Year	Author	Title of Paper	Deliverables
2018	Georgi Hristov, Jordan Raychev, Diyana Kinaneva, Plamen Zahariev	Emerging methods for early detection of forest fires using unmanned aerial vehicles and Lora WAN sensor networks	Two different emerging solutions for early detection of forest fires. The first of these solutions involves the use of unmanned aerial vehicles (UAVs) with specialized cameras. The possible use of the drones for forest fire detection will be presented and analyzed, including a solution with the use of a combination between a fixed-wind and a rotary-wing UAVs. Second solution for early detection using LoRaWAN sensor networks and we will analyse and present some of the hardware and software components for the realisation of such sensor networks
2022	Alya Faryanti Purbahapsari, Irene B. Batoarung	Geospatial Artificial Intelligence for Early Detection of Forest and Land Fires	Based on interpretation of satellite images, the hotspot data have tremendously helped firefighting efforts and further enforcement. However, the system has several shortcomings, especially due to its inability to distinguish forest and land fires from other hot surfaces or fires caused by common human activities. The results of hotspot clustering that detect fires may assist firefighters in rapidly extinguishing the fire, and support law enforcement officers in determining the appropriate target location.
2022	Abdelmalek Bouguettaya, Hafed Zarzour, Amine Mohammed Taberkit, Ahmed Kechida	A review on early wildfire detection from unmanned aerial vehicles using deep learning-based computer vision algorithms	UAV-based remote sensing technologies play a very important role in vision-based forest monitoring systems. Smart UAVs that are able to navigate, detect forest fires, and notify the concerned authorities autonomously without any human intervention by combining them with recent deep learning techniques showed impressive results both in speed and accuracy and powerful computational hardware.

2008	Mohamed Hefeeda and Majid Bagheri	Forest Fire Modeling and Early Detection using Wireless Sensor Networks	Early detection of forest fires is the primary way of minimizing their damages. We present the design of a wireless sensor network for early detection of forest fires. The proposed approximation algorithms for the node k-coverage problem which is shown to be NP-hard.The simulation study demonstrates that our algorithms: activate near-optimal number of sensors, converge much faster than other algorithms, significantly prolong (almost double) the network lifetime, and can achieve unequal monitoring of different zones in the forest.The design is based on the Fire Weather Index (FWI) System, which is backed by decades of forestry research. The FWI System is comprised of six components: three fuel codes and three fire indexes. The three fuel codes represent the moisture content of the organic soil layers of forest floor, whereas the three fire indexes describe the behavior of fire.