### Safe helicopter operations in



## aerial fire fighting

By Capt. Jaume Bosch





### Different models for Fire Fighting

#### State operations

The State assumes and regulates fire fighting and the operation has legal cover; crew is acting under State umbrella.

#### Hiring private operators

State hires civil operators which operate under AOC, under some authorizations or under AWC as Poland, and crews are recruited under normal labor contract.

State publishes some operational exceptions through an "agreement operational letter" for special operations as fire fighting that allows no FPL, no minimum flight altitudes and to drop water and products, only this.





### Kind of Helicopter missions when Fire fighting



### Why Aerial coordination?

To guarantee safety in the area
To improve fire fighting efficiency
To organise drops and air traffic
To give aerial picture to ground
And to avoid this.....







## **EHEST** is the helicopter component of **ESSI** and the European branch of **IHST**



## Example of Fire Fighting accident scenario

- The helicopter was operating in fire fighting mission, dropping water using a bambi bucket system.
- The pilot had already performed 8 runs.
- After the 9<sup>th</sup> water drop and when the helicopter was in a turn, the tail rotor hit a wire.
- The pilot performed an emergency landing. The helicopter was substantially damaged and the pilot received serious injuries.

## Example of Fire Fighting accident scenario

- The helicopter was operating in fire fighting mission, dropping water using a bambi bucket systemetitive tasks in short time
- The pilot had already performed 8 runs.
   After the 9<sup>th</sup> water Restricted visibility opter
- waspressure he tail rotor hit a wire.
- The pilot performed an emergency landing. The helicopter sustained substantial damage and the pilot received minor injuries. Unsuitable area for emergency landing

% of Accidents were SPS level 1 has been identified at least once EHSAT Database, Type of Operation Aerial Work - Fire Fighting



#### **Intervention Recommendations level 1 Statement Counts**

EHSAT database, Type of Operation Aerial Work - Fire Fighting



## Example of areas identified for IRs for Fire Fighting (not prioritised)

- Best practices for landing site selection
- Promotion of safety culture
- Risk assessment training
- Improvement of flight procedure training and mission specific training
- Certification of surplus aircraft
- Personal safety equipment such as helmets
- Compliance with SOP
- Investigation: Data/information issues

### Hazards and issues

Mission risk - Hostile environment

 $\blacktriangleright$  Different types of aircraft are operating in a small area

Different professionals working in the same mission

Pressure

Lack of standard operational procedures for mission

Other issues (heliports, fatigue)



# SEPLA's mitigation proposals

Establish fire fighting operational rules

Establish a fire fighting rate

Improve instruction and training on mission

Comply with rest periods and max duty time as EU 79/2000

Operators must establish a real Safety Department, SMS

Improve operational fire fighting oversight by NAAs



### References

#### EHEST: <u>EHEST@easa.europa.eu</u>

- SEPLA's Fire Fighting rate proposal request: <u>heliaep@sepla.es</u>
- > Operational fire fighting procedures:

http://www.copac.es/direcciones/Helicopteros/EXTINCIO N-INCENDIOS-FINAL-3.pdf

http://sonnet1.sonnet.com/usr/wildfire/helo.pdf

Air coordination on fire fighting course request:
<u>copac@copac.es</u>





### Thank you for your attention Questions?



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