Rocky Mountain Research Station

Management Science, Safety & Organizational Learning for Wildfire

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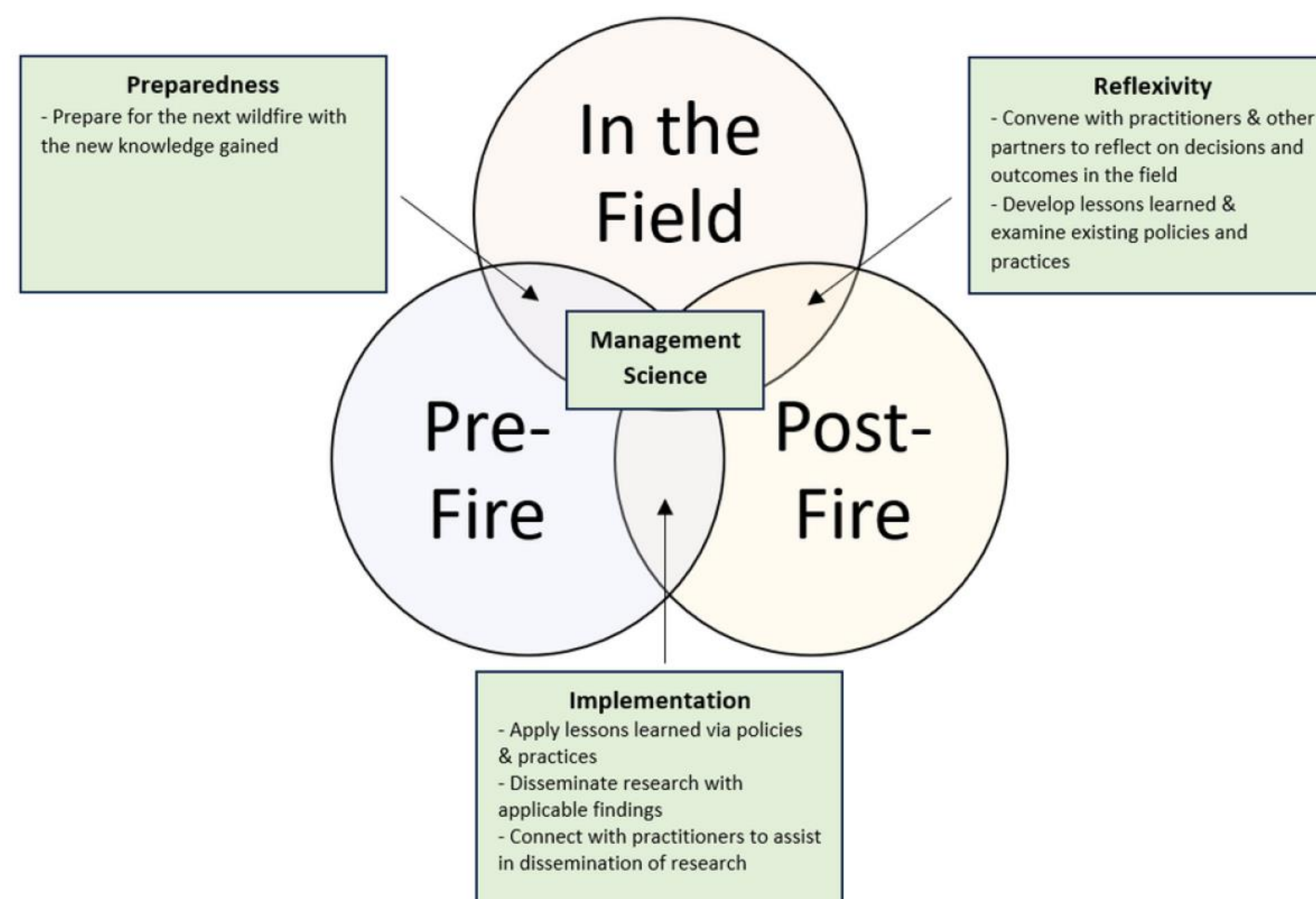Melissa Villarreal, Postdoctoral Fellow, melissa.villarreal@usda.gov

OUR OBJECTIVE

Given the complexity of wildland fire management and the number of actors necessarily involved in reducing wildfire risk, it is vital to invest in a comprehensive program of management and safety science to **identify current and future organizational challenges** and to **offer evidence-based actions.**

OUR FRAMEWORK

The framework for the Management Science, Safety & Organizational Learning for Wildfire research program introduces an **actionable approach** to management science, firefighter safety, and organizational learning.

Preparedness
- Prepare for the next wildfire with the new knowledge gained

In the Field

Reflexivity
- Convene with practitioners & other partners to reflect on decisions and outcomes in the field
- Develop lessons learned & examine existing policies and practices

Management Science

Pre-Fire

Post-Fire

Implementation
- Apply lessons learned via policies & practices
- Disseminate research with applicable findings
- Connect with practitioners to assist in dissemination of research

OUR TEAM

As a long-term effort, this team brings together **highly experienced** fire and line **practitioners** and **senior-level social scientists** to gain insights about wildfire inter-agency organizational learning.

OBJECTIVE 1

Co-developing research with fire managers and line officers during fire planning and response.

OBJECTIVE 2

Administering social science action research to investigate the wildland fire response system and build more effective, efficient, and safe processes within the U.S. Forest Service and across multiple wildfire response agencies.

OBJECTIVE 3

Establishing post-fire research that captures how high performing teams implement lessons learned when engaging complex problems to build long-term organizational learning in wildland fire.

ONGOING PROJECTS

Identifying non-compensational factors that impact recruitment and retention of wildland fire personnel.

Studying wildland fire managers during complex incident management response to examine decision-making in real-time.

Publishing a special collection focused on wildfire research via Natural Hazards Center's *Research Counts* series.

WHY OUR WORK MATTERS?

The Management Science, Safety & Organizational Learning for Wildfire group is grounded in a philosophy **of co-development of knowledge and application.**

The innovative nature of this effort presents an opportunity to improve public and firefighter safety, response effectiveness and efficiency, and community and landscape resilience.