



# ISAR 2023 PROGRAMME

DAY	TIME	AERONAUTICAL & MARITIME SEARCH & RESCUE	DISASTER MANAGEMENT	TECHNOLOGY
DAY 1	1100 - 1230	PLENARY SESSION 1 3 Speakers	PLENARY SESSION 1 3 Speakers	PLENARY SESSION 1 3 Speakers
	1330 - 1500	PLENARY SESSION 2 3 Speakers	PLENARY SESSION 2 3 Speakers	PLENARY SESSION 2 3 Speakers
	1530 - 1700	PLENARY SESSION 3 3 Speakers	PLENARY SESSION 3 3 Speakers	PLENARY SESSION 3 3 Speakers
DAY 2	0900 - 1030	PLENARY SESSION 4 3 Speakers	PLENARY SESSION 4 3 Speakers	PLENARY SESSION 4 3 Speakers
	1100 - 1230	PLENARY SESSION 5 3 Speakers	PLENARY SESSION 5 3 Speakers	PLENARY SESSION 5 3 Speakers
	1330 - 1630	COLLOQUIUM		



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### **TACTICS OF USING UNMANNED AIRCRAFT FOR MONITORING THE CHEMICAL CONDITION IN THE EMERGENCY ZONE**

Task. Determination of the possibility and tactics of using unmanned aircraft for monitoring the territory after an accident with the release of dangerous chemicals.

Abstract. The dimensions of the man-made emergency zone due to an accident with the release of hazardous chemicals depends on many factors: the amount of the hazardous substance, the state of the atmosphere, the direction and strength of the wind, etc. Under certain circumstances, the zone can reach significant sizes. In this case, monitoring the accident area presents certain difficulties.

It is possible to use unmanned aircraft to monitor the state of the territory. Unmanned aircraft must be equipped with appropriate recording equipment (gas analyzer).

The tactics of using unmanned aircraft are characterized by the height and trajectory of the flight. From the point of view of the properties of the gas analyzer, the flight height of the unmanned aircraft should be as low as possible. The flight path of an unmanned aircraft is determined by the shape and size of the infection zone.

To determine the parameters of the contamination zone, the national method of forecasting the consequences of the spill (release) of chemically hazardous substances during accidents at industrial facilities and transport is used. The contamination zone is characterized by a shape that depends on the wind speed, and a depth that depends on the state of the atmosphere and the properties of the hazardous chemical substance.

Knowing the shape and depth of the infected zone, the length of the unmanned aircraft's flight path to the infected zone is determined.

Knowing the flight speed of an unmanned aircraft, the time of its flight in the infection zone is determined.