

**BUSINESS
FINLAND**

SMART ENERGY

Fire Smart

FINLAND



SPECIAL KNOW-HOW ON FIRE SMART

- Sustainable forest management involves forest owners and industries
- Smart forestry methods decreases risk of fires
- Forest residuals are utilized in the energy production
 - high risk biomass is removed to produce energy or pulp
 - Residual removal decreases the risk of forest fires



SPECIAL KNOW-HOW ON FIRE SMART

- Systematic model to collect information about risks and fires
- Preventing forest fires is efficient in Finland. This includes fast detection and elimination
- Forest-fire warning system and index by Finnish Meteorological Institute
- Flight supervision on risky days

FINNISH FIRE SMART

PREVENTING FIRES

- Climate Smart Forestry (planning, thinning, harvesting, collecting residuals)
- Mapping critical forests
- Planning preventive actions
- Fire pre-warnings for public

EMERGENCY PREPARATIONS

- Mapping critical forests
- Planning and executing preventive actions
- Climate Smart Forestry (thinning, harvesting, collecting residuals)

EARLY DETECTION

- Quick action models
- Physical detections: flights, drones, people
- Digital detections: satellite, web cams

FIRE MANAGEMENT

- Controlling and extinguishing fires
- Human and infra safety
- Digital platform to collect and analyze data: improve the efficiency of value network

POLICY DEVELOPMENT

- Co-creation

UTILISATION OF RISKY BIOMASSES

- CHP
- Bio coal
- Advanced bio fuels
- Bio gas
- New bio products

HOW TO UTILIZE RISKY BIOMASS: COMPANIES

some examples

- Ariterm
- Biofire
- BMH
- Ecomond
- Efirec
- Ferroplan

- KPA Unicon
- Raumaster
- Saalasti
- ST1
- Valmet
- Volter