



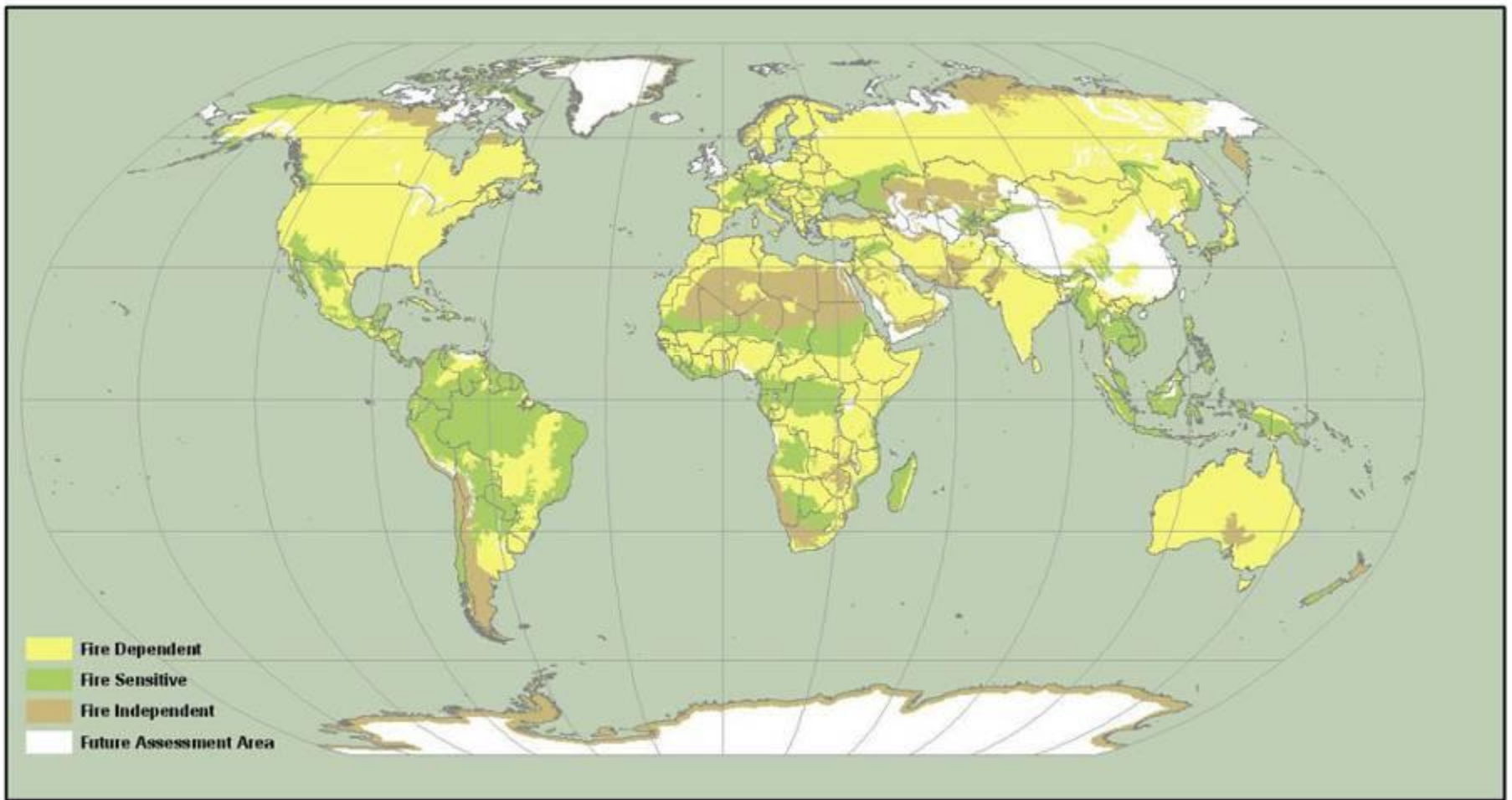
Fire: The Ecological Imperative

Dr. Joe O'Brien, USDA Forest Service, Southern Research Station

For most of the history of terrestrial life, fire has been the ecological imperative



Fire affects almost every terrestrial ecosystem in one way or another



Most Florida Vegetation is *Fire Dependent*



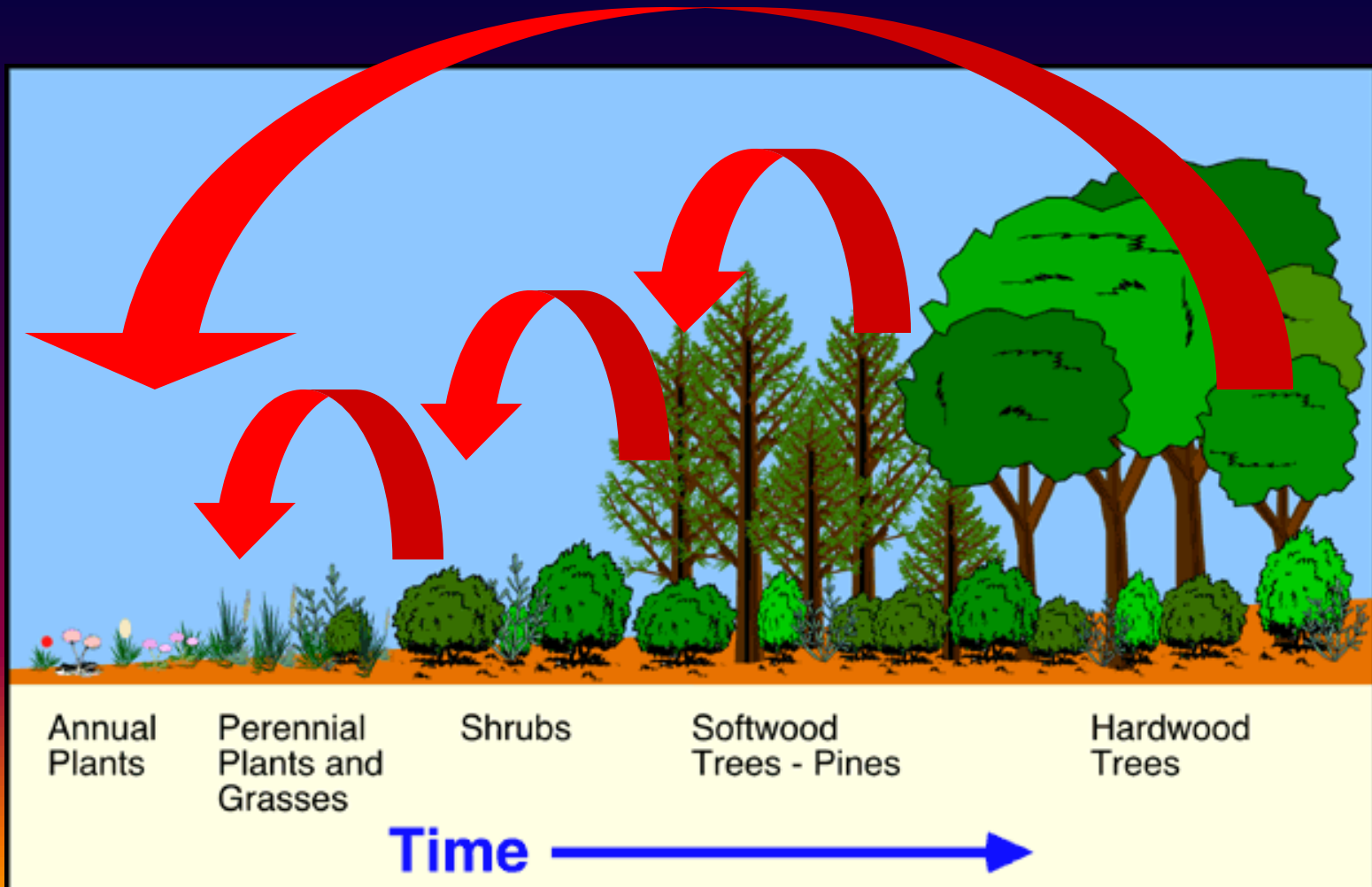
Florida has diverse fire regimes:



What are Fire Dependent Ecosystems?



Fire arrests succession.

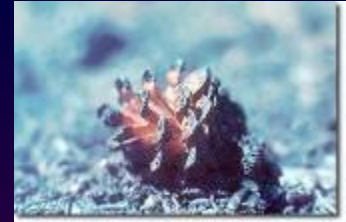


What does fire do?



Fire Adaptations (or Lack Thereof) Affect Competition

Fire Tolerant

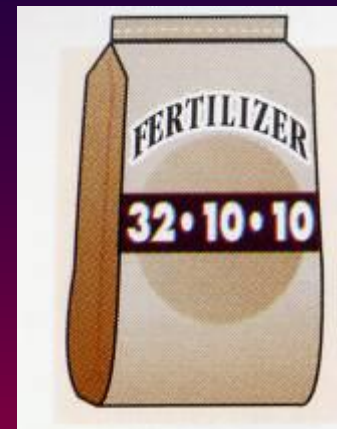


Fire Sensitive





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Frequent Fire = High Biodiversity

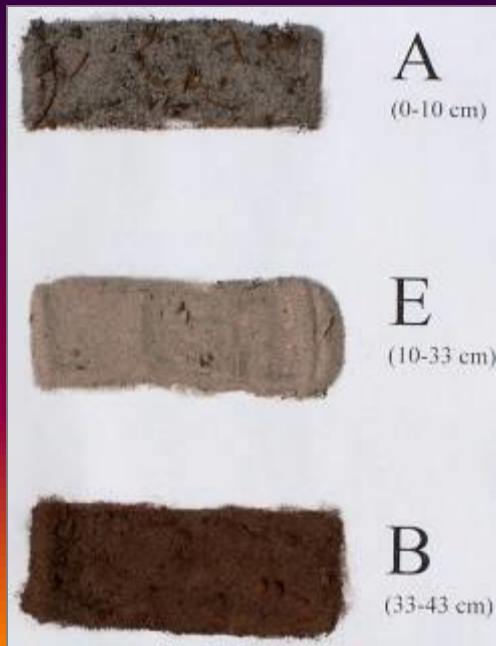




Carbon Sequestration

- Frequent Fire Builds Fire Safe Carbon Pools

Protected



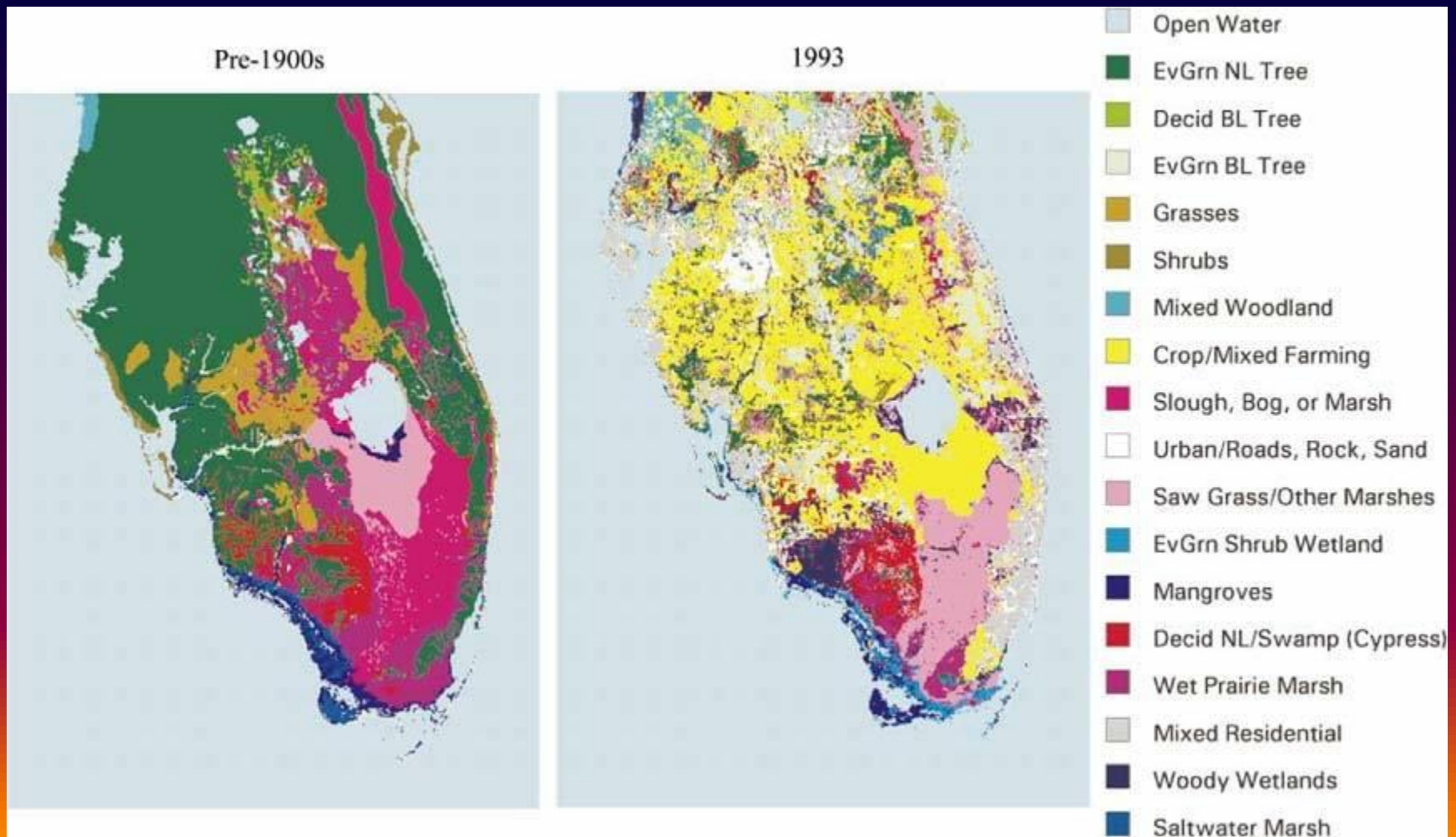
At Risk



Frequent Fire keeps Fuels in Check



Fire Management in the Contemporary Landscape



Habitat Fragmentation



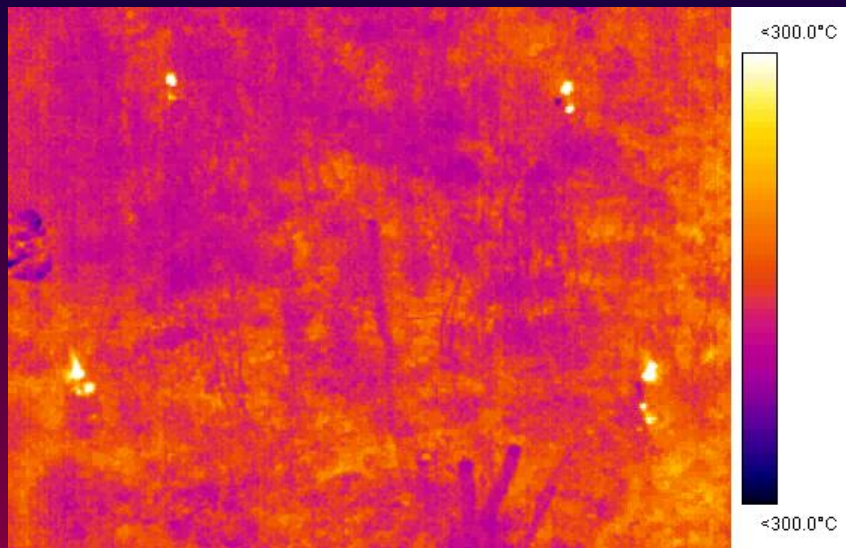
Smoke



Fire-Atmosphere Interactions



Fuel Arrangement



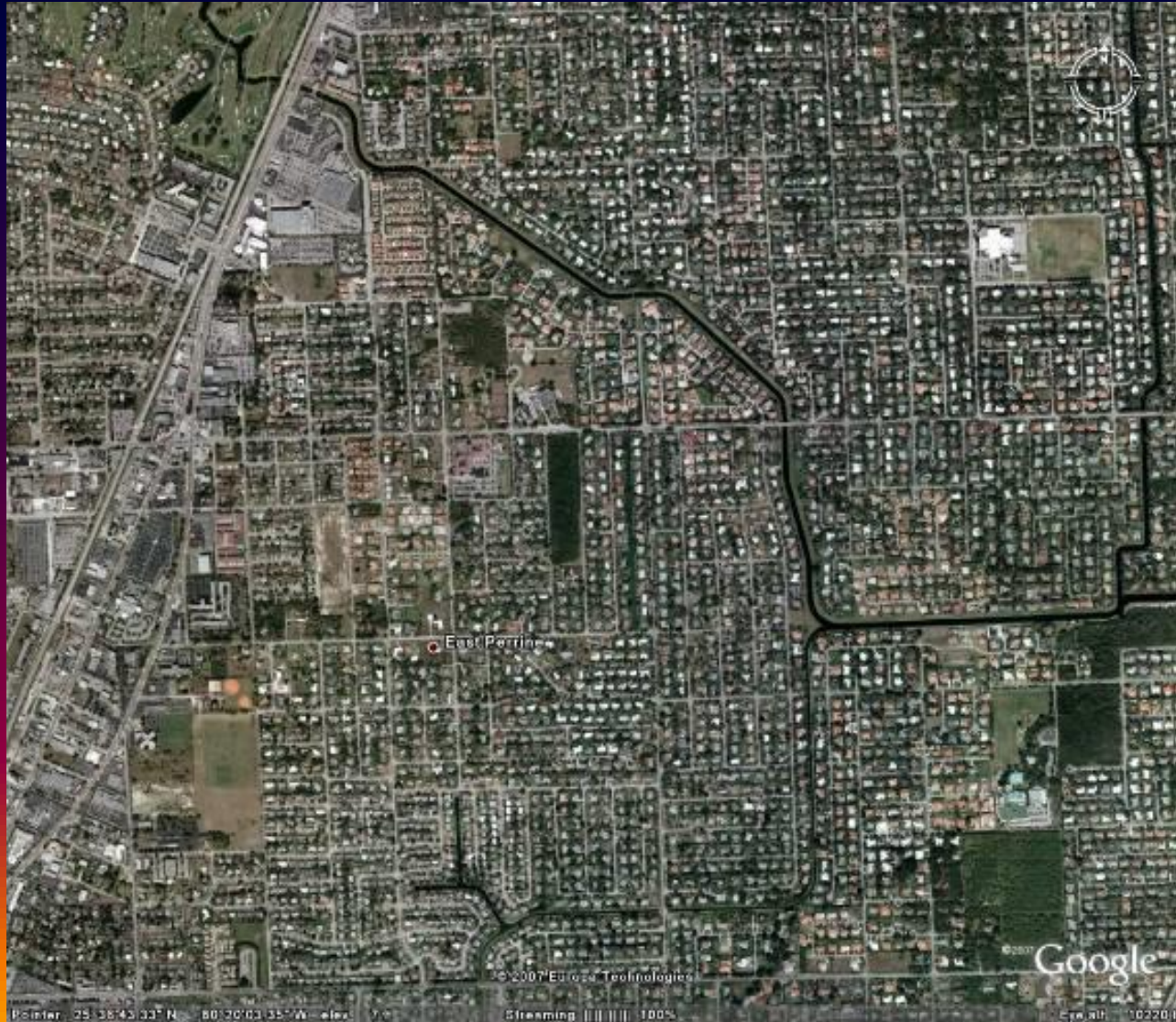


Fire Seasonality

What is the “natural” fire season?



Fire in any season is better than no fire at all!

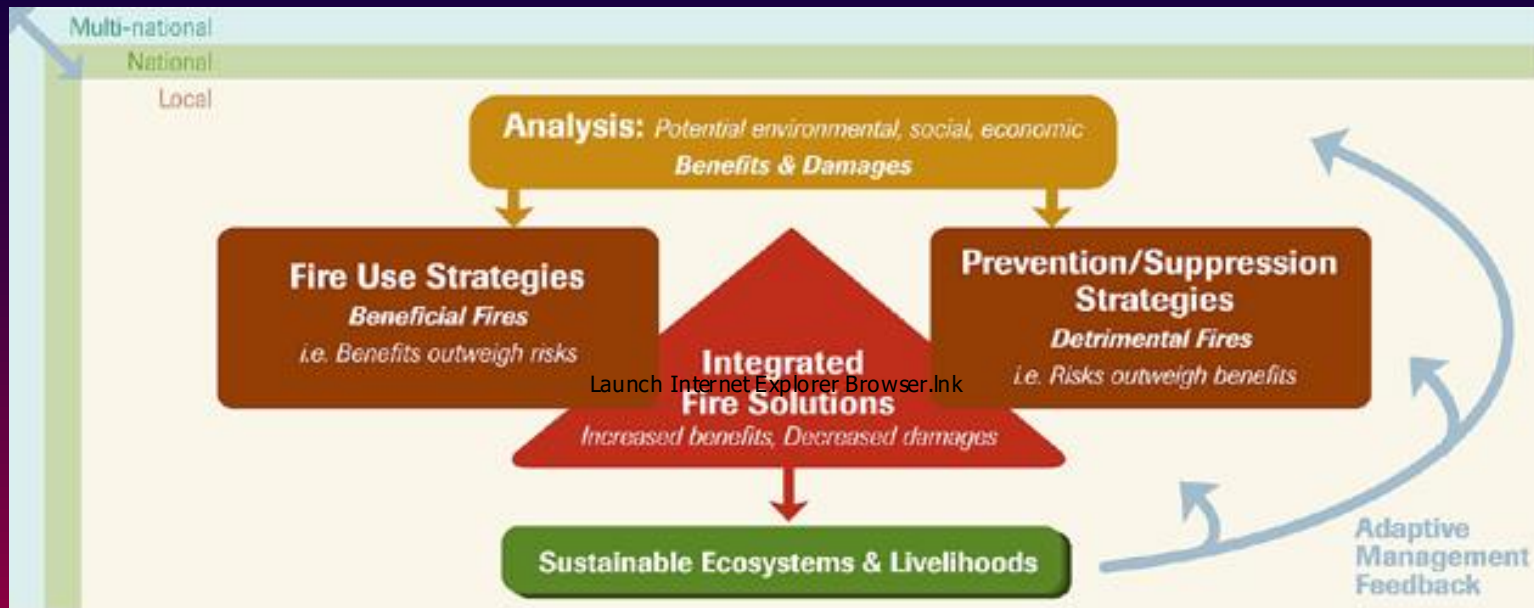


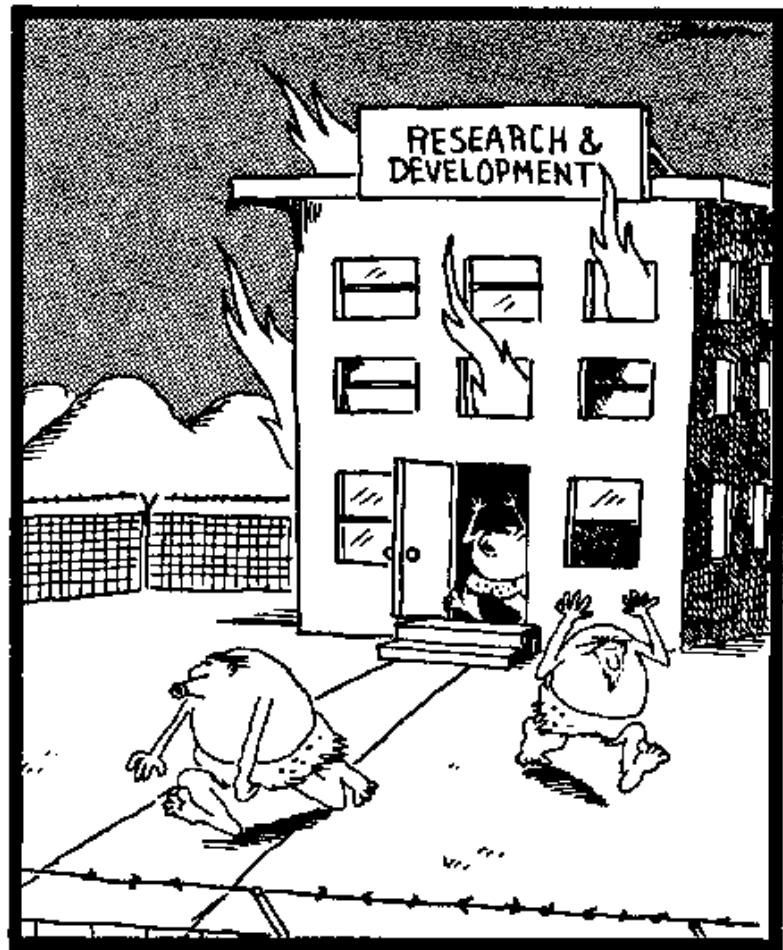
Nothing completely replicate fire effects.

- Fire must remain a management option



Fire Management





Fire is invented.