



SUSTAINABILITY RESEARCH visioning event



Sponsored by the UW- Madison
Sustainability Research Hub



SUSTAINABILITY RESEARCH

visioning event

RISE EARTH: RESILIENCE

- BREAK OUT SESSION -

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Reimagining systems

RISE-EARTH stands for Environment: **Adaptation, Resilience, Technology, and Humanity**

Focus on two themes:

1. Reimagine economic and environmental systems to, for example, find innovative ways to revitalize communities with new modes of transportation or renew agricultural lands to reduce erosion and enhance biodiversity.
2. Build sustainable energy and technical systems — for instance, developing new clean energy technologies and ways to capture and store carbon.



Adaptation - responsive to changing conditions

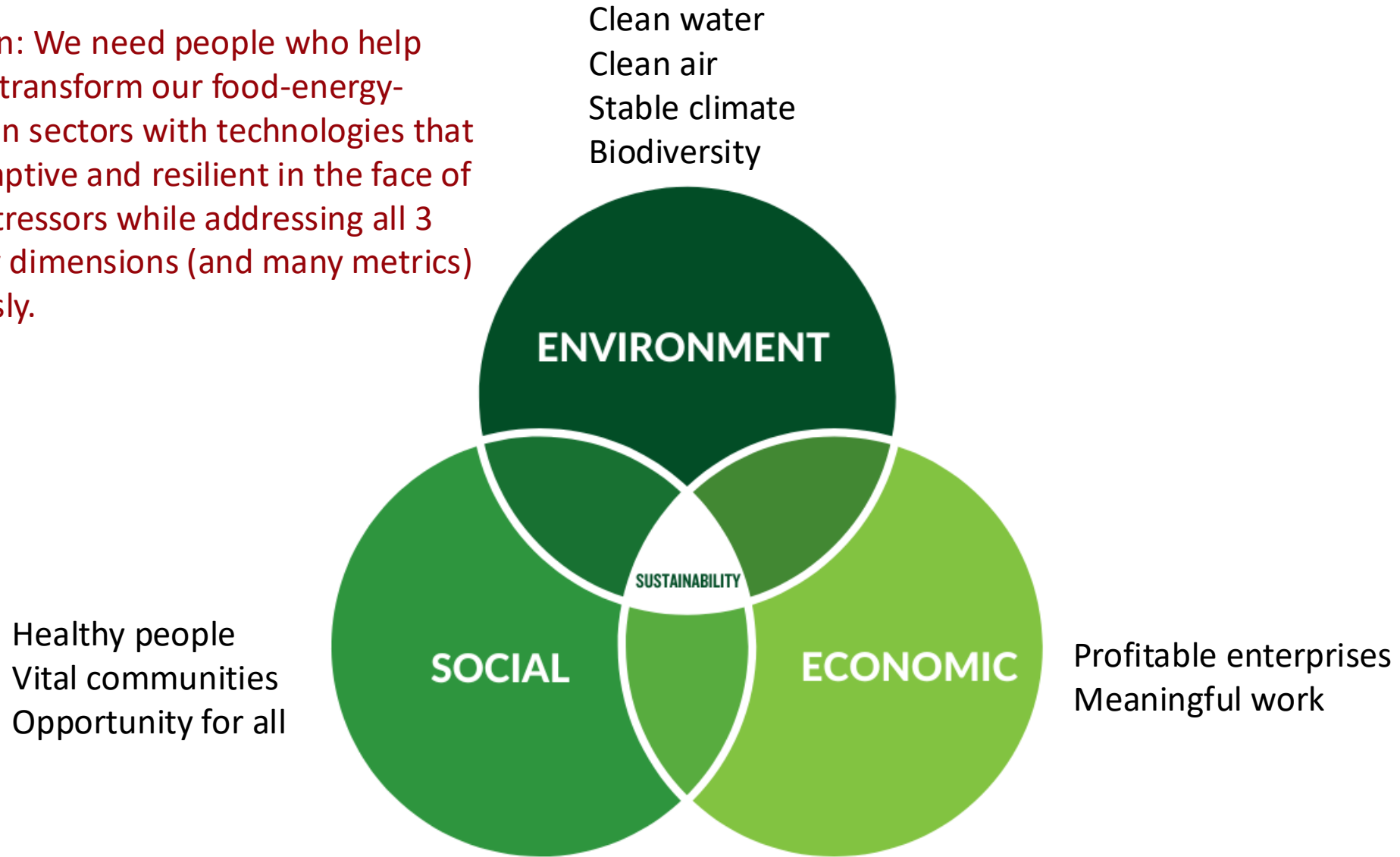
Resilience – ability to return to baseline conditions after perturbations ... but we want the resilient system to be a GOOD system! Let's look to 'sustainability' dimensions to define "good"...

Technology – knowledge, skills, tools

Humanity – all people, not just some



Interpretation: We need people who help develop and transform our food-energy-transportation sectors with technologies that are more adaptive and resilient in the face of shocks and stressors while addressing all 3 sustainability dimensions (and many metrics) simultaneously.



What does resilience mean for us?

- Ecological theory notes resilience arises from
 - Biodiversity/richness that promotes facilitation, competition, and niche occupation
 - Sustained productivity that promotes resistance to withstands shocks and occurrence of resource limitations
 - Ability to opportunistically fill new niches in response to change
 - Dynamic equilibrium, potentially in multiple states
 - Equitably and adaptively managed, considering mutual goals
- How might RISE-Earth, Office of Sustainability, and all our collective actions promote resilience for the ecosystem of sustainability research at UW, especially on resilient ecological, technical, and human systems?



Elements of RISE-Earth

- 20 positions (match with 20 more) in "Reimagining Economic and Environmental Systems" across **CALS**, **L&S**, Engineering, Nelson, Education, Human Ecology, Business
 - Topics: Land resources, ag, cities, transportation, natural resources, lifestyles
- 20 positions (match with 20 more) in "Sustainability Energy and Technical Systems" across **Engineering**, **L&S**, CALS, Nelson, Law
 - Topics: Decarbonizing land, carbon/GHG storage/reuse/emissions, clean energy tech, fossil fuel use reduction
- Thought leaders and all of you helping shape how we can use this opportunity to build on existing strengths, centers, and build in new areas, while increasing interaction, collaborative proposals, staff support, seed funding, educational offerings -> with resilience!



Discussion prompts

1. What does this topic mean to you?
2. What resources exist to support UW-Madison in this research space?
3. What resources are needed for UW-Madison to be successful in this research space?
4. In what ways can the University support the sustainability research community?
5. What do you see as areas of opportunity for sustainability research on campus?

