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# Reducing the Risk of Severe Wildfire through Forest Management: Examples, Challenges and Opportunities

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Canfor  
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# Fuel Reduction in the Wildland Urban Interface (WUI)



*Canfor logging in Jasper National Park to reduce the risk of severe wildfire to the town of Jasper, in collaboration with Parks Canada*

***6,000 ha in the WUI treated over 20 years for \$72 M  
(300 ha/yr @ \$ 12,000/ha)***

**PRE-HARVEST**

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**POST-HARVEST**

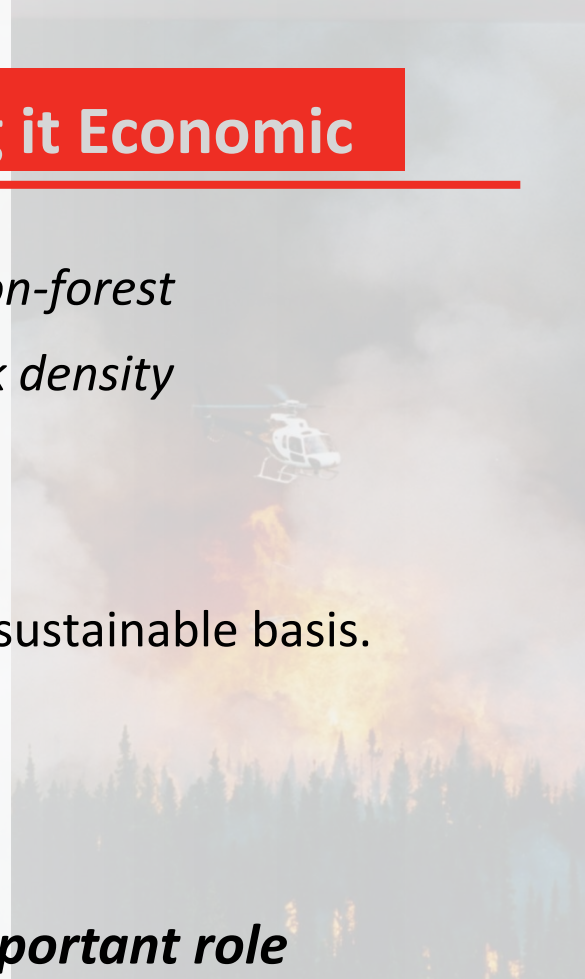
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# Overarching Challenge – Scaling up & Making it Economic

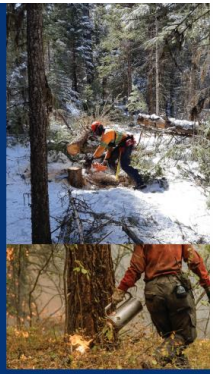
- *20-40% of interior landscapes were in open forest or non-forest*
- *Critical need to reduce fine fuels as well as canopy bulk density*
- Estimated cost: **billions** of dollars
- Government funding alone cannot cover the costs on a sustainable basis.
- Need to support the growing bioeconomy
- Address policy and other barriers

***The forest industry can and must play an important role***









### 2023 Fuel Management Practices Guide

Forest fuel management planning, treatment design and implementation methodologies



### CROWN LAND WILDFIRE RISK REDUCTION PLANNING GUIDE 2023-2024

Community Resiliency Investment program



### SUMMARY OF RECOMMENDATIONS

### THE PREMIER'S EXPERT TASK FORCE ON EMERGENCIES



### MITIGATING WILDFIRE INITIATIVE

### DIALOGUE ON STRATEGIC AND COLLABORATIVE APPROACHES TO MITIGATING WILDFIRE

WHAT WE HEARD REPORT | OCT 2023



### B.C. establishing 'first of its kind' fire centre in Kamloops

Thompson Rivers University program being developed this year, courses offered from 2025, premier says

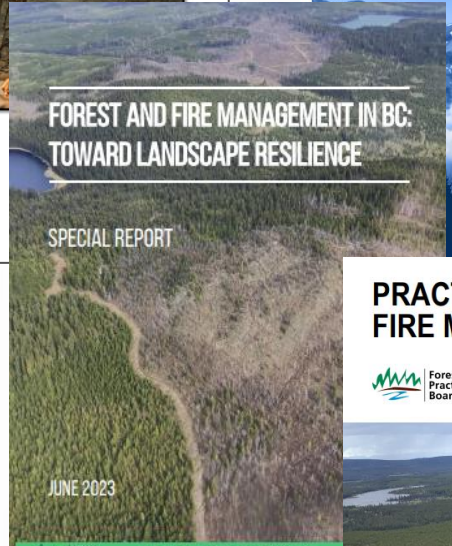


### THE MITIGATING WILDFIRE INITIATIVE: LANDSCAPE RESILIENCE AND WILDFIRE

A Primer for Collaborative Dialogue

### FOREST AND FIRE MANAGEMENT IN BC: TOWARD LANDSCAPE RESILIENCE

SPECIAL REPORT



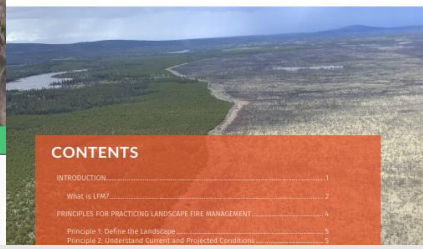
JUNE 2023

Forest Practices Board BC'S INDEPENDENT WATCHDOG FOR SOUND FOREST AND RANGE PRACTICES

### PRACTICING LANDSCAPE FIRE MANAGEMENT



TECHNICAL BULLETIN



### CONTENTS

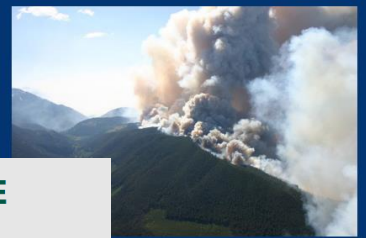
- INTRODUCTION 1
- WHAT IS LFM? 2
- PRINCIPLES FOR PRACTICING LANDSCAPE FIRE MANAGEMENT 4
- Principle 1: Define the Landscape 5
- Principle 2: Understand Current and Projected Conditions 5



### Wildland Urban Interface Wildfire Risk Reduction Plan

2023 Development Standard and Guidance Document

Updated: July 2023 BC Wildfire Service



## UBC FORESTRY TO LAUNCH CENTRE FOR WILDFIRE COEXISTENCE THANKS TO \$5M DONATION FROM THE KOERNER FAMILY



An aerial photograph of a mountainous region. The terrain is rugged with green vegetation and brownish patches. A river flows through the landscape, and several roads are visible. The text is overlaid on the top left of the image.

## Challenge 1. Where to focus our efforts

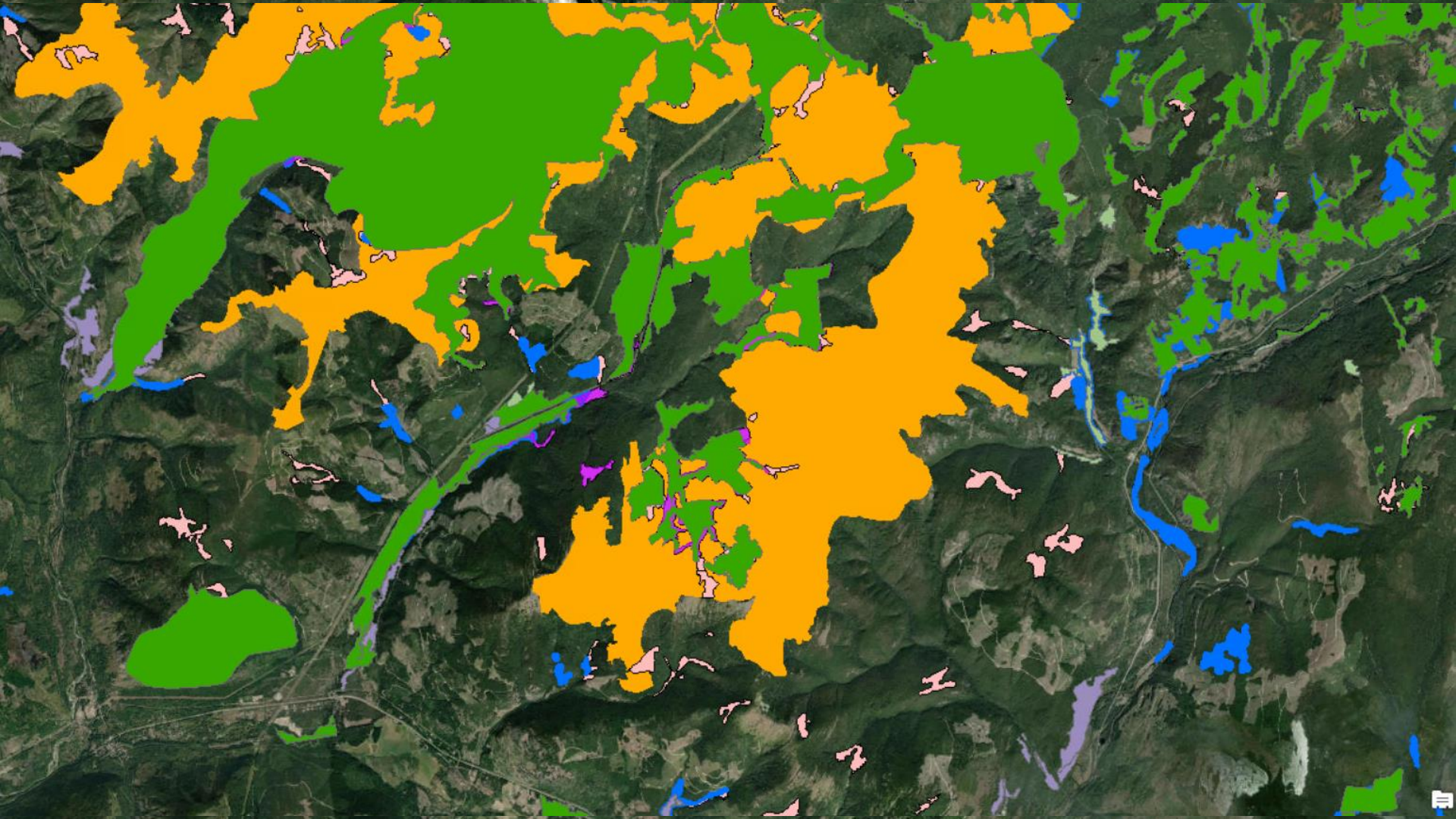
Need to be strategic – where will treatments have the greatest probability of being most effective?



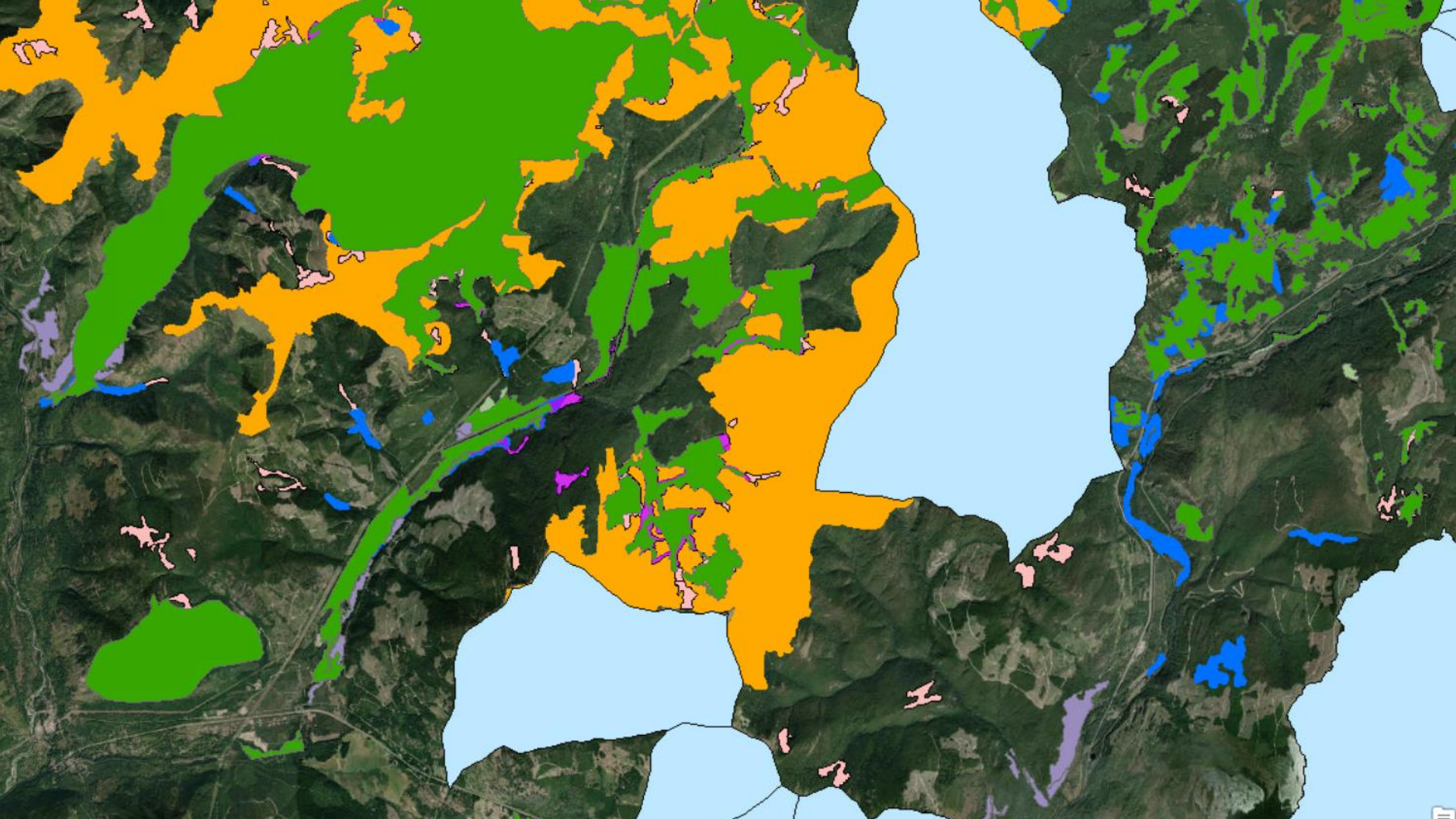
An aerial photograph of a mountainous landscape. A large, irregularly shaped area in the upper-left and central parts of the image is highlighted in a bright yellow color, representing a static reserve. The surrounding landscape is green and brown, showing a mix of forested areas and open land. The text "Challenge 1 – Where to focus and how to incorporate values managed through static reserves in a dynamic landscape?" is overlaid in white on the yellow area.

**Challenge 1 – Where to focus and how to incorporate values managed through static reserves in a dynamic landscape?**









# Opportunities:

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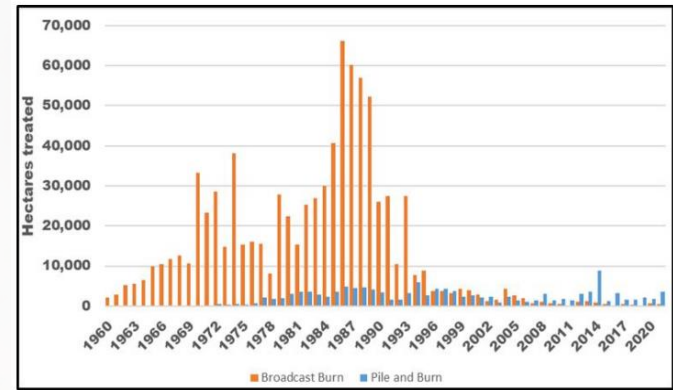
- Support efforts to better understand fire flow patterns and where treatments may be most effective (i.e., East Kootenay Project)
- Identify static reserves at high risk of catastrophic wildfire and develop resilience treatments
- Define old forest and wildlife habitats in terms of *stand structure* consistent with resilience landscape conditions, not (or not solely) on stand age (LiDAR)
- Require Forest Landscape Plans to manage for landscape fire resilience and incorporate landscape level fuel management as a foundational driver in their planning.





# Challenge 2: Reducing Fuels through Burning

- Legal framework & interpretations strongly discourage broadcast burning by licensees.
- Venting index requirements make achieving burn windows challenging.
- Lack of experienced people to design and prescribe cutblocks for burning and to supervise the burns.



# Opportunities

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- Address the liability issue – need to *incentivize* burning in appropriate circumstances
- Training - more fire experts, but also trained foresters
- Building social license for burning through education and maintaining it through good communication



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# Challenge 3: Poor market for biomass residuals (*currently*)

- Options for reducing non-merch fuels that can be more carbon efficient than burning:
  - heat or electricity
  - biochar
  - biofuel
- Barriers: transportation costs and lack of well-distributed facilities.
- Subsidy programs (i.e., FES-BC) have budgets orders of magnitude lower than required & licensees cannot access these funds.



*Tigercat 6050 Carbonator – biochar generator*

# Opportunities:

- Bioeconomy and carbon space rapidly changing
- Develop partnerships & implement trials: develop a tool kit with options for different situations.
- Increase budget for FES-BC: spend at least equal amount on proactive work as on reactive work.
- Enable existing co-gen facilities to fully contribute or even expand, consider them as part of a comprehensive provincial energy strategy with fire risk reduction benefits



Lheidli T'enneh



*Partnership to trial use of slash piles to produce bio-oil*



# Challenge 4: Reforestation Requirements

- Current stocking standards require licensees establish dense conifer stands on virtually all logged sites outside WUIs.
- Flexibility to allow small areas of broadleaf trees, but awareness and implementation has been low (but improving).
- Other than the boreal mixedwood (NE BC), broadleaf trees not utilized



# Opportunities

- Expand use of Fire Management Stocking Standards outside WUIs (*need guidance on where*) and develop more of these for additional BEC variants/site series
- Develop broadleaf and mixedwood stocking standards for ecosystems throughout the interior
- Provincial Broadleaf Working Group
  - Successful pilot NW of Prince George
  - Expanding to remainder of province





## 5. Challenges : Fire Salvage

- Canfor BMPs
- Developed with input from First Nations and expert hydrologists, wildlife and fish biologists, etc.
  - Reserve live and lightly burned trees/patches
  - Retain some patches of dead trees
  - Retain large dead fir, ponderosa pine, western larch
  - Protect riparian areas
  - Protect soils, minimize erosion and sedimentation
  - Minimize invasive plant transfer
  - Access control

**Overall Goal:** To maintain the variability in habitats that wildfire creates, and to mitigate the impacts of salvage logging on soils and water quality/quantity.



***Typically < 5% of fire area salvaged, much less in larger fires***

A scenic view of a mountain range. The foreground is dominated by a dense forest of evergreen trees, with some trees showing signs of being dead or dormant. The middle ground shows a steep, rocky slope covered in more trees. In the background, a prominent, rocky mountain peak rises against a clear, bright blue sky. The overall scene is a natural, mountainous landscape.

*Thank you*