

Global Session

Friday, 01 November 2019

Statement

Fire\$: Economic Drivers of Global Wildland fire Activity

**International Union of Forest Research Organizations
(IUFRO)**

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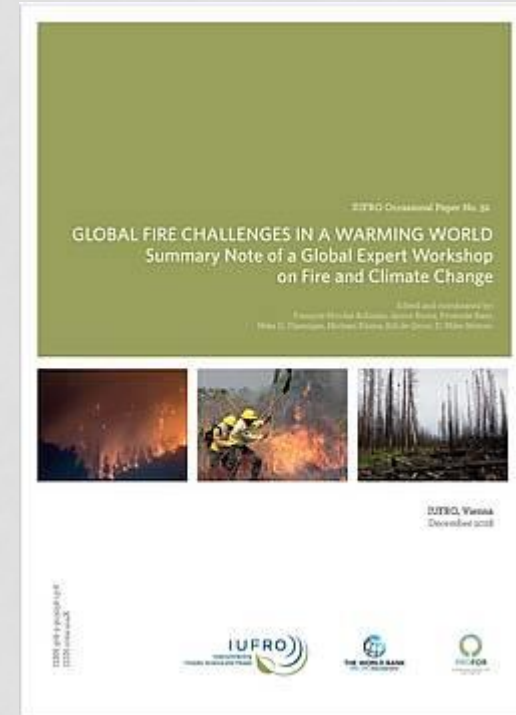
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1. Introduction

- **Global expert workshop (Summer 2018):**
Leading scientists and experts on fire and climate change:
 - Synthesis of existing scientific information
 - Discussed **Climate change, forest management** and influence of **economic factors** on the current global pattern of landscape fires
 - **Published** occasional paper “Global Fire Challenges in a Warming World”
 - **Foundation** for an international consortium (**IUFRO Fire\$ Task Force**)





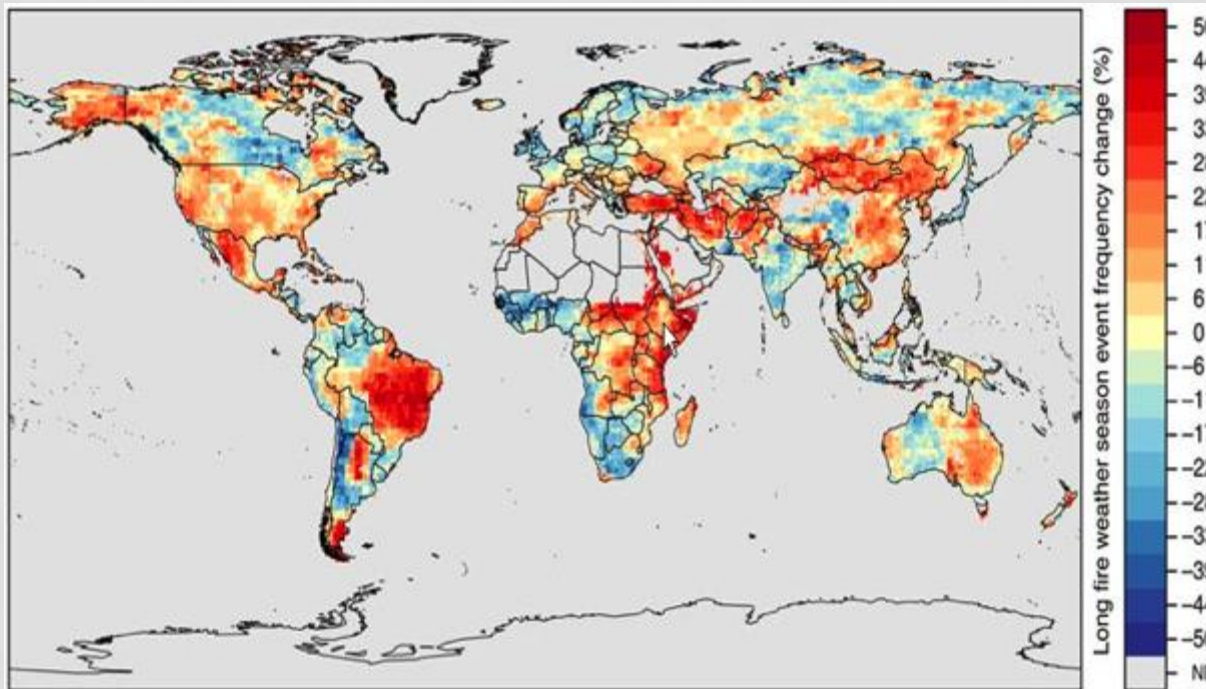
2. Specific landscape fire problems

- Fire is essential to many ecosystems and societies
- Local to regional land-use changes are driven by macro-scale economic forces
- Inconsiderate use of fire may lead to environmental degradation and a sharp decrease in the provision of ecosystem services



2. *Specific landscape fire problems*

- Climate change and planetary changes contribute to increased occurrence of extreme events => double exposure



Global changes in the frequency of long fire weather seasons over 1979–2013 due to climate. *Source: Jolly et al. 2016*

2. *Specific landscape fire problems*

- IFM is needed and must be based on knowledge of natural and cultural roles of fire
- Engagement with stakeholders via multiple tiers of governance is necessary to maintain fire resilient landscapes
- Collecting and sharing globally harmonised fire data will enhance understanding and requires investment

Id	Nome do proprietário	Endereço	Telefone	Idade	Sexo	Profissão	Religião	Cor da pele	Cor dos olhos	Cor dos cabelos	Altura	Peso	Temperatura	Pressão arterial	Frequência cardíaca	Respiração	Suor	Outros
1	João da Silva	Rua 100, 100	111-1111	45	M	Engenheiro	Católico	Branco	Azul	Preto	1,80	80	36,5	120/80	70	Normal	Não	
2	Maria da Silva	Rua 100, 100	111-1111	45	F	Engenheira	Católica	Branca	Azul	Preto	1,70	65	36,5	120/80	70	Normal	Não	
3	Carlos da Silva	Rua 100, 100	111-1111	45	M	Engenheiro	Católico	Branco	Azul	Preto	1,80	80	36,5	120/80	70	Normal	Não	
4	Ana da Silva	Rua 100, 100	111-1111	45	F	Engenheira	Católica	Branca	Azul	Preto	1,70	65	36,5	120/80	70	Normal	Não	
5	Roberto da Silva	Rua 100, 100	111-1111	45	M	Engenheiro	Católico	Branco	Azul	Preto	1,80	80	36,5	120/80	70	Normal	Não	
6	Luciana da Silva	Rua 100, 100	111-1111	45	F	Engenheira	Católica	Branca	Azul	Preto	1,70	65	36,5	120/80	70	Normal	Não	
7	Paulo da Silva	Rua 100, 100	111-1111	45	M	Engenheiro	Católico	Branco	Azul	Preto	1,80	80	36,5	120/80	70	Normal	Não	
8	Renata da Silva	Rua 100, 100	111-1111	45	F	Engenheira	Católica	Branca	Azul	Preto	1,70	65	36,5	120/80	70	Normal	Não	
9	Roberto da Silva	Rua 100, 100	111-1111	45	M	Engenheiro	Católico	Branco	Azul	Preto	1,80	80	36,5	120/80	70	Normal	Não	
10	Luciana da Silva	Rua 100, 100	111-1111	45	F	Engenheira	Católica	Branca	Azul	Preto	1,70	65	36,5	120/80	70	Normal	Não	



3. Gaps/shortcomings in landscape fire science, management and policies

- Losses associated to increasing catastrophic fire activity are often driven by distorted economic incentives and ineffective/fragmented policies
- Economic drivers have seldom been studied => economic drivers work transnationally and are often hidden within the movement of capital





4. Statements for solutions / action to be taken

This statement main focus is manifold:

- Reaching a better understanding of the global-to-local economic drivers of fire activity through time and space
- Deciphering the bottom-up and top-down economic controls influencing variation in global fire activity; and
- Exploring the future of global fire activity according to future social, economic, and environmental pathways



4. Statements for solutions / action to be taken

The TF will explore a range of important topics:

- Identify the spatio-temporal relationships between global trade, national socio-economic profiles, and global patterns of fire activity
- Explore existing or potential links and feedbacks between fire activity and poverty
- Identify and analyze whether existing bottom-up initiatives are sustainable and efficient at promoting sound fire practices
- Review the current state of knowledge, evaluate the efficacy of current environmental regulation and fire management policies



4. Statements for solutions / action to be taken

The TF will explore a range of important topics (continued):

- Design a number of future scenarios linking global environmental change, future global and national economic outlooks, and future human-made fire activity hotspots
- Identify existing or to-be-developed indicators of “economically responsible fire practices or alternatives”
- Evaluate the tradeoffs and synergies of Indigenous “human services for ecosystems” associated with indigenous fire stewardship
- Reach out to a number of stakeholders

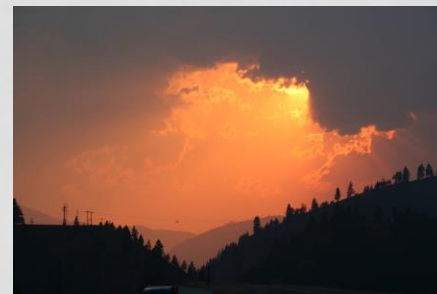
5. *Conclusions*

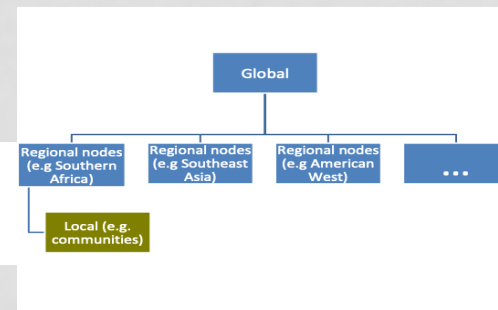
- Support IUFRO's strategy and institutional goals ➡ and continental programs (e.g. Bonn Challenge, REDD+ and SDGs)
- Solid network of professionals (scientists, managers, and practitioners)



5. *Conclusions*

- State-of-knowledge report ➡ inputs to int'l policy processes and decision-making
- Special issue in a scientific journal
- Initiate the creation of 3 int'l databases:
 - 'virtual fire trade' and its carbon equivalent per country
 - International economic fire losses (direct and indirect)
 - Wildland fire management/ firefighting expenditures on a national base





5. *Recommendations*

- Three levels of exploration/discussion in relation to the economic drivers of fire activity (global, regional and local)
- Address those three levels using a mix of outreach-oriented (OOAs) and research-oriented activities (AOs)
- OOAs will serve to build nodes and collaborative teams, to convene external people and organizations
- ROAs will try to explore the complex aspects of the problem that will be prioritized through the OOAs



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Thank you!

