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Montreal, QC – 15th April 2020

"OPERATIONAL, SAFETY AND FATIGUE RISK MANAGEMENT RECOMMENDATIONS DURING COVID-19"

Dear Colleagues and Partners,

We all need to slow down, take time to breath deeply, shut out the voices of worry inside our heads for just a brief moment and remind ourselves that we will get through these difficult times together.

Meanwhile, the "No-Fly World" we now see, is a dark and unacceptable place, where humans cannot physically connect, transport goods, food and medical supplies and advance.

Global humanitarian support will not be shaped, nor restricted by the negative impact COVID-19 has on our lives. During these hard times and regardless of our background or culture, religion or status we must stand together to make the world a better place.

As humanitarian aviation, our main priority will always be to take the necessary actions in order to reduce the spread of the virus and continue lifesaving operations, while being ready to act fast and efficiently to all kind of crises around the world.

In recent times, aviation has significantly increased its humanitarian activities and humanitarian support. A large number of fixed and rotary wing aircraft are participating in missions with an extreme variety of operational tasks. Commercial operators and military units from different countries are taking part in these operations. Although the commercial operators comply with Rules and Regulations of their State Authorities, and through them with the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (S ARPs), differences in national regulations and practices might exist that could potentially generate different standards of aviation safety.

More than ever, Aircraft operators and other aviation service provider organizations shall apply a formal risk management process within the framework of the organizational SMS. Risk management must ensure that risks are systematically analyzed (in terms of probability of occurrence and severity of hazard effects), assessed (in terms of tolerability) and controlled to an acceptable level (by the implementation of risk reduction measures).

These days Fatigue Risk management, part of every organization SMS, plays a major role as the aviation industry adapts to the restrictions put in place to combat COVID-19, the regular fatigue measures for flights are being pushed to their limits more than normal.

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Obviously, fatigue is caused by lack of sleep. But it's not always that simple. It can manifest acutely, such as the physical fatigue after a runner completes a marathon, or cumulatively, which we may lead to burnout.

Here are some specific causes of fatigue:

- Lack of quality sleep
- Sleep disturbances
- Disruption of circadian rhythms or working in the window of Circadian Low (WOCL).
- Mental or emotional stress (such as family problems, anxiety, or check ride stress)
- Physical exertion, such as heavy exercise
- Poor health, including dehydration or poor diet
- For rotary wing operations, vibration and noise.

Specifically, fatigue in pilots can be caused, or amplified by, the following:

- Commuting: some pilots start their day 2-3 hours earlier than others to commute to work. Some have to drive a long distance to the airport; more often, though, a pilot's commute is because he doesn't live near his home base at all, and he must fly in from a different airport, adding hours to the beginning of his day.
- Inadequate resting facilities
- Layovers at airports: sometimes pilots will have a 12-hour layover at an airport, where they are meant to rest. Instead, some choose not to sleep, or otherwise can't get to sleep. They watch TV, check email, or catch up with old friends and might get a few hours of sleep before their next flight departs.
- Jet-lag: In long-haul pilots, jet-lag can be a big problem when it comes to pilot fatigue. Most operators give ample time for pilots to adjust to time zone changes, but when the circadian rhythm is disrupted, it may be hard for pilots to sleep when they need to, and difficult for them to stay awake later when they are operational.
- Night flying: Cargo pilots, especially, deal with fatigue when flying lengthy routes at night due to working at the time of lowest performance of the body's natural circadian rhythm. This will be especially true for those pilots that have varying schedules or alternate day and night shifts.

> *67% of French pilots identify a series of morning departures as problematic and contributing to fatigue.*
>
> *88% of the pilots in Denmark estimate the rest between work periods as insufficient and 83 % reiterate on the long working hours.*
>
> *69% of the pilots in Germany stated they were too tired to perform a full flight duty after having been called out of standby*
>
> *In addition to a series of early or late duties, in the top 3 of the Netherlands survey, pilots note that there often is a lack of resting places/possibilities.*

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More than 50% of the pilots polled in France have similar concerns. The lack of adequate rest areas is considered problematic and contributing to fatigue.

ECA_Barometer_On_Pilot_Fatigue (www.eurocockpit.be)

Pilots and crews have to face new challenges. in particular, repatriation flights can be longer than usual and may involve limited or no opportunities for rest at destination ports. For cargo operations, pilots continuously face such restrictions.

Regulators are allowing strategies that would not be considered under normal circumstances. However, these strategies should be monitored and if fatigue levels reach unacceptable levels they should be discontinued. Bio mathematical models have helped some airlines and regulators do an initial assessment of these new strategies. If the solution includes pilots sleeping on board the aircraft on the ground, the selection of the crew should include an assessment of how flexible they are in their ability to sleep under difficult circumstances. The prospect of a repatriation flight or a cargo flight crashing due to pilot fatigue should be avoided at all costs.

The current operating environment is challenging and the typical safety defences that are in place may not be functioning as well as they normally would. The protection of safety now relies more heavily upon adherence to the already-established processes and standards of the safety systems than during normal operational climates.

For more on the subject, please refer to IFALPA Fatigue Mitigation for Flights Affected by COVID-19 Restrictions study: https://www.ifalpa.org/publications/library/fatigue-mitigation-for-flights-affected-by-covid-19-restrictions--3316

GHAO is providing hereunder some examples of personal fatigue mitigation strategies that might be covered in FRMS for flight crew. These recommendation (from FRMS Implementation Guide for Operators – July 2011 / ICAO-IATA-IFALPA) are neither binding nor presented as an exhaustive list. It's up to each organization to implement or to apply similar measures to reduce the operational risk through any organization FRMS.

In-flight sleepiness on non-augmented flights	• Maximize sleep in 24 hours before departure. • Controlled flight deck napping, strategic use of caffeine in flight.
Difficulty sleeping in onboard crew rest facilities	• Maximize sleep in 24 hours before departure. • Use eye mask, ear plugs, arrange a suitable wakeup call. • Avoid caffeine for 3-4 hours before trying to sleep.

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	• Strategic use of caffeine after in-flight rest period.
Difficulty sleeping in noisy, poorly-curtained rooms in layover hotel	• Submit a fatigue report to your Organization Fatigue Safety Action Group. • Use eye mask, ear plugs, arrange a suitable wakeup call. • Avoid caffeine for 3-4 hours before trying to sleep.
Unpredictable call-outs	• Ensure that sleep environment is dark and quiet, and use sleep hygiene measures to maximize sleep quality. • Maximise recovery sleep on off-duty days. • When feeling sleepy while waiting for call-out, attempt sleep (prioritize sleep over other activities). • Controlled flight deck napping maximize sleep during in-flight rest periods (if available). • Strategic use of caffeine in flight
A specific city pairing results in landing when extremely fatigued.	• Submit a fatigue report to your organization Fatigue Safety Action Group. • Controlled flight deck napping. • Maximize sleep during in-flight rest periods (if available). • Strategic use of caffeine in flight.
Extended commute prior to scheduled flight duty period.	• Arrive at duty location with sufficient time to allow adequate sleep, ensuring fitness for duty.

GHAO, in its capacity and mission to unite, serve and mobilize the humanitarian aviation community worldwide, will continue to provide with any relevant information and necessary support when important humanitarian operations require it.

Thank you for your kind attention.

Sincerely yours,

GHAO Executive Team

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