



Above: This is the type of real-time overview the Kytherian Fire Brigade will have once the fire monitoring system is fully operational.

A New Pair of Eyes: Technology and Community Join Forces to Protect Kythera from Wildfires

By James Prineas

When a wildfire starts, minutes matter.

A small plume of smoke spotted early can mean the difference between a minor incident and a devastating blaze. With this in mind, a new island-wide fire detection and monitoring system is now being rolled out on Kythera, combining modern technology, artificial intelligence, and community participation to help protect the island's people, landscapes, and wildlife.

The pilot phase is already underway.

The goal is simple: detect fires earlier, respond faster, and minimise damage.

Early detection not only saves precious time and resources but can also help identify illegal burning during the fire season before it develops into a serious emergency.

Perhaps most importantly, the system will give firefighters something they have never had before: a real-time overview of large parts of the island from a single

screen. Instead of relying on one or two staffed lookout points, a firefighter will be able to monitor dozens of locations simultaneously.

Building the System

The project is being developed in three stages.

The first stage is the installation of the camera network and making the live feeds available to the authorities.

The second stage involves a volunteer coordination app that will assist not only during fires but also in prevention. Volunteers will be able to report illegal burning, overgrown fields, damaged infrastructure, unsafe electricity transformers, and other fire hazards.

The final stage is a dedicated operational platform for the Fire Brigade. This will provide a complete overview of fires, volunteer reports, water supplies, personnel, and vehicles, allowing commanders to make faster and better-informed decisions during emergencies.

How the Camera Network Works

Each monitoring site uses two 180-degree cameras to create a complete panoramic view of the surrounding landscape.

The system operates on three levels:

- Monitoring by the Kythera Fire Brigade
- Monitoring by trained volunteers
- Continuous monitoring by Artificial Intelligence (A.I.)

The A.I. system analyses high-resolution images from every camera around the clock. If smoke or flames are detected, automatic alerts can be sent immediately via SMS, WhatsApp, Viber, or Signal to personnel designated by the Fire Brigade.

This creates an effective partnership between human vigilance and modern technology.



Above: The A.I. identified smoke from agricultural burning in the valley between Mitata and Paleopoli and highlighted the location automatically. Images that generate positive detections are immediately forwarded for review.

A Global Volunteer Network

A dedicated website has also been created that streams images from all cameras, updating approximately six times per minute.

The vision is to create a worldwide network of volunteer observers who can provide additional eyes on the landscape. Members of the Kytherian diaspora are uniquely positioned to help. Australian daytime corresponds closely with Greek night-time, allowing Kytherians in Australia to effectively monitor the island while most residents are asleep.

In this way, distance becomes an advantage.

Community Support Makes It Possible

The project would not exist without the support of local organisations, businesses, and individuals.

Spyros Fountoulakis and the team of the Kythera Fire Service have provided valuable operational guidance and assistance, including the installation of the pilot cameras on Skliri above Aroniadika.

Akis Agiopoudis and Stavros Haros have generously provided access to their internet transmission networks at selected locations, helping reduce costs and expand coverage.

The long-term objective is for the system to operate within an official framework under the supervision of the relevant authorities for the benefit of the entire island.

As with many innovative projects, implementation has not been without challenges. Administrative approvals are still required before the Fire Brigade can formally assume control of the camera network, despite the system already being financed and operationally tested. Access to some public locations has also proven difficult, limiting the placement of cameras in a few strategic areas.

Fortunately, the generosity and commitment of private landowners and local supporters have enabled the project to move forward, creating a functioning and growing network across the island.

Respecting Privacy

Privacy protection has been a core consideration from the beginning.

The system is designed to comply fully with European GDPR regulations and all applicable privacy laws. Cameras are positioned specifically to monitor landscapes rather than private property.

Although the cameras provide high-resolution panoramic views, they do not possess the optical zoom capability necessary to identify faces or vehicle registration numbers at operational distances. Where necessary, sections of the image can also be permanently masked.

No footage is stored in cloud-based systems. The cameras are intended solely for real-time fire detection and monitoring.

Current Progress

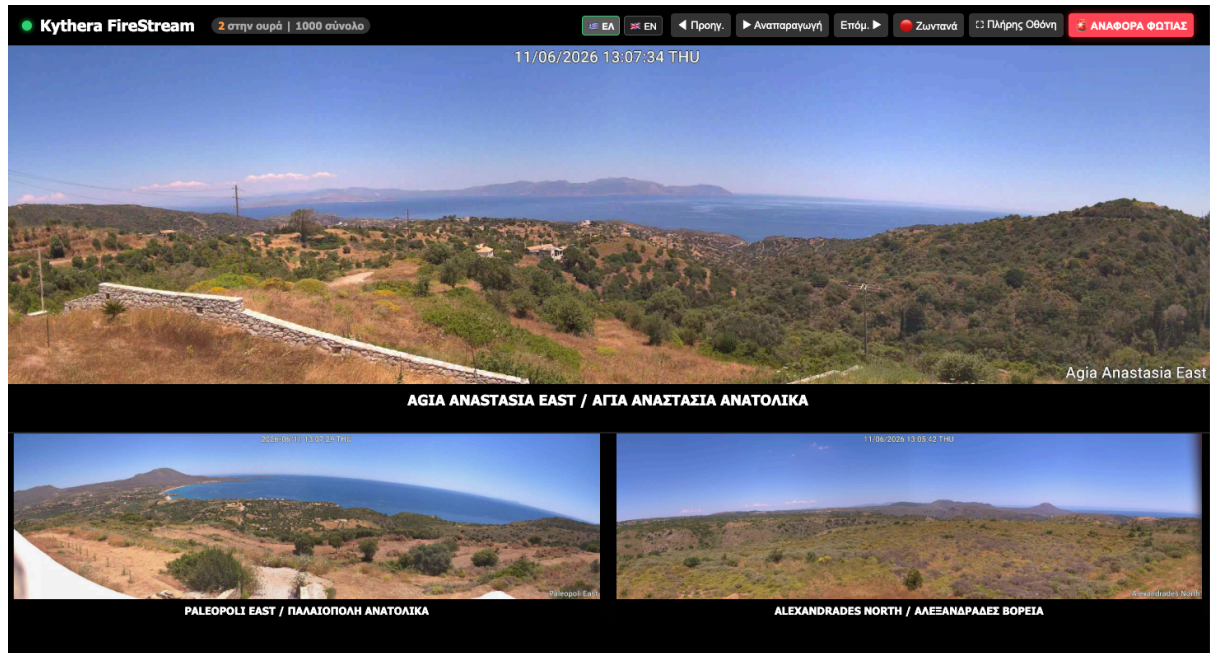
To date, 21 cameras have been installed across the island, with a further nine scheduled for installation in June.

Some locations can utilise existing internet connections from nearby homes or local providers. More remote sites require additional infrastructure, including solar panels, batteries, internet dishes, and mounting equipment.

The costs are approximately:

- Camera: A\$300 each
- Typical remote site (two cameras plus infrastructure): approximately A\$1,100
- Sites with nearby internet access: approximately A\$600

Every additional camera improves coverage and increases the likelihood of detecting a fire before it spreads.



Above: The monitoring website provides a continuous overview of some of the island's most vulnerable landscapes, making it easy for the fire brigade to

How You Can Help

The Kytherian Association of Australia and the Aroney Trust have generously funded the first 30 cameras, covering approximately 20 monitoring locations. Their support has been instrumental in transforming the concept into reality.

Many other individuals have also contributed funding, equipment, internet access, and countless hours of volunteer work.

However, the work is not yet finished.

The more cameras we install, the greater the protection for the island. Donations are therefore still welcome.

If you would like to assist, please contact:

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To ensure complete transparency, a regularly updated record of all donations, expenses, and receipts is maintained and available for review.

Together, technology, local knowledge, and community spirit can create a safer future for Kythera.

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