

The Case for Risk Management in the U.S. Forest Service

Formalized vs. Informal Risk Management

Every day, Forest Service employees across all program areas manage risk in a variety of ways. Most visibly, risks are managed informally at the field operational level. At the enterprise level, risk management in the Forest Service is much less visible; there is no established framework for the management of risk at that level, no defined terminology, training or education around the practice of risk management. Would the Forest Service benefit from a more organized, formal approach to risk management across the agency?

Although the term “risk management” has been widely used in the Forest Service, we currently have no working definition for what that is; how can we effectively practice something that we haven’t defined? For the purposes of this paper, a working definition of risk management is: *a set of coordinated processes and activities that identify, monitor, assess, prioritize, and control risks that an organization faces.*

In 2015, a group called the Association for Federal Enterprise Risk Management (AFERM) published a survey titled *Enterprise Risk Management in the Public Sector* (<https://www.pwc.se/sv/offentlig-sektor/assets/enterprise-risk-management-in-the-public-sector.pdf>). This survey, the first in an intended annual series, included nearly 30 Federal Departments, Agencies or Organizations. The survey identifies a number of trends or themes, including:

1. Enterprise Risk Management (ERM) is a growing priority in the Government
2. ERM enables Federal agencies to better define and proactively respond to risks
3. Departments and agencies with ERM capabilities built dedicated programs and processes to effectively manage risk
4. Barriers continue to inhibit the implementation of ERM

Several other findings of the survey are noteworthy. “While commercial enterprises leverage mature ERM programs resulting from decades of experience, the evidence shows that risk management is still an emerging practice across the public sector. Our survey respondents indicated (1) they believe that when ERM is properly implemented, organizations realize benefits and (2) that they expect the number of Federal agencies adopting ERM practices to continue to grow.” In terms of the benefits realized, the survey says that “respondents with established risk management programs indicate that their organizations realize significant benefits,

such as reduced duplicity of risk management and compliance efforts and existence of risk based indicators to support proactive mitigation planning.”

“Survey respondents report that Federal organizations with both a formal risk management structure and/or ERM program improve performance of their core capabilities and gain a deeper understanding of the compliance and mission risks facing their organizations. With a strong, well-defined structure, leaders are equipped to identify risks and adjust organizational priorities to enhance decision making efforts. Organizations that possess a formal risk management structure benefit from a portfolio view of risks and leverage the insight to help navigate the complexities of their mission.”

Perhaps most importantly, the survey states “that the successful implementation and maturation of an ERM program in the Federal space requires the staunch support and commitment of agency leadership. A common practice of successful ERM programs is that they are championed by executive leadership and often a risk-focused officer within the organization; this enables risk innovators to break down organizational silos and encourages thoughtful risk analysis in major decision-making processes.”

Also in 2015, several Forest Service researchers authored a General Technical Review (GTR) on wildland fire risk management in the Forest Service. In this paper, currently undergoing scientific peer review, the authors “argue that organization-wide adoption of risk management will be critical to effectuating change and ultimately improving the health of our public lands, the safety of firefighters, and the well-being of communities that reside in fire-adapted environments. Risk management is a long-standing, mature discipline that has helped organizations across sectors and domains improve their business practices and achieve objectives.”

In describing what risk management is, the GTR says that “central tenets of risk management include integrating risk principles into all organizational processes and decisions, embracing an uncertain world and developing a familiarity with probability, committing to generating and using the best available information, developing systems of accountability to monitor performance, and using that information to facilitate continual improvement. Risk management organizations are proactive, invest time and resources in “upstream” assessment and planning, and as a result are less susceptible to the vagaries of uncertain, time-pressured decision environments.”

The GTR makes the case for formalized risk management in the Forest Service this way: “We believe that the pathway forward is to rely upon advances in the risk and decision sciences that provide frameworks and concepts that can improve how the USFS deals with complex and uncertain problems. This body of science is well-established and has been applied to a range of problems, including military

applications, clean air and water, food and product safety, and natural hazards. However, the adoption and application of risk management (RM) principles and practices can be challenging and even uncomfortable. At the same time, RM can improve returns on investment the USFS makes, ensure safe and effective decision making, and demonstrate organizational accountability. We would argue RM is the best bet for the USFS to remain a sustainable organization that empowers its employees to promote the health and resilience of the nation's public lands.”

Forest Service leaders have repeatedly expressed a desire for employees at all organizational levels to practice effective risk management, for example to perform “risk informed decision making.” If the Forest Service is to transition from a system of periodic exhortations to employees to practice risk management, to a more formal enterprise-wide system of risk management, it will require commitment, dedication and leadership at the highest levels of the agency.

What Formal Risk Management Would Look Like in the Forest Service

What would formal risk management look like if the USFS was doing it? Managers across all levels of the organization would follow a structured process that provides an objective basis for decisions, helps avoid common errors, fosters communication and inclusion of relevant decision factors, helps evaluate tradeoffs, and improves transparency. Managers would begin this process by asking the right types of questions and ensuring analyses and assessments answer the questions they are intended to answer. Getting the question right provides the focal point for all subsequent problem solving efforts. Managers would embrace the responsibilities of identifying problems and opportunities, estimating risks, evaluating risk management options, implementing risk control measures, and monitoring outcomes. Managers would find themselves regularly and iteratively posing the following basic risk management questions:

- What is the problem (i.e., what is the risk faced) and what is its impact on objectives?
- What information is necessary to address the problem?
- What actions (i.e., risk management options) can be taken to alter the exposure to or the consequences of the risk, and what are their tradeoffs?
- Which risk management options are most likely to achieve objectives?
- Are they working?

In order for the Forest Service to institutionalize risk management, several things will be necessary. Figure 1 clearly illustrates the various components of a wildland fire risk management system; these same components would be necessary to manage risk in any other program area. Such a system will be based on foundational principles - the underlying philosophy behind risk management in the Forest Service - and the definition of basic terms. The latest findings from research will be applied to system design, so that risk management as practice in the Forest Service is state-of-the-art. Risk management will need to be institutionalized at all organizational levels, from the highest leadership echelon to the field unit and everything in between. This will require training, education, tools and processes for all levels. Some of these already exist but may require work in the form of standardization agency-wide or, in the case of fire management, adoption by an interagency community.

Some form of governance for a Forest Service risk management system will be necessary: what group or individuals will oversee the implementation of such a system, and how will mandates for its use be authorized? Evaluation, monitoring and feedback mechanisms need to be developed to ensure that the risk management that is being practiced is accomplishing desired goals. Extensive communication will be necessary in order to convey both to internal and external audiences what the Forest Service is doing with risk management and why it is being done.

Finally, it is clear that strong commitment from senior agency leadership is required in order for such a pervasive change in management practices to become institutional across the agency. Without the strong and steadfast commitment of senior agency leaders to risk management, it is likely that its practice will not be consistent across the agency and as a whole the Forest Service will not be positioned to better define and proactively manage all the risks it faces.

Figure 1

Wildland Fire Risk Management

