

## **PL CASE STUDY: EXPERIENCES OF USING DRONES AND MANNED AVIATION IN CRISIS OPERATIONS ON THE BASIS OF LAS2021 STATE FIRE SERVICE EXERCISE**

**Jakub Ryzenko, Anna Kobierzycka**  
*Centrum Informacji Kryzysowej CBK<sup>1</sup>*  
[ryzenko@cbk.waw.pl](mailto:ryzenko@cbk.waw.pl); [analecz@cbk.waw.pl](mailto:analecz@cbk.waw.pl)

### **Abstract – Academic paper.**

At the end of August in northern part of Poland the State Fire Service organized the first and largest field exercises after the Covid-19 pandemic called „Forest2021”. For 3 days 470 firemen and 150 vehicles, together with representatives of other safety and crisis management institutions – police, medical services, armed forces, State Forests, Polish Air Navigation Services, local critical infrastructure operators and Crisis Information Centre played a series of episodes related to large-scale forest fire. The exercise scenario assumed a long-term forest fire, covering large area and difficult to extinguish due to unfavourable environmental conditions. The quickly-spreading fire was a threat not only to critical infrastructure (electric power station and grids), but to several groups of tourists and forest workers, resulting in the need for search and rescue activities and providing on-site medical assistance in addition to „ordinary” fire-fighting. One of the issues specifically addressed during the exercises was operational use of unmanned and manned aviation to monitor the crisis situation, assist in search of missing people, combat the fire and deliver initial risk and damage assessment. The challenge was how to ensure maximum possible benefits from drones and planes for the crisis management activities (especially making available updated, full geoinformation services to the command centre), while guaranteeing safe and smooth coordination of flight operations of manned and unmanned aircrafts.

**Keywords:** Drones, UAVs, crisis management

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<sup>1</sup> Bartycka 18a, 00-716 Warszawa, Poland