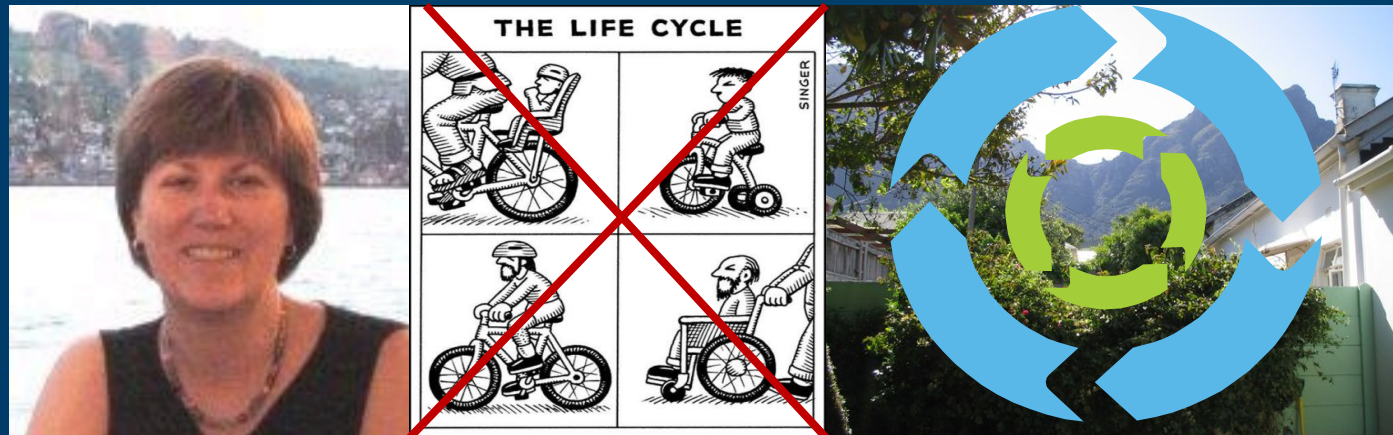




Promoting the Use of Life Cycle Assessment for a Sustainable Agri-Food Industry

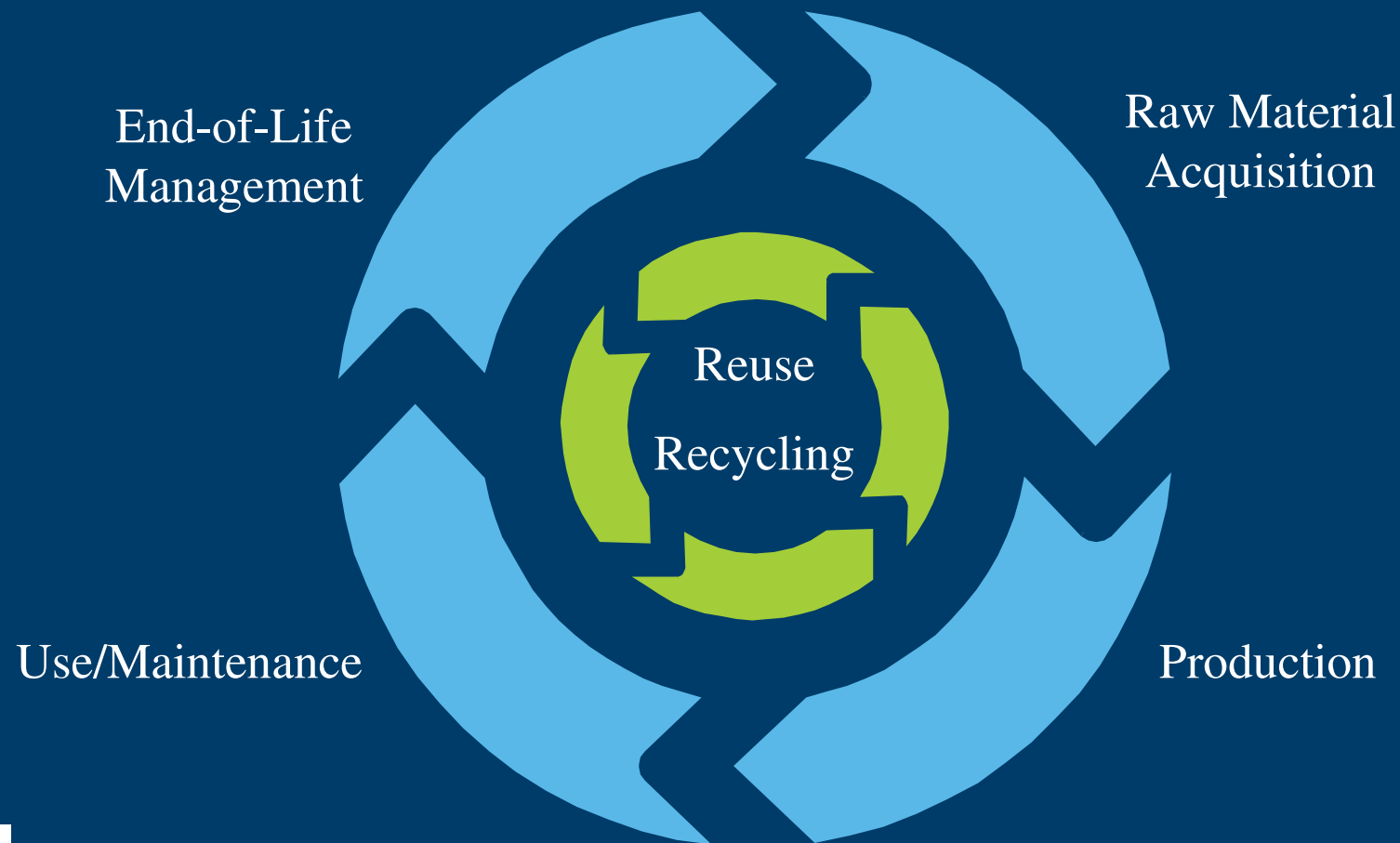
*Mary Ann Curran, PhD
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University of Tennessee*

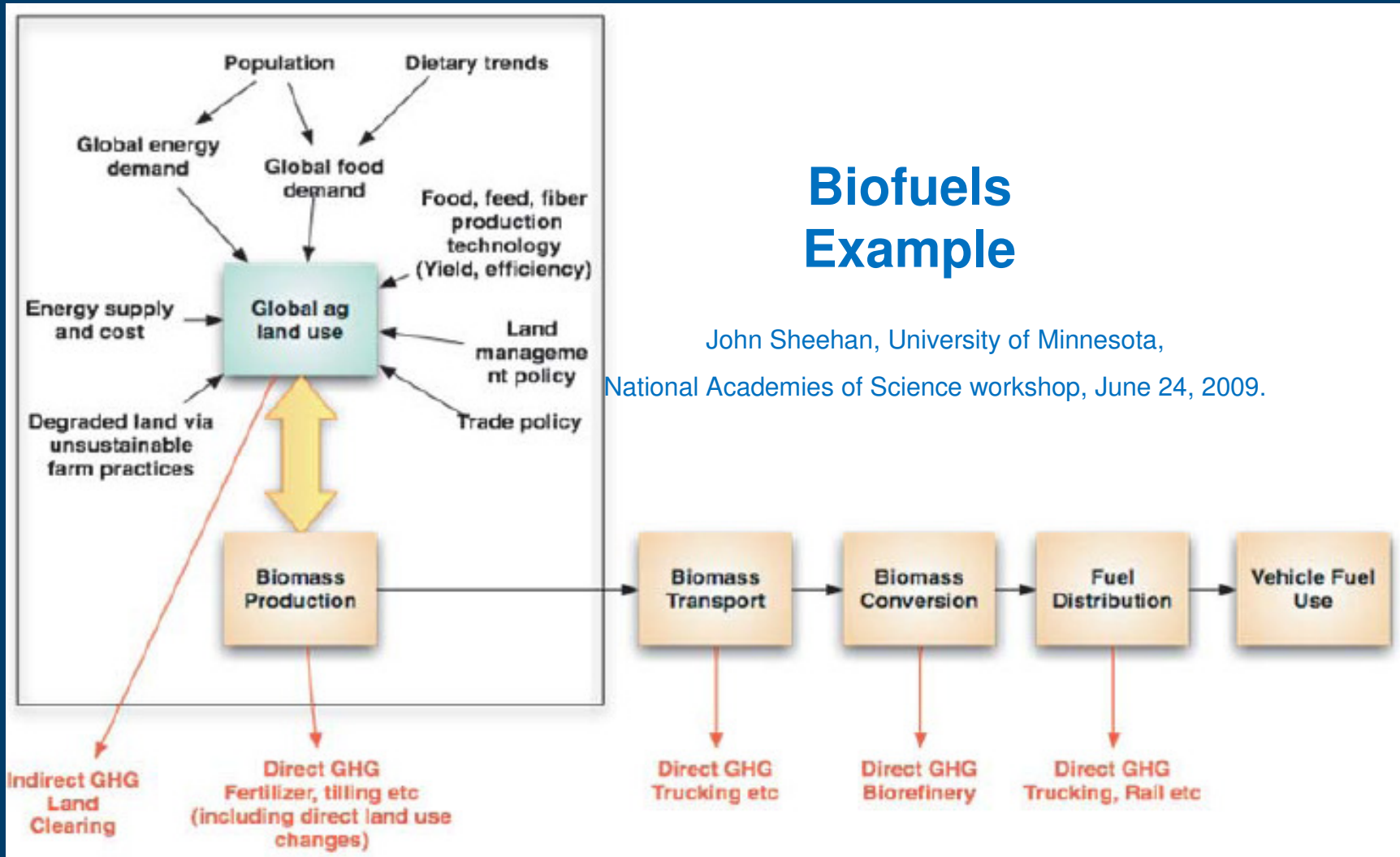


Life Cycle Assessment

An **industrial** environmental management approach to look **holistically** at products, processes, and activities.



Expanding the boundaries around biomass production



Human Health and Environmental Issues Related to Crop Production

Common issues:

- Greenhouse gases
- Land use
- Water use
- Soil quality
- Water quality
- Human health

Less visible impacts:

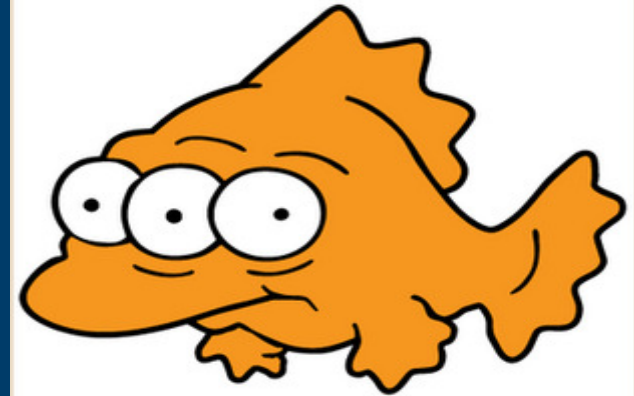
- Worker exposure to pesticides
- Land use changes
- Soil function impairment
- Loss of biodiversity
- Invasive species (GMOs)

The number of LCAs and food-related LCAs is steadily growing

Table 1: Food LCA and all LCA Publications Reported by SCOPUS, 1999 - 2010

Year	Food LCAs	All LCAs
1999	0	144
2000	1	187
2001	0	182
2002	2	184
2003	4	253
2004	3	312
2005	8	420
2006	2	375
2007	2	448
2008	8	499
2009	9	649
2010	2	350
Total	41	4,793

Ongoing and Emerging US Data Efforts



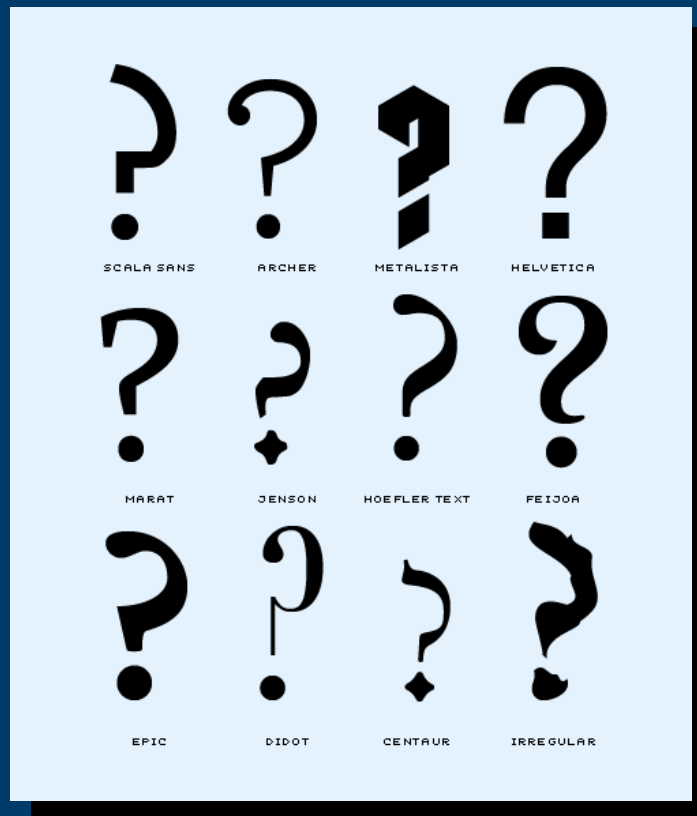
- NREL US LCI Database
(www.nrel.gov/lci)
- National Agricultural Library (NAL) pilot project to make USDA data accessible
- Development of international guidance for database management (UNEP/SETAC Life Cycle Initiative - workshop planned for early 2011).
- Development of Open Platform systems, such as Earthster (www.earthster.org).
- Creation of a Global Data Network moving beyond traditional databases.

Special 'Food LCA 2010' Issue in the Journal of Cleaner Production

- Emphasize the need to consider the entire production system.
- Push the envelope of traditional LCA methodology to better include issues related to biomass production.
- Develop more data and information, and maintain transparency.
- Support effective decision making for sustainability.
- Approx. 15 selected conference papers will comprise the special issue.

THANK YOU!

QUESTIONS?



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