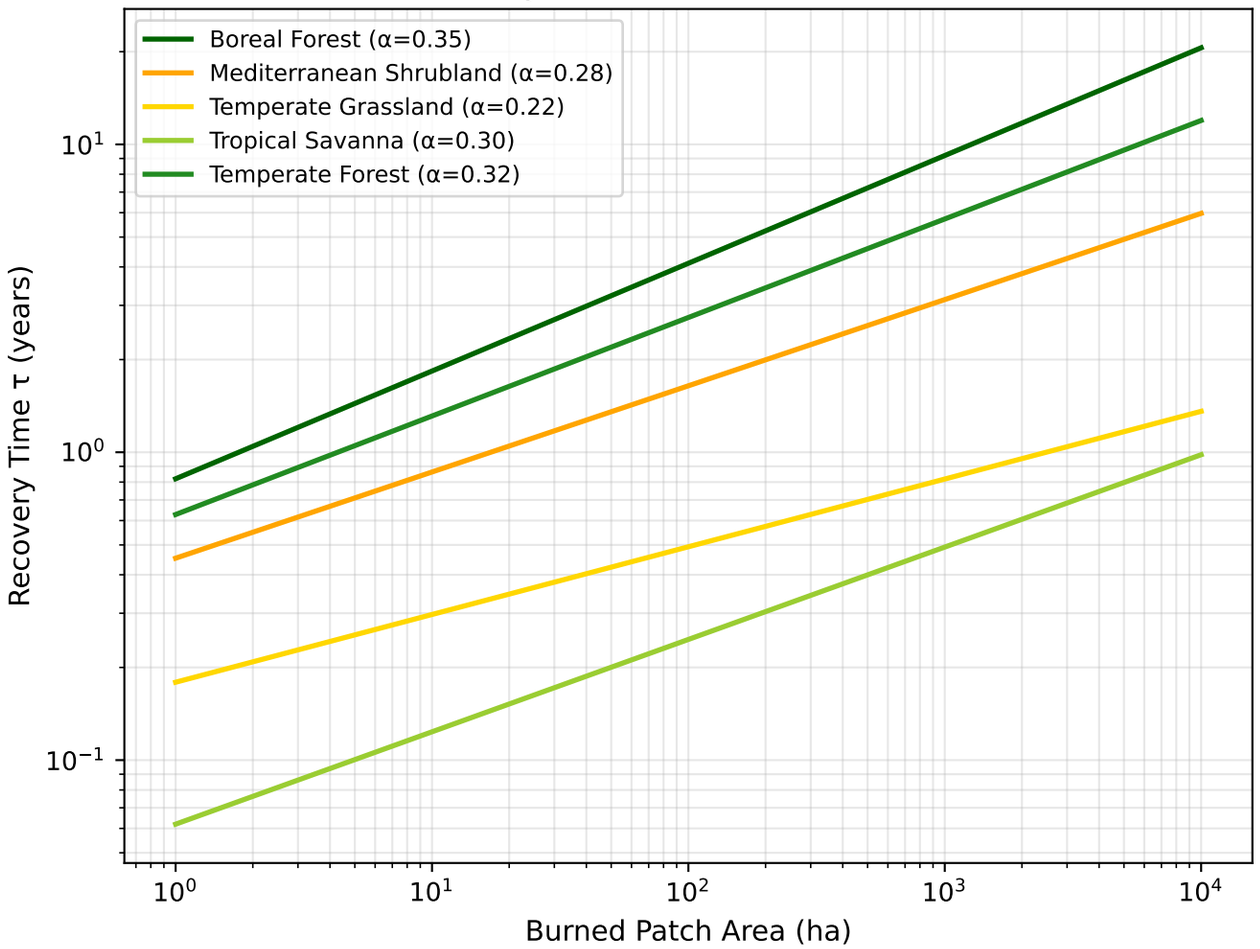
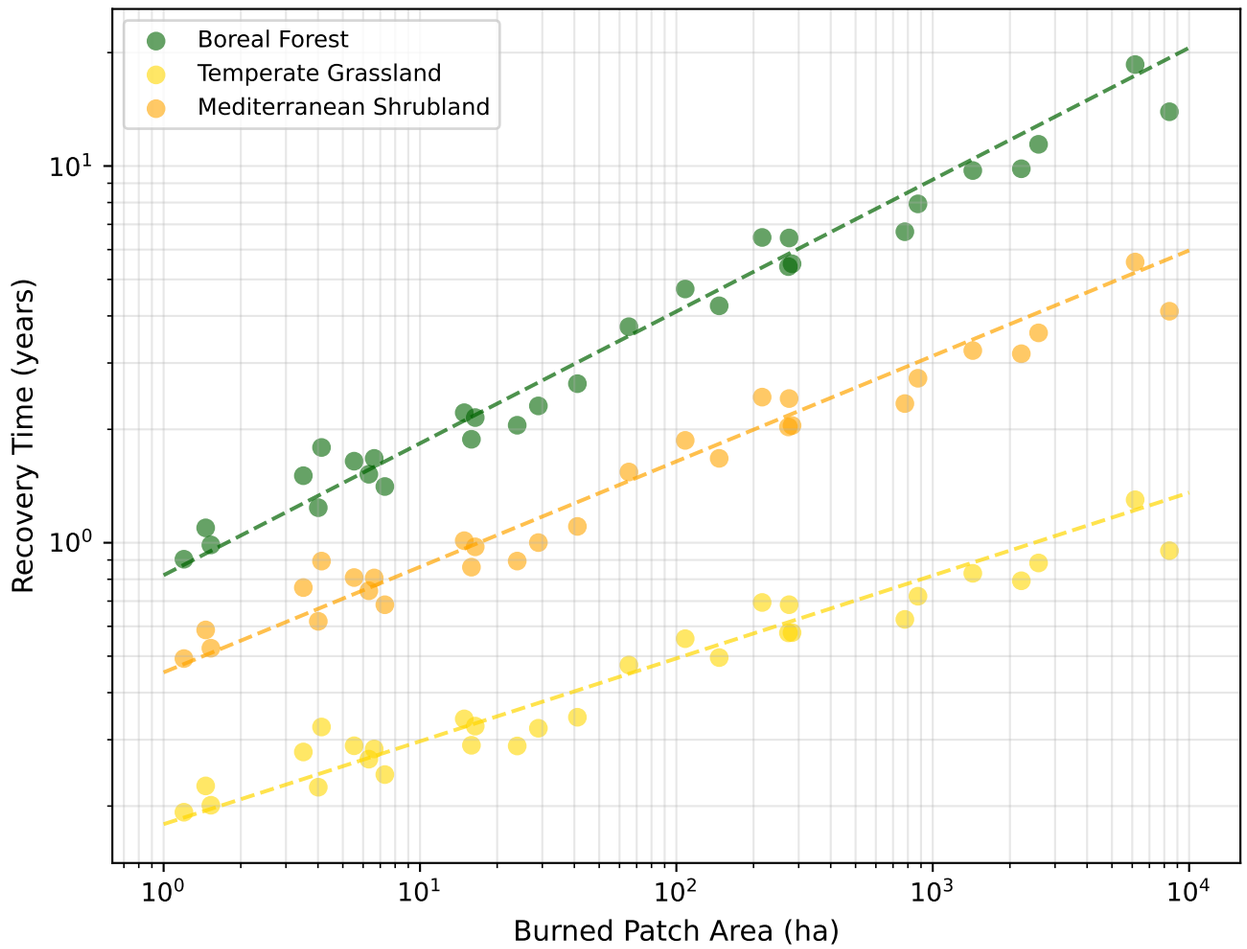
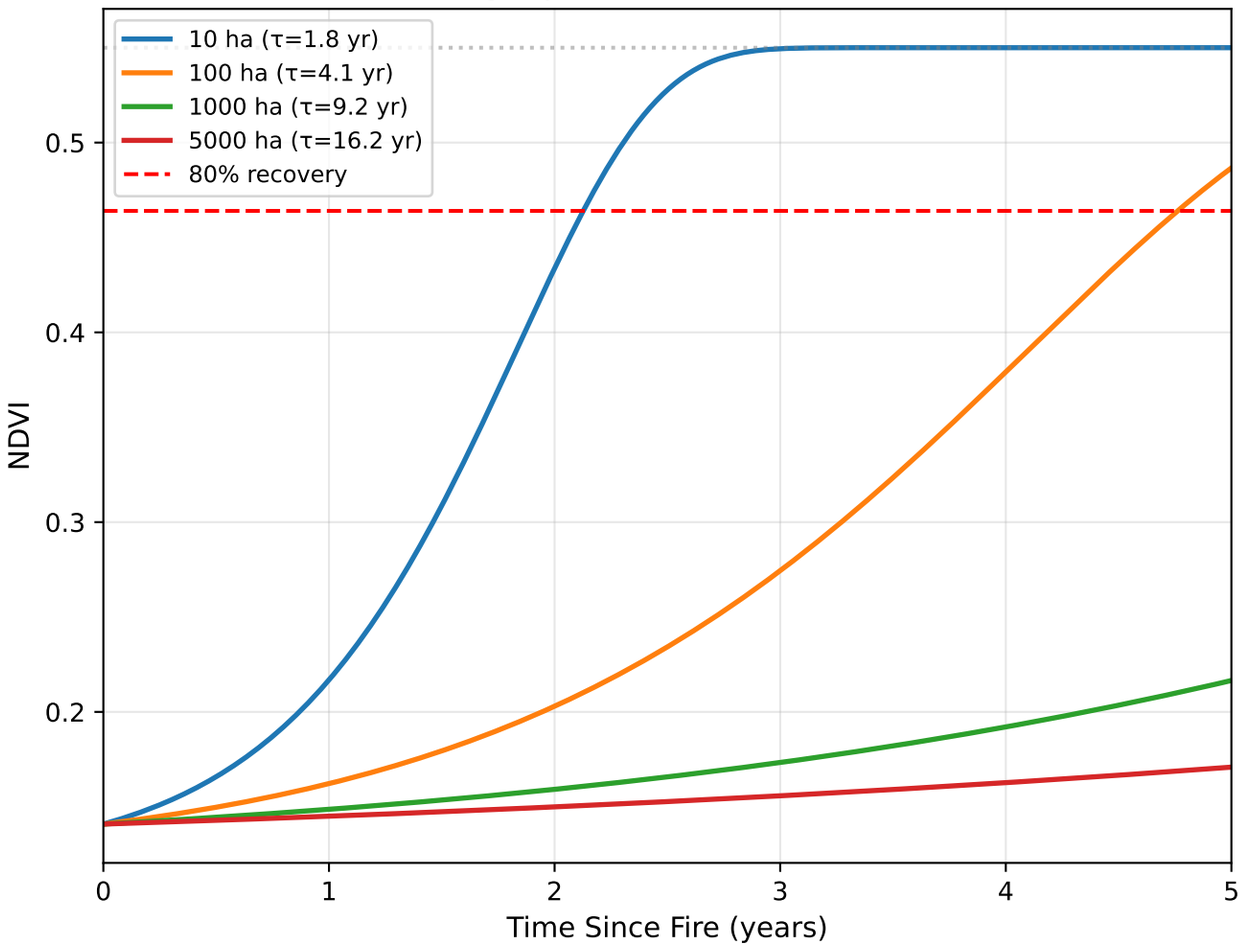
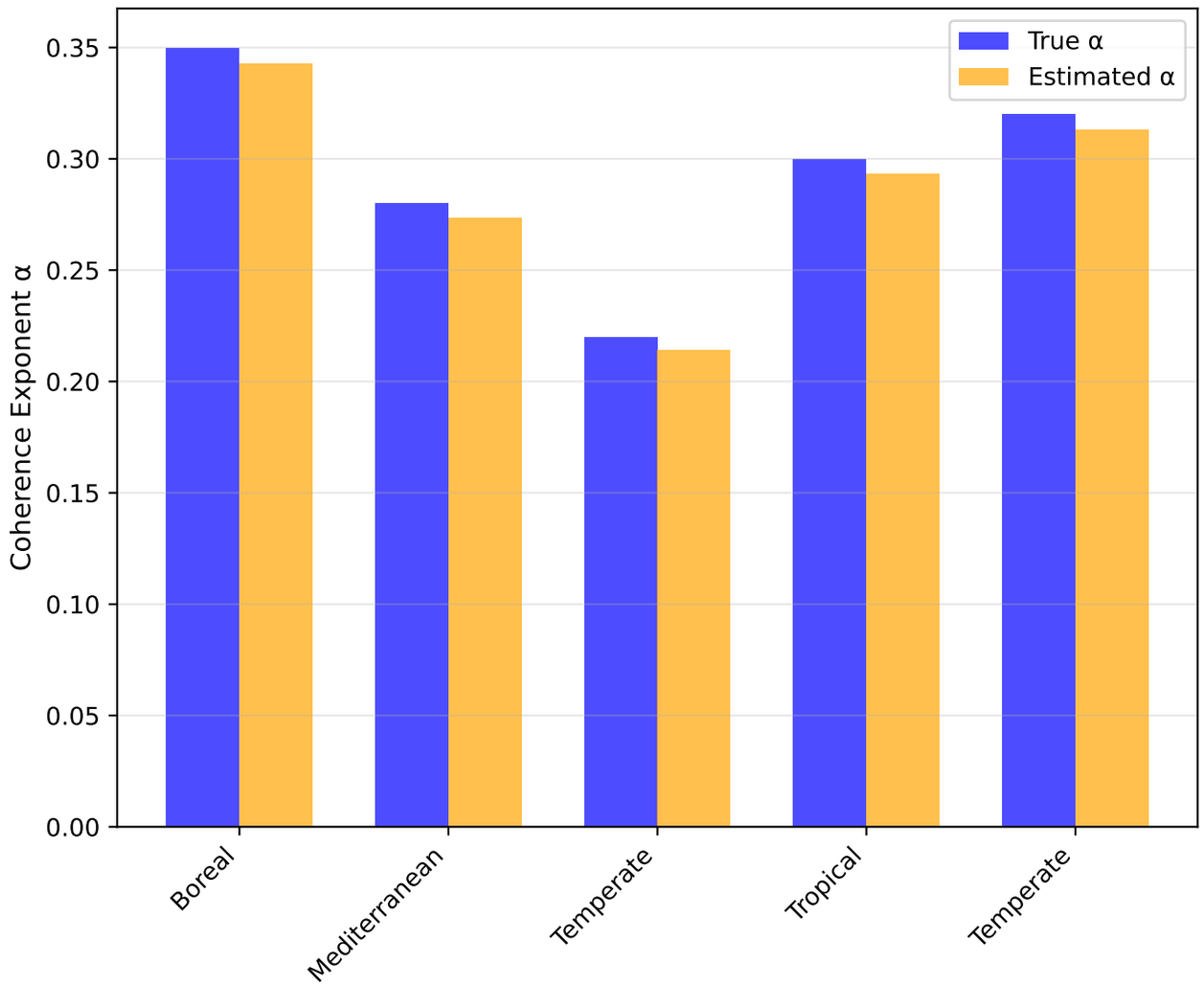

RTM Prediction: τ ∝ L^α
Recovery Time Scales with Patch Size
Boreal Forest (α=0.35)
Mediterranean Shrubland (α=0.28)
Temperate Grassland (α=0.22)
Tropical Savanna (α=0.30)
Temperate Forest (α=0.32)
Recovery Time τ (years)
Burned Patch Area (ha)


Simulated Fire Recovery Data
(Points = simulated observations)
Boreal Forest
Temperate Grassland
Mediterranean Shrubland
Recovery Time (years)
Burned Patch Area (ha)


Boreal Forest: NDVI Recovery Curves
Larger patches recover slower
10 ha (τ=1.8 yr)
100 ha (τ=4.1 yr)
1000 ha (τ=9.2 yr)
5000 ha (τ=16.2 yr)
80% recovery
NDVI
Time Since Fire (years)


α Recovery Across Ecosystems
(Simulated data, n=50 fires each)
True α
Estimated α
Coherence Exponent α
Boreal
Mediterranean
Temperate
Tropical
Temperate