

EASA Draft Opinion for EU-wide Air Crew Fatigue Rules

We will compare the **current rules for
Flight Duty Times in Luxembourg
with the
new European rules
proposed by EASA on 01 October 2012**

The proposed European rules
will replace
the current Luxembourgish rules!

Example 1

Calcutta to Luxembourg

Calcutta to Luxembourg



Calcutta to Luxembourg

- Total block time is 09:40 hours
- The Crew will have to report for duty 1 hour before departure making it a 10:00 hour Flight Duty Period
- The crew will start duty on at 00.00 local time in Calcutta

Calcutta to Luxembourg

Present Luxembourgish Rules

- With the present Luxembourg regulations, this flight is **NOT** possible with only two pilots.
- This flight will have to be augmented with a third pilot due to the late night departure.
- This will allow the crew to have in-flight rest to reduce fatigue for the pilots landing the aircraft.

Calcutta to Luxembourg

Proposed New European Rules by EASA

- With the proposed EASA regulations, this flight **IS** possible with only **two** pilots.
- This means that the pilots will **NOT** have a possibility for in-flight rest and will land the aircraft in Luxembourg early morning after having been at the controls the whole night.

Calcutta to Luxembourg

Proposed New European Rules by EASA

**Is this an acceptable level of safety
or a reduction in safety margins?**

Calcutta to Luxembourg

How does this really translate in terms of fatigue?

The following slides show some equivalent scales between the present Luxembourgish rules and the new European rules proposed by EASA to better understand how the pilots may eventually perform at the end of the flight while landing in Luxembourg.

Calcutta to Luxembourg

We have used a fatigue predicting tool (Qinetiq's SAFE software) produced by one of the Scientists that has commented on the EASA FTL opinion to illustrate the risks involved.

Calcutta to Luxembourg

The screenshot displays a flight duty calculator interface. At the top, a timeline shows duty periods for two days: 11/2/2012 and 11/3/2012. A green bar labeled 'CCU' is shown on 11/2/2012, and a yellow bar labeled 'LUX' is shown on 11/3/2012. A dialog box titled 'Equivalent Scales' is open, displaying the following text: 'On the 100-point scale, the predicted level of alertness for duty CCU - LUX on day 1 at 11/3/2012 08:55 is 34.1. This is 9.9 hours into the duty period lasting a total of 10.0 hours.' Below this text are several tabs: 'Visual vigilance', 'Complex reaction time', 'Missed responses', 'Duty Hours', 'Samn-Perelli', 'Karolinska Sleepiness Scale', 'Karolinska Probability', and 'Blood alcohol'. The 'Blood alcohol' tab is selected, showing 'Percentage blood alcohol concentration'. To the right, a form titled 'Enter duties in:' is visible, with fields for 'Start Day' (1), 'Duty Start' (11/2/2012 23:00), 'IATA Code' (CCU 5.5), 'Airport Name' (Calcutta [Dum Dum International]), 'Off duty' (11/3/2012 09:00), 'IATA Code' (LUX 1), and 'Airport Name' (Luxembourg [Findel], Luxembourg). Red arrows point from the 'Equivalent Scales' dialog box to the 'CCU' and 'LUX' bars in the duty schedule, and from the 'Duty Start' field in the form to the 'Equivalent Scales' dialog box.

By selecting on graphical displayed we are able to view various “Equivalent Scales”

Here we have entered the start of duty and the end of duty

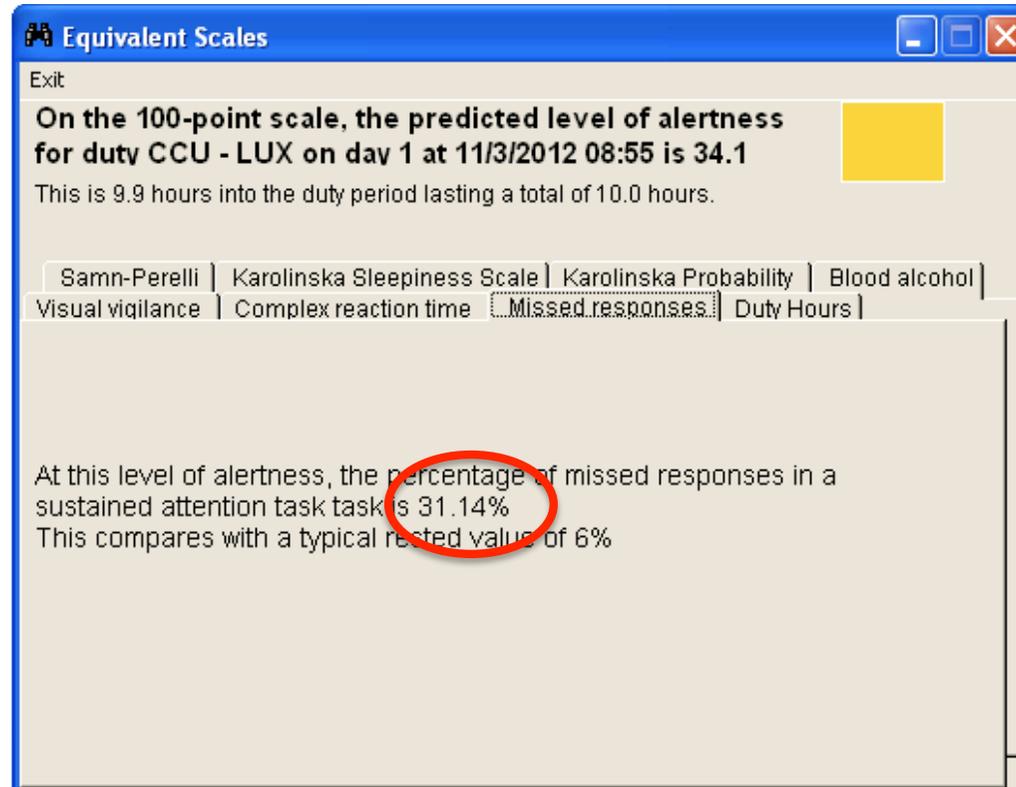
Calcutta to Luxembourg

Equivalent Levels “Missed Responses”

- When humans are fully rested they will make errors 6% of the time in a sustainable task
- The most important and notable sustained tasks for pilots are takeoffs and landings

Calcutta to Luxembourg

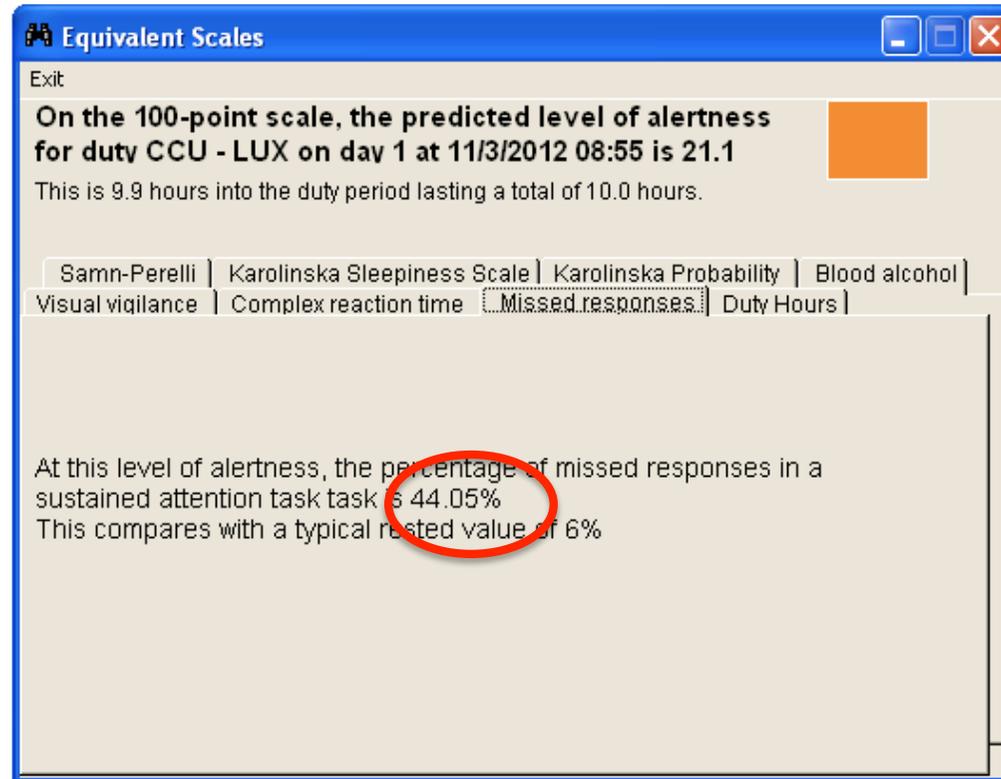
Present Luxembourgish Rules



This equivalent level shows the percentage of missed responses in a sustained attention task is **31,14%**.

Calcutta to Luxembourg

Proposed New European Rules by EASA



This equivalent level shows the percentage of missed responses in a sustained attention task is **44,05%**.

Calcutta to Luxembourg

Equivalent Levels “Missed Responses”

The **difference** between the Luxembourgish rules and proposed European rules results in a possible increase in errors:

From
33%
to
50%

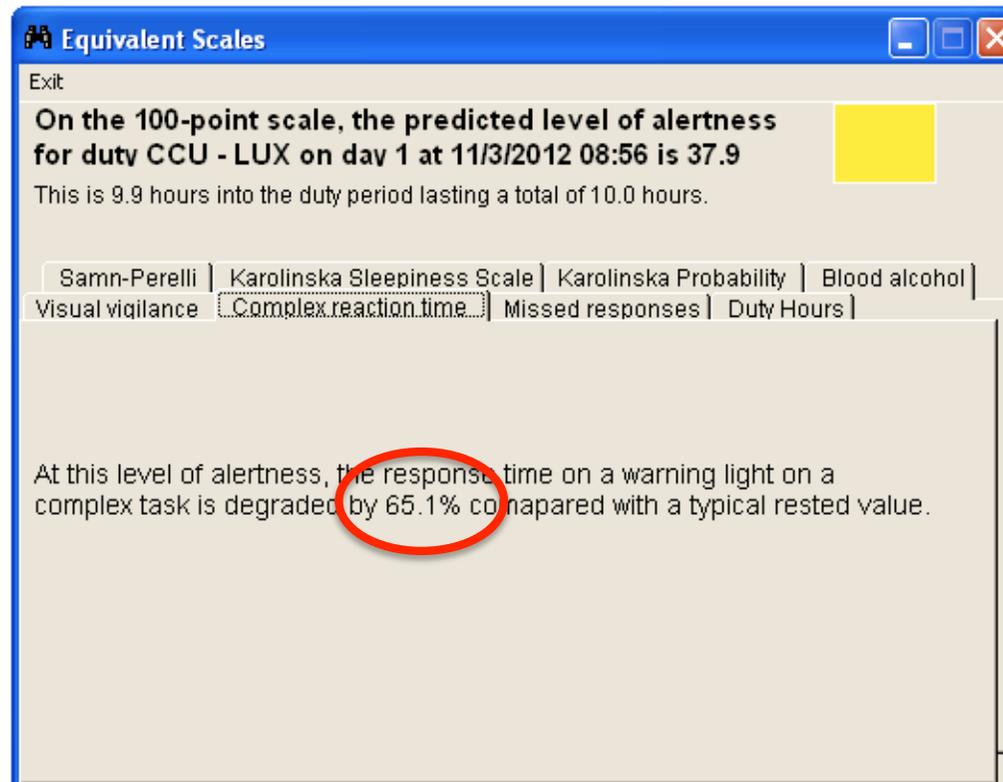
Calcutta to Luxembourg

Equivalent Levels “Response - Time”

- In case any malfunction would occur pilots are expected to identify the problem and carry out the procedures to rectify it.
- If their response time is delayed due to fatigue – this could have serious consequences to flight and passenger safety

Calcutta to Luxembourg

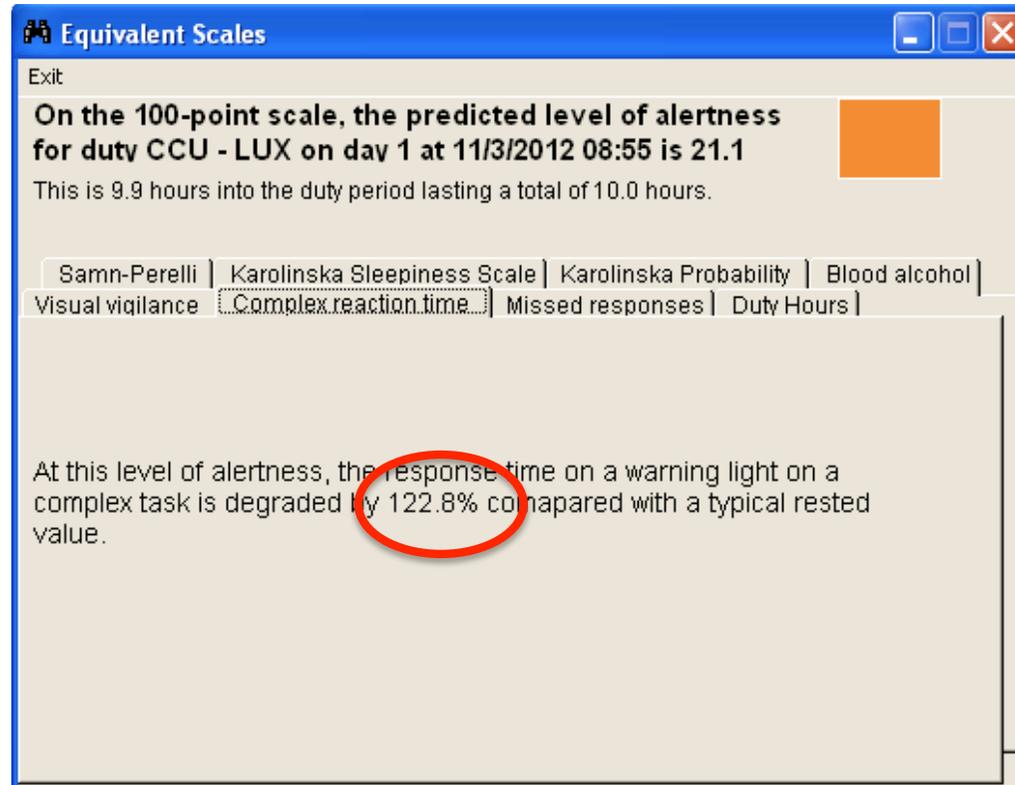
Present Luxembourgish Rules



This equivalent level shows the pilots response time on a warning light is degraded by **65,1%**.

Calcutta to Luxembourg

Proposed New European Rules by EASA



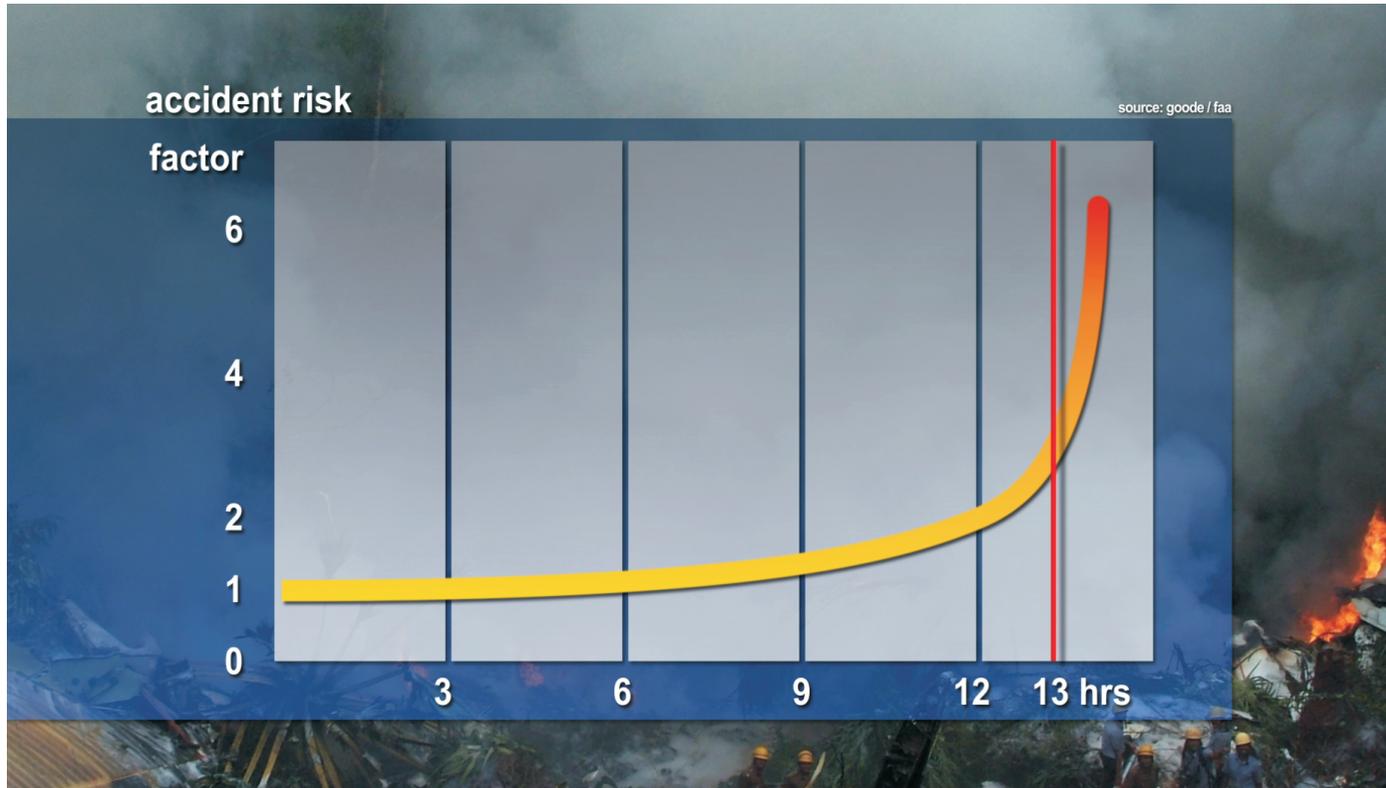
With only two pilots are this equivalent level shows the pilots response time on a warning light is degraded by **122,8%** .

Calcutta to Luxembourg

Equivalent Levels “Response - Time”

The difference between the present Luxembourgish regulation and the proposed regulation by EASA clearly shows that two pilots on such a flight response is deteriorate by half.

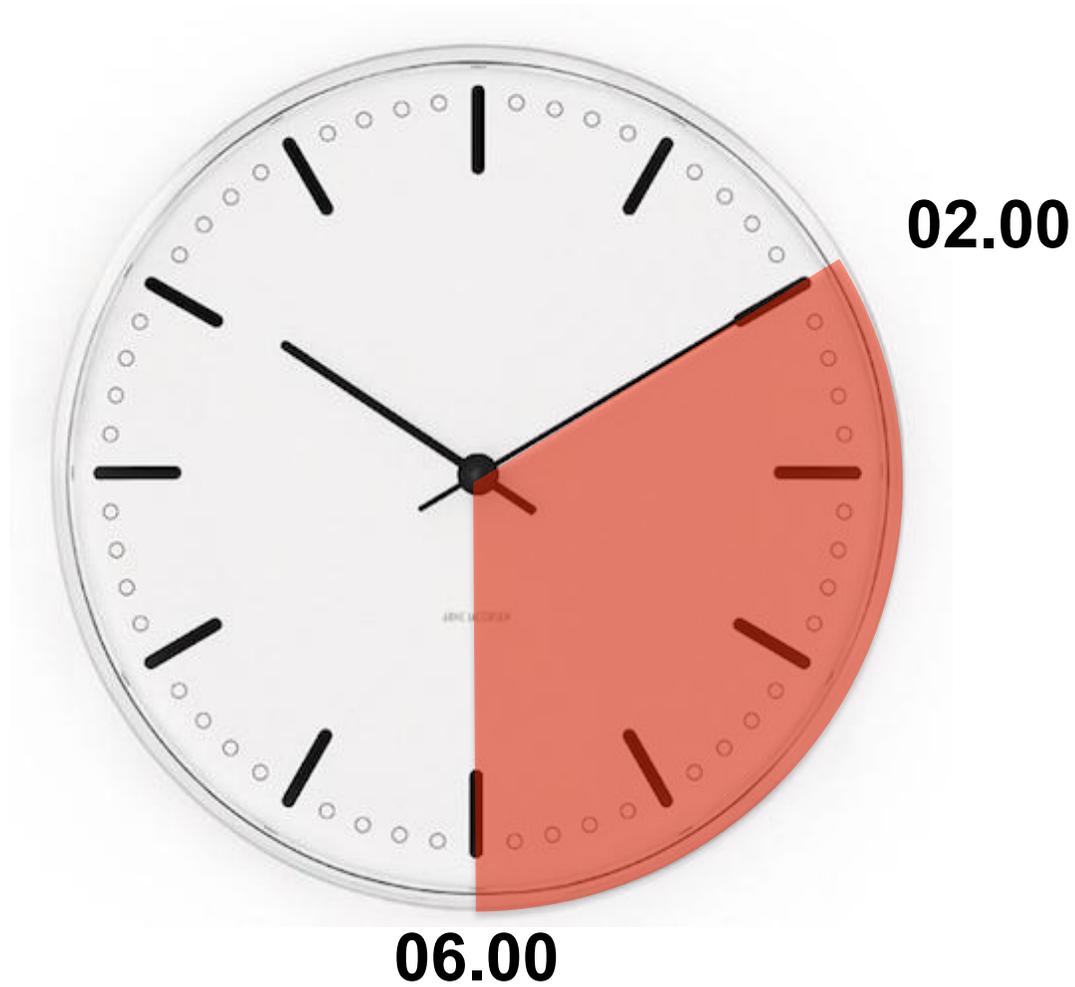
Pilot Fatigue



When a crew of 2 pilots is awake for long periods of time, greater than 12 hours and operate through the “*Window of Circadian Low*” the accident risk of a flight rises dramatically.

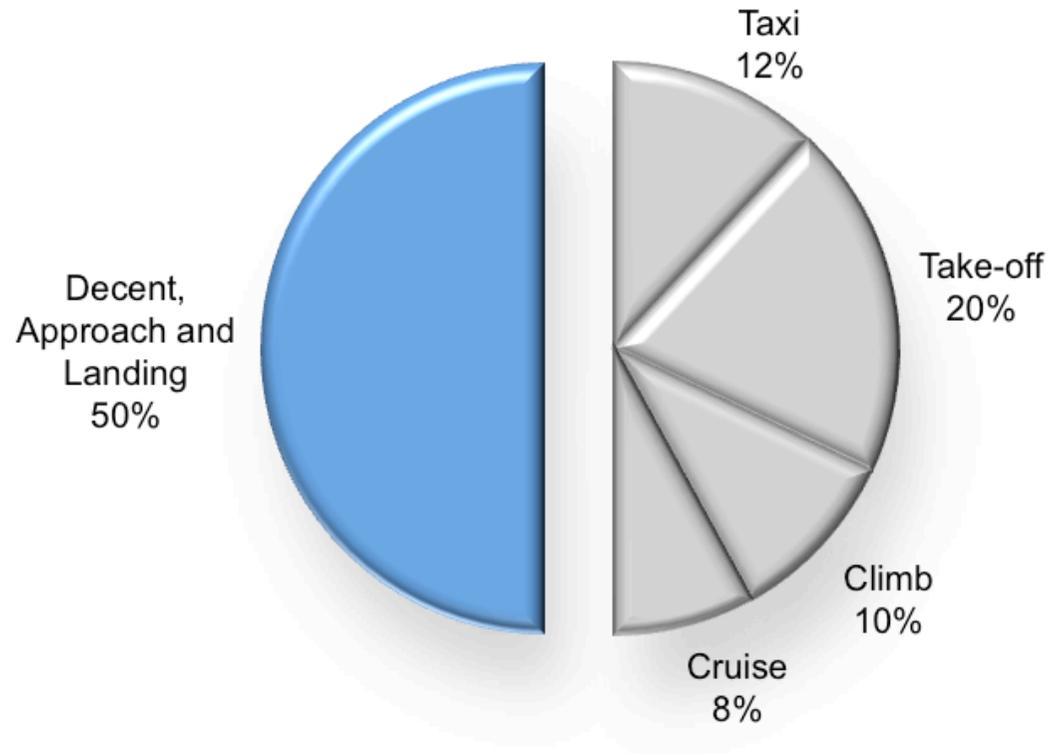
Window of Circadian Low

The “body clock” time between 02.00 and 06.00



Most accidents occur during approach and landing

Accidents by Flight Phase



What do the Scientists Say?

- EASA contracted three Scientists to provide their opinions on many items.
- In the example above ALL three stated clearly that the **maximum** Flight Duty at night for two pilots must be **10:00 hours**.
- The present Luxembourgish regulation **respects** their findings since years!
- Why does EASA not listen to them and fabricates an opinion that states that it is **OK** to do **11:00** hours?

Example 2

Airport Standby

Airport Standby

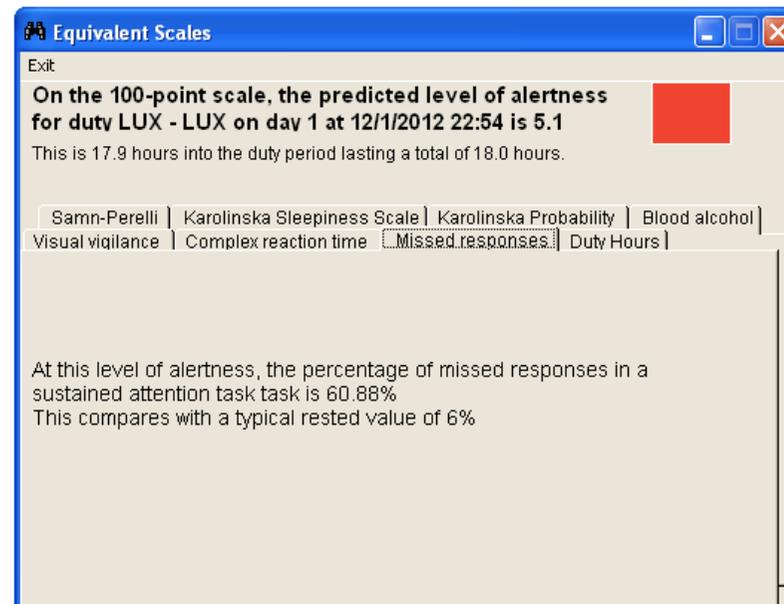
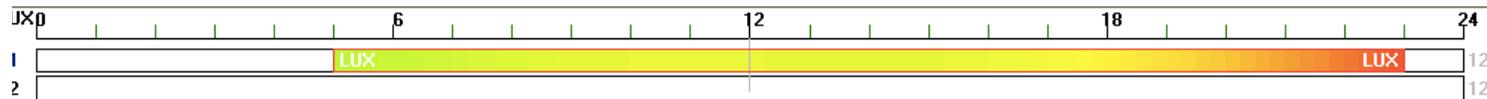
Airport Standby means that crew members will be on duty at the airport, waiting to be activated for a flight to cover unforeseen circumstances, e.g. a sick crew member, delays etc.

Airport Standby

- Start of airport standby 05.00 am
- The crewmember will be activated at 14.00 pm for a flight that departs at 15.00 pm
- The flight returns at 23.00 pm
- Start of airport standby 05.00 am

Airport Standby

Proposed New European Rules by EASA



When comparing the missed responses, it is an enormous **60,88%** of the time.

The safety of Passengers is at risk!

- Do Luxembourg citizens and passengers want to have rules where crews are becoming fatigued approaching large populated areas?
- Does Luxembourg and Europe have to witness an accident such as the *Colgan Air* accident in the USA to have safer rules?

Colgan Air Flight 3407

- 50 people lost their lives including 1 on the ground
- DHC-8-400 aircraft operating for Continental Airlines
- Buffalo Niagara International Airport (USA)
- The aircraft crashed ~ 5 km before the runway

Colgan Air Flight 3407

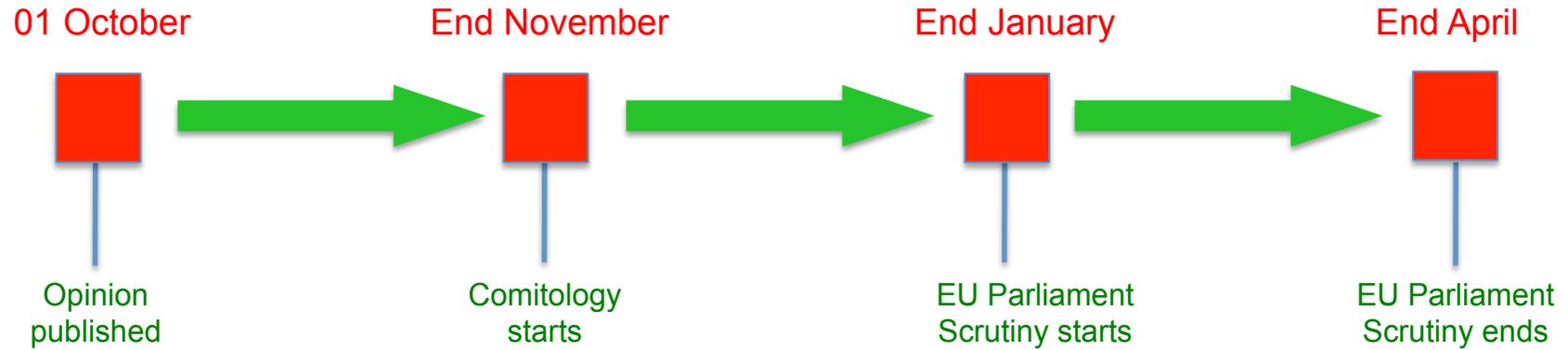
"The pilots' performance was likely impaired because of fatigue..."

Chairman Hersman, while concurring in a hearing, was clear in considering **that fatigue was a contributing factor** in this accident.

What's Next?

Now that EASA has produced its opinion, it will have to be approved by the Member States (Luxembourg Transport Minister), EU Commission and the EU Parliament.

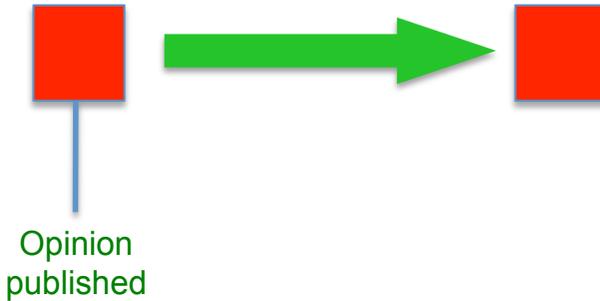
Time Line 2012 - 2013



Time Line 2012 - 2013

01 October

End November

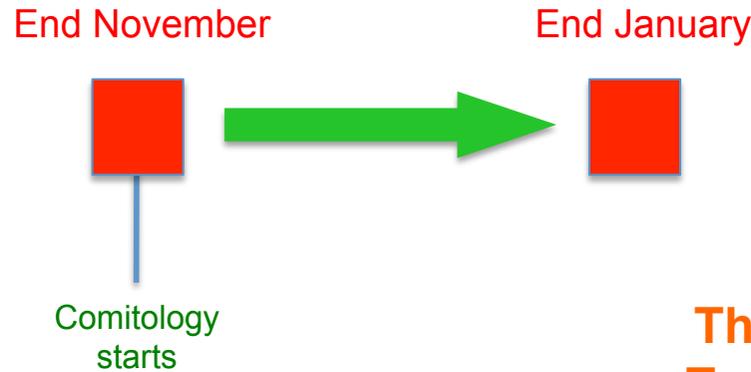


The EU Commission invites other departments such as Legal to view the text for EU compliance



Time Line 2012 - 2013

The 'Comitology' process involves the EU Commission together with the EU Members States (Transport Ministers) and EU Parliament.



This period is used by the EU Commission to accommodate political compromises!

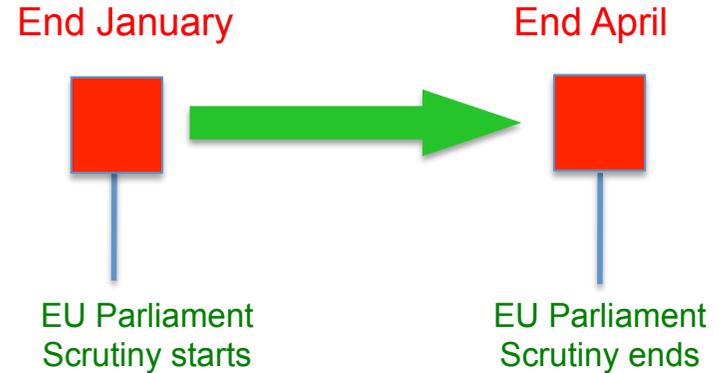
This is where the LUX Transport Minister can make improvements!



ALPL will be involved here together with the LCGB to **safeguard** passenger safety by improving fatigue regulations vis a vis the Luxembourg Ministry of Transport.

Time Line 2012 - 2013

Once the technical and political work is done, the EU Parliament is the body that will either vote this text as a regulation or not maintaining a dialogue with the Member States.



What do pilots and cabin crew demand?

**The ALPL and LCGB urge the
Transport Minister and his
representative in Brussels to
demand that the EU Commission
and EASA amend the draft proposal
to include current scientific
knowledge!**