Korea Forest Service

2025. 11. 6.

Korea’s Forest Disaster Management Policy

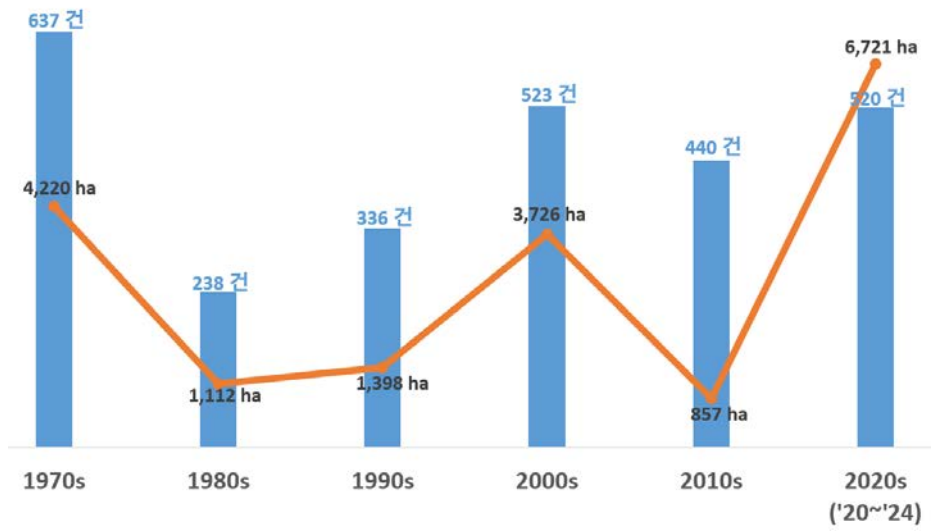
International Cooperation Division

LEE Youngji

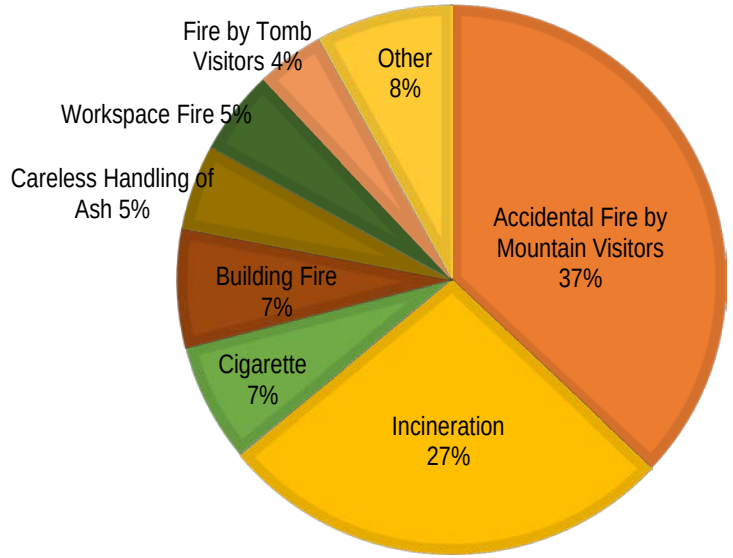
01 Forest Fire Status

- **Frequency of forest fires and scale of damage increasing due to climate change**
  - Annual occurrence (affected area): 440 cases, 857ha (2010s) → 520 cases, 6,720ha (2020-2024)
- **In Korea, most forest fires are caused by human activities**

Forest Fire Cases and Affected Area



Causes of Forest Fires (2015-2024)



01 Large-Scale Forest Fires in the Yeongnam Region, 2025

- **Damage in Ulsan, Gyeongbuk, and Gyeongnam (March 21-30)**
  - Casualties: 187 people (31 fatalities, 156 injured)
  - Facilities: 3,848 houses, 6,747 agricultural, forestry, and livestock facilities
  - Forests: 103,876 ha (26 times of past 10-year annual average 4,003 ha)

2025.3.21. Sancheong, Gyeongnam

2025.3.22. Uiseong, Gyeongbuk

02 Innovation in Forest Fire Prevention

▪ Strengthening Forest Entry Control

* Controling entry and closing mountain trails in high-risk areas during forest fire precaution period

– Increase of designation rate of access control zones* in mountains through regulation revision

* Designation rate: (current) 30% → (revised) 50%, up to 100% when warning level is "danger"

▪ Enhanced Management of Forest-Adjacent Areas

* Half of forest fires in Korea occur in forest-adjacent areas and spread to forests

– Strengthening inter-ministerial cooperation to prevent fires in facilities near forests

* (Defence) Standby of military helicopters at shooting ranges; (Agriculture) Installation of fire extinguishing facilities at farm huts, (Environment) Removal of hazardous trees near power facilities

– Support for shredding agricultural residues to stop burning practices in farm fields

* Shredded volume (thousand tons): 2022:13 → 2023: 21 → 2024: 166 → 2025 (plan): 201

Fire Suppression Facilities

▪ Prevention of Forest Fire Spread

– Allow emergency cutting in case of high spread risk without prior approval and simplify forest owner consent procedures

– Promote establishment of Safe Spaces in high-risk forests in residential areas

Safe Spaces to Protect Wildland Urban Interfaces

02 Innovation in Forest Fire Prevention

▪ Enhancing Public Awareness

* Most forest fires in Korea are caused by human activities

– Preventing negligent behavior through strict penalties and fines for forest fire-related violations

* Arson on others' forests (≥5 years imprisonment); Negligence (≤3 years imprisonment);
Smoking in forests (up to KRW 300,000)

– Raising public awareness and vigilance through media reports and diverse outreach channels

Public campaigns via university displays

Strengthened Penalties

Type	Current	Strengthened
Arson, Negligence	Imprisonment of 5-7 years	Imprisonment of **7-15** years
	Imprisonment up to 3 years or Fine up to KRW 30 mil.	Imprisonment up to **5** years or Fine up to KRW **50 mil**.
Fine	Up to KRW 2 mil.	Up to KRW **3 mil**.

Media report


의성·산청 산불도 '실화'…징역 또는 벌금에 손해배상 책임

박찬수 기자
업데이트 2025.03.25 오후 03:33

최근 5년 가해자 검거율 40%…최고 징역 12년 선고도
쓰레기 소각 53ha 태운 60대 징역 10개월·8000만원 배상금

03 Innovation in Forest Fire Response

- **Forest Fire Precaution Periods** * Spring: Feb. 1–May 15; Autumn: Nov. 1–Dec. 15
  - – Concentrated deployment of personnel and resources during Forest Fire Precaution Period
  - – Regional Forest Fire Danger Warnings* issued for effective response based on topography, forest type, and weather conditions

    * Four risk levels of Forest Fire Risk Index: Attention (<51), Caution (≥51), Alert (≥66), Danger (≥86)

- **Building an Advanced Multi-Layered Surveillance System**
  - – Ground: About 1,446 forest fire CCTVs, linked with AI for automated detection

    * Real-time AI video analysis of CCTV footage for forest fire identification and automatic alerts to authorities
  - – Aerial: Utilization of thermal imaging drones, drone monitering teams, and Agroforestry Satellite (scheduled for 2026) to cover blind spots in forest fire surveillance

Forest Fire CCTV

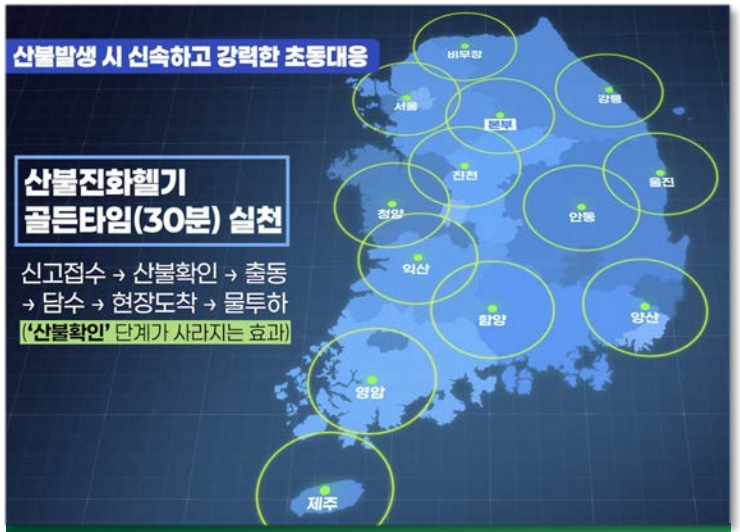
Automated Detection Using AI

Detection of Fire Lines Using Thermal Imaging Cameras

03 Innovation in Forest Fire Response

- **Reinforced Initial Suppression System**
  - – Initial Response: Immediate dispatch of suppression helicopter upon report during large-scale fire (golden time: 30 min)
  - – Training: Integrated forest fire suppression training with all relevant agencies (22 October)

    * Participants: Korea Forest Service, National Fire Agency, Military, Police, Korea Heritage Service, Korea Meteorological Administration, Chungnam Province



Golden Time: 30 min

Integrated Suppression Training

Forest Fire Prevention and Suppression Team

03 Innovation in Forest Fire Response

- **Aerial Suppression Resources: 205 Firefighting Helicopters**
  - KFS: 50 helicopters; lease by local governments: 78 helicopters, other agencies (including Military, Fire Agency, Police): 77 helicopters

Model / Description	Large (7)	Medium (32)		Small (11)	
	S-64E (7)	KA-32 (29)	KUHC-1(3)	Bell-206 (7)	AS-350 (4)
					
Country (Manufacturer)	USA ERICKSON	Russia KumAPE	Korea KAI	USA BELL	France EUFOCOPTER
Passenger	5	18	14	7	6
Max Speed with Water Tank	213 km/h	148 km/h	259 km/h	161 km/h	148 km/h
Duration of Flight	150 min	160 min	180 min	200 min	200 min
Water Capacity	8000 L	3000 L	2000 L	600 L	800 L

03 Innovation in Forest Fire Response

▪ Ground Suppression Resources

– Suppression: 495 Special Suppression Team for Forest Fire Disasters Personnel (→ 2026: 555)

– Vehicles: 347 Command vehicles, 1,477 firefighting vehicles, high-performance firefighting vehicles, 64 multipurpose firefighting vehicles (→ 2026: 72)

– Facilities: 148 Forest Fire Response Centers, 1,755 Portable Pumps, 45,751 sets of Hand Tools & Backpack Pumps

High-performance Firefighting Vehicle

Forest Fire Response Center

Firefighting Vehicle

Multipurpose Firefighting Vehicle

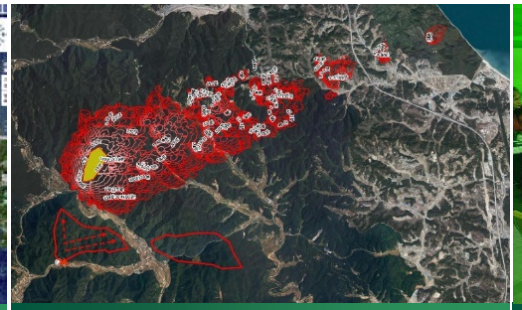
Special Suppression Team for Forest Fire Disasters

04 Rapid and Effective Forest Fire Response

- **Prompt Fire Reporting**
  - – Forest fire patrol reporting terminals, Smart Forest Disaster Application, emergency call (e.g., 119) → linked to Forest Fire Situation Control System
- **Forest Fire Situation Control System**
  - – Location of 200,000 facilities (critical and fire-prone infrastructure) → fire suppression strategies
  - – Forest fire spread prediction based on wind direction&speed, topography → evacuation guidance for local residents * Preemptive evacuation plans and protection peasures for key facilities in vulnerable areas
- **Integrated Command Headquarters of Forest Fire Field**
  - – Coordination among KFS, National Fire Agency, Korea Meteorological Administration, military, police, and relevant agencies: strategy meetings and establishment of suppression plans on-site


Forest Fire Situation Control System


Suppression Strategy Map


Spread Prediction Map


Integrated Command Headquarters

Korea Forest Service

Forests for People, People for Forests

Jeju Nokkome Oreum Volcanic Cone