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COMMISSION STAFF WORKING DOCUMENT
EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

Accompanying the document

COMMISSION REGULATION

amending Regulation (EU) N° 965/2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) N° 216/2008 of the European Parliament and of the Council

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1. INTRODUCTION

EU aviation safety regulation includes a wide set of technical operational rules related to all aspects of "safe flying" under Regulation (EC) No 1899/2006 (EU-OPS)¹. These rules include mandatory EU measures related to fatigue and alertness of flight crew, commonly called "flight and duty limitations and rest requirements (FTL)". Their aim is ensuring that flight and cabin crew members are performing safety functions on board at an adequate level of alertness.

In order to improve the safety and efficiency of civil aviation, all aviation safety rules have been gradually transferred into the single legal framework of Regulation (EC) No 216/2008². The FTL rules are today the only EU aviation safety rules which still remain outside the common legislative framework.

Accordingly, EASA has delivered to the Commission its technical Opinion 04/2012³ on how the current FTL rules should be transferred and adjusted in line with the latest scientific evidence on safety. The EASA Opinion is a result of a long preparation process lasting three years, based on the latest research and analysis of aviation safety as well as experience in running the current system. The preparatory work includes two detailed regulatory impact assessments (RIA) - EASA RIA included as Part B of the Notice of Proposed Amendment 2010-14⁴, EASA RIA accompanying the Opinion 04/2012⁵ – and the summary of stakeholders' views on the detailed technical options considered⁶. Consequently the current Commission Impact Assessment (IA) is a proportional document, which will refer extensively to the preparatory work done by EASA.

2. PROBLEM DEFINITION

The current EU FTL regulatory framework is amongst the most comprehensive and protective in the world. However, it needs regular updating in the light of research findings and operational experience. This initiative will have effects on aircrew members, air carriers, Member States competent authorities and passengers.

The description of main problems is provided below.

1. The fragmentation of the aviation safety legislative framework.

The FTL rules still remain outside the common legislative framework. Consequently, the FTL rules are not under the direct EASA supervision. Furthermore, in order to ensure a common safety level across all EU and facilitate cross-border air operations, the safety rules should be harmonised in all safety areas. However, in certain areas of FTL still different rules are applied by Member States. These areas include:

1. rest compensating time zone differences;
2. duty extension due to in-flight rest;

¹ Commission Regulation (EC) No 1899/2006 (Annex III - hereafter referred to as EU OPS).

² OJ L 79, 19.3.2008, p.1.

³ See EASA Opinion 04/2012, of 1.10.2012, and related material available at <http://www.easa.europa.eu/agency-measures/opinions.php>.

⁴ <http://www.easa.europa.eu/rulemaking/docs/npa/2010/NPA%202010-14.pdf>

⁵ [http://www.easa.europa.eu/agency-measures/docs/opinions/2012/04/Appendix%201%20to%20Opinion%2004-2012%20\(RIA\).pdf](http://www.easa.europa.eu/agency-measures/docs/opinions/2012/04/Appendix%201%20to%20Opinion%2004-2012%20(RIA).pdf)

⁶ EASA's Comment Response Document CRD 2010-14

3. Split duty (the extension of a flight duty period (FDP) due to a break on the ground);
4. Standby;
5. Reduced rest arrangements.

2. Adaptation according to scientific and international developments

Following its analysis of the current system, EASA has identified the following core issues with existing rules:

- *Fatigue risk management*– the current rules are not aligned with international developments. This concerns the introduction of fatigue risk management principles developed by ICAO and of fatigue management training.
- *Protection against cumulative fatigue with maximum flight time and duty limitations* – the current cumulative flight duty period (FDP) limits would still allow for excessive cumulative fatigue within certain time periods.
- *Protection against cumulative fatigue with recurring rest periods* – the current weekly rest requirements do not sufficiently protect the second night sleep.
- *Protection against fatigue of crew on night flights with extension* –the current maximum overnight flight duty period (FDP) limits could be insufficient to ensure adequate alertness of aircrew.
- *Mitigating measures against fatigue effects of disruptive schedules* – current rules do not foresee a compensation of the cumulative effects of curtailed sleep.

3. Clarification of the existing rules

Experience with the implementation of the EU-OPS has indicated that there are still differences in how the existing rules are interpreted and implemented. The areas requiring clarifications include e.g. the formula for calculating an allowable maximum daily FDP and the maximum extension of FDP decided by the commander in case of exceptional circumstances.

3. SUBSIDIARITY

Air carriers operate transnationally throughout the EU, and pilots and cabin crew duty rosters include a combination of flight and rest periods taking place often in different Member States and carrying passengers of different nationalities. It is therefore important both for air carriers, aircrew and passengers to have harmonised rules where possible to avoid incompatible or contradictory rules in different territories and ensure equal safety standards for the passengers on board.

4. OBJECTIVES

The **general objective** of the initiative is to contribute to avoiding aircraft accidents, and of related fatalities, through the improvement of the existing FTL system.

The general objective can be translated into three **specific objectives** which correspond to the problem drivers identified in chapter 2.

Table 1: Link between the problem drivers and specific objectives

Problem drivers	Specific objectives
1. The fragmentation of the aviation safety legislative framework	SO1: Ensuring a coherent and uniform EU safety : legislative framework
2. Adaptation according to scientific and international developments	SO2: Having state of the art EU FTL rules
3. Clarification of the existing rules	SO3: Improving clarity and ensure common interpretation of the current EU FTL legislation

No operational objectives have been defined, as these would relate to the individual FTL rules, which have been assessed in EASA RIAs.

5. POLICY OPTIONS

The core policy options considered in this IA are:

Option 1: Transfer current EU FTL rules to the EASA regulatory framework without any change (the baseline scenario)

Option 2: Transfer revised EU FTL rules to the EASA regulatory framework

The technical revision under option 2 could be done in various ways as discussed under the different suboptions:

Option 2.1: *Follow fully the EASA recommendations.*

This means that all recommendations made by EASA, and which reflect the consensus achieved with most of the stakeholders, would be included in the legislative proposal.

Options 2.2a-2.2.b: *Depart from the EASA recommendations for some technical parameters*

These suboptions follow the EASA recommendations, except for certain specific issues which reflect the latest suggestions of aircrew representatives.

• **Option 2.2.a:** *FDP for night flights: 10 hours vs 11 hours*

Current EU FTL rules allow up to 11:45 hours of flight duties during the night. EASA has proposed reduction of maximum night FDP to 11:00 hours. The aircrew representatives however suggest setting the maximum FDP during night at 10 hours.

• **Option 2.2.b:** *Disruptive schedules: only one definition vs two options for the Member States*

The aim of the EASA proposals is to provide for additional rest in case of disruptive schedules. EASA in its proposal has recognized that cultural differences could require some adjustment to the definitions in different countries and proposed that Member States can chose between two time bands ('early type' or 'late type'), according to their cultural habits. However, aircrew unions proposed to retain a single definition.

• **Option 2.2.c:** *Standby outside the airport: 8 hours buffers vs 8 hours buffer in combination with 18 hours maximum time awake*

One of key elements to be defined in home standby is the maximum duration of the FDP that can be achieved after being called out. EASA proposes, under Certification Specifications (technical soft law), setting an 8-hour buffer after

which any time spent on standby should be deducted from the maximum FDP. Aircrew unions consider that this buffer rule is insufficient and propose to complement it with an 18-hour cap of wakefulness time.

6. ASSESSMENT OF IMPACTS

Main **social impacts** of the initiative are related to **safety** and effects on **working conditions**. As regards **economic impacts**, FTL schemes limit the way crews can be scheduled by airlines in order to mitigate fatigue hazards. The most immediate economic effects induced by these measures are on crew productivity. None of the options is expected to have significant **environmental impacts** and therefore environmental impacts are not discussed

6.1. Safety impacts

All measures proposed by EASA under **option 2.1** aim at increasing safety, either due to more coherent legislative and administrative framework, more protective rules (for example, in terms of additional rest or reduced duty periods) or due to the clarification ensuring the correct or the most efficient way of attaining the safety aim.

Further shortening of the maximum FDP at night below 11 hours (**option 2.2.a**), would allow for an improvement of working conditions, however does not necessarily achieve improved alertness scores at the end of night FDPs.

As regards one versus two options for disruptive schedules (**option 2.2.b**), there is no evidence showing that this measure would make a difference in terms of safety.

As regards rules on standby outside the airport, the EASA proposal would not explicitly avoid the possibility that aircrew could land an aircraft after long awake times exceeding 18 hours, when their alertness could be significantly decreased. Therefore, **Option 2.2.c**, which proposes additional 18-hour cap for the combined duration of wakefulness and FDP, could bring a safety improvement.

6.2. Impacts on working conditions

While recalling that the proposed measures are developed solely to ensure achievement of the safety objectives and thus are not aimed at regulating working conditions, the EASA proposal will imply a reduction of duty times and an increase of rest as well as improvement of in-flight rest facilities. This should also imply positive effects on working conditions and general well-being. Impacts of **options 2.2.a to 2.2.c** are slightly higher than that of the **option 2.1**.

6.3. Economic impact

The overall impact of **option 2.1** on crew productivity is estimated to be low, but the effects vary by the different in types of operators. The table below summarises the qualitative analysis of the impacts on different operational models of airlines.

Table 2: Summary economic impact

Key to the scores applied:

--	-	decreasingly negative
0		neutral or negligible
+		positive

Issue	Economic Impact				
	Legacy Airlines	Low Cost Carriers	Charter operators	Regional operators	Cargo Operators
The fragmentation of the aviation safety legislative framework					
Rest to mitigate the effects of Time-zone crossing	-	0	-	0	-
Duty extension due to in-flight rest	0	0	--	0	0
Split Duty	+	0	+	+	+
Standby	+	+	+	+	+
Reduced rest	+	+	+	+	+
Adaptation according to scientific and international developments					
Requirements on fatigue management training	-	-	-	-	-
Rolling limit on flight time	0	0	--	0	-
Rolling limit on duty time per 14 days	-	0	-	-	-
Minimum recurrent rest	-	0	-	-	-
Duty extension night flights	-	0	--	-	--
Additional rest due to disruptive schedules	-	0	-	-	-
Clarification of existing rules					
Flight Duty Periods table	-	0	-	-	-
Minimum standards for accommodation during airport standby	--	-	-	-	-

In general, operational costs would be higher concerning home standby, in particular for the countries which currently have no limitations on standby. A negligible operational cost impact is expected for *Low Cost Airlines*. A limited cost impact is expected for *Legacy*, *Regional* and *Cargo* operators due to the additional safety requirements. *Charter operators* may incur a more significant cost impact due to their particular business model. Limited **implementation costs** were identified for all operators in order to rearrange the management of rosters. Very limited **enforcement costs and administrative burden** are expected for airlines, national aviation authorities and EASA, as only minor additional reporting obligations are proposed and no new oversight obligation is included. It is possible that the clearer rules will facilitate oversight of compliance and reduce **enforcement cost**.

Option 2.1. is expected to **maintain the competitiveness** of European operators, despite some cost increases necessary for safety improvements. Importantly, more harmonised rules would improve the level playing field between the European operators.

Option 2.2.a would have significant negative effects on the operational costs of European carriers and could deteriorate their international competitiveness, disrupt a level playing field and threaten economic viability of certain long distance routes.

Option 2.2.b is expected to raise significantly **operational costs** for certain operators and distort **competition** by limiting the rule to one definition of disruptive schedules according to preference of certain member states, while ignoring the cultural context of others.

Option 2.2.c is expected to generate limited additional operational costs in comparison with option 2.1., since the extra wakefulness cap is supposed to have an effect in only limited number of extreme situations.

7. COMPARISON OF OPTIONS

Table 2 below summarises the assessment of and provides the comparison of each option to the baseline in terms of effectiveness, efficiency and coherence.

Table 3: Comparison of options

	Option 1 Transfer of current rules	Option 2 Transfer and revision of rules*			
		2.1 As recommended by EASA	2.2 As recommended by EASA, but with following variation:		
			a. FDP for night flights	b. Definition of disruptive schedules	c. Home standby
SUMMARY OF IMPACTS					
Social Impacts:					
Safety	0	+	+	+	+ / ++
Working conditions	0	+	++	+	+ / ++
Economic impacts:					
Operational costs	0	-	--	--	-
Implementation costs	0	-	--	-	-
Level playing field between EU operators	0	+	--	-	+
Competitiveness vis-à-vis 3 rd country airlines	0	-	---	-	-
Enforcement costs	0	+	+	++	0 / +
Administrative costs	0	-	-	-	-
Environmental impacts	0	0	0	0	0
EFFECTIVENESS/ EFFICIENCY/ COHERENCE					
Effectiveness:					
SO1: Ensuring a coherent and uniform EU safety legislative framework	0	+	+	++	+
SO2: Having state of the art EU FTL rules	0	++	+	+	++
SO3: Improving clarity and ensure common interpretation of the current EU FTL legislation	0	+	+	+	+
Efficiency	0	+	--	-	+
Coherence	0	++	+	+	++

All options considered would imply improvement in safety levels. **Option 2.1** is expected also to ensure level playing field between operators and facilitate enforcement. Additional operational costs are modest and considered by air operators proportional to the expected safety gains. The negative impact on competitiveness vis-à-vis 3rd country operators is linked to the increase of operational costs.

Options 2.2.a and 2.2.b provide more positive outcome in terms of working conditions, however the evidence on their additional effect on safety is inconclusive. At the same time there are clear negative impacts in terms of operating costs and they would distract the level

playing field between the EU operators. In addition, Option 2.2.a weakens the competitive position of European airlines vis-à-vis the third country carriers.

Option 2.2.c presents the results similar to the option 2.1 with marginal gains in terms of safety and working conditions. The main benefit of this option in comparison to 2.1 is that it provides additional legal clarity, while not applying significant extra cost. However, the rule of 18 hour wakefulness cap could be difficult to enforce.

In conclusion, option 2.1 ranks well in terms of effectiveness and efficiency related to the specific objectives. Option 2.2.c has the same benefits as option 2.1 with some additional safety and employment conditions benefits. However, the rules for standby outside the airport are provided with the means of technical soft law and will therefore not be included in the Commission legislative proposal. Nevertheless, based on the conclusions of this analysis, option 2.2.c should be considered by EASA, while developing relevant Certification Specifications. Options 2.1 and 2.2.c are also **coherent** with the legislative framework of aviation safety rules, as they focus on safety issues in proportionate manner and respect the established framework of co-existence of hard and soft law.

8. MONITORING AND EVALUATION

EASA is tasked of monitoring effectiveness and suitability of the EU air safety legislation. Sources for information include the European Aviation Safety Plan, Safety Recommendations received from Accident Investigation Boards and the Agency's consultative bodies.

It is proposed also to launch a monitoring and research programme to further investigate aircrew fatigue and performance. Such a programme would be run by EASA and include gathering data on a long term basis, monitoring the impact of the new rules, assessing the effectiveness of fatigue management within the industry and researching specific issues as appropriate.

The proposed monitoring system would not bring along additional administrative burdens to the stakeholders as it would largely rely on data already collected by airlines and by National Aviation Authorities.

No specific ex post evaluation arrangement is foreseen at this stage, given the thorough monitoring process and continuous interactions with stakeholders.