

Wildfire Detection and Prediction AI

ANMD-MRS18-177 · Environmental AI Applications

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Wildfire detection and prediction AI spots ignitions early and forecasts fire risk and spread — combining camera-AI, satellite infrared, ground sensors and spread modelling. As climate change intensifies wildfire seasons, these systems deliver the early warning and decision support that limit catastrophic loss. This decision-grade study sizes the global market three ways — value, deployments and area monitored (hectares) — across detection technology, function and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Wildfire AI protects lives, property and forests and supports adaptation, while raising false-alarm and access-equity questions.

Mapped Sustainable Development Goals:

SDG 13 Climate Action	SDG 15 Life on Land	SDG 11 Sustainable Cities & Communities
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Measurable sustainability outcomes assessed:

- Faster detection and better risk prediction
- Reduced fire damage to communities and ecosystems
- Detection-reliability and false-alarm risk as a material risk
- Coverage equity and data-governance assessed

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

53 Chapters	9 Report Parts	7 Regions Covered	40+ Country Markets
2025–32 Forecast Horizon	4 Forward Scenarios	25+ Companies Profiled	3 SDGs Mapped

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. North America leads deployment; Europe scales on Mediterranean risk; Asia Pacific grows fastest; other regions assessed on their own merits.

- Early ignition detection and fire-risk forecasting
- Camera-AI, satellite IR, ground sensors and spread modelling
- Early warning and decision support that limit loss
- Detection reliability, coverage equity and governance as risks

MARKET OVERVIEW

From manual lookout to automated detection and prediction — where pairing rapid detection with spread modelling drives response value.

Wildfire AI is moving from manual lookouts to automated, multi-sensor detection and prediction. Demand is driven by intensifying fire seasons, utility liability and insurance pressure across North America, Europe and Asia Pacific. The market is read three ways — value, deployments and area monitored — and forecast under four scenarios, each region reported separately.

- **North America leads deployment** — the United States and Canada, supported by camera-AI networks, utility wildfire-liability programmes and agency adoption in the western US
- **Europe scales on Mediterranean risk** — Greece, Spain and Germany, anchored by Mediterranean nations facing intensifying fire seasons
- **Early detection plus prediction is the differentiator** — combining rapid ignition detection with spread modelling drives the response value single sensors cannot
- **Detection technology segments the value** — camera-AI, satellite IR, ground-sensor and spread-modelling designs, each with distinct economics

REGIONAL OUTLOOK

Across seven reporting regions, the report separates leading markets from high-growth and emerging ones — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Country Markets & Drivers
North America	Deployment leader	United States, Canada — regulation, funding, tech-vendor base
Europe	Mediterranean-risk-led	Greece, Spain, Germany — Mediterranean fire seasons
Asia Pacific	Fastest growth	Australia, Indonesia — bushfire & forest-fire risk
Latin America	Emerging	Brazil, Chile — forest and wildfire risk
Middle East	Emerging	Saudi Arabia, UAE — environmental strategy, sovereign investment
Africa	Frontier	South Africa, Kenya — conservation, climate adaptation, blended finance

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> • Intensifying wildfire seasons • Utility wildfire-liability pressure • Insurance & risk-pricing demand • Camera-AI & satellite-IR advances • Spread-modelling & response support 	<ul style="list-style-type: none"> • False-alarm & detection-reliability risk • Sensor-coverage & network cost • Prediction-uncertainty limits • Integration with response systems • Funding & public-good business models

SEGMENTATION SNAPSHOT

By Detection Technology	Camera-AI · satellite IR · ground sensors · spread modelling · prediction
By Function	Detection · risk prediction · spread modelling · response support
By Application	Detection · risk prediction · spread modelling · response support
By End User	Fire agencies · utilities · insurers · forestry · governments
By Business Model	Hardware sale · SaaS · data · managed service
By Scale	Pilot · deployment · enterprise / national-scale

TECHNOLOGY & APPLICATION FINDINGS

Where the category is differentiating fastest — the technology and application fronts that separate leaders from followers:

- **Detection** — camera-AI and satellite IR spot ignitions early across large landscapes
- **Prediction & spread** — modelling forecasts fire risk and spread to guide pre-positioning and response
- **Response support** — integrated platforms support agency and utility decision-making

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

Part II — Market Intelligence, Sizing, Forecasting and Segmentation

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- › Chapter 53. Reference Annexes

COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans camera-AI detection specialists, satellite-IR and sensor-network providers, and fire-spread-modelling innovators. Deal activity — utility and agency contracts, camera-network roll-outs and satellite partnerships — signals a market consolidating around multi-sensor detection and prediction.

Representative players profiled in the full report:

Pano AI, Inc. · Dryad Networks GmbH · ALERTCalifornia (UC San Diego) · OroraTech GmbH · Technosylva Inc. · and 20+ further profiled players.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a conditional investment view.

KEY QUESTIONS THIS REPORT ANSWERS

- How large is the global wildfire detection and prediction AI market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- Which technologies and methods reshape the addressable market and the cost curve?
- Who leads, and where is the competitive and patent white space?
- Is the investment case bankable — and under what conditions?
- How does the category align with the SDGs and disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate and natural-capital intelligence and a decision-ready bankability view in a single architecture.

- **Triangulated sizing** — every market read three ways so value, volume and the physical-unit views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

WHO SHOULD BUY THIS REPORT

Fire agencies, utilities, insurers, forestry, governments, investors and policymakers, and strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.