



SPARKING FIREWISE POLICIES

Projects For Policy (P4P)

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Impact of wildfires in the EU in the period 2000-2017

- Environmental losses: **8.5 Million ha** burned, approx. 480.000 ha/ year
- Human losses: **611** firefighters and civilians killed
- Economic losses: over **54 Billion Euro**, approx. 3 Billion Euro per year.

Under A1B scenario, economic impacts for Portugal, Spain, France, Italy and Greece may increase to over 5 Billion Euro per year by 2070-2100.

Source: EFFIS, PESETA II project

POLICY CHALLENGES FOR FOREST FIRES

Promoting resilient landscapes and communities through Integrated Fire Management in the EU

Shifting the focus from suppression to prevention and increasing the awareness and preparedness of populations at risk

Developing synergies between EU and national policies to improve wildfire risk management

Promoting effective science-based forest fire management and risk-informed decision-making

Improving firefighting and rescue capacities of first-responders in crisis management

EUROPEAN POLICY AREAS

Environment, Climate, Agriculture and Rural Development

EU Forest Strategy, Common Agricultural Policy

EU Climate Adaptation Strategy

EU Habitats Directive, EU Biodiversity Strategy

Jobs, Growth and Investments

European Regional Development Fund

Cohesion Fund, Horizon 2020, LIFE+

EU Bioeconomy Strategy

Civil Protection

Union Civil Protection Mechanism (rescEU)



20 YEARS OF EU FOREST FIRE RESEARCH

100 million Euro invested in about 60 forest fire-related R&I projects



➤ **ADVANCING OUR SCIENTIFIC UNDERSTANDING**



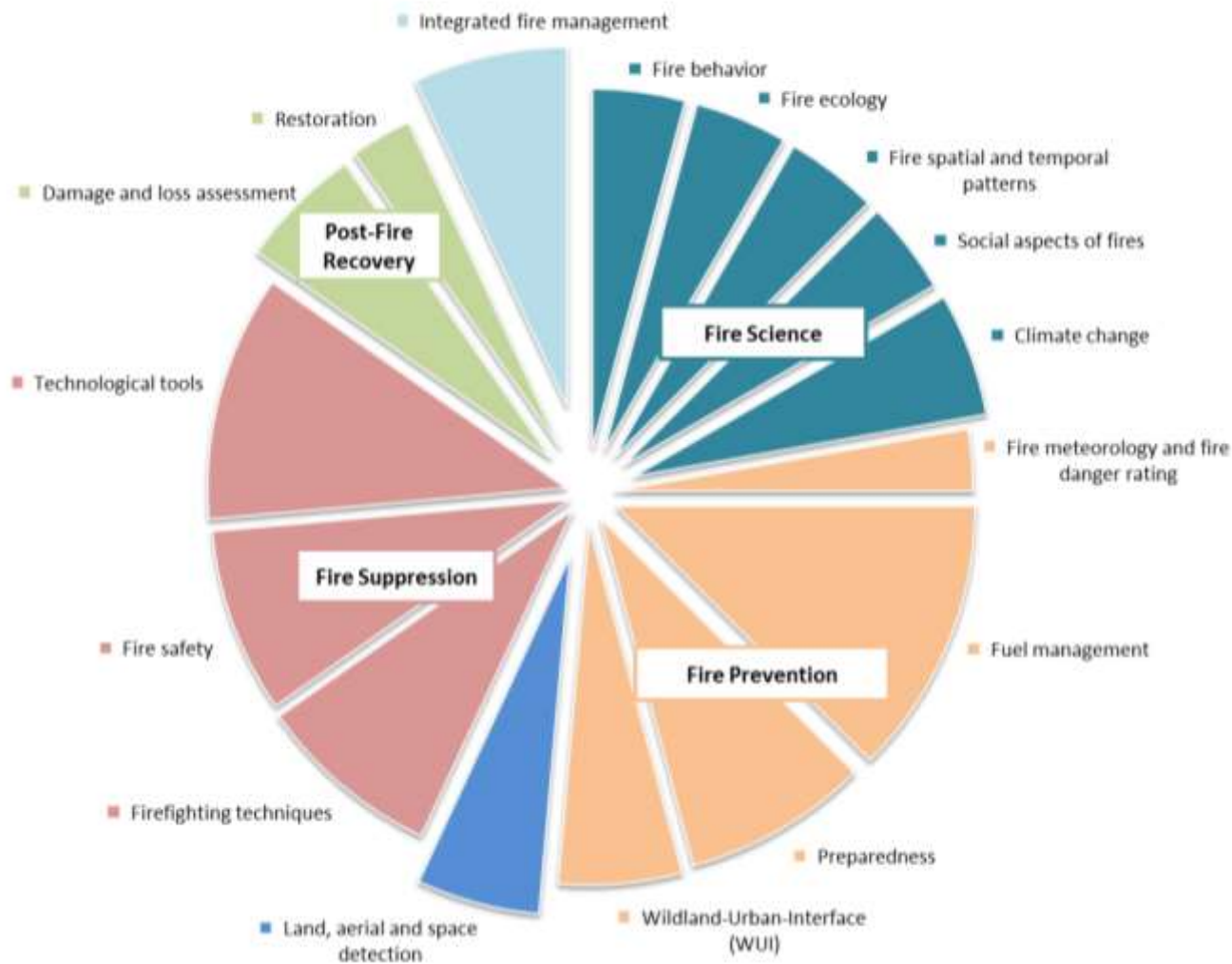
➤ **SUPPORTING OPERATIONAL MANAGEMENT**



➤ **BETTER-INFORMED DECISION-MAKING**

PORTFOLIO OF R&I PROJECTS

Forest fire research thematics



ADVANCING OUR SCIENTIFIC UNDERSTANDING

how forest fires are changing in time and space

- Trends in fire frequency and burned area in southern Europe are not following those of climate change, suggesting the importance of country-level structural factors (FIRE PARADOX, FUME, GRADIENT)

how ecosystems respond to fire

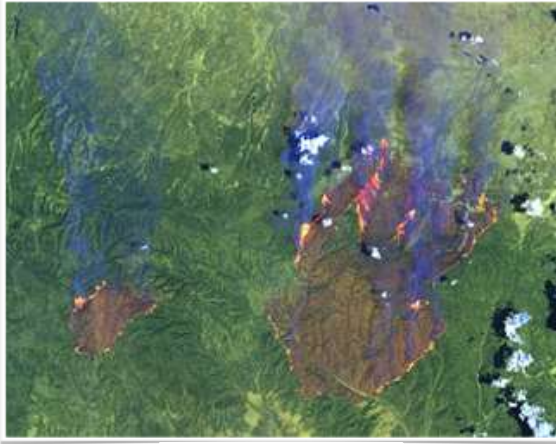
- shifts in vegetation dominance (from *Pinus* to *Quercus* species) may occur as a result of one fire owing to past management practices (FUME, FIRESCAPE and FILE)



how the climate will change and will affect future fire conditions

- vegetation-fire models and climate scenarios indicate that changes in land use and land cover affecting forest productivity may constrain fires where these are prevalent today (e.g., Iberian Peninsula) and that other areas such as Eastern Europe, may become a fire hotspot under unabated climate change (EARLYHUMANIMPACT, FUME, HESFIRE)

SUPPORTING OPERATIONAL MANAGEMENT



How to detect a forest fire in the initial stage

- projects contributed to reducing the high rate of false alarms typically associated with these systems through the development and use of appropriate sensors and algorithms (FIRESENSE and ODS3F)



how to develop special firefighting techniques

- Strategic Management Points enable reducing fire spread speed and intensity while ensuring a secure point for firefighters (LIFE DEMORGEST)

how to improve fire resistance and resilience in highly fire-prone systems

- A toolbox (MOTIVE) for adaptive forest management under climate change contributed to equip forest managers with methods for strategic forest management planning

BETTER-INFORMED DECISION-MAKING

how to cope with more severe forest fires in Europe

- fire risk communication toolkit and specific assistance to national civil protection authorities (FIRELIFE and eFIRECOM)

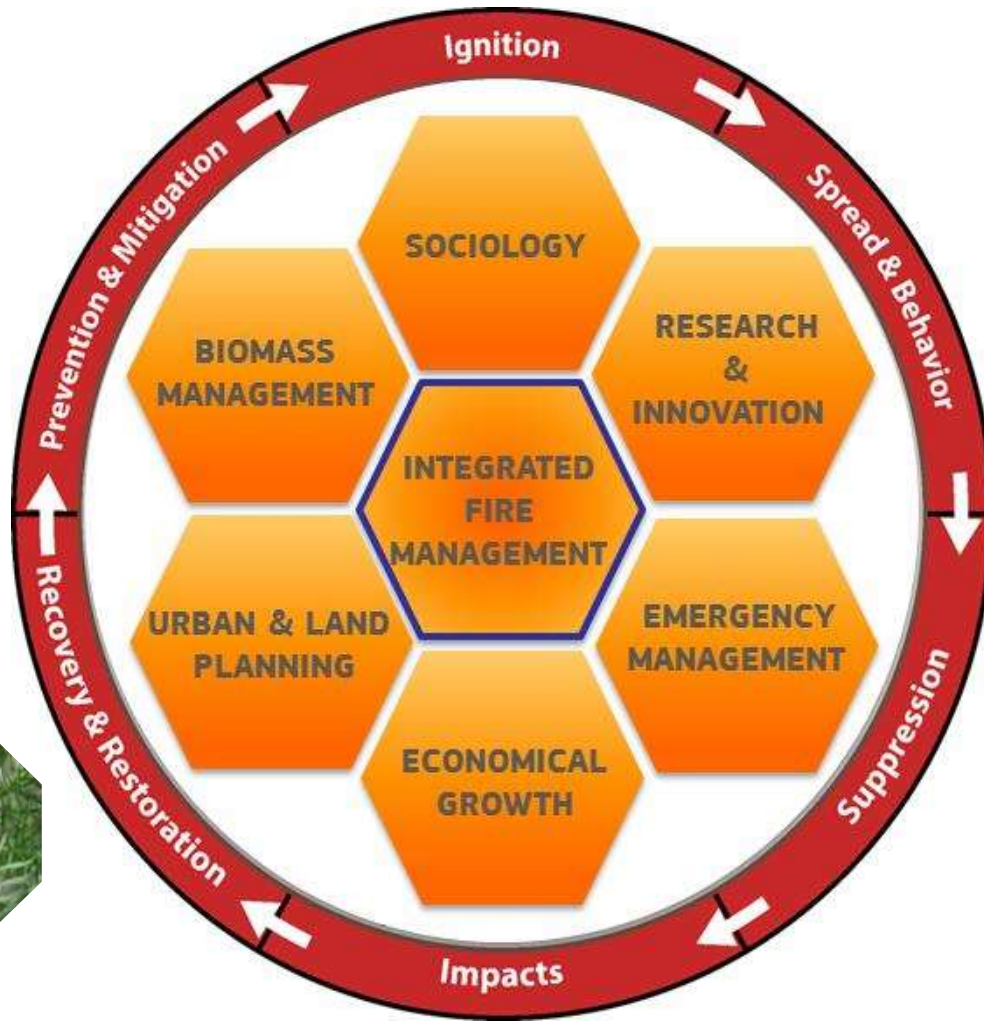


how to estimate wildfire risk probability and severity at different scales



- geospatial methodology to classify forest vegetation into fuel types in Europe and map them (ArcFUEL) This methodology, based on EFFIS classification, allows production of reliable and accurate estimations of wildfire spread and behaviour for improved decision-making

INTEGRATED FIRE MANAGEMENT



Policy recommendations

General Recommendations

- promote knowledge exchange and dissemination through a common repository of research projects.
- further develop bioeconomy value chains as a mean to overcome current forest management barriers (e.g. fragmented ownerships)
- enhance citizen awareness through targeted education curricula, and change perception of the risk to increase citizen preparedness and engagement in fire management/governance

Integrated Forest Fire Management

- focus should be shifted from fire suppression to prevention, emphasizing territorial policies (planning, rural development, energy policy),
- Need to train and manage multidisciplinary teams of fire specialists while enhancing communication between all players
- build capacity and resources towards the adaptive management of burned areas

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Thank you