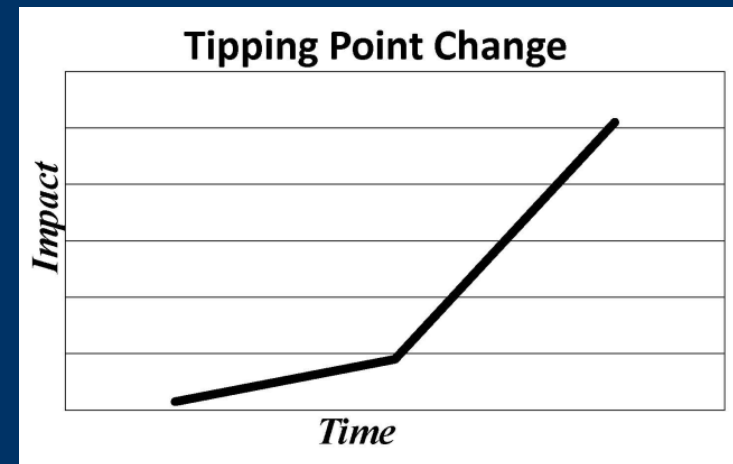
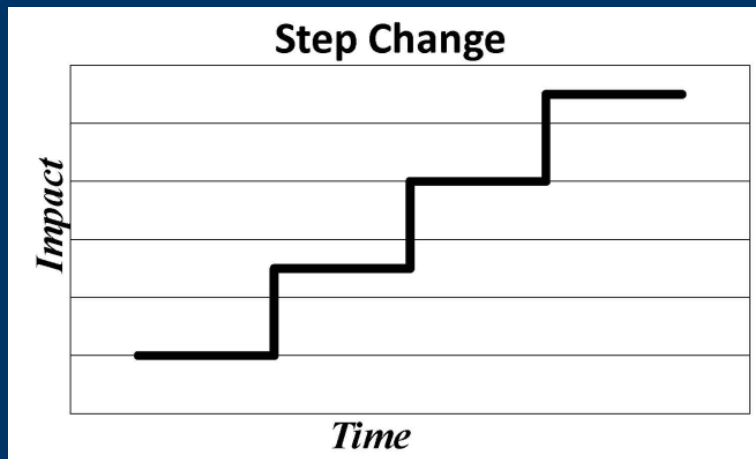
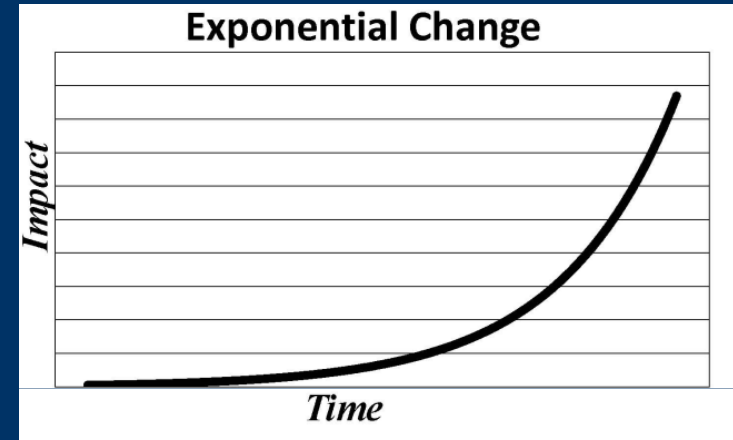
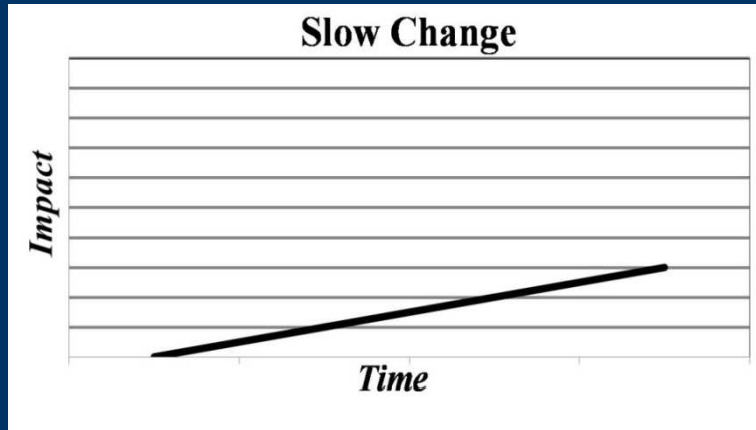

Sustainable Agricultural Development in the Context of Climate Change

Per Pinstrup-Andersen

**Copenhagen University
January 31, 2011**

CORNELL

Hypothetical Patterns of Negative Impact of Climate Change on Agriculture



Climate Change

↑ Temperature

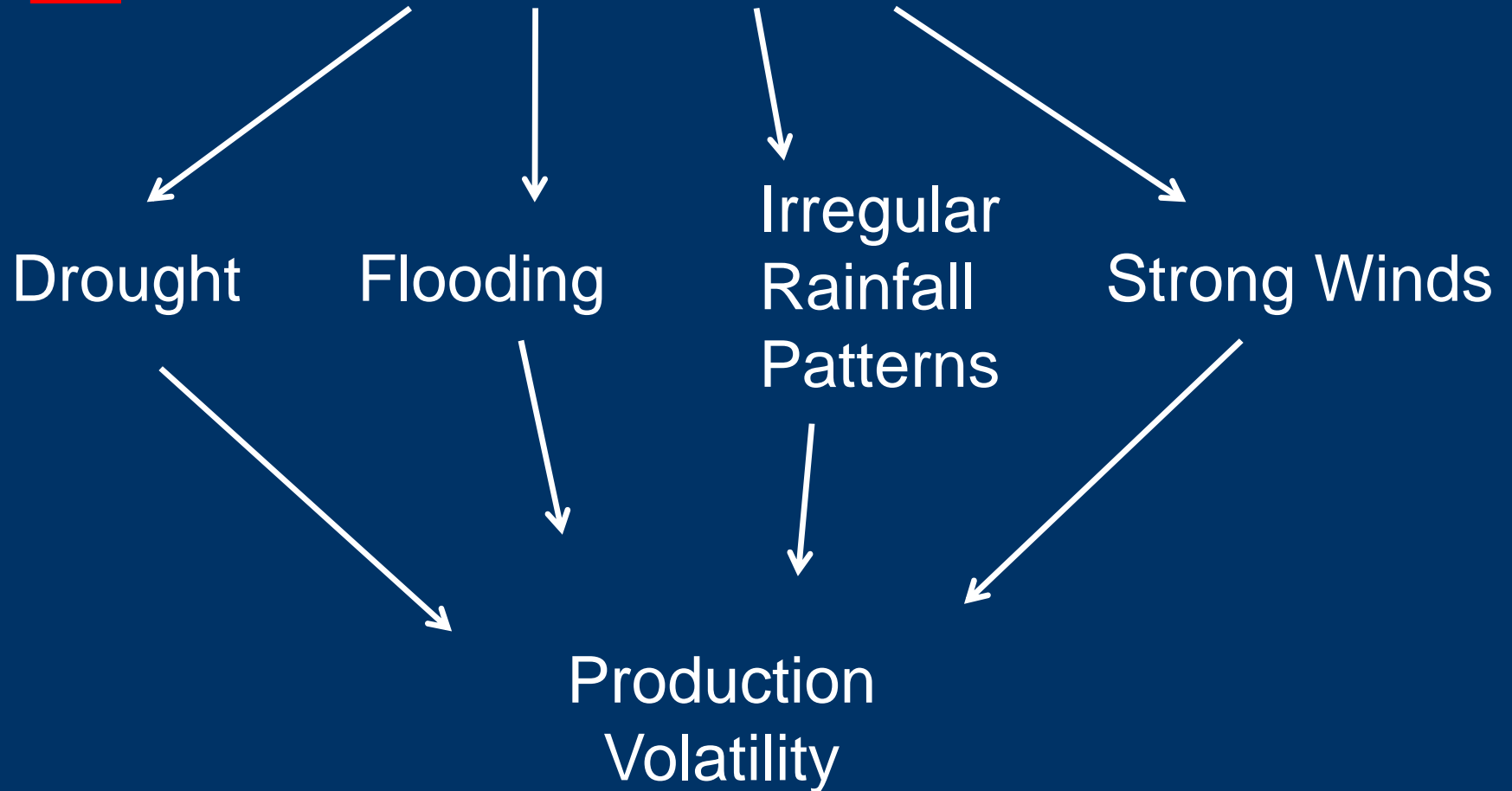
↑ GHG Concentration

↑ Volatility in
Weather
Patterns





↑ Volatility in Weather Patterns





Climate Change

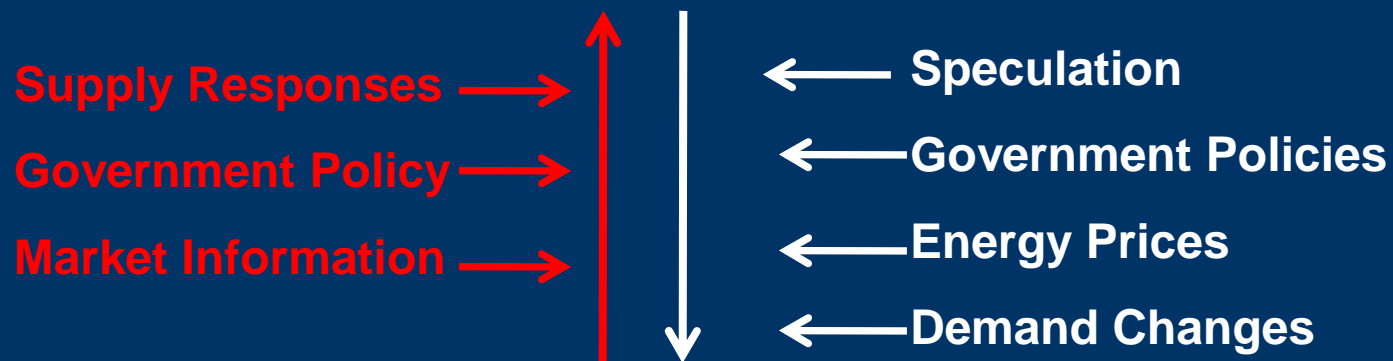
Natural Resource
Management



Future Production and
Production Volatility



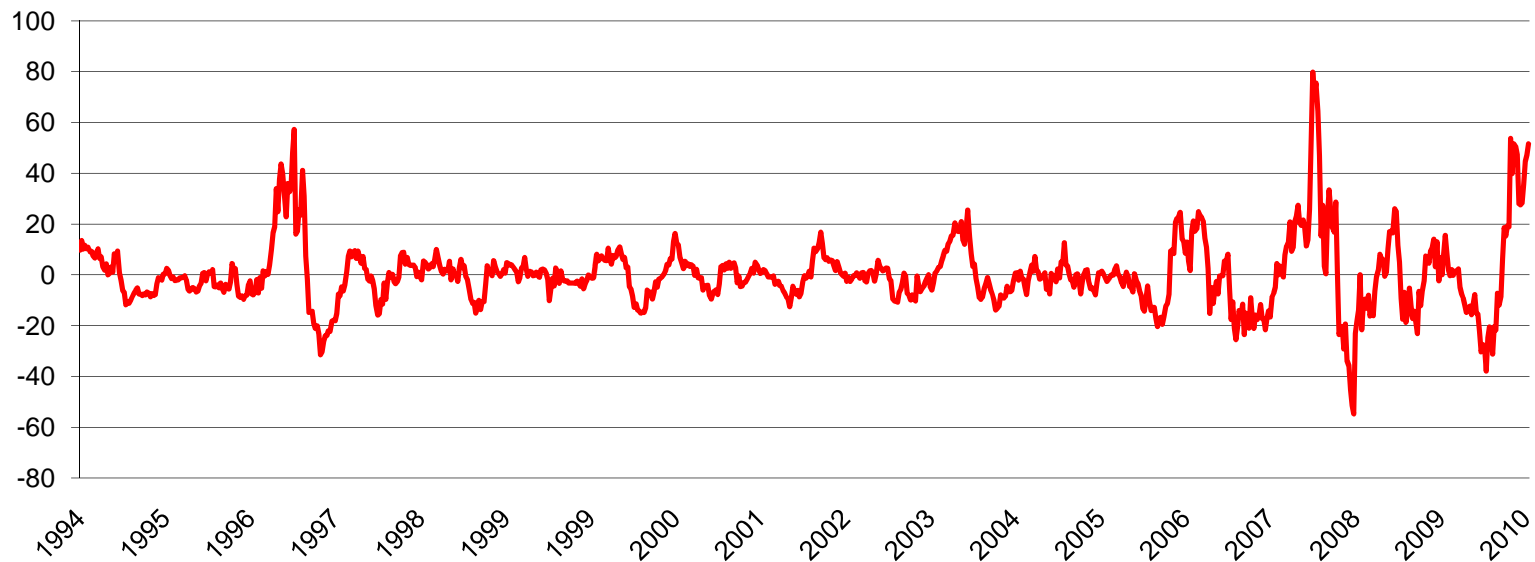
Production Volatility



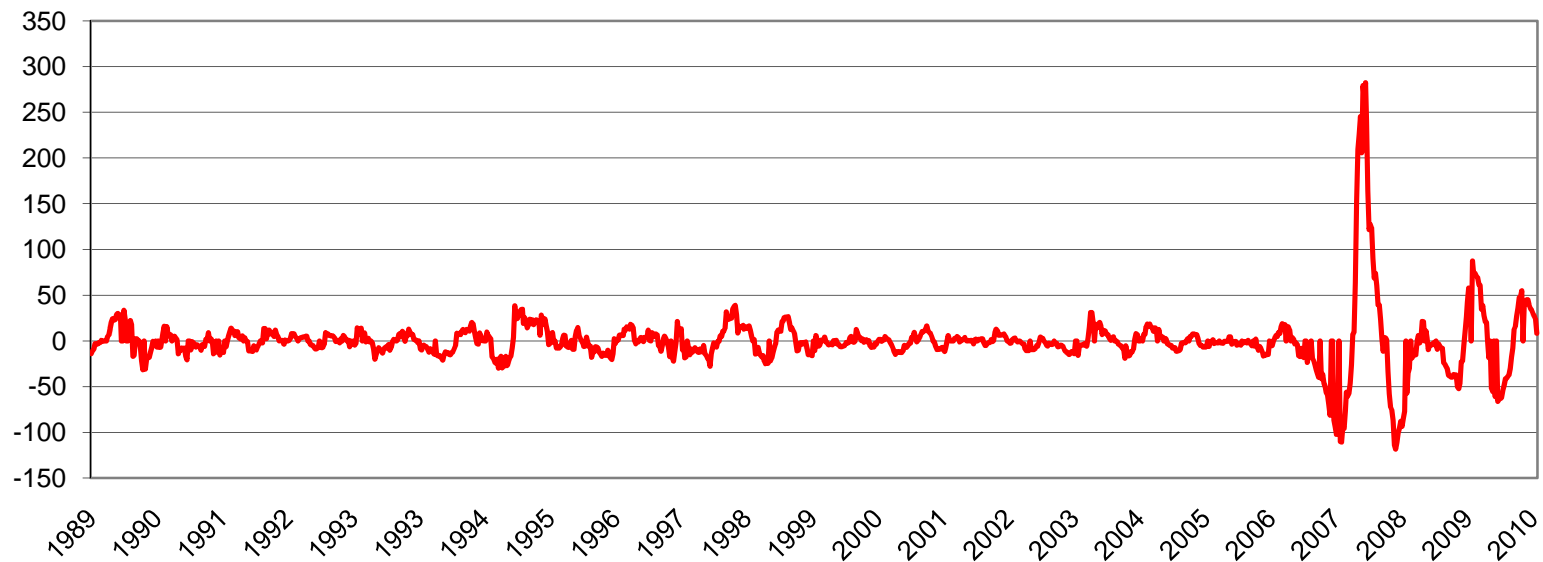
Price Volatility



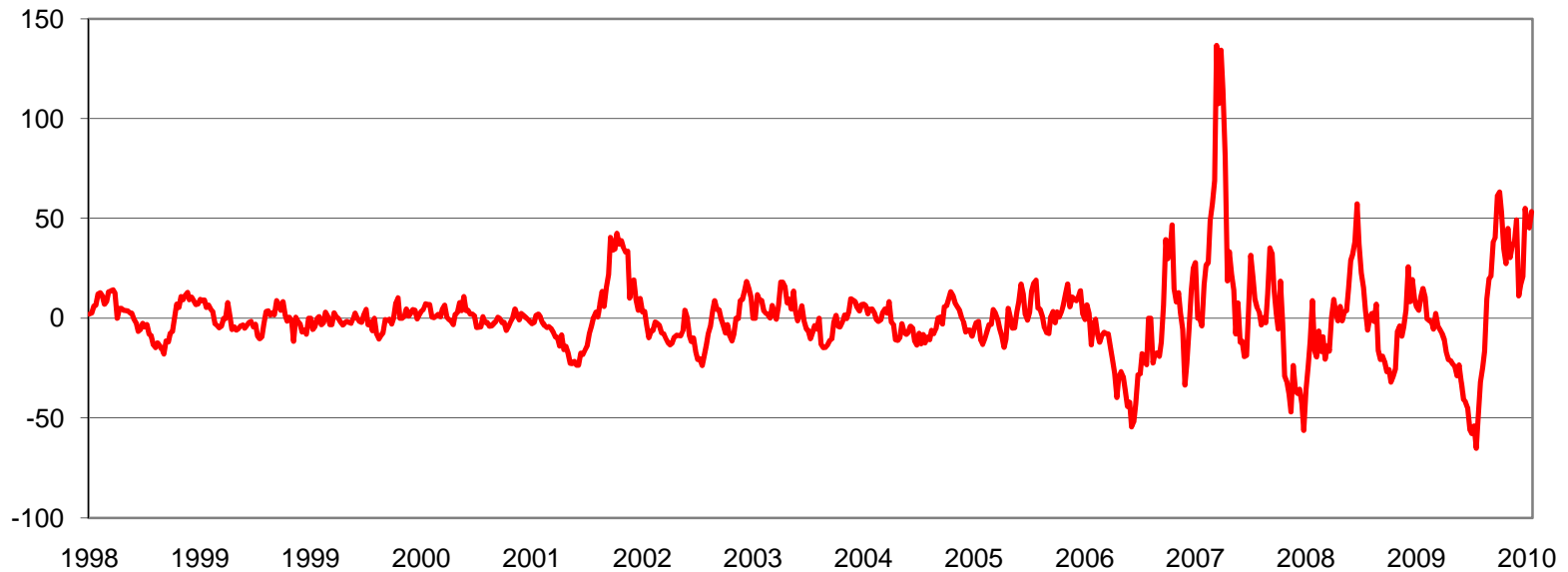
Maize Weekly Price Minus 12-Month Moving Average



Rice Weekly Price Minus 12-Month Moving Average



Wheat Weekly Price Minus 12-Month Moving Average



What to do?

- Mitigation or adaptation?
- Risk management
 - Infrastructure and markets
 - International trade rules
 - Social safety nets

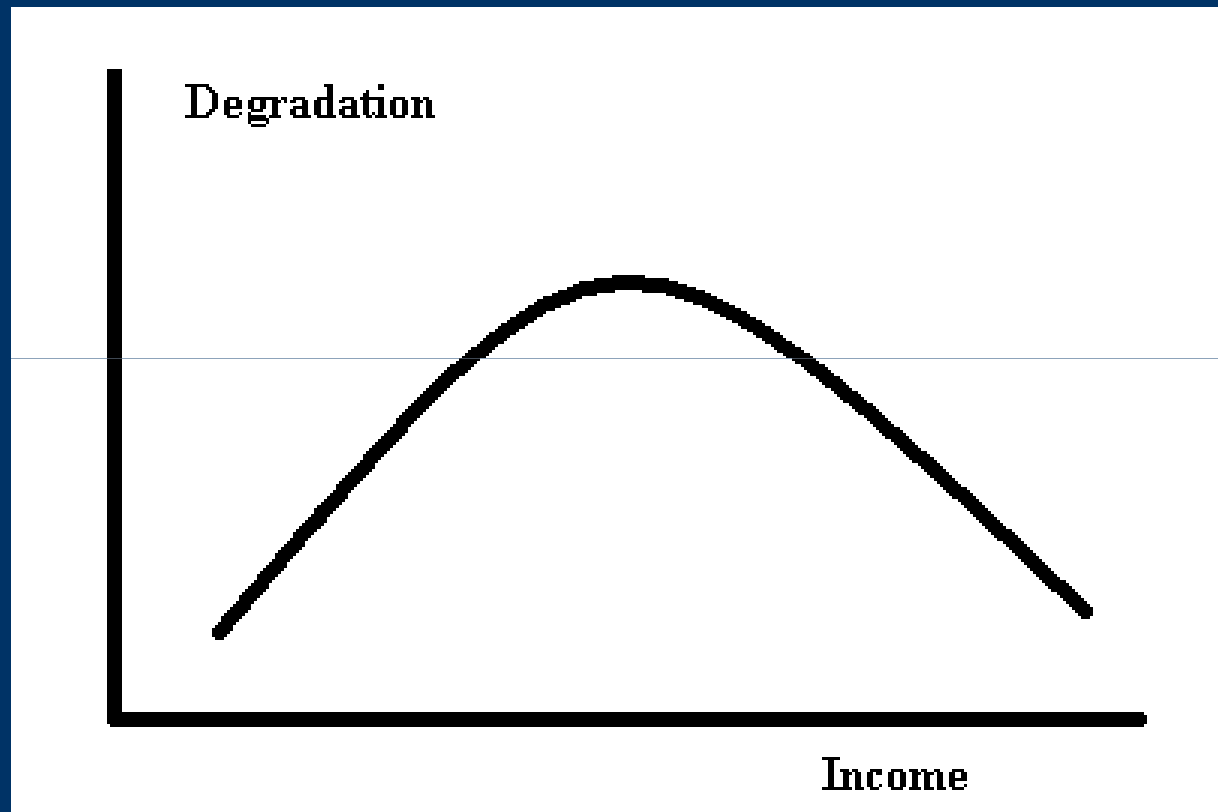


What to do?

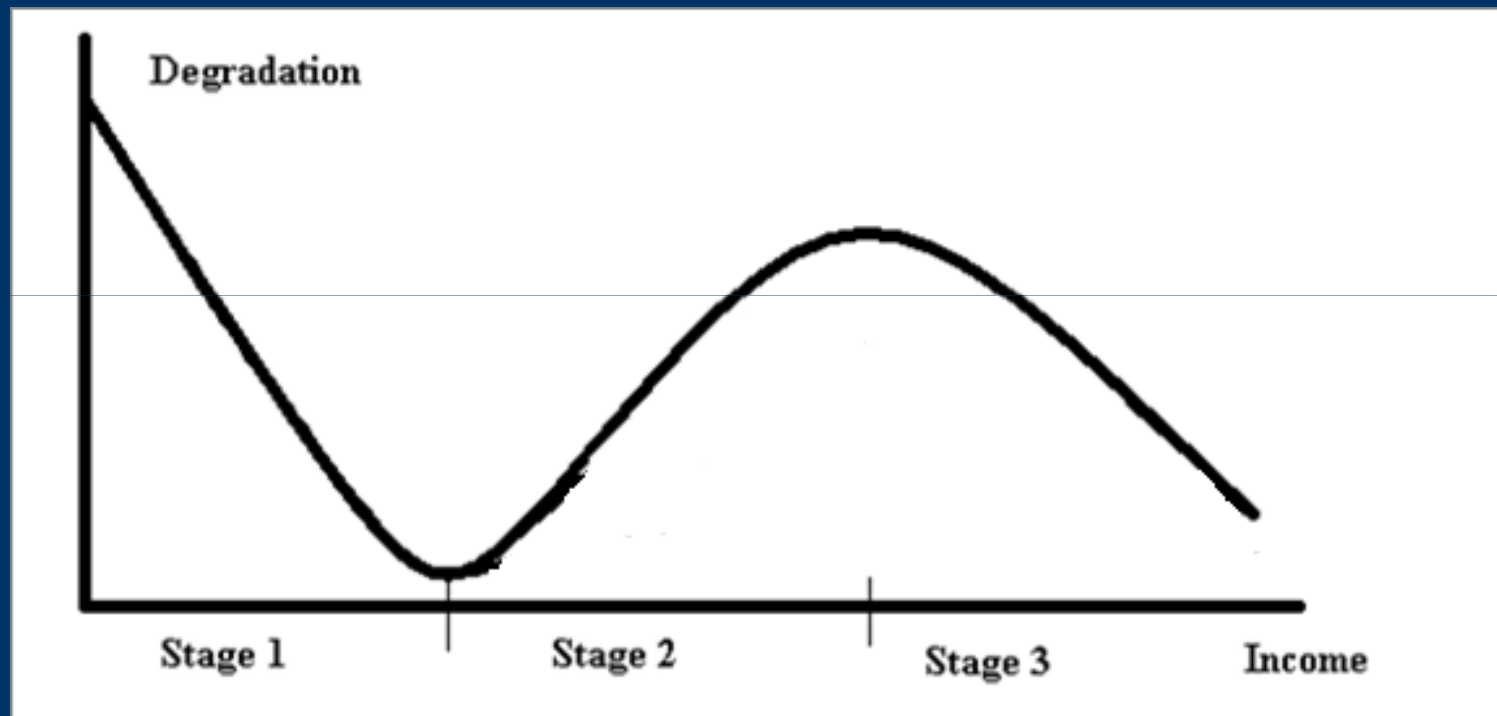
- Integrated, cohesive policy response
 - Climate change
 - Natural resource management
 - Food system
 - Health and nutrition
- Full costing
- Seek multiple wins



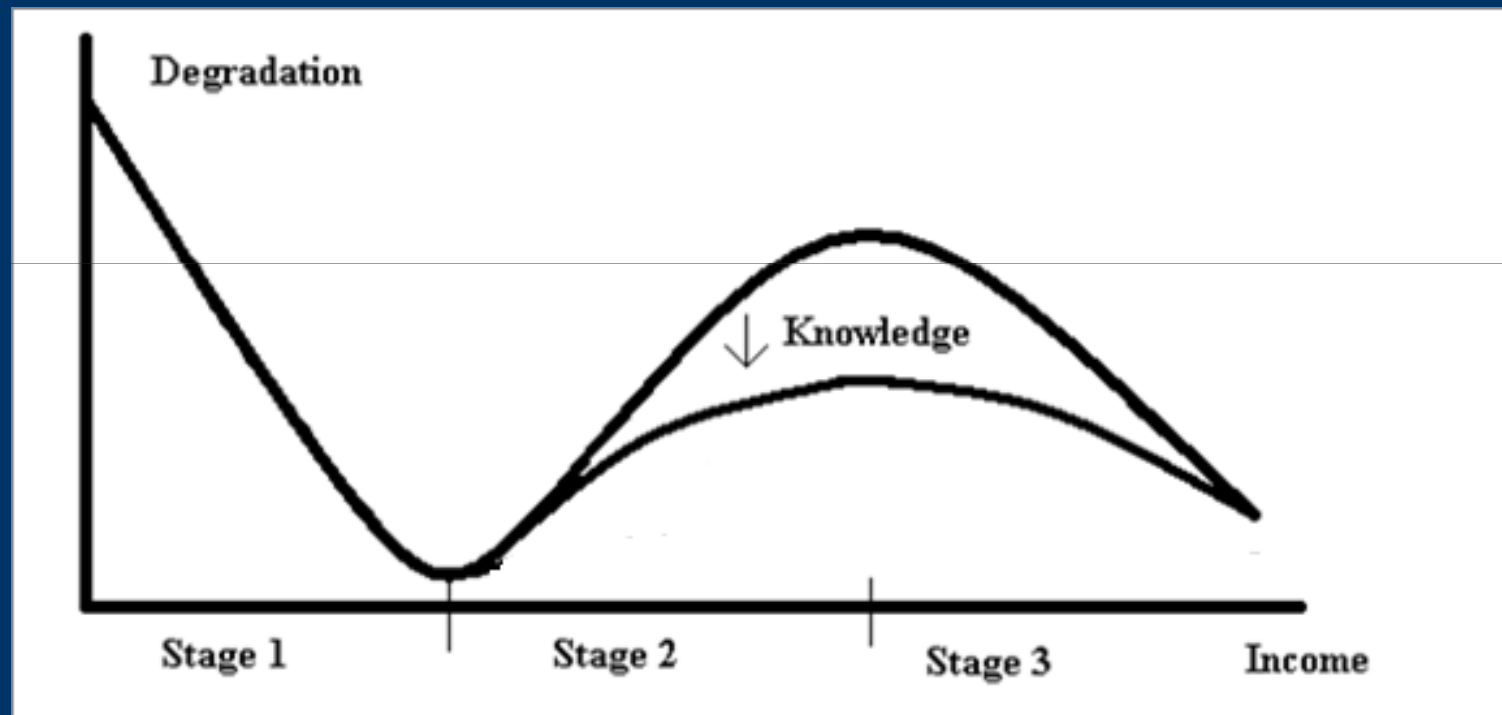
Environmental Kuznets Curve



Hypothetical Relationships Between Income and Deforestation/Soil Mining



Hypothetical Relationships Between Income and Deforestation/Soil Mining



Hypothetical Relationships Between Income and Deforestation/Soil Mining

