

TECHNOLOGY AND ENVIRONMENT: A YEAR OF WILDFIRE MONITORING

The Use of INWIT Digital Infrastructures for WWF Woodland Oases

Rome, 6 December 2023 – The **WWF Italia** and **INWIT** digital fire surveillance project has just ended. The installation of smart cameras and gateways on the towers of Italy's leading tower operator allowed prevention activities to be carried out by promptly detecting any forest fires in the WWF Oases of Macchiagrande (Rome), Bosco di Vanzago (Milan) and Calanchi di Atri (Teramo).

Luckily, at least in Italy, the extreme heat this summer was not accompanied by a record season of forest fires, the main threat to forests in Italy and Europe, despite it being the third worst summer in the last 15 years (the highest temperatures were recorded in 2021 and 2017).

However, the risk of forest fires must be constantly monitored as fires are not limited to the hottest season of the year. They affect the ecosystem throughout the 12 months, which leads to precious functions being degraded, including regulation of the water cycle or the stabilisation of mountain slopes. A forest weakened by fire provides a less effective defence against other extreme climatic events, such as floods, compromising the resistance and resilience of the entire territory. It is therefore increasingly essential to protect our lands with all the tools we have at our disposal.

Technology can be very useful in preventing environmental disasters in particularly high-risk contexts, and this pilot project brings hope. *"This initiative has confirmed how our Oases are an excellent opportunity to experiment with innovative methods of environmental conservation which can then be replicated on a larger scale"* says **Marco Galaverni**, Program and Oasis Director of WWF Italy, *"technology can be a valuable tool for protecting habitats, biodiversity and human health, for example by helping to prevent threats such as forest fires"*.

"INWIT towers can be allies of their local area and environment. The "Tower as a service" logic is central to our strategy: a digital and shared infrastructure, capable of both accelerating the spread of operators' 4G, 5G and FWA networks, and of becoming a technological hub in which IoT components and communication systems come together to enable innovative services, as in the case of fire monitoring in the Oases managed by WWF Italia. Thanks to its widespread presence across the country, our infrastructure provides a great opportunity and is an important added value environmentally in the protection of ecosystems, territories and biodiversity" – says **Michelangelo Suigo**, INWIT's External Relations, Communication and Sustainability Director.

Luckily, no fires occurred in the three areas involved, during this project year. One of the video cameras, installed at the Calanchi di Atri Oasis, detected a plume of smoke on one occasion, caused by the burning of plant residues (olive branches) on the edges of the Oasis. This practice is among the main causes of forest fires in Italy, as the fire can get out of control and spread into the surrounding forest vegetation, causing enormous damage to the ecosystem. The presence of the monitoring system, thanks to the smart cameras and gateways on the INWIT tower, allowed prompt intervention and serious consequences were thus avoided.

"Considering the many fires that have hit the Oases in recent decades, and the increased frequency of extreme events caused by climate change, it is important to plan ahead and focus on prevention to protect our precious biodiversity" says **Adriano De Ascentiis**, Director of the Calanchi di Atri Oasis.