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## MAPPING BURNED AREAS USING SENTINEL-2 IMAGES

### >>> A few years later

In the last few years, the burned area mapping service has been systematically used by both the local forest offices and the central forest service. The central forest service has secured additional funding, both for securing the continuation of the service and for conducting research on new products (fire severity, post-fire regeneration monitoring and others).

*Dimitris Stavrakoudis, Laboratory of Forest Management & Remote Sensing, Aristotle University of Thessaloniki, Greece*  
*Prof. Ioanis Z. Gitas, Laboratory of Forest Management & Remote Sensing, Aristotle University of Thessaloniki, Greece*



BENEFICIARIES	Laboratory of Forest Management & Remote Sensing, Aristotle University of Thessaloniki	Directorate General of Forests Citizens and Society and Forest Environment, Hellenic Ministry of Environment and Energy; Local forest offices	General Secretariat for Civil Protection; Authorities responsible for investigating the causes of the fire; NGOs (e.g., WWF Hellas)	Citizens and Society
	TIER 1: SERVICE PROVIDER	TIER 2 PRIMARY USER	TIER 3 SECONDARY USER	TIER 4 END USER BENEFICIARIES
SERVICES	Sentinel-2	National Observatory of Forest Fires (NOFFi); a semi-automated burned area mapping service (NOFFi-OBAM)	Monitoring and safeguarding against illegal activities within the affected area (highlights on exact starting location)	Improved protection and safeguard of forests and vegetated areas; Improvement of civil security

Value chain definition following SeBS Methodology - <https://earsc.org/sebs>

### The space-based solution

This Copernicus-based solution was produced by a scientific entity for a for a Public Administration. From technical perspective, there were significant improvements, with mapping algorithm being further automated.

### The Usage Maturity Level

The solution has improved and it has consolidated at UML=4. The main reason for this transition was identified in an increased recognition about the effectiveness of the solution at decision making level based on the achieved results and return-of experience.

Thematic Area



**BIODIVERSITY AND ENVIRONMENTAL PROTECTION**

Region of Application



**GREECE**

Sentinel mission used



**S2**

Copernicus Service used



**-**

Usage Maturity Level



**4**

## Overall benefits

### ECONOMIC



Capital expenditure has been reduced or avoided.

### ENVIRONMENTAL



More efficient management plans could be devised for the fire-affected areas.

### REGULATORY



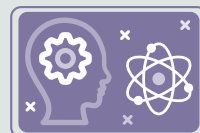
The solution has facilitated or improved the compilation of institutional reports by the PA.

### INNOVATION



The solution has helped to introduce some innovation in the functioning of the public administration.

### SCIENCE



There was an increase in technical/scientific expertise related to Copernicus/E0 at the service provider.

### SOCIETAL



- Improved coordination and governance has been registered"
- Sense of trust/community for the involved actors has increased

Benefits classification following SeBS Methodology - <https://earsc.org/sebs>

## Interesting facts...

The solution has been validated by the local forest offices, while the central administration is currently using it systematically due to its effectiveness. The recognised added value of the solution has led to additional funds for its continuation. During the fire season, the service is being systematically applied all over Greece.

## Outlook to the future

The future objective that is currently under active discussion is to establish a permanent observatory of forest fires, which, in addition to mapping, would also monitor the evolution of wildfire in near real-time via satellite-based active fire products (Sentinel-3, VIIRS, SEVIRI MSG, etc.).

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## Contacts

**Dimitris Stavrakoudis** | [jstavrak@auth.gr](mailto:jstavrak@auth.gr)  
**Ioannis Z. Gitas** | [igitas@for.auth.gr](mailto:igitas@for.auth.gr)

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