# The Role of Research in the Burned Area Emergency Response (BAER) Process

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## *The Earth Sciences, Life Sciences, and Social Sciences can Assist and Improve the BAER Process. Here's How.*

## Assessment

**Remote Sensing Tools**

Aerial Photography
Satellite Imagery
Aerial LiDAR
Hyperspectral Imagery

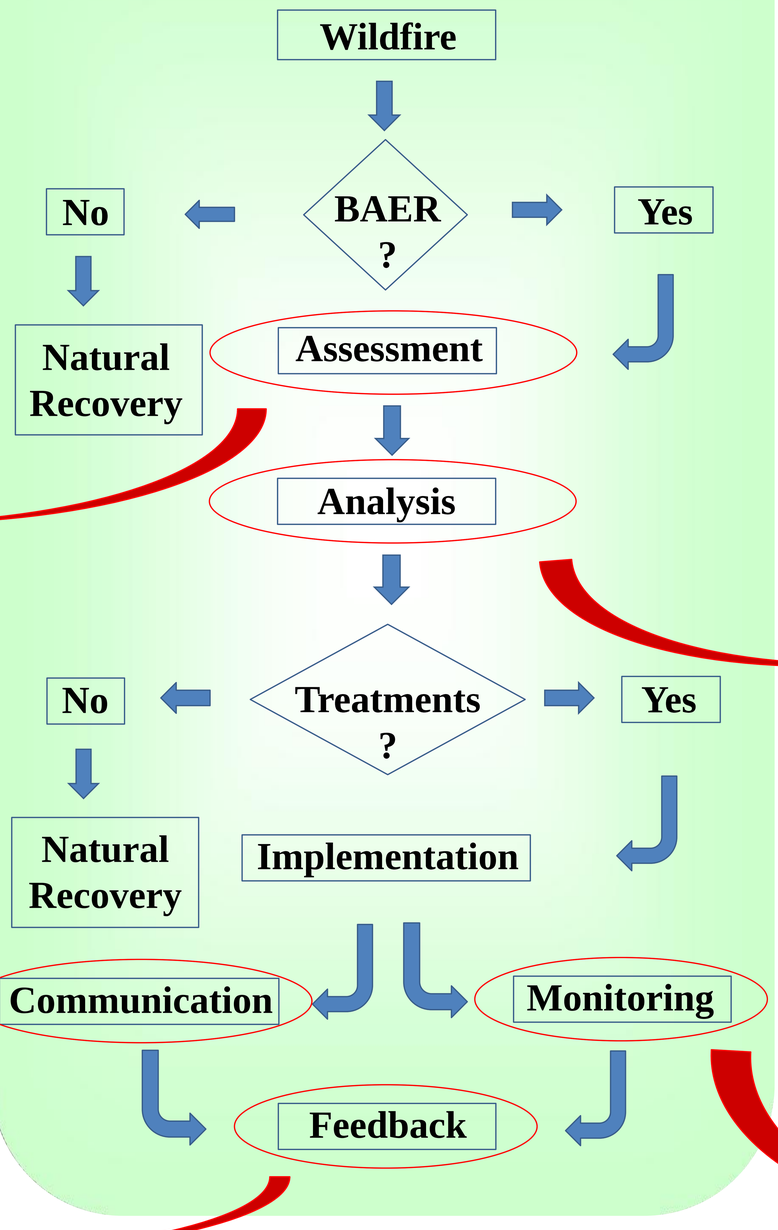
**GIS Tools**

Resource Inventory
Slope/Aspect Thresholds
Endangered Species Habitat

**Needs**

Burn Severity
Tree Mortality
Water Repellent Soils
Archaeological Resources

## Simplified BAER Process




## Analysis

**Hydrology/Erosion**

Peak Flows
Water Quality Deterioration
Sediment Yield
Loss of Soil Productivity

**Ecology/Botany**

Endangered Species
Aquatic Organisms

**Economics**

Life and Property
Commodities and Infrastructure
Non-Market Valuation

**Needs**

Numerical Models
Ecological Responses
Values at Risk
General Principles
Local Knowledge Base

## Communication

**Interagency Needs**

Implementation Coordination
Treatment Coordination
Common Terminology

**Public Needs**

Closure Orders
Early Warning Systems
Reaching Diverse Publics
Signage

## Monitoring

**Treatment Installation**

Design Specifications
Treatment Integrity

**Treatment Performance**

Reduce Negative Impacts?
Unintended Consequences?

**Needs**

Treatment Effectiveness
Cost Effectiveness
Side Effects
Model Validation

## Feedback

**Agency Needs**

Research Results
Model Guidance

**Research Needs**

Access to the Process
Knowledge Gaps