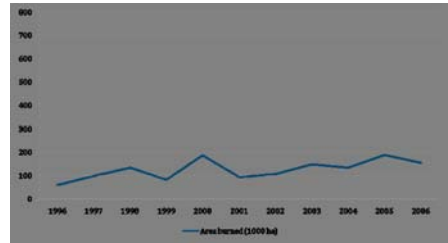


# Evaluation of economic efficiency of fire prevention

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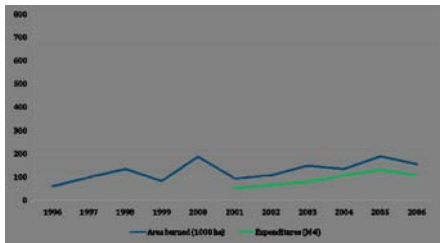
## Looking for a solution



Source: MMA, 2008



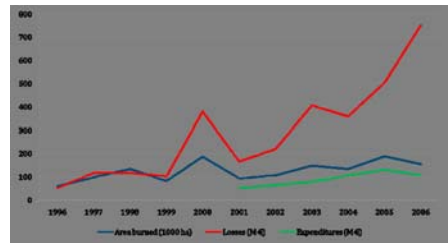
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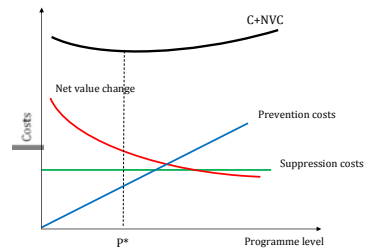
## Fire prevention

Fire prevention includes a set of measures with the objective to **reduce** the probability of **fire occurrence** or to **limit the effects** of a fire (Velez, 2003).



## Economics of forest fires

Model C+NVC (diff. authors)





## Economic efficiency of fire prevention

- **Economic efficiency** - measures the total contribution of the investment on society's welfare (all inputs and outputs are valued).
- **Cost efficiency** - measures how well the inputs in a production process are used to produce a fixed set of outputs.



## Economic efficiency evaluation

	Alternative 1	...	Alternative n
Prevention	$P_1$	...	$P_n$
Suppression	$S_1$	...	$S_n$
Damages	$D_1$	...	$D_n$
Total	$T_1$	...	$T_n$



## The questions are...

- Which type of measures and resources?
- How much?
- Where?
- How to apply them (organization)?

### and ...

- Considering limited resources!!!



## Before we can answer these questions

- the impacts of forest fires on the spatial and temporal provision of goods and services (e.g. how the quality and quantity of a good or service is affected and for how long);
- the potential effect of the changes caused by forest fires on society's wellbeing (e.g. what is the value of the losses);
- the impact of fire prevention measures on risk, extent and severity of forest fires.



## What else (I)?

- **identification of current prevention and fire management programmes and expenditures**,
- evaluation (quantitative and qualitative) of current prevention programmes (also using successful examples from other regions -> extremely difficult to change habits)
- learn about the effects and effectiveness of different prevention measures,
- identify the public perception, and foster public participation and support for the prevention programmes,



## What else (II)?

- planning of fire prevention and fire management should become an integral part of the natural resource management,
- raising public awareness about the consequences of forest fires and the costs they cause,
- justify the expenditures of current and new fire prevention programmes,
- **re-evaluation of prevention programmes**.



### **But consider...**

Efficiency analysis of fire prevention measures is only a supporting tool that can help the decision maker to take decisions based on unbiased information...



**THANK YOU!**

