Kellogg Biological Station LTER

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LTER SCIENCE COUNCIL MEETING 2018

MADISON, WI

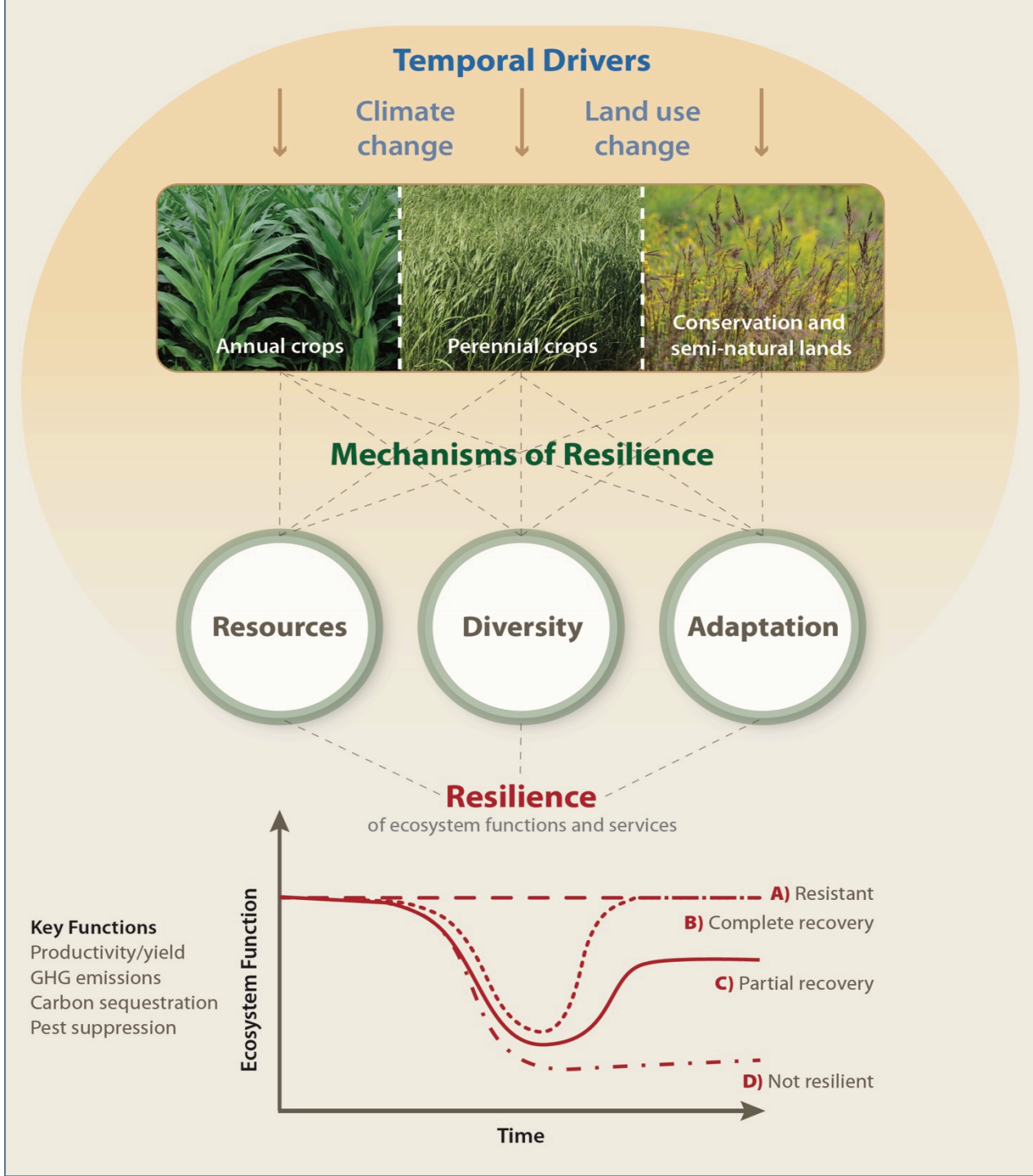
NATIONAL SCIENCE FOUNDATION

LTER NETWORK

LONG TERM ECOLOGICAL RESEARCH

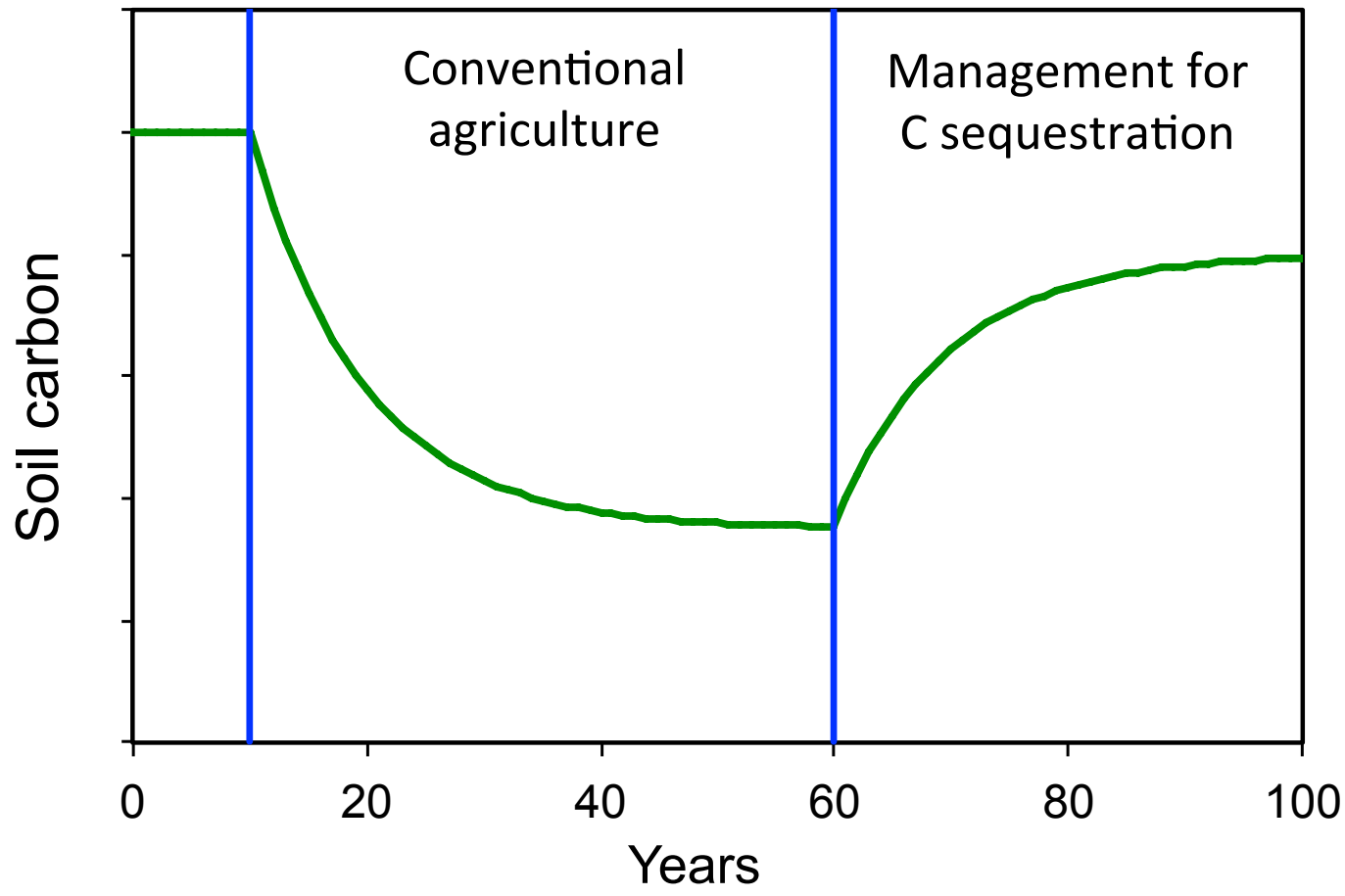
KBS news

- Renewal proposal in review
- New focus on *mechanisms* promoting stability and resilience in agricultural landscapes
- Adding prairie strips within plots, switchgrass plots, restored prairies
- Lead PI role to transition to Nick Haddad



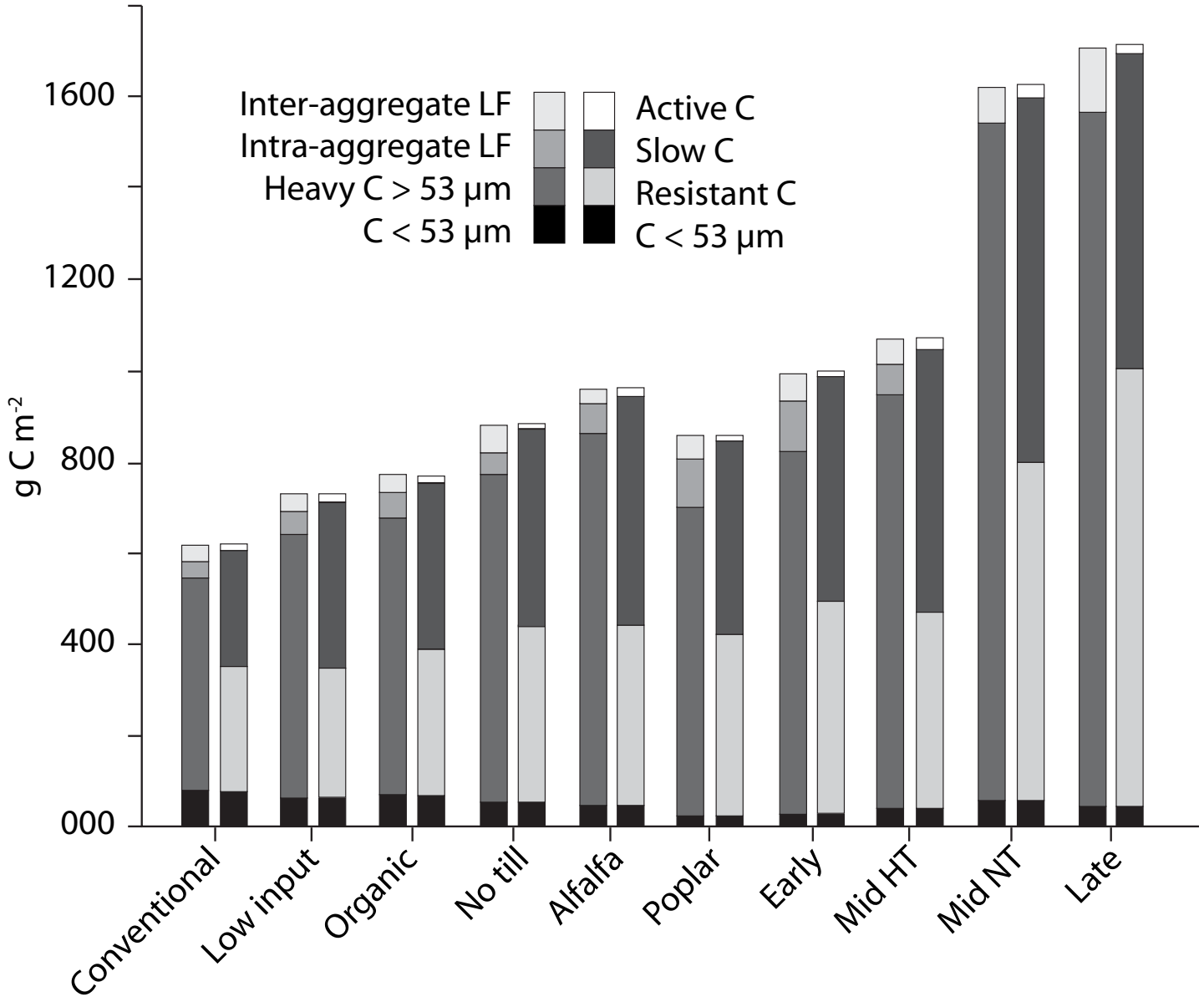
Soil organic matter research at the KBS LTER

- Soil organic matter has been a longstanding focus with >80 pubs
- Agricultural soils have generally lost C
- How is soil C sequestered?
- Can cropping systems be managed to enhance soil C storage?
- How does soil C change with cropland abandonment and ecological succession?
- These questions require long-term, careful measurements!



Organic Matter - Results

- Nearly 30 years since conversion
- In annual cropping systems, no-till enhances soil C storage
- Perennial crops—alfalfa and poplar—as well as our early successional treatment also gained C
- The never-tilled (NT) grassland and late successional forest show the potential maximum C storage



Unpublished figure based on the work of E.A. Paul and others