

# Helicopter OPS as follower & WTS (we need clarity)

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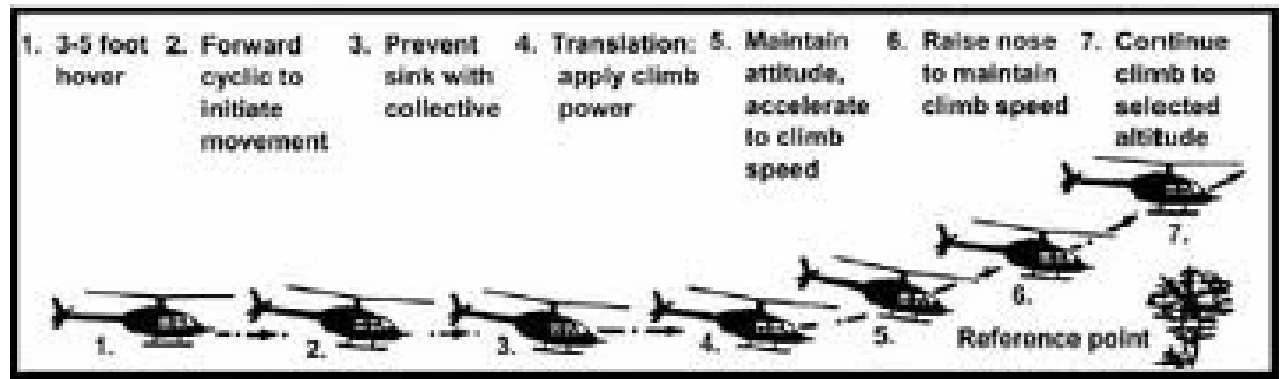
# WHY?

Objectives of this WS:....

- involve the experts from CAAs, ANSPs
- identification of research needs**

# Content

- The problem
- Analysis
- Questions
- Discussion



# The problem

Ambiguity regarding the application of the wake turbulence separation minima/criteria related to helicopter operations following the heavier fixed wing aircraft operations

- ICAO Annex 14 – Aerodromes, provides minimum requirements in regard to placement of the FATO – Final Approach and Take-Off paths based on distances from the RWYs categorised by the mass(?) of the aircraft using that RWY
- On the other hand ICAO P-ATM prescribes the WT time separation minima using the notions of two RWYs being spaced by less than 760m. No heliport or FATO being mentioned.

*Note: The problematic of the helicopter wake turbulence and/or down-wash impact on the light aircraft in the proximity is not the subject of this discussion.*



# Analaysis – P-ATM

## 5.8.3.1

A minimum separation of **2 minutes** shall be applied between a LIGHT or MEDIUM aircraft taking off behind a HEAVY aircraft or a LIGHT aircraft taking off behind a MEDIUM aircraft when the aircraft are using:

...

b) **parallel runways separated by less than 760 m (2 500 ft);**

...

What is the WTS (wake turbulence separation) required for the helicopter operations from the helipad placed closer then 760m from the RWY wherefrom the heavier aircraft are departing (not necessarily parallel direction)?

Should the above criteria be used?

Here is where the Annex 14 adds to the confusion:

# Annex 14- Aerodromes

**Final approach and take-off area (FATO).** A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced...

3.1.1 A surface-level heliport shall be provided with at least one FATO.

*Note.- A FATO **may be located on or near a runway strip** or taxiway strip.*

3.1.39 Where a FATO is located **near a runway** or taxiway, and **simultaneous VMC operations** are planned, the **separation** distance between the edge of a runway or taxiway and the edge of a FATO shall not be less than the appropriate dimension in Table 3-2.

3.1.40 Recommendation.- *A FATO should not be located:*

*b) **near** areas where aeroplane vortex wake generation is likely to exist.*

# Annex 14- Aerodromes

Table 3-2. FATO minimum **separation** distance

If aeroplane mass and/or helicopter mass are	Distance between FATO edge and runway edge or taxiway edge
up to but not including 2 720 kg	60m
7 000 kg up to but not including 100 000 kg	100m
<b>100 000 kg and over</b>	<b>250m</b>

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# Questions (1)

- What are the simultaneous VMC operations?
  - Simultaneous – according to ICAO SOIR is not equal to independent. Did Annex 14 mean – independent? That would result in the clear situation where the P-ATM minima are not to be applied.
- VMC operations? Unknown notion in ATM.
  - DGAC study considers both heli & fix wing ops
  - Paper Lawrence-Padfield-Taghizad implies only heli ops
- "Separation distances" - ?
  - should it be replaced with "minimum distances". Or if the intention was to make these distances at the same time already separations – then we would have the same result as above.



# Questions (2)

- Does the table 3-2 actually fulfil the recommendation 3.1.40 b) and if the distances required are established it is then considered that the FATO is abolished from WTS?
- What about heli take-offs not parallel to main RWY
- Does this mean that the helicopter may take off immediately after an A380 (when the VMC prevails) from a helipad spaced only by **251m** from the RWY wherefrom A380 takes-off, while if the same type of helicopter is about to take off from a parallel RWY spaced by **759m** from A380 taking off – shall wait 3-4minutes...

# Discussion point

- Are **helicopters abolished** (when following) from the application of the ICAO P-ATM WTS?
- This is **not only** an ATM Procedures/Provisions **interpretation** question, it requires a serious **science** behind the answer.
- ANSPs/Regulators need an **answer fast**



**Thank  
you**

Questions?