

8TH INTERNATIONAL WILDLAND FIRE CONFERENCE

GOVERNANCE PRINCIPLES:

Towards an International
Framework

Porto - Portugal | **May 16-19th**, 2023

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Fire Analysis Cell

Portuguese methodology for operational decision support for rural/forest fires

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Summary

Fire Analysis Cell

Portuguese methodology for operational decision support for rural/forest fires



1. Importance of **wildfire analysis**
 - i. **Before:** Anticipate scenarios
 - ii. **During:** Capacity for analysis of the ongoing situation
 - iii. **After:** Lessons learned
2. How to implement fire analysis?
3. **Portuguese case** - Use of Fire and Analysis Group (GAUF)
4. The importance of the relationship between science and operation
5. Concept



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Importance of fire analysis

Before | During | After



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Why is it essential to implement fire analysis in the operation?



Source:: FEPC (Garrocho/Portugal 2022)



The same answer ???



Different phenomenon

- More intense and faster
- More extreme events



Scenario Changed

- Larger and more available territories
- Drier fuels
- More periods with severe weather

More resources
VS
qualified resources

Investment in fire analysts

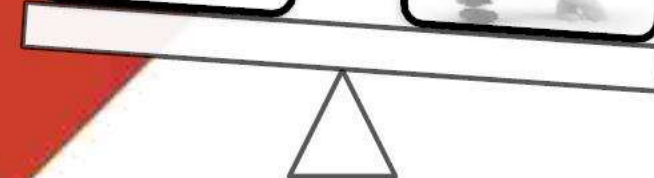
investment in airplanes

????



investment increase

Efficiency?



How to implement fire analysis?

Different **levels of analysis** presuppose different profiles of analysts

A TEAM is needed



Predict fire behaviour

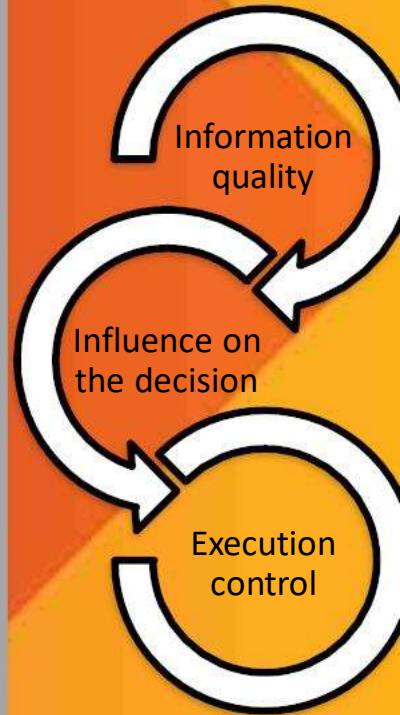
It foresees the development of the scenario, without intervening directly in the operation

National | Regional

Dimension

Strategic

Assumption



Commitment to the operational decision

Tactical Proposals



Incident Commander

Tactical



intervenes in the maneuver

- task coordination
- Use of technical fire

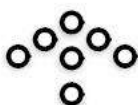
into operations

Maneuver



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The **Fire Use and Analysis Group (GAUF)** is composed by 28 specialists in analysis and use of technical fire, members of the Special Civil Protection Force. All of them are trained in prescribed burns and fire suppression.



NAD-AIR

- Strategical and a Tactical Analysis
- Tactical proposals



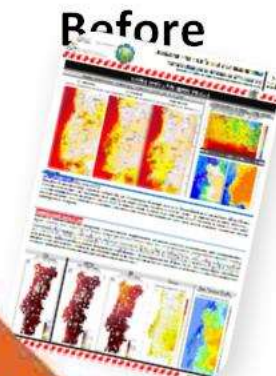
AVRAC

- Near real time image and data transmission
- Direct articulation with NAD-AIR
- Fire analysis and information share



EAUF

- Direct articulation with the incident Commander
- Analyze wildfire and suggests the strategic plan of action
- Plan and execute suppression tactics using technical fire



Strategic Operational Analysis



Daily briefing at the National Command

During



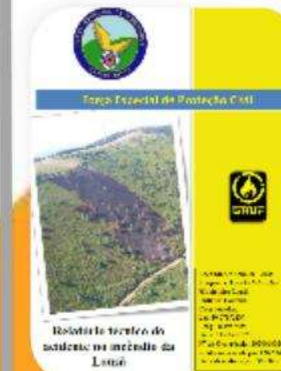
Operational Information to Incident Commander



fire spread simulation



After



Technical Report



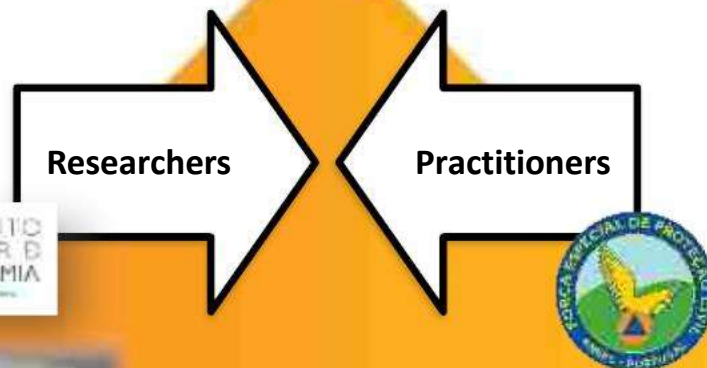
Internal lessons learned



Training

Portuguese case

Use of Fire and Analysis Group (GAUF)



What happens when decision support resources only appear when there is an emergency?

Contact with all agents and focus on development must be constant



Operational dynamics

- **Researcher working in the analysis cell**
- **Operational instructions for all agents**
- **Prescribed Burn with firefighters**

Fire analysis products

- **Types of meteorological products in articulation with the IPMA**
- **Strategic Operational Analysis**
- **Co-creation with of risk maps and new prediction parameters (research)**

Creation of decision support tools

- **Common platform for wildfire analysis and management**
- **Wildfire energy released dashboard**
- **Fire simulator**

Develop knowledge about the phenomenon

The Portuguese Large Wildfire Spread Database (PT-FireSprd)

Concept

Translate complex information to operational language

Expecting the best development and technical analysis without guaranteeing basic needs is a utopia.



✓ Communication tools and common language

✓ Better definition of the analyst in the operations management system

✓ Legitimacy of the function in the legislation

✓ Adequate salary remuneration

✓ Legitimacy of the function in the legislation

✓ Career

✓ Selection of human resources

✓ Multidisciplinary education and training

✓ Constant relationship with scientific researchers

✓ Technological update

✓ Operational experience

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