studies and research in order to draw their consensus conclusions. The report cites over 40 pieces of research, many of which are also the basis for ‘CAP 371’ and the FAA’s current work.
- The UK’s state-of-the-art fatigue rules ‘CAP 371’ (Civil Aviation Publication 371) are based on a wide body of existing scientific studies and research, developed over many decades.
- The US Federal Aviation Authority’s (FAA) current rule-making process aims at basing US fatigue rules on existing scientific evidence. No further research has been commissioned. Aviation stakeholders agreed that the current level of evidence is sufficient.
- The independent Flight Safety Foundation (FSF) devised schemes for ‘ultra-long-haul’ operations (20+ hours duration), based on latest scientific principles and knowledge.
- Individual airlines occasionally commission studies into their operations, in order to obtain derogations from EU/national fatigue laws. Such studies can provide valuable input for developing fatigue rules, provided they are made public and peer-reviewed.
- There is no relevant research available – and probably not for the near future – based on operational experience with EU fatigue rules (“Subpart Q”), as these rules became mandatory only recently (July 2008) and as only few airlines actually apply Subpart Q as such (most operate to stricter company specific rules – agreed upon between management and air crew – and/or to stricter national provisions).

For a (non-exhaustive) list of studies and research please refer to the Annex.

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