Fire Research Consensus Project – Phase 4: Science Informant Review of Draft Consensus Statement

Below are summaries of individual responses submitted to an online questionnaire requesting review of the June 2017 draft Consensus Statement prepared by the Fire Research Consensus (FRC) project. Reviewers included respondents to a previous questionnaire (project Phase 2) from summer and fall 2016 and additional members of the fire research community in the western United States. The above documents, plus summary of responses to the Phase 2 questionnaire and a list of the scientific references identified by respondents, can be found online at the working group website.

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*indicated did not have time to review document thoroughly

Q1: Overall, to what extent does the draft Consensus Statement accurately reflect the balance of scientific viewpoints, supported by the results of the 2016 survey?

Main points

● Overall reviews ranged from “highly impressed” to “very poorly” done
● What is consensus? Can it be equated with majority opinion?
● What emerged strictly from the Phase 2 survey and what are “opinions” (potentially non-expert opinions) of Steering Committee (SC) members?
● Geographic biases
● Concern about conflict of interest (e.g., SC affiliation with USFS)

Synthesis

This question basically asked respondents whether they believed the draft met one of its main objectives. For the most part, respondents agreed that the draft adequately reflected the range and balance of scientific viewpoints on various topics. Some respondents did not answer this question in detail because they thought they would need to have read the Phase 2 responses. For those that did not feel the draft reflected the balance of scientific viewpoints, issues raised included alleged insertions of non-expert opinions (i.e., not fire science), geographic imbalance in both specific examples and more general themes and the implied (or perceived) notion that majority viewpoints indicate consensus. Related, although the draft identifies both common ground and areas of divergence, a stated focus on common ground may downplay the need to resolve disagreements through rigorous science. Most respondents thought the draft was sufficiently detailed in its summaries of scientific viewpoints, but one respondent suggested areas of divergence should be presented in more detail with attention paid to geographic differences rather than simply stated.
Q2: In your opinion, are there any significant gaps in the draft Consensus Statement? If so, please indicate in which specific section these gaps occur, and what additional material would be needed to ensure that the statement is balanced and complete.

Main points

- Ambiguity of terms not resolved (severity classes, WUI), particularly related to scale and patch sizes, which hampers consensus building
- Ecological components of fire regimes: tree species’ life history, soil, insects
- Climate change: uncertainty, mitigation, expected changes to fire regimes, conflation of weather and climate
- Effects of compounded disturbances/cumulative impacts
- Limitations: fires in non-forested areas and effects on forested areas
- Geographic imbalance
- Phase 2 process: vaguely stated qualifications of respondents, what constitutes substantial field experience, influence of sampling on results and perception that voting on viewpoints occurred
- References (lack of, or geographic biases in examples)
- Discussion of west-wide fire trends and effects, particularly about high-severity fire and patch-size distributions
- Emerging methods: wood anatomical responses to heat exposure (resin ducts, tracheid and ray anatomy)
- Open science: call for more open presentation of data and methods used in fire research to help resolve disagreements (i.e., better acknowledgement of limitations), need to move beyond inherent polarization that is perpetuated by peer review
- Underrepresented disciplines: remote sensing, post-wildfire rehabilitation, wildlife ecology, ecophysiology, silviculture, social science, paleoecology, evolutionary ecology
- Trends in perception of fire by scientists and society
- Solutions: what do we actually do to resolve disagreements? Stating disagreements is not enough
- Call for more interaction among fire scientists, particularly in the field, looking at the same data
- HRV is a guide, but what kind of guide? How is it a guide?
- No mention of alleged deliberate misuse of data or peer review process for advancing agendas as a key source of disagreements

Synthesis

In many cases, perceived gaps were topics or intellectual viewpoints that the SC initially decided were outside the scope of the project (e.g., paleoecology, wildlife ecology, ambiguity in terminology). On the topic of terminology, however, several respondents suggested that lack of clear terminology is a major impediment to consensus. An emergent theme from respondents was a desire to move beyond identification of disagreement and toward resolving disagreements. Although the SC did not originally intend to resolve disagreements, there may be opportunities to offer generic solutions such as a call for more interaction among fire scientists, particularly in the field, rather than conference settings. Greater interaction would be a step toward a more open research community that could include more widespread data sharing and discussions about methods and interpretations.
Q3: Would you be prepared to endorse the draft Consensus Statement in its current form? If no, what changes would be needed to secure your endorsement?

Yes: 15, No: 21 (Total = 36)

Main points
- Addressing of gaps identified above
- Terminology needs to be clarified
- Process: clarification of how “majority” and “minority” viewpoints were integrated, including with respect to disciplinary imbalance in Phase 2 respondent pool
- Removal or rewording of value-laden statements and non-expert opinions
- Deeper acknowledgement of limitations
- Include references
- Emphasize research needs moving forward and create roadmap for better use of fire science in policy and management
- Make more specific, especially in terms of relevance to managers
- Be mindful of use of jargon and applicability of cryptic insider debates to outsiders (i.e., make this document accessible to intended audience)

Synthesis

In general, respondents stated that the gaps identified above needed to be addressed before they would endorse the draft. Issues that emerged repeatedly in responses to this question included the need to clarify terminology, to alleviate concerns about the Phase 2 process and to ensure that managers would be able to use information described in the document. Other general points that were raised again included removal of opinion-based text, acknowledgement of FRC project limitations, the lack of references and greater emphasis on future research priorities.

Q4: Please offer any additional comments or feedback that may be helpful to the FRC Project Steering Committee as they prepare a final version of the Consensus Statement.

Main points
- Lingering concern over process and handling of majority and minority opinions, perceived lack of transparency generally, and specifically with respect to views of SC vs. those of Phase 2 respondents
- Pitfalls of touting HRV as a guide
- Deviance from stated objectives has lengthened the document unnecessarily and distracted from topic of high-severity fire
- Criticism of reconstructions from fire scars without reference to recent attempts to address criticisms
- Elevate calls for open science and integration of diverse datasets and methods across disciplines and regions
- Questions over usefulness for managers (i.e., may be too general, or not include regionally balanced examples)
- If the document focuses on the western US, why all the references to global and not regional climate change?
- Some redundancy is OK so chapters can stand alone, but topics F and G were noticeably repetitive
- Many repeated comments from above
Synthesis

Respondents generally repeated previous concerns, or expressed general or specific concerns that did not fit under the umbrellas of previous questions. Many comments were line-specific and were too specific to be summarized here. General issues that re-emerged were concerns from a few people about the overall Phase 2 process, the need for more open science, ambiguity of role of climate vs. weather in fire regimes and questions whether the document would be useful to managers in its current form given its many generalizations and geographic imbalance in examples (potentially reflecting breadth Phase 2 responses). Additional issues raised included unfair criticism of fire regime reconstructions based on fire scars and potential deviance from stated objectives in introduction that may have made the document overly lengthy or repetitive. Finally, it was suggested that future research priorities could be compiled from each section’s areas of divergence in a way that would be helpful for both researchers and managers; researchers would see key needs and managers would see what key disagreements remain within the research community.