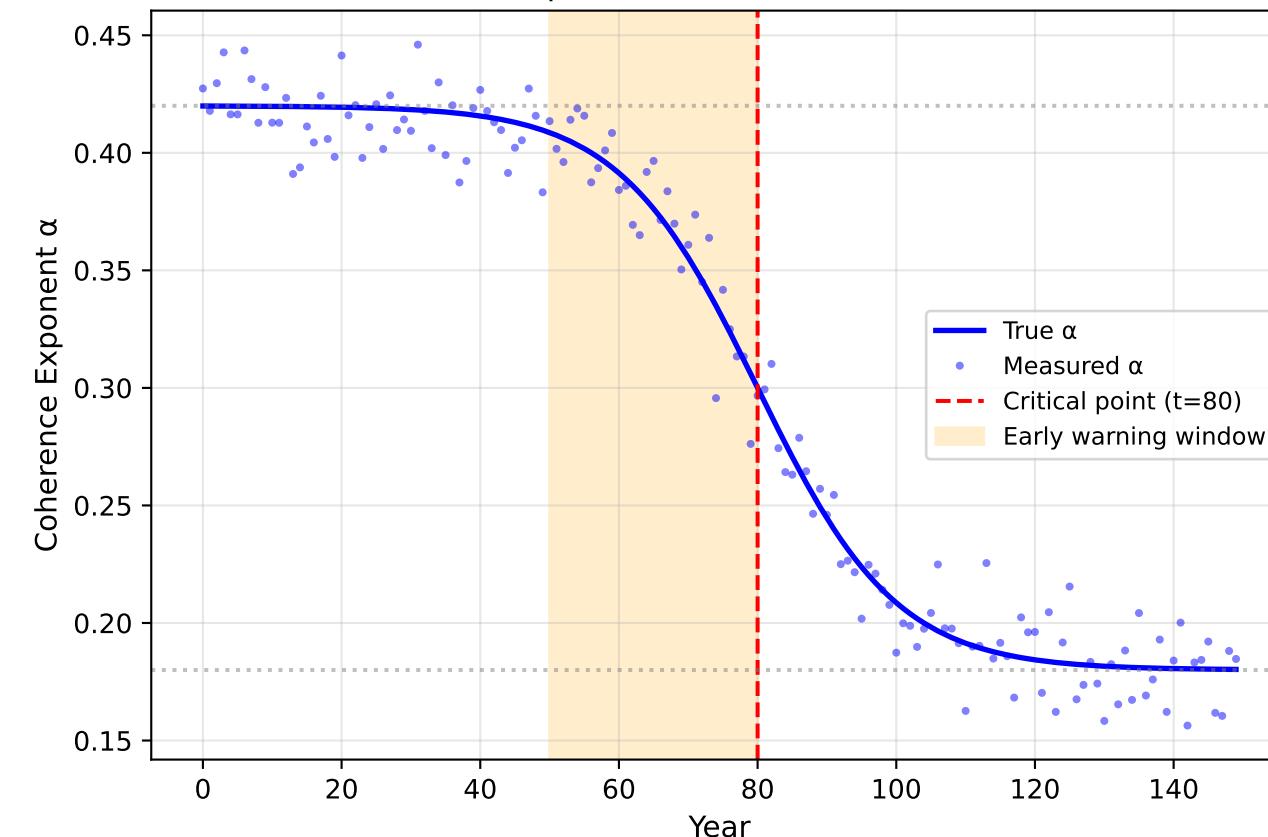
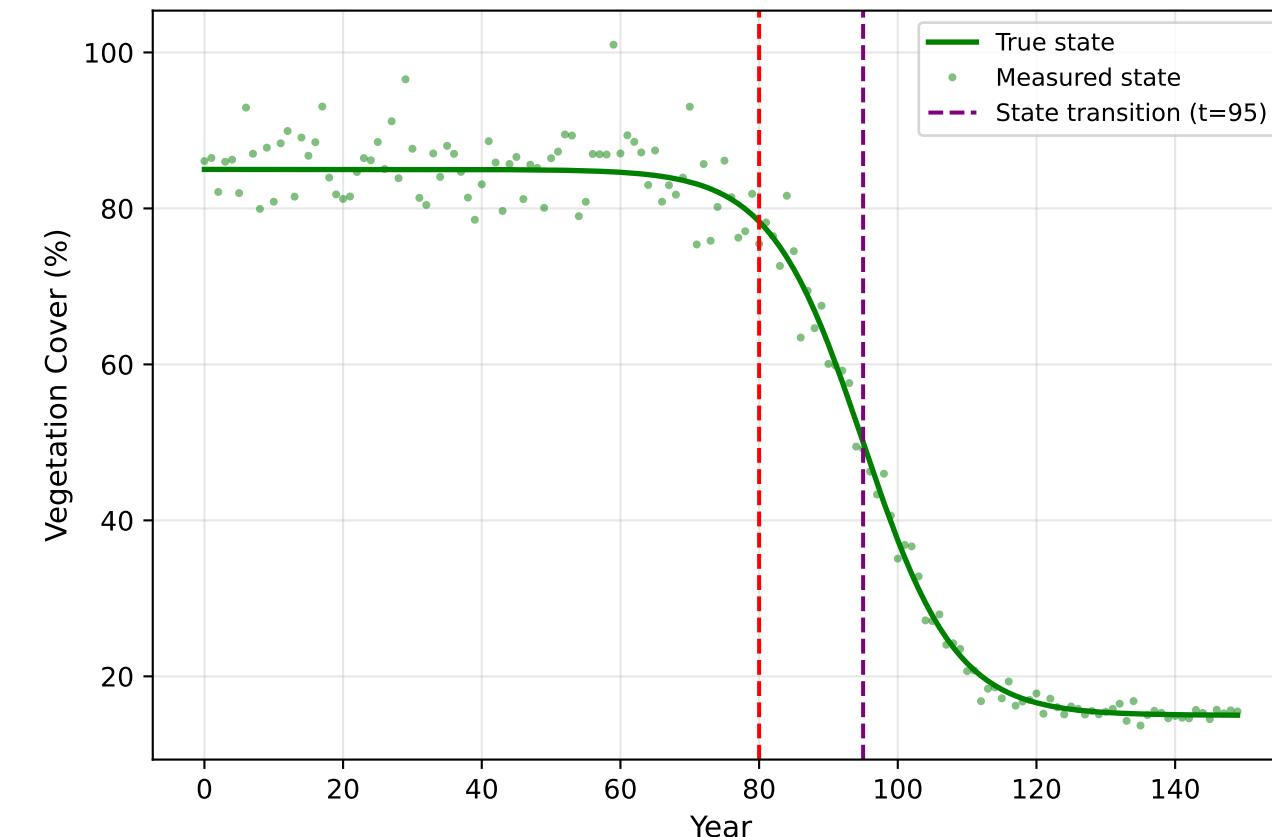


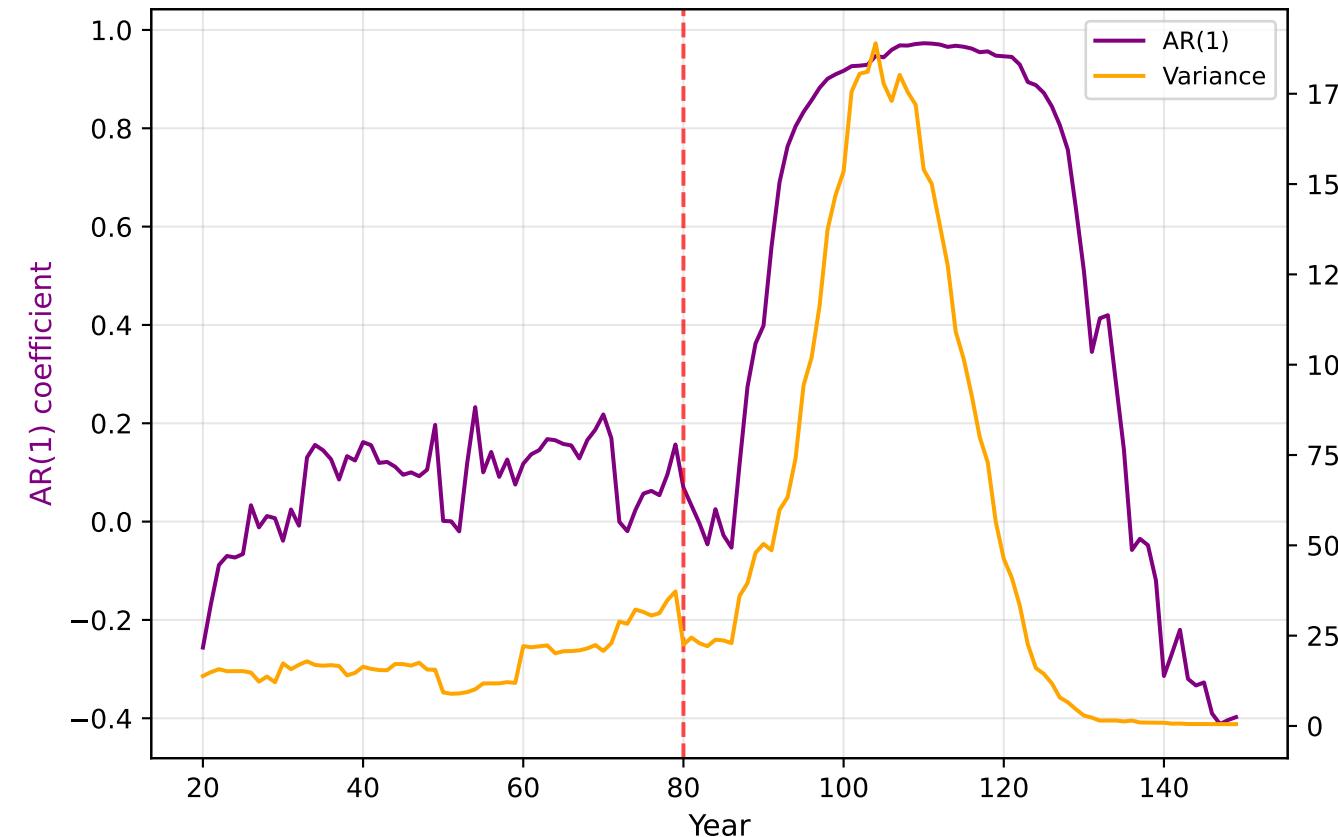
$\alpha$  Decline: Early Warning Signal  
( $\alpha$  drops BEFORE state transition)



Ecosystem State  
(State transition is DELAYED)



Classical Early Warning Signals  
(Autocorrelation & Variance)



Early Warning Detection Comparison  
 $\alpha$  decline provides earliest warning

