

NSAT Work in Phase III – The Risk Analysis and Interactions with the Regional Strategy Committees and Working Groups

This paper is intended to describe the primary work of the National Science and Analysis Team (NSAT) in terms of its relationship to the major products of Phase III, the anticipated outcomes of the Cohesive Strategy, and interactions with the Regional Strategy Committees (RSCs) and Work Groups (WGs).

What outcomes are anticipated from the Cohesive Strategy?

The Cohesive Strategy process is about creating:

- A collaborative environment where everyone engaged and affected by wildland fire:
 - Works toward common goals
 - Is aware of wildland fire risks and opportunities to address risks
 - Makes decisions with compatible-cohesive information
 - Contributes to reducing risk
- A policy environment that:
 - Recognizes opportunities to reduce risk
 - Rewards successful efforts to reduce risk
 - Recognizes barriers that prevent achieving common goals
 - Chips away at the barriers – an iterative process with adaptive learning
- A science environment that enhances multi-scale understanding of:
 - Wildfire risks to important values
 - Opportunities to reduce risks
 - Tradeoffs among options intended to reduce risks
- A decision-making environment where
 - Complementary decisions are possible among agencies and organizations at all scales – local, regional, and national
 - Risks are reduced and managed
 - Three broad common goals influence outcomes

It is through the Phase III risk analysis and report that progress might be possible in creating these environments. That is, **collaboration** might be enhanced because a common report shows how the actions of all players influence risk; **policies** might be more consistent in the way they influence risk because a common report shows how policies affect risk on all lands; **science** might make additional contributions to reductions in risk because there are tools that show how actions influence risk at all scales; and **decision-making** might better align to reduce risks because the linkages among actions can be better displayed on all lands and specific options have been explored and outcomes and consequences described.

The Cohesive Strategy Phase III risk analysis and report will tell stories that can enhance these environments through potential changes implemented by the partners of the Cohesive Strategy either jointly or individually. Success in achieving the three broad goals of the Cohesive Strategy is a long-term proposition – no single decision at the end of Phase III will solve the wildland fire issues. The strength of

the Phase III report will lie in its ability to motivate potential changes through cascades of decisions within individual agencies, organizations, and partners involved in the wildland fire issue.

What work is to occur in Phase III?

The Phase II report describes the work of Phase III:

1. Identify specific regional alternatives,
2. Continue and expand outreach within and among the regions utilizing the communications framework,
3. Continue to identify immediate opportunities,
4. Complete Regional and National Science-based Risk Analysis Reports, and
5. Complete regional action plans and a national action plan.

What is the risk analysis and report of Phase III?

The regional and national science-based risk analysis reports are essentially the tradeoff analysis and reports mentioned in the Phase I and II reports. To better understand the role of a tradeoff analyses in Phase III it is useful to consider how the Cohesive Strategy will be used.

Because no “big decision” is planned as an outcome of the Phase III process, the real decisions are likely to be those made by the partners of the Cohesive Strategy in their individual budgeting, prioritization, and policy choices. Trade-off analysis enables a uniformly informed group of partners who can consider potential changes in their current policies/actions/activities and priorities because they can see the implications of their choices in relation to the choices of the entire fire community.

The report will need to consider the important stories to tell concerning where investments might make a substantial difference in risk and also where investments are currently being made that may not be providing the benefits anticipated. The same is true concerning which (in addition to where) investments appear to be more effective at reducing risk than other investments.

The Cohesive Strategy Phase III report should tell stories that are applicable at multiple scales across the country. In the end the Phase III report should:

1. Lay out the goals the Cohesive Strategy aims to achieve.
2. Characterize the risks that are present or are likely to exist and describe what factors contribute to the risks.
3. Identify what opportunities there are to address the risks.
4. Identify what options there are to address the risks.
5. Identify what barriers stand in the way of addressing the risks.
6. Broadly define the options, the impacts of adopting an option—including the benefits and consequences, and how these compare to current conditions.
7. To the extent possible, explore how outcomes might be influenced by climate change, invasive species, and population growth.

How will NSAT interact with the Regional Strategy Committees and Working Groups?

The work of NSAT and interactions with the various groups involved in the Cohesive Strategy can be shown graphically as a sequence of steps. In this diagram there are specific actions highlighted corresponding more directly with the interactions that will occur in the Phase III process.

Interactions with the RSCs and WGs occur iteratively throughout the process. Specifically the interactions are planned to occur during:

1. **Step A Characterize Risks and Step B Establish Links** – The NSAT will use the products of Phase I and II as well as national and regional data sets to characterize values and fire on the landscape to derive an estimate of risk. The NSAT will also translate the proposed actions of the regional assessments into factors that can be modeled as influencing the values of interest to the regions. During these steps the NSAT intends to interact with appropriate individuals from the RSC/WGs to understand the linkages between the actions as proposed and the factors that contribute to risk. The process will likely be a webinar/conference call process in mid March. The expectation is that several (4 to 6) members from each RSC/WG could effectively interact with the NSAT in this process. The purpose of the interactions is to show the characterization of risk, describe what information is used in the process, how the interactions are modeled between factors contributing to risk and the actions within the strategies.
2. **Step C Exploratory Analysis** – Drawing from information in the regional assessments of Phase II, the NSAT will develop an initial set of alternatives to explore with the RSC/WGs. The intent is to share draft model outcomes and explore how modeled outcomes are linked with available data. The expectation is that maps and tables and graphics will be used to display the spatial relationships and potential outcomes. The process will likely be a face-to-face meeting for two days in mid to late April. The anticipated outcome from the interactions is to point to potential opportunities where risks might be managed effectively and barriers that might prevent achieving risk reductions. The information will be helpful in modifying models as well as contributing to potential modifications to the actions proposed in the regional alternatives.
3. **Step D Specific Alternatives and Step E More Complete Analysis** – Interactions are anticipated between the NSAT and the RSC/WGs as more specific alternatives are developed. This interaction is anticipated to continue throughout the process of completing more specific analyses (Step E). The interactions are anticipated to begin with sharing information via webinar/conference call and are likely to include a face-to-face meeting. Interactions will likely occur in early June and early July. The outcome of the interactions will be to describe the specific alternatives that can be analyzed in the detailed analyses, explore the potential decision space for reducing risk, understand how local contributions are anticipated to manage risks, understand the costs for the alternatives, and the role that external drivers (climate change, population increases, etc.) are likely to have on contributing factors and consequences. These outcomes will be an outgrowth of the interactions and will be captured to the extent possible in models, data, and summary of descriptions.
4. **Step F Synthesis and Report** – The synthesis step will involve interactions among the RSC/WGs and NSAT to highlight the stories that can be told from the analyses – national and regional stories. This step will also involve interactions among NSAT, RSCs, CSSC, and WFEC – where national and regional stories will be discussed and considered for inclusion in the Phase III report. Stories will highlight the risks, opportunities to manage risks, barriers to risk management, and outcomes (benefits/consequences) likely from the alternatives for each region. Report content will originate from the NSAT (science information and understanding) and the RSCs (interpretation of outcomes and intent). The interactions will offer opportunity to

provide comment on content for the final report. These interactions are expected to be via a webinar/conference call and occur between mid July and mid September. The final interactions will occur in mid September to allow time for final edits and report writing.

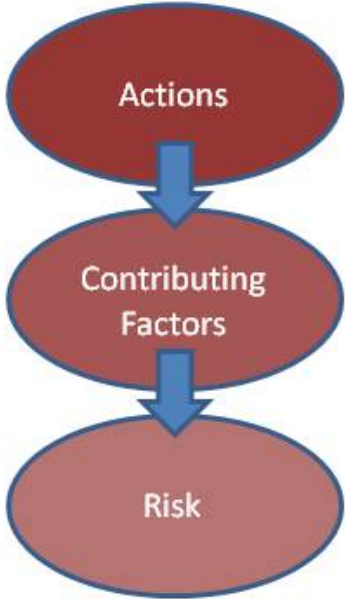
5. **Step G Action Plans and Peer Review** – While the science work is being peer reviewed interactions occur to help define next steps along the path to managing wildland fire related risks at the regional and national scales. .

What is the linkage between these steps and the description of the Phase III work included in the Phase II report?

The following excerpt from the Phase II report describes the work of NSAT in Phase III. The shaded entries in parentheses indicate which steps include the described NSAT work.

NSAT will develop analytical models and interact with the RSCs and work groups to explore alternative management strategies (alternatives) for each region, based on application and utility of the models. To complete these analyses, the WFEC, CSSC, and RSCs will engage with the NSAT to:

1. Translate the conceptual models developed in Phase II into quantitative and qualitative models, as appropriate. (Step A and Step B)
2. Compile and integrate appropriate data to quantify and validate the relationships presented in the models, using both federal and state data sources. (Step B)
3. Identify performance measures that can be used across all regions and within a given region. (Step B)
4. Identify geographic variations in the models to reflect appropriate differences across the regions. (Step B and Step C)
5. Interact with the RSCs to validate that the modeled relationships are reasonable. (Step A, Step B, and Step C)
6. Explore specific alternatives developed by the RSCs through regional analysis. (Step C and Step D)
7. Interact with the RSCs to revalidate analysis models and iteratively refine regional alternatives to be included in the comparative risk analyses—national trade-off analysis. (Step D and Step E)
8. Conduct and document the comparative risk analyses—national trade-off analysis. (Step E and Step F)

Activity	Description	Interactions
<p>STEP B <i>Establish Linkages</i></p> <p>STEP A <i>Characterize Risk</i></p>		<p><i>Webinars and conference calls (Feb-March)</i></p>
<p>STEP C</p>	<p>Exploratory Analysis of Opportunities and Barriers</p>	<p><i>Face to face meetings (April)</i></p>
<p>STEP D</p>	<p>Development of Specific Alternatives</p>	<p><i>Webinars, conference calls, and face to face meetings (June-July)</i></p>
<p>STEP E</p>	<p>More Complete Analysis (Quantitative, Qualitative)</p>	<p><i>Webinars and conference calls (July-Sept)</i></p>
<p>STEP F</p>	<p>Synthesis of Alternatives into a Final Report</p>	<p><i>Action Plans, Monitoring Strategies, and Peer Review</i></p>
<p>STEP G</p>	<p>Action Plans, Monitoring Strategies, and Peer Review</p>	

What will the Phase III report look like?

The report will include a description of the issues, drawn largely from the Phase I and Phase II reports, being addressed by the Cohesive Strategy, a characterization of the wildland fire risks, and the regionally-specific alternatives to address the risks. The report will reveal the tradeoffs among the alternatives – essentially describing the decision space that is available, the potential benefits/consequences and outcomes associated with the alternatives and the associated uncertainty. The report will describe the similarities and differences among the benefits/consequences, outcomes, and uncertainties associated with the alternatives. Stories will be told and shown in graphics, tables, and maps that highlight spatial differences and topical issues. Stories will also highlight the opportunities and potential barriers to achieve substantial reduction in wildland fire risks. Unlike NEPA type analysis of alternatives, no criteria will be defined regarding potential selection among the alternatives. No preferred alternative will be named. The report should enable the Cohesive Strategy partners to understand how their choices might better align with reductions in risk given a common understanding of regional and national wildland fire risks.