Slide 1

Integriertes Feuermanagement:
Neue Wege im Wald- und Naturschutz

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Methoden des Integrierten Feuer-Managements in Nordamerika

Integrated Fire Management: Methods from North America

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Global Fire Monitoring Center (GFMC) / Arbeitsgruppe Feuerökologie, Freiburg

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Slide 2

U.S. Forest Management

- National Forest System created in 1891, U.S. Forest Service created in 1905
- Forestry based on *Duerwald* model, however challenges arose: Succession, altered vegetation/ fire regimes
- The Big Burn 1910: USFS at fault or more suppression needed?

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Slide 3

Rebranding Fire

- WWII: Fire domestic enemy
- USFS fire suppression to military
- Engrained with quasi-military structure/ culture and equipment

3

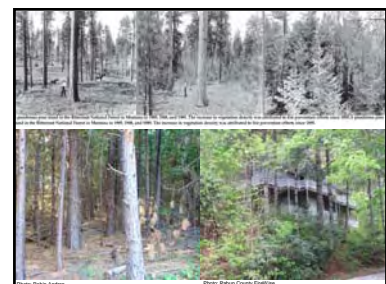
Slide 4

Slide 5

Ecosystem Management: Fire?

- Fire exclusion policy was unevaluated into the 1980s
- "Tall Timbers" Research Station
- Northern Spotted Owl controversy
- Halted the timber industry of the Pacific Northwest
- Integrated Forest Management: Landscape approach began in early 1990s
- European models failed
- 1993 FEMAT Report
- Integrated Forest Management

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Slide 6

Photo: Robin Andrea   Photo: Rabun County FireWise

Slide 7

Photo: Noah Berger for NPR

Slide 8

Reintegration of Fire: Integrated Fire Management (IFM) (I)

"An approach to addressing the problems and issues posed by both damaging and beneficial fires within the context of the natural environments and socio-economic systems in which they occur, by evaluating and balancing the relative risks posed by fire with the beneficial or necessary ecological and economic roles that it may play in a given conservation area, landscape or region."

Source: The Nature Conservancy (TNC)

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Slide 9

Reintegration of Fire: Integrated Fire Management (IFM) (II)

"Fire management systems which include one or both of the following concepts of integration:
(1) Integration of prescribed natural or human-caused wildfires and/or planned application of fire in forestry and other land-use systems in accordance with the objectives of prescribed burning;
(2) Integration of the activities and the use of the capabilities of the rural populations (communities, individual land users) to meet the overall objectives of land management, vegetation (forest) protection, and smoke management (community-based fire management)".

Source: GFMC

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Pillars of IFM (I)

1. Assessment and analysis of situation and issues
2. Fire management goals and desired ecosystem condition
3. Laws, policy and institutional framework
4. Prevention and education

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Pillars of IFM (II)

5. Fire use
6. Preparedness and response
7. Restoration, recovery and maintenance
8. Adaptive management, research and information transfer

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Assessment and Analysis of Situation and Issues

- Values at risk:
  - houses life and property;
  - infrastructure
  - ecosystems services, market value
- Public and political interest

- Fire treatment objectives
- Management organization
- Interagency coordination (e.g. jurisdictional responsibilities)
- Capacity

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Photo: The Denver Post
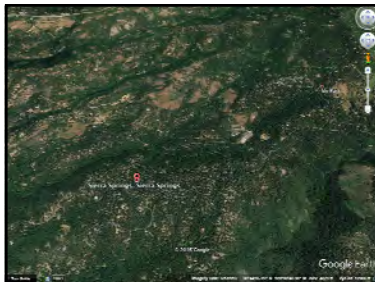
Fire Management Goals and Desired Ecosystem Condition

- Protected areas
- Sensitive areas; cultural heritage
- Stand age / health
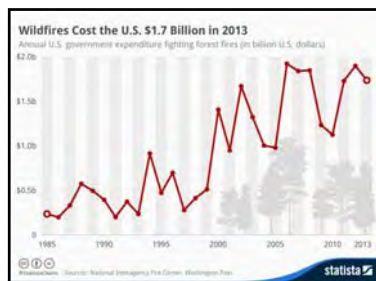- Species
- Fire regimes / Fire Return Intervals

Protected Area, but in Need of Fire

Laws, Policy and Institutional Framework

- Do current laws protect management assets?

- Are current policies effective to meet desired management goals?

- Are current institutional frameworks adequate to meet the needs of relevant stakeholder groups, forest and fire management objectives, and technical requirements (e.g. fire suppression)?

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Wildfires Cost the U.S. $1.7 Billion in 2013
Annual U.S. government expenditure fighting forest fires (in billion U.S. dollars)

Prevention and Education

- Fuel load management and fuel treatment areas
- Multiple uses (i.e., timber harvest; grazing leases)
- Prescribed fire
- Community outreach and education (e.g. Smokey)
- State private and community initiatives
- *Firewise* communities

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Fire Use

- Prescribed fire objectives
- Placement, intensity, frequency
- Multiple resource management objectives (e.g. watershed management)
- Smoke management
- Public and political attitudes

Methods of Fire Application

- Prescribed fire
- Pile burning (hand and machine)

- MIST /Let burn
- Types of Ignition
- Big-box suppression

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Preparedness and Response

- Early-warning and detection
- Dispatch and coordination
- Location and response areas/ ranges
- Staffing and equipment

- Trainings level and qualifications
- Incident response capabilities and times
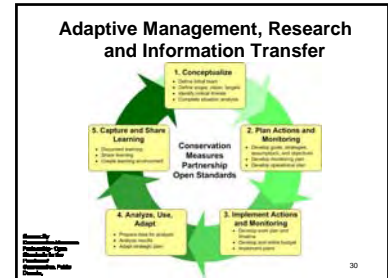- Backstopping and readiness (for new/ worsening incidents) 27

Restoration, Recovery and Maintenance

- Rehabilitate fire breaks
- Replant
- Mimic natural process
- Prescribed fire treatment

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Adaptive Management, Research and Information Transfer

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Wildland-Urban Interface

Compounding Problems

Conclusions

- Despite human intervention, Nature aims to correct herself
- Not considered, this poses serious implications for forest (and fire) management
- Fire-adapted (and non fire-adapted) ecosystems made more vulnerable by human activity
- North American experience: The 100-year error
- Repeating itself elsewhere: Plantation forests in Chile, Spain etc.
- **IFM tasked with both responsibility and response to ecological consequences of human activity, including worsening effects of anthropogenic Climate Change**

Wood Industry Summit
Access to Resources and Technology

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Danke für Ihre Aufmerksamkeit