

Climate Change - Global Changes, State Programs, Local Projects: How They Fit Together

- **California's import/export economy and how it affects global, state, and local GHG emissions - *Bill Stewart***
- **Agriculture GHG emissions - animals and fertilizers - *Frank Mitloehner***
- **Agriculture and potential carbon sequestration – healthy soils initiative - *William Horwath***
- **Conversion from Agriculture to Residential Emissions - *Van Butsic, CE Specialist, ESPM, UC Berkeley***



IPCC AR5: Mitigation (2014)

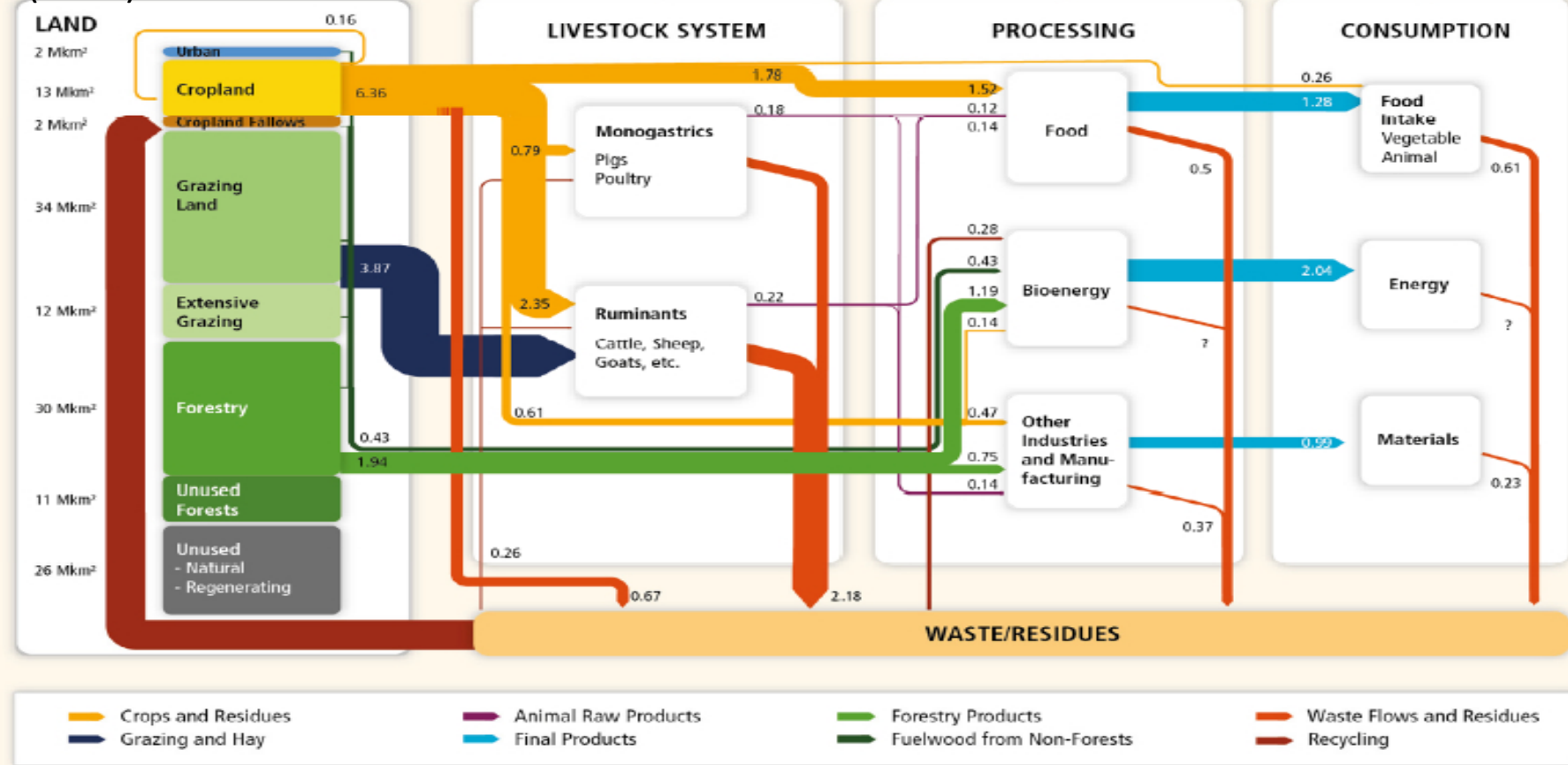


Figure 11.9. Global land use and biomass flows arising from human economic activity in 2000 from

ARB's Forest Offset Protocols (2015)

Can count this

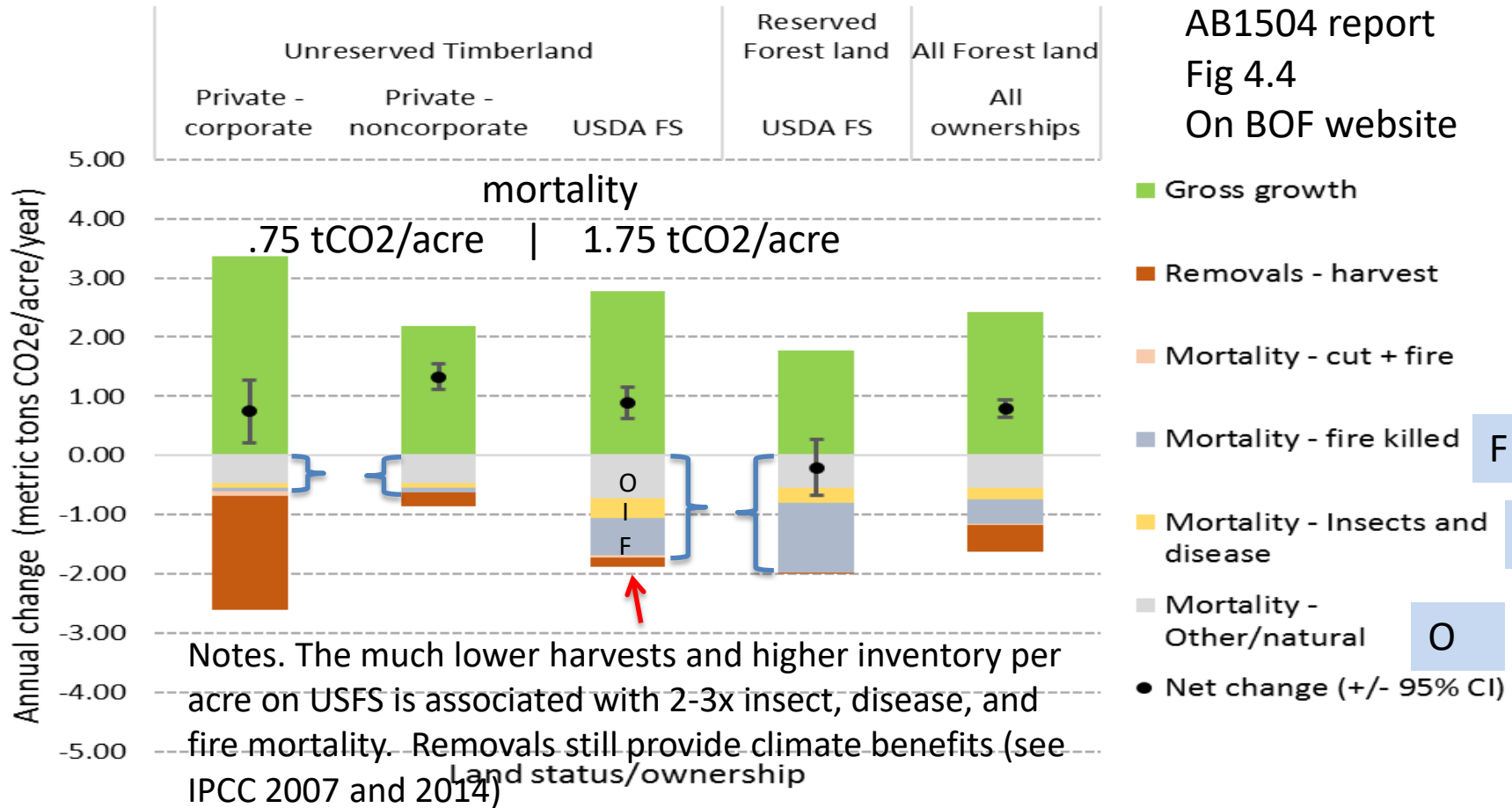


But ignores this

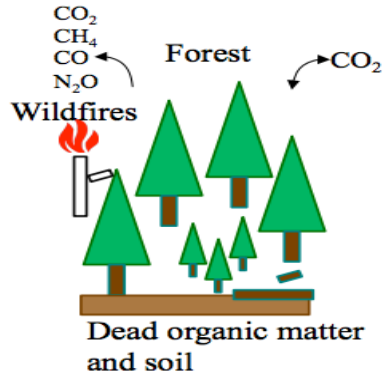


California forest carbon (CO₂e) - Average annual growth, mortality, harvest, and net change per acre above ground live tree pool: 2001-2005 to 2011-2015

AB1504 report
Fig 4.4
On BOF website



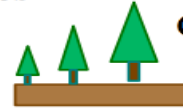
Schematic of the Canadian CBM-CFS3 forest and forest products model (Kurz 2009, Smyth 2014)



Mitigation Analysis

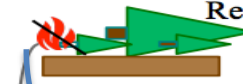
Seven FM Strategies

1. Better Growth
2. Planting



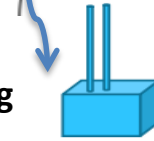
Growth/Regrowth

3. Better Utilization



Residue Management

4. Clear cut harvest
5. Commercial thinning
6. Thin young stands



Bioenergy

Displace alternate fuel sources



Harvested Wood Products

Two HWP Strategies

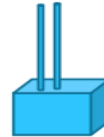
1. Longer-lived products

Displace alternate products



2. Bioenergy Harvest

Displace alternate fuel sources



Four Wood Waste Strategies

1. Burn it for energy
2. Engineered Landfill Storage
3. Compost it
4. Biochar it

The Key: Innovation across the whole supply chain is necessary for global gains.