Notes on Megafires Conference

Tallahassee Florida

Nov 14-18, 2011

The Meeting:

- Held by Elsevier Scientific Publishing: Forest Ecology and Management.
- Attracted 60—70 worldwide, tho Africa, So. America, Indonesia, Russia not represented.
- A full list of topics is attached.
- Also attached is major paper by Jerry Williams, former USFS, on megafire issues. Key points below.
- The PPTs and posters may go up on a website soon, I'll advise.

Major Cross cutting Points:

- Uncertainty about definition of megafire. Conference group is working on one. Many possible dimensions of seriousness.
- Megafires a widespread issue around world
- Several cases on the Australia Black Saturday fires. Worst natural disaster in their history.
- Mediterranean Fires
    - Several papers on fire outbreaks. Outstanding Europe-wide data.
    - Very close correlations to weather.
    - Land use: abandoned farms in hills growing up to flammable brush.
    - Along Med, fire season matches tourist season.
    - Coordination hard with multiple languages & systems.
    - Resource limits: note that these nations are basically bankrupt. (Financiers call them the PIGS – Portugal, Italy, Greece, Spain)
- Arson is often a cause of major fires. Little social science work going on about this.
- Everyone has a significant Interface issue.

N. Minnesota 1918 Megafires

One talk addressed the wave of fires across N. Lake States 1880's to WWI. Key points:

You can simulate historic fires with current fire models.

Rates of spread, intensity unbelievable.

The eyewitness accounts of survivors were not believable to the listeners – even people who knew a fire was coming. Because what they heard was far outside their own experience.

One community was told to evacuate immediately; many people took their time and perished.

Is there a relevant lesson here?

Reactions to my Approach

I showed the poster to several people who agreed that the approach we are taking – the Extreme value analysis and return periods -- seems reasonable.

J. Williams Arguments

Measured against our goals, we have failed on megafires.

We just explain them away as unavoidable natural phenomena

Our response is to build & buy bigger hardware – DC-10 Supertankers, supercomputer weather forecasting etc. etc.

Used Vietnam analogy: Col Summers: "We won all the battles". NVA officer: "but that was not relevant, was it!" Argues we are doing the same thing, unable to break a stalemate.

Doing little about the causes.

No alternative to much more active management.

Useful contacts gained.

I think we should have Jerry Williams to a meeting. Jtwilliams50@msn.com. Missoula, MT. He says he'd be interested.

I met a graduate student at Waterloo (Ont) working on resource sharing issues in Canada.

I met Leda Kobziar of Univ Florida who has done a lot of work on the Okefenokee fires.

And, the Landfire Meister, Kevin Ryan of USFS Missoula fire lab. Asked him for some data and ideas about simulating large fires in our situation. He thinks it could be done.

Will be in touch with all.

PS: Thanks for the opportunity to attend!

November 2011 Megafires Conference Topics List.

O = oral presentation **P = Poster**

Website with these under construction.

Ecological impacts: why larger is more than just more

O3	Fire activity over Africa and Mediterranean Europe based on information from Meteosat-8
O19	Regional variation in the effects of wildfire size on structure and diversity of forested landscapes in the Pacific Northwest
P1	Modelling forest fire incidence in the wildland-urban interface (WUI): A case study in southern Italy
P15	The influence of fire size and climate on burn severity and the within-fire burn severity pattern in the northern Cascade Range, WA, USA
P23	Spatial and temporal effects of wildfire on insect community in Mediterranean forest ecosystems
P26	Vegetation recovery in the disturbed parches of Shimoga and Uttara Kannada districts in Western Ghats, India

Economic and Social Aspects

O6	A spatially explicit and quantitative assessment of the socioeconomic vulnerability to fire using GIS
O7	Incorporating fire risk into valuation of habitat damages following a catastrophic forest fire
O8	The economic effects of large wildfires: A mixed methods analysis of the 2008 fires in Trinity County, California
O9	Suppression costs, efficiency, and exposure: Examining potential tradeoffs and management options for mega fires
O10	Megafires in Portugal: Contribution for sustained changes in wildfire management
P24	Institutional fire landscapes in Calakmul, Mexico: The human responses to forest fires in protected areas

Fire and ecosystem management: options and choices before fires ignite

P11	Whether weather matters: Examination of weather patterns prior to fire events in a tropical dry forest in southern India

Integrating the Mega-fire reality into operational forestry

P2	Stress-testing the northeast forest fire compact: A statistical and historical analysis
P16	Estimating daily fire risk over Mediterranean Europe
P20	Impact of fuel reduction burning on carbon balance in Eucalyptus forests of south eastern Australia
P22	Real time simulation of 2007 Santa Ana fires
P31	Post-fire management regimes affect carbon sequestration in a Sierra Nevada mixed conifer forest

Mega-fires – Ecosystems at Risk

K1	Mega-fires and the urgency to re-evaluate wildfire protection strategies through a land and resource management prism
K2	Analysis of large fires in European Mediterranean landscapes: Lessons learnt and perspectives
K4	Wildland fires in landscapes of Eurasia / Asia: A conceptual approach for interpreting the nature and consequences of wildfires and land-use fires
K5	Mega-fires in eucalypt forests of south-eastern Australia
K6	Recent research on the economics of mega fires: Who pays, who benefits, and who suffers the consequences?
K8	Fire and Ecosystem Management: Options and Choices Before Fires Ignite
K9	Fuel management using prescribed fire in eucalypt forests and woodlands of southern Australia
K10	Landfire - A national vegetation/fuels data base for use in fuels treatment, restoration, and suppression planning
K11	Do we need to manage Ecosystem recovery after megafires?
K12	Integrating mega-fires into operational forestry
O4	Smouldering mega-fires in the earth system
O14	Analysis of fire weather patterns and affected land covers in large forest fires in Europe
P3	Does the regime shift in forest fires lead to a decline in native colonies of rhododendrons?
P6	Fire ignition trends in Durango, México
P7	The effect of fire history on flowering landscape of native rhododendrons
P9	Application of data mining technique for hotspot occurrence prediction in tropical peatland
P21	Mapping fire scars in a forest region in Roraima (Amazon) using MODIS products and object-based image analysis
P25	Intensity of fire affected zones in Bandipur National Park and Bhadra Wild Life Sanctuary, Western Ghats, Karnataka, India
P29	The cysts matorrals threatened by the fire in the Tlemcen region (Northwest Algeria)
P32	Missing the big picture: Upper atmosphere influence on behaviour of recent large fires in Texas, USA.

Options and Choices after Mega-fires: roads to ecological recovery

O17	Predicting long-term ecological and hydrological responses to a large wildfire in wet sclerophyll eucalypt forest
O18	Using satellite information to monitor vegetation recovery following large fire events in

	Mediterranean Europe
P5	Regeneration dynamics, recovery and succession of a Pinus yunnanensis forest five years after a major fire in central Yunnan, China
P12	Post-fire vegetation recovery following large wildfires in Portugal
P14	Ten years after wildfire: Forest fuel complexes depend on mortality
P17	Natural tree regeneration dynamics a decade after the storrie fire in the lassen national forest

Perspectives & lessons learned from around the world

O1	Mega fires of the north central US: Fatal fires in the human- wildland interface 1871-1918
O2	What causes large fires in southeastern France?
O5	Increasing large fire severity and impacts across the circumboreal: Are these mega-fires?
O11	How the southern US is spared from the mega fire reality
P4	Historic variability in fire-generated landscape heterogeneity of subalpine forests in the Canadian Rockies
P10	Contribution of wild-land fires on atmospheric composition in arid regions
P27	Fire regime during the past 50 years (1960-2010) in the continental Aosta valley (Italy)
P28	Fire in Europe: past, present and future

Regional and global weather and climate: expected future fire regimes

K3	Changing fire regimes in the boreal forest
K7	Regional and global weather and climate: Expectedfuture fire regimes
O12	Forest fires and climate change in Canada: Past, present, and some emerging trends
O13	Future trends and impacts of mega-fires in the United States under changing climate and fuels
O15	Studying atmospheric and fire behavior dynamics of megafire events
O16	Feedbacks to structure and microclimate from large drought fires in wetland forest landscapes
P8	Predict wild fire severity and post-fire vegetation dynamics in terrestrial ecosystems of the United States during the 21st century
P13	The impact on fire activity of the recent European mega-heatwaves of 2003 and 2010
P18	Evaluating fire fighting cooperation in Canada at times of crisis
P19	The climate threshold for megafires
P30	Frequency of extreme hot-dry weather patterns in different locations in Spain and related large wildland fire events