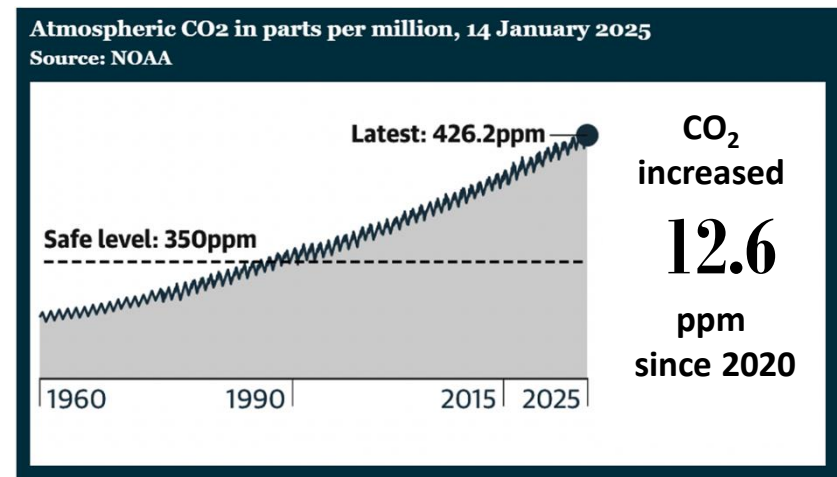
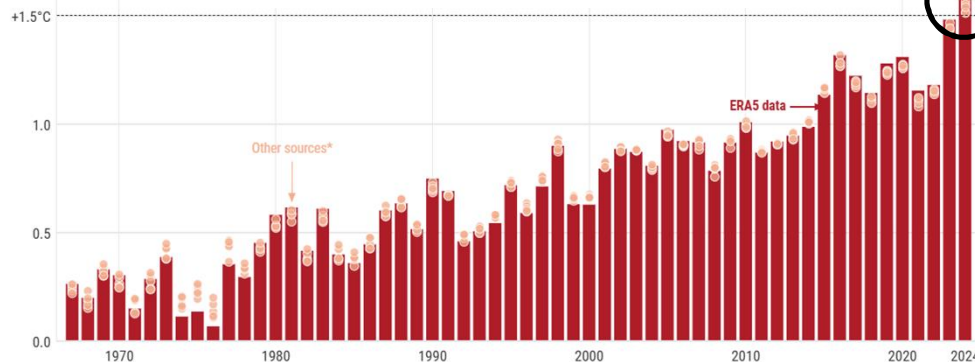


Climate Disruption Update

What has happened in the last 5 years?



Global Surface Temperature (anomaly to pre-industrial 1850-1900)



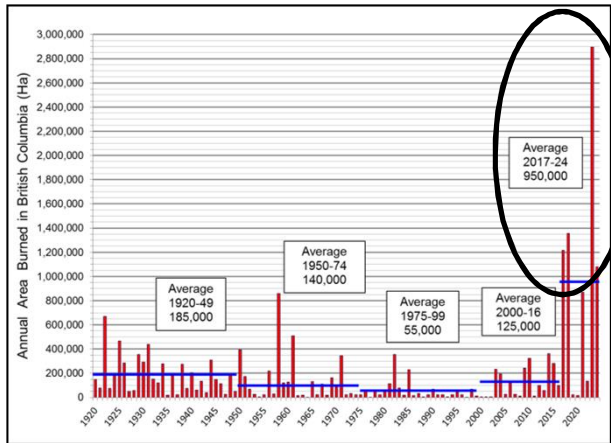
2024
1.55°C

Global
temp
increased
0.3°C
since 2019

*Other sources comprise JRA-3Q, GISTEMPv4, NOAA GlobalTempv6, Berkeley Earth, HadCRUT5.

Recent Wildfire Implications

Province-wide

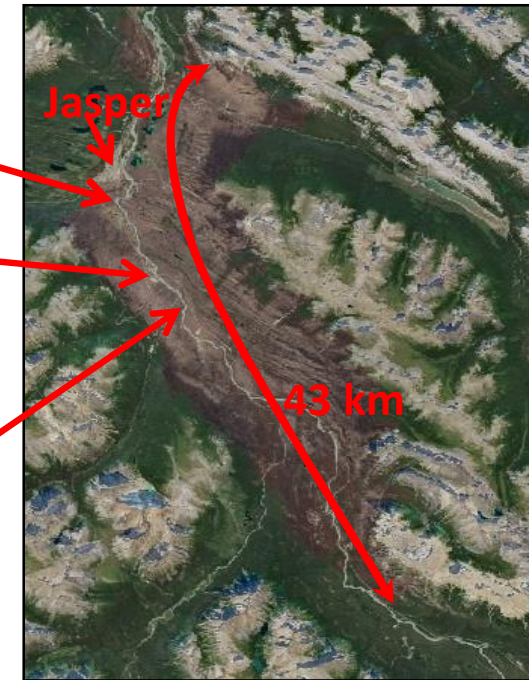


2023
2.9m ha



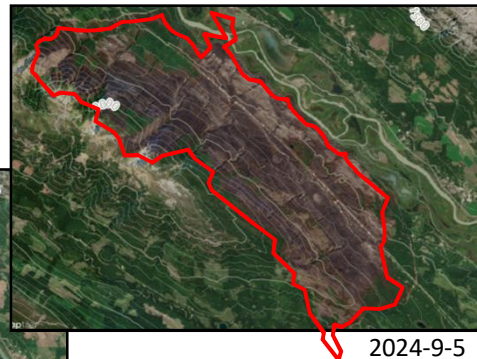
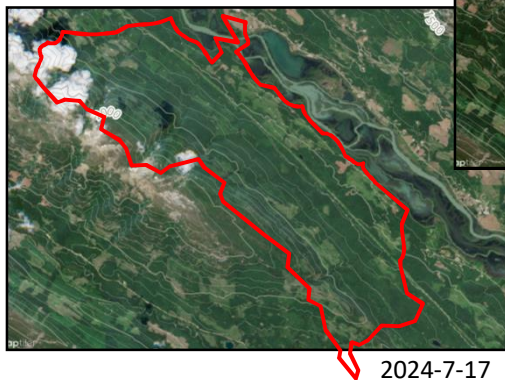
Summer 2024

Jasper Wildfire 32,722 ha



Chad O'Halloran

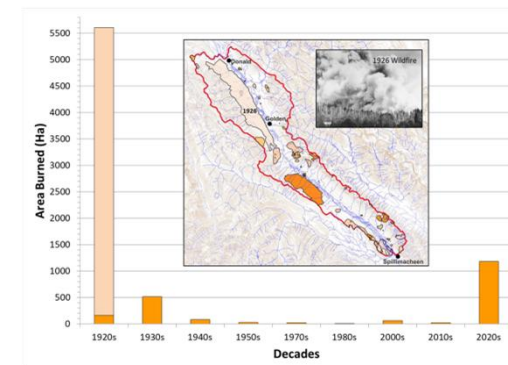
Dogtooth Fire
5,445 ha



2024-9-5

Sentinel-2 L2A 2024
European Union Copernicus
and CSRD

2024-7-17

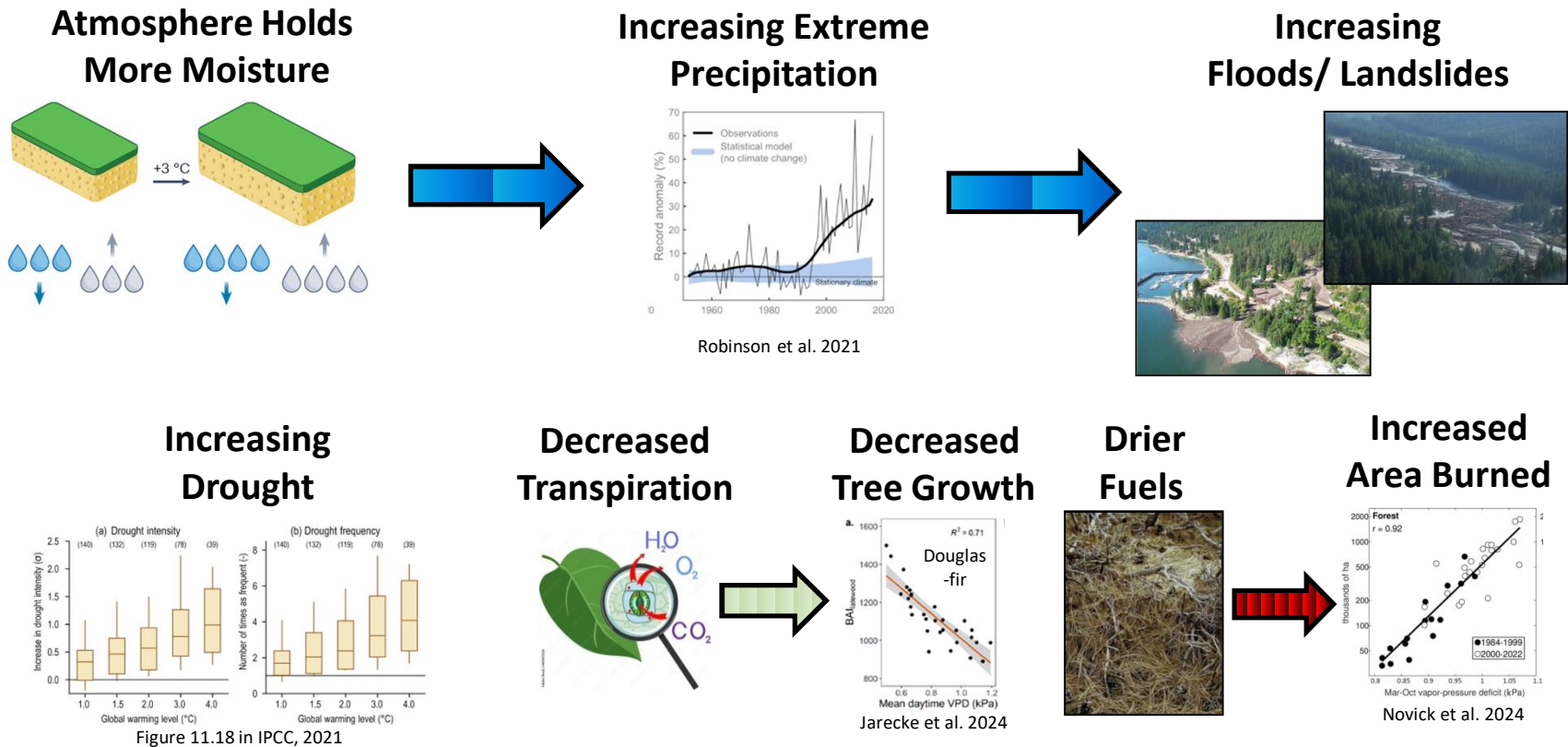


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Some Increasingly Relevant Concepts

Vapour Pressure:

- “ saturation vapour pressure: how much moisture the atmosphere can hold
- “ vapour pressure deficit: strength of moisture demand from plants or fuels
- “ both increase by 7% per degree Celsius



Some Increasingly Relevant Concepts

Vapour Pressure:

- “ **saturation vapour pressure:** how much moisture the atmosphere can hold
- “ **vapour pressure deficit:** strength of moisture demand from plants or fuels
- “ **both increase by 7% per degree Celsius**

Atmospheric Volatility (climate whiplash):

- “ sudden, large and/or frequent transitions between very dry and very wet conditions

Increasing Drought

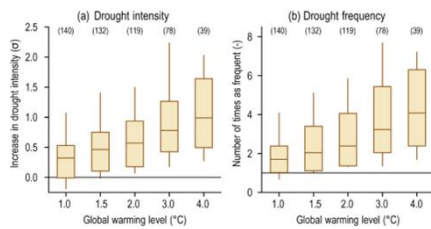
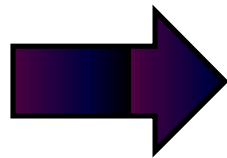
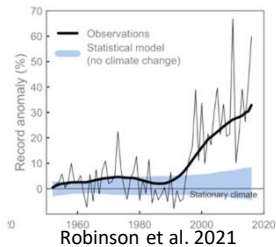


Figure 11.18 in IPCC, 2021

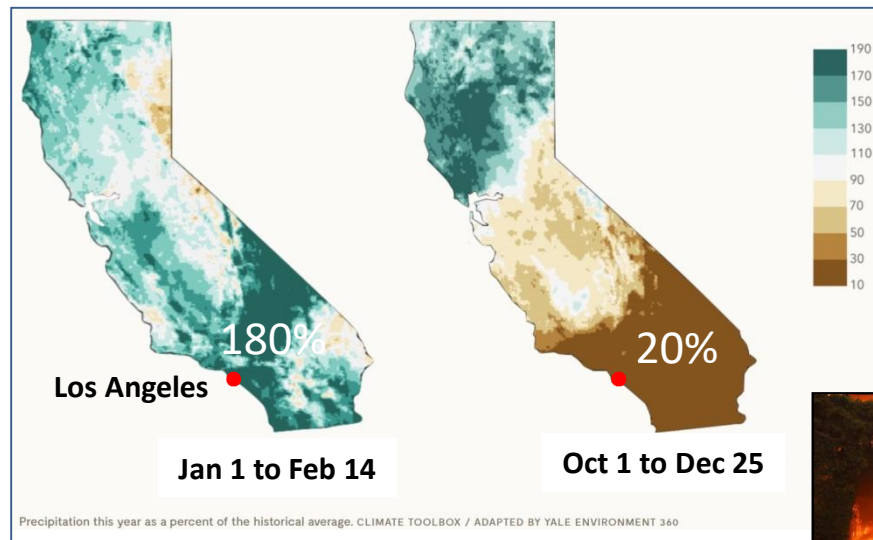


Increasing Extreme Precipitation

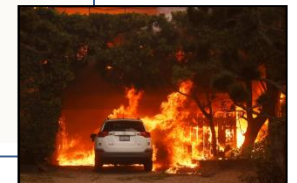


Atmospheric Volatility/ Climatic Disasters

California Precipitation 2024 (% of normal)



Los Angeles Wildfire



AP 2025

What Can be Done?

Reduce Greenhouse Gas Emissions

everybody, everything, everywhere ...

Heat Pump



**Induction
Stove**



Electric Vehicle



Solar Power



Bicycling

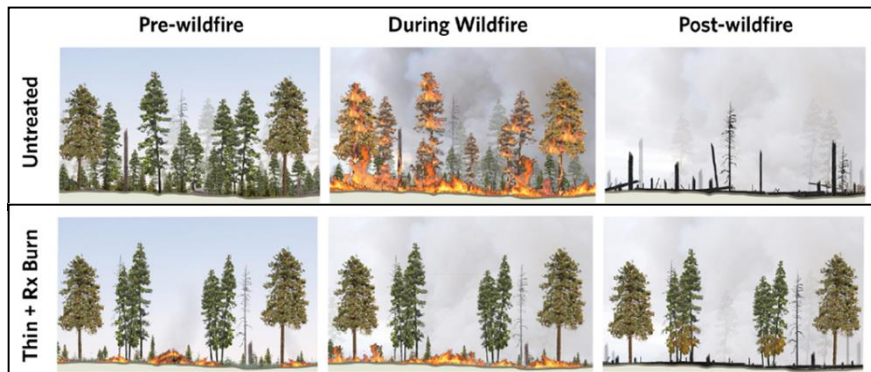


What Can be Done?

Reduce Greenhouse Gas Emissions

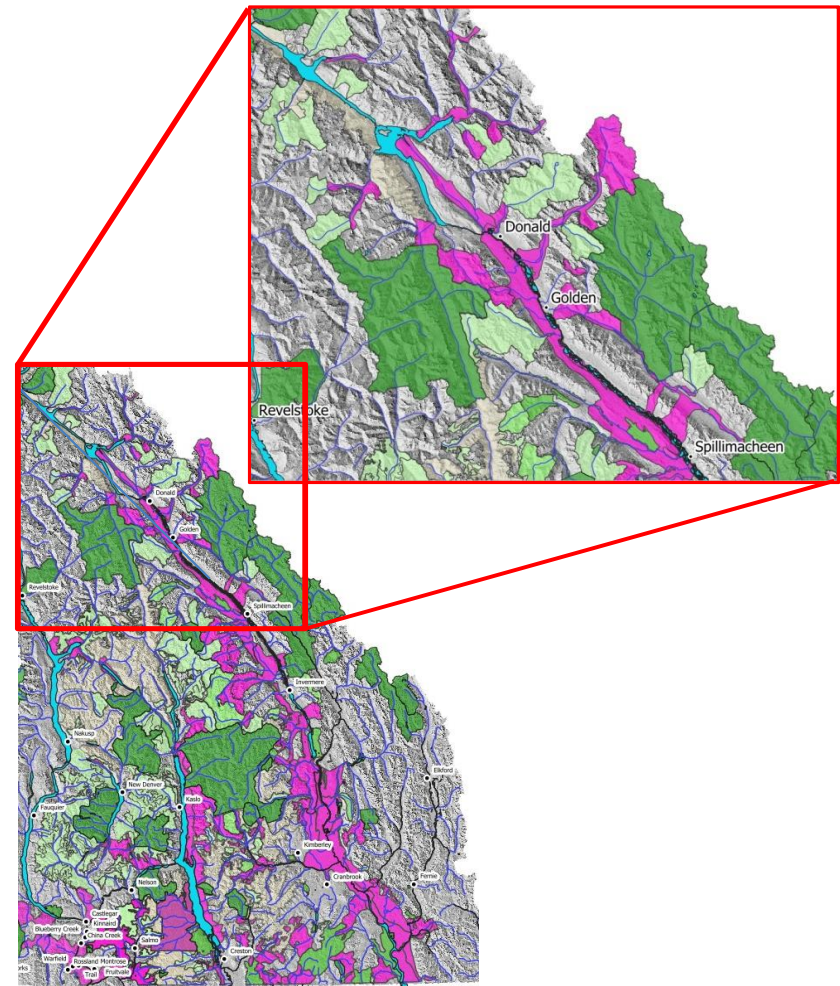
everybody, everything, everywhere ...

Wildfire Fuel Treatments



Steve Rondeau, Klamath Tribes Natural Resources Director , in Davis et al. 2024

Regional Conservation and Connectivity



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**Eliminating
GHG emissions
is the only real answer**

**It is all about that thin
little layer of air**



“We have options, but the past is not one of them”

Sauchyn and Kulshreshtha 2008, p.295

“Times have changed ó no longer is our goal sustainable development í . our goal must now be sustainable survival”

Blackstock 2008, p.15

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