

Wednesday, 19 March 2014

Forest Fire Management Policy of Korea



Forest Fire Prevention and Control Division

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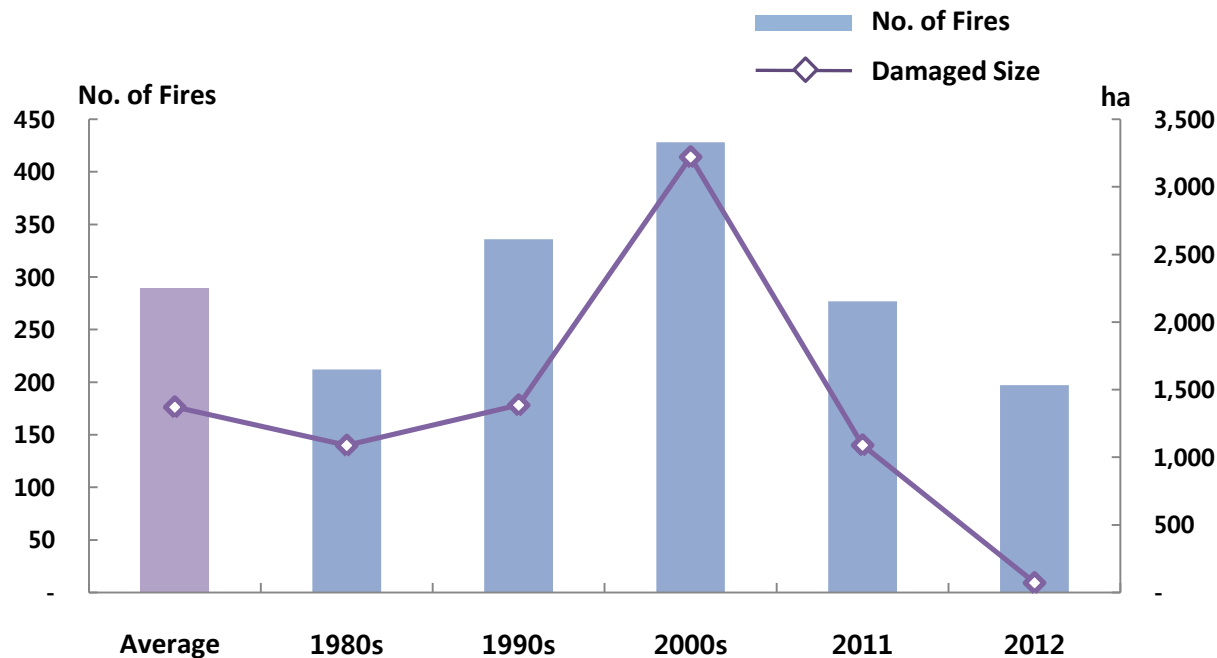
V. Enhancing International Cooperation

I . Status of Forest Fire

Annual Fires

- **389 fires** of annual average, **776ha** of burned area
- The number of the outbreaks and damaged size vary depending on the weather conditions.

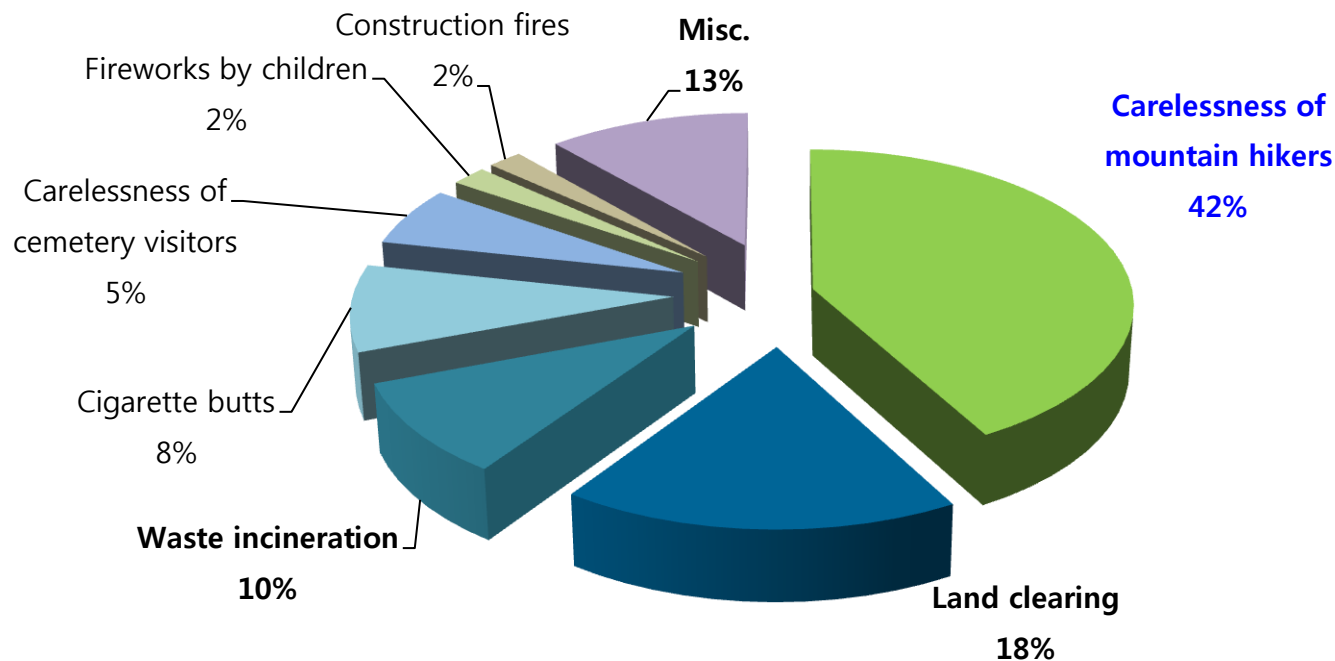
* Forest fires continuously increased until 2000s, but the outbreaks have been decreasing thanks to operational optimization of expanded resources since 2010.



I . Status of Forest Fire

Causes of Forest Fires (2004-2013)

- Most fires are caused by the **carelessness of people**



I . Status of Forest Fire

Topography

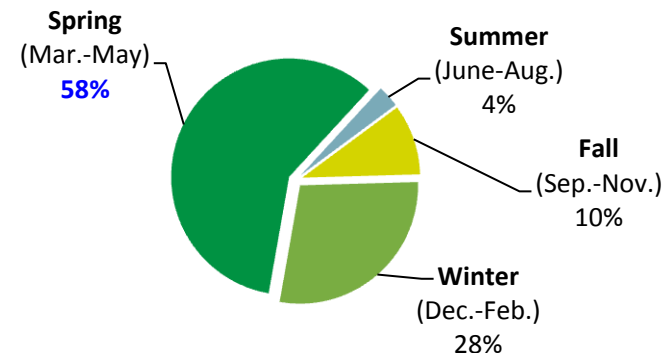
- **Forest covers 64% of the land** (forest area: 6.38 mil. ha)
- **Forest land is mostly mountainous, curved, and steep**

Forest

- **44% of the forest is made of pine forests which are highly flammable**
 - **59% of the dense forests are composed of trees that are more than 30-year-old**
- ※ **Changes in Growing Stock:** (1980) 22 m³/ha → (1990) 38 m³/ha → (2000) 63 m³/ha → (2010) 126 m³/ha

Weather

- **Forest fire season: November to May**
 - **The most dangerous period: March to May**
- ※ **9% of annual rainfall(1,328mm), strong seasonal wind**



< Ratio of fire outbreak by season >

II. Policy on Forest Fire

Goal

To minimize fire damage using practical prevention, early report, and initial attack

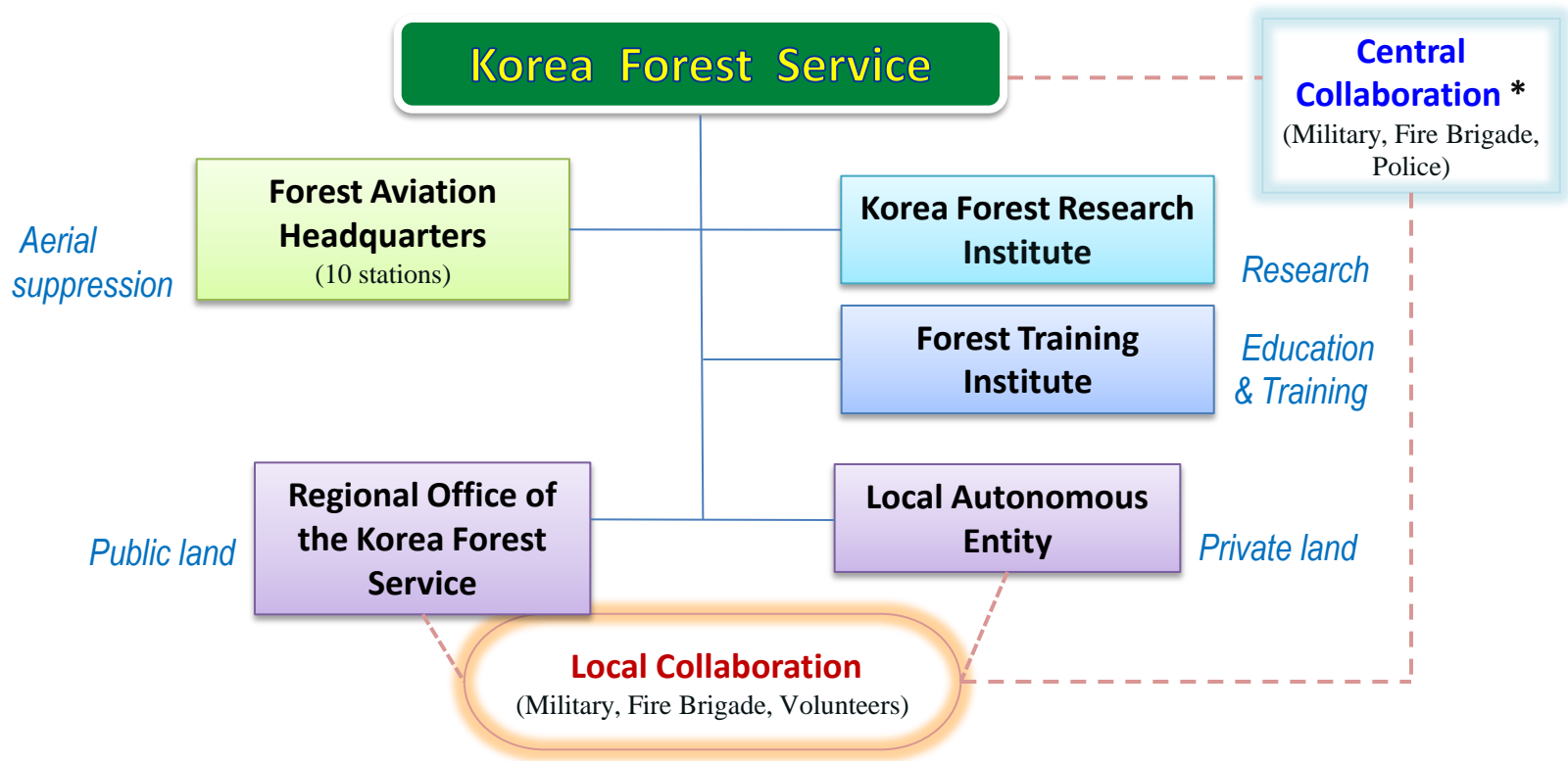
Strategy

- ◆ To reduce fire outbreaks through practical preventions
- ◆ To provide early fire reports by using high-tech IT system
- ◆ Initial attack by KIICS, 30 min.' AH, and KMPS

* KIICS : Korea Integrated Incident Command System, AH : Arrival of Helicopter, KMPS : Korea Mountain Pumping System

II. Policy on Forest Fire

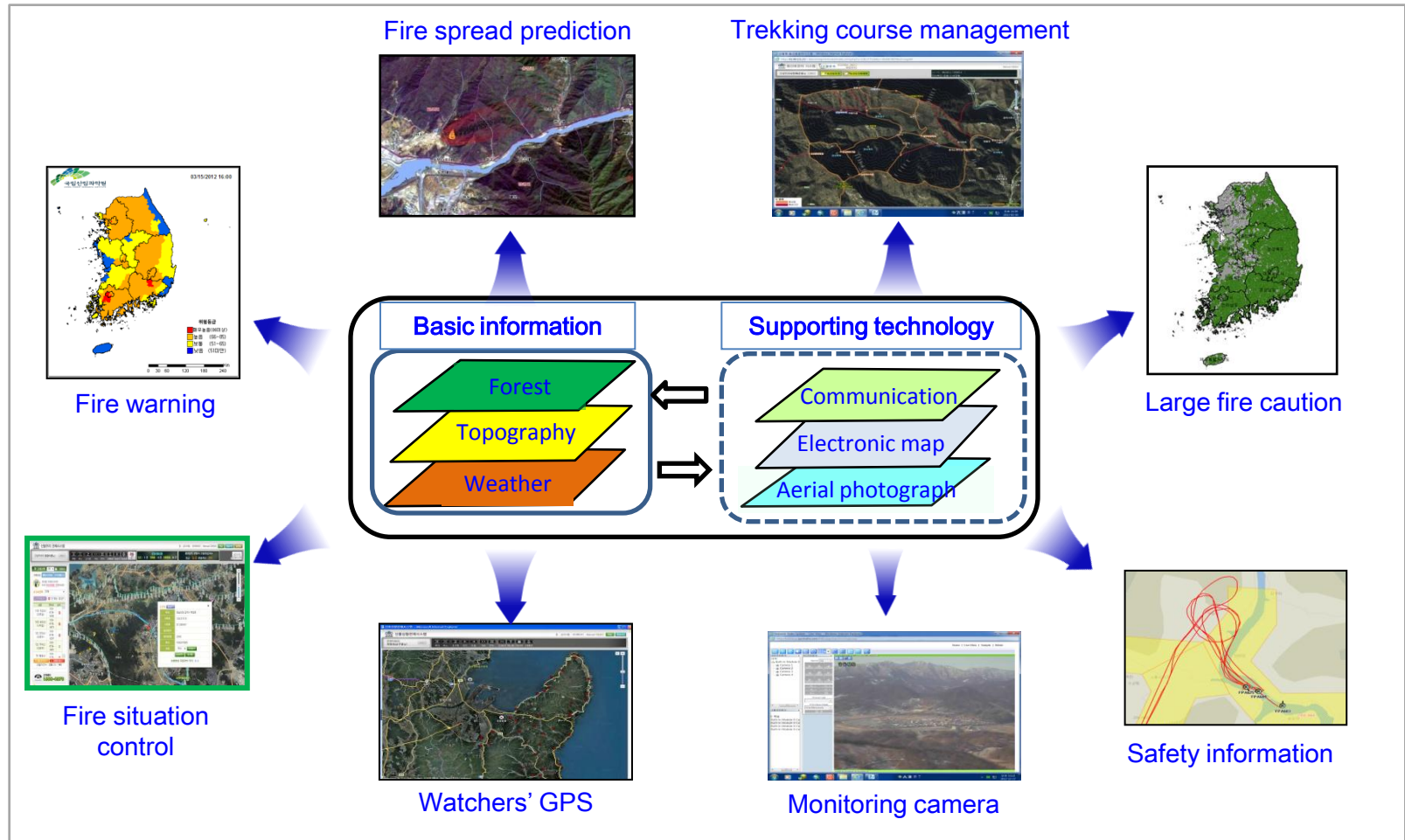
Organization for Forest Fire Control



*** 7 Related Government Departments administering Joint Regulations:** Korea Forest Service, Ministry of National Defense, Korea National Park Service, Cultural Heritage Administration, National Emergency Management Agency, National Police Agency

II. Policy on Forest Fire

Fire Management System



III. Forest Fire Prevention Strategy

Admission Control of Trekking Courses and Forests

- Close trekking courses up to 50%
- Restrict access to fire-vulnerable forests up to 30%

Nationwide Fire Watchers

- 22,000 fire watchers are hired during fire season
- Fire watchers patrol vulnerable areas
- Fire watchers report occurrences of fire using GPS

Early detection

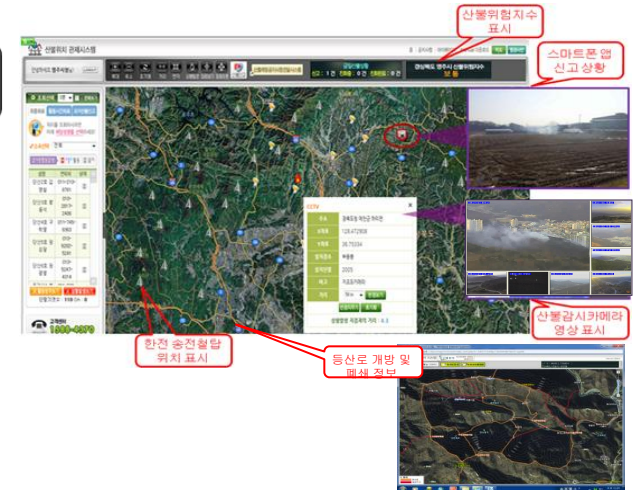
- 1,024 cameras to surveil fires up to 10km distance
- 2,600 Hiker's checkpoint guides, 2,545 observation post



III. Forest Fire Prevention Strategy

Integrated Fire Situation Management System

- Fire danger forecast + trekking course information
+ watcher's GPS + fire location report + SMS
+ Smartphone App + location of High-voltage line



Removal of Burnable Materials Near Forests

- Remove agricultural wastes of farms near forests
- Forest tending around valuable natural and cultural heritages.

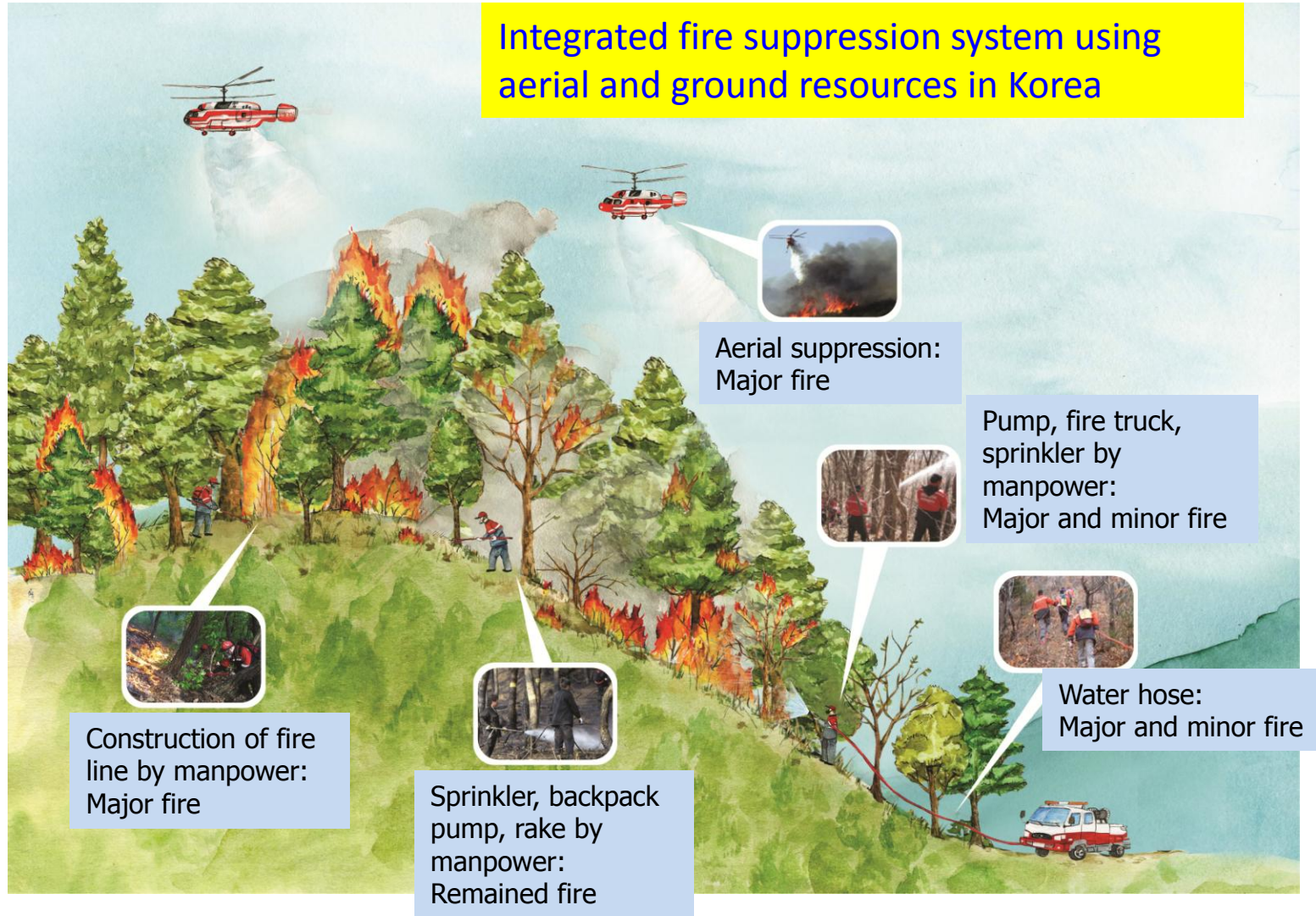


Water sprinkler establishment

- **Water sprinkler system** is established to protect valuable natural and cultural heritages.



IV. Forest Fire Suppression Practice



IV. Forest Fire Suppression Practice

Integrated Incident Command System

- A mayor/governor of the region or a chief of the national forest station commands the incident and gives missions to agencies
- ※ Military (suppression support), Fire Brigade (facility protection), Police (traffic control)



Video Transmission System

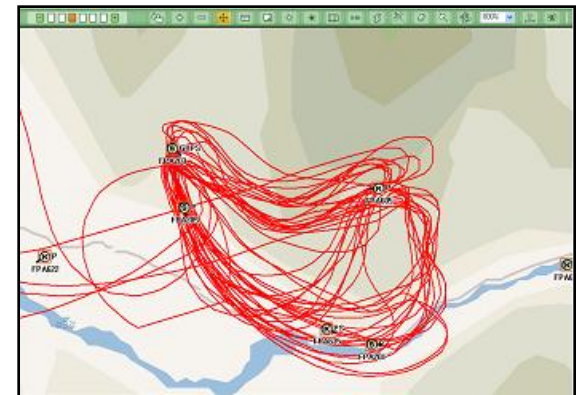
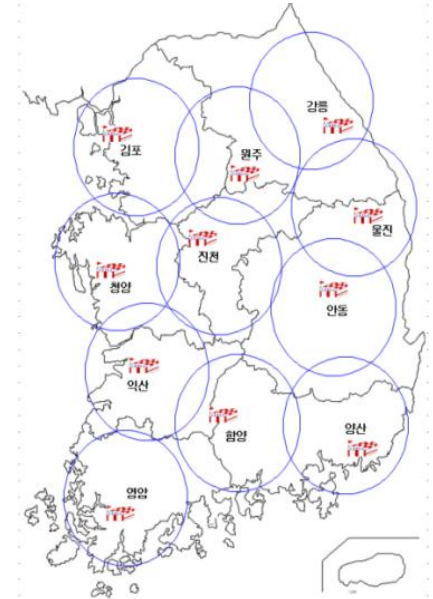
- Helicopters and ground crews are efficiently dispatched with the Real-time video transmission system.



IV. Forest Fire Suppression Practice

Aerial Firefighting

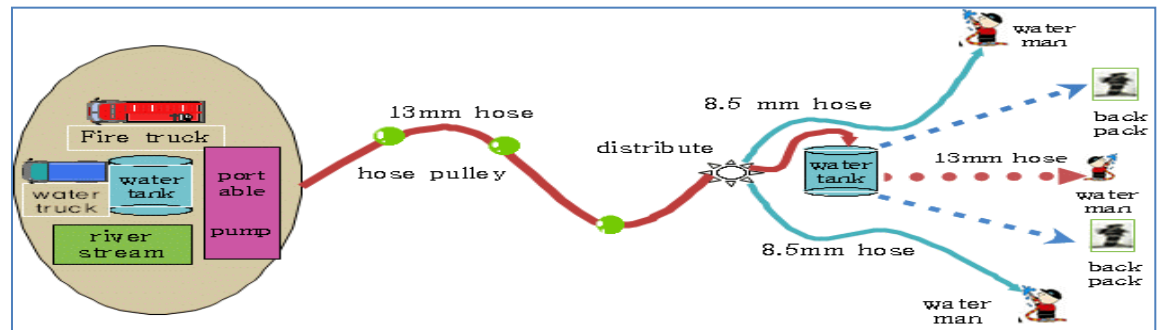
- **Forest Aviation Headquarters** were established in 1971 with 3 helicopters.
 - 42 helicopters in 10 aircraft stations as of 2014.
 - No. of helicopters will increase from:
(2013) 42 → (2017) 50
- **Arrival of helicopter** to the scene **within 30 minutes** nationwide
 - No. of aircraft station will increase from:
(2013) 10 → (2017) 14
- Operation of **Aerial Navigation System** to prevent safety accidents



IV. Forest Fire Suppression Practice

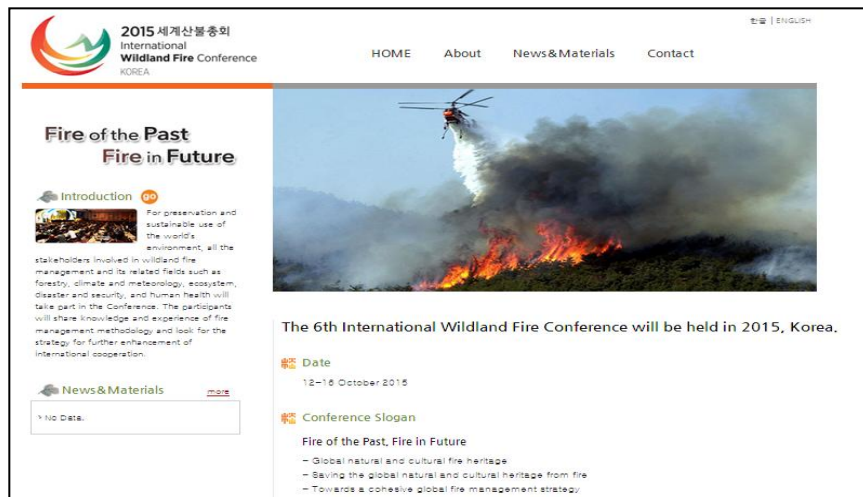
Ground Firefighting

- Organizing mechanized units using **KMPS** to supply water at the fire scene.
 - ※ KMPS : Korean Mountain Pumping System
- Strengthening manpower by operating training and education system through visitation.



V. Enhancing International Cooperation

- Established the Northeast Asia Wildfire Network in 2004
- Coordinating the Pan-Asia Wildland Fire Network to share Asian countries' experiences and to exchange the state-of-the art knowledge
- Hosting the 6th International Wildland Fire Conference (IWFC)
 - Theme: Fire of the Past, Fire in Future
 - Date: 12-16 Oct. 2015
 - Venue: Alpensia Convention Centre, Pyeongchang, Korea



2015 세계산불총회
INTERNATIONAL
WILDLAND FIRE CONFERENCE
PYEONGCHANG, KOREA
Fire of the Past
Fire in Future

<Logo>

Website – <http://www.wildfire2015.kr>

Thank you

