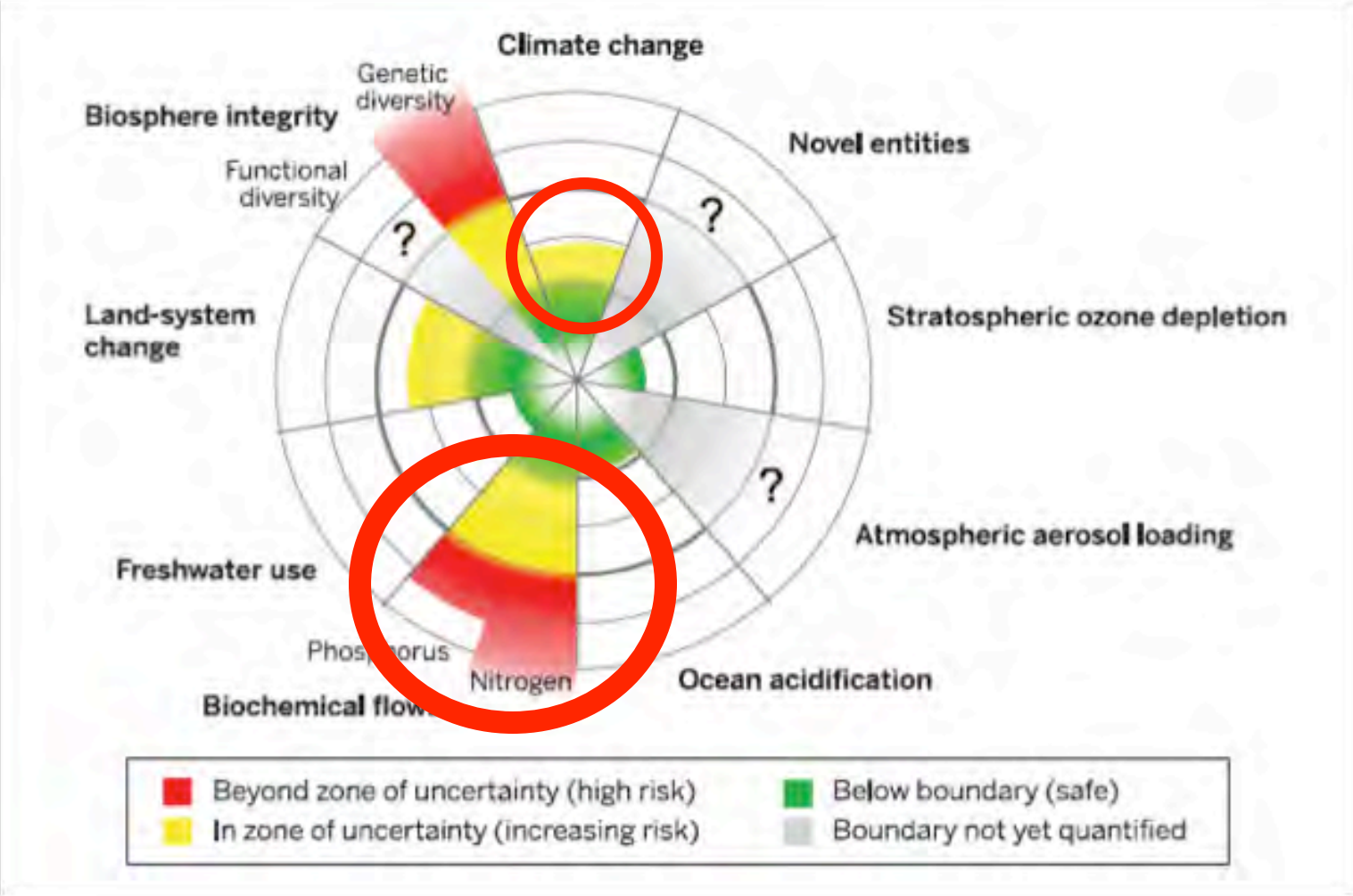
Can We Have High Quality Compost and Zero Waste?

2015 Conference on Canadian Stewardship/ RCA Waste Reduction Conference

Integrated Waste Management Consulting, LLC

Matthew Cotton

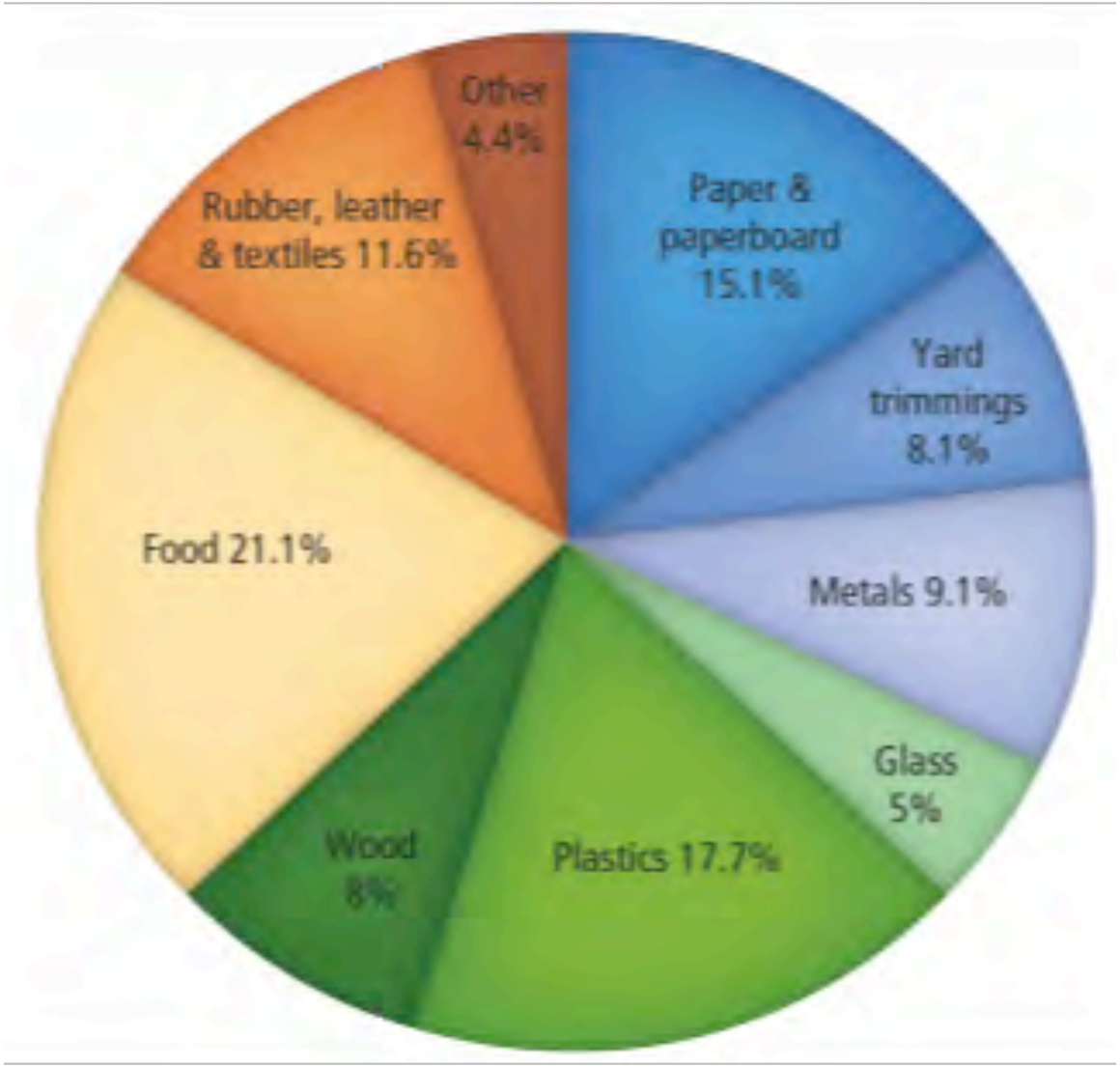
Planetary Boundaries



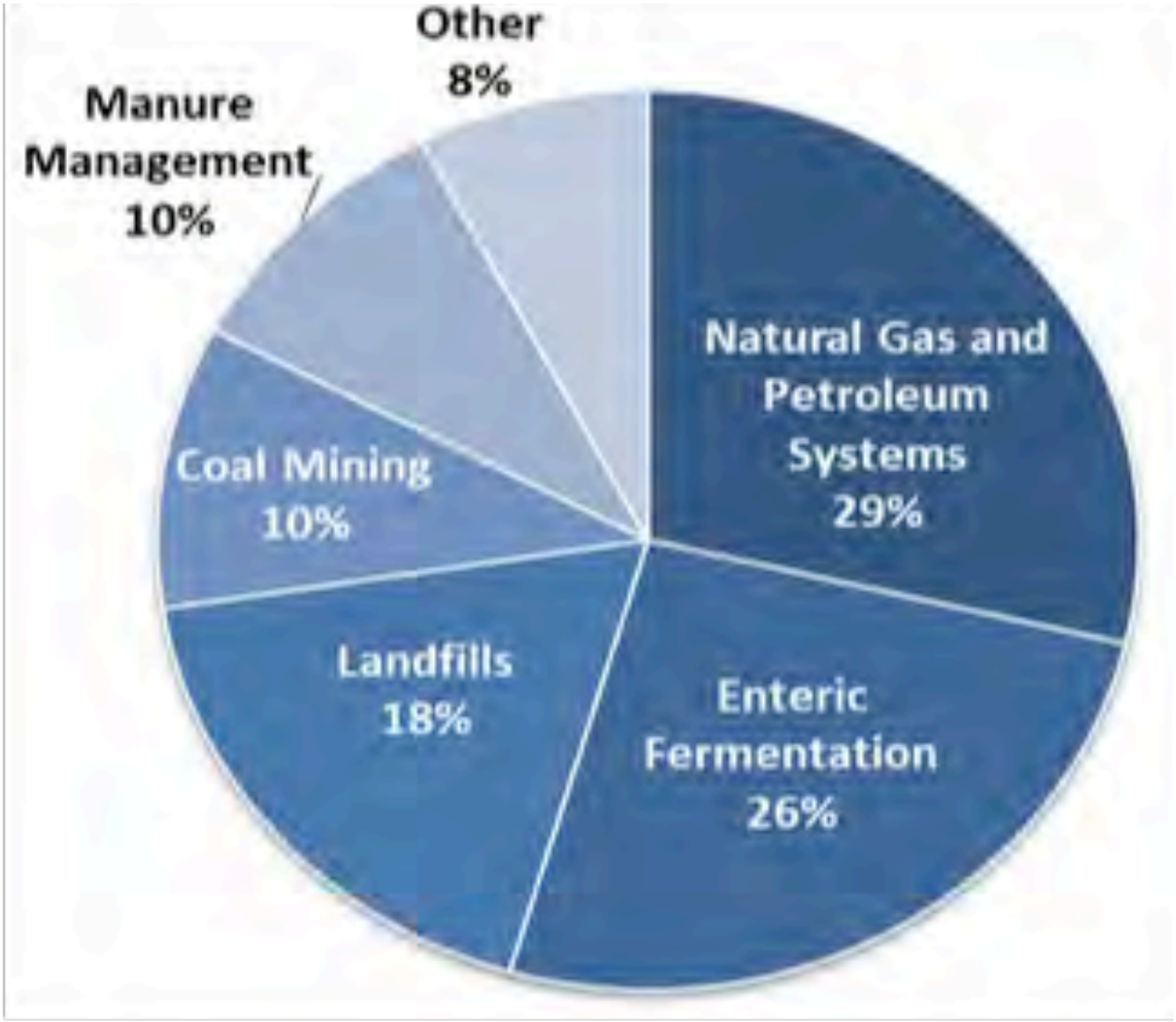
Source: W. Steffen *et al.*, *Science* (347), 2015

Matthew Cotton

Integrated Waste Management Consulting, LLC



Advancing Sustainable Materials Management: Facts and Figures 2013



Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013.

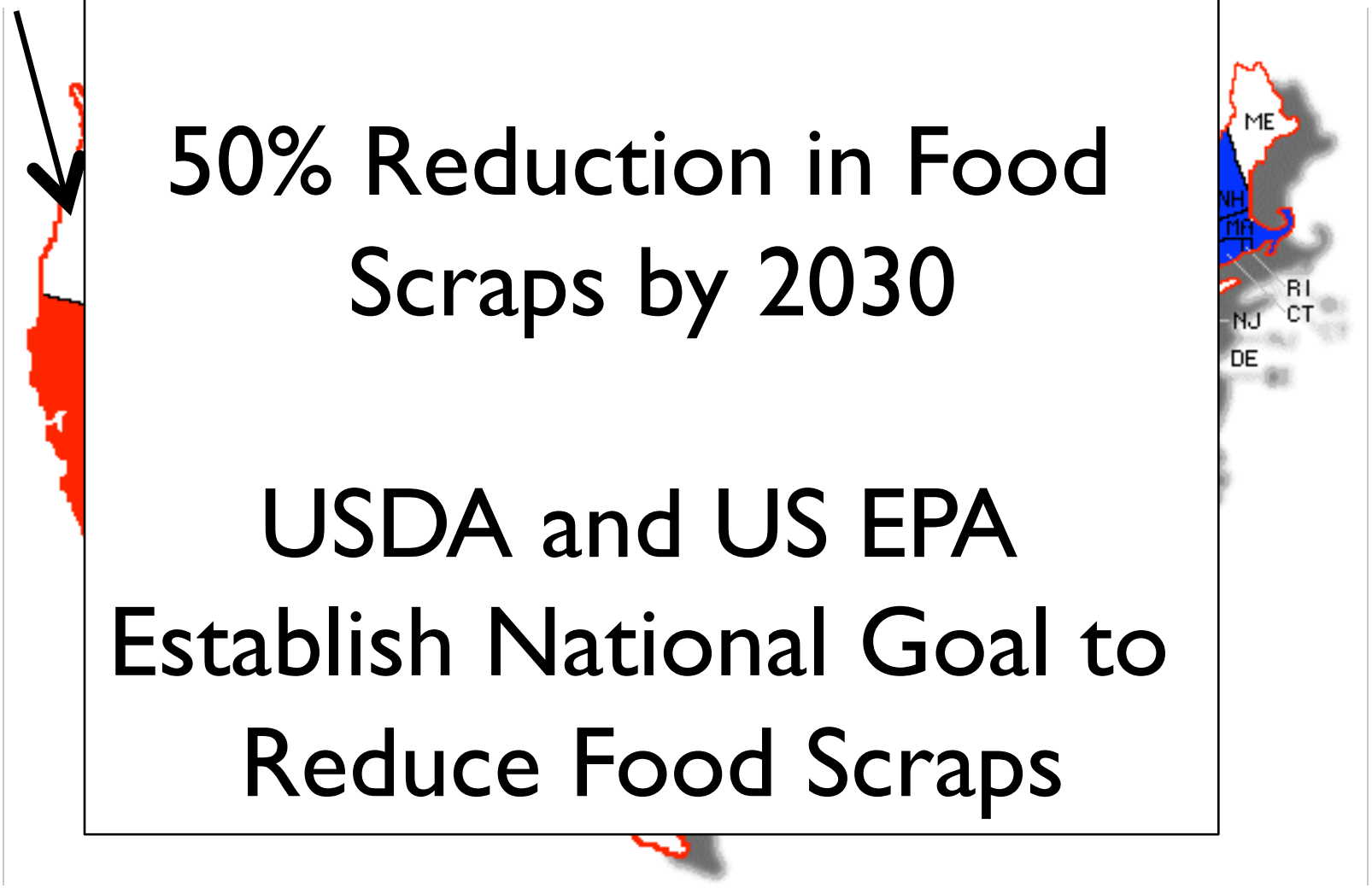
Integrated Waste Management Consulting, LLC
Matthew Cotton

Agg
Recyc

MAJOR US UPDATE:

50% Reduction in Food Scraps by 2030

USDA and US EPA Establish National Goal to Reduce Food Scraps



Integrated Waste Management Consulting, LLC
Matthew Cotton

Food Scraps: Perception vs. Reality

Right stuff, Right bin

Photo Credit: Kevin Barnes, City of Bakersfield

Integrated Waste Management Consulting, LLC
Matthew Cotton

Integrated Waste Management Consulting, LLC
Matthew Cotton

Programs Everywhere

- Big companies
- Big haulers
- Kids with bikes

Integrated Waste Management Consulting, LLC
Matthew Cotton

Should you accept:

- Food Scraps?
- Compostable Plastics?
- Everything that comes along with those?




- Most municipal food scraps programs are INCLUSIVE (meat, dairy, food soiled paper, pizza boxes, etc.)

Integrated Waste Management Consulting, LLC
Matthew Cotton

Compost Manufacturing

Quality Improvement:

- Larger investments in **prevention** drive even larger savings in quality related failures and appraisal efforts.
- Most composters get paid more on the raw material side. Thus less incentive to try to remove contaminants at the back end.
- Plus, not all composters are connected to the collection side.

Integrated Waste Management Consulting, LLC
Matthew Cotton

Business

Training/Education
Financial Incentives

$$

Resident

Training/Education
Pay As You Throw

$$

Upstream

Picking/Sorting

$$$$

Downstream

Screening/Separating

$$$$

A densimetric what?

Integrated Waste Management Consulting, LLC
Matthew Cotton

This is Going to Take Some Time

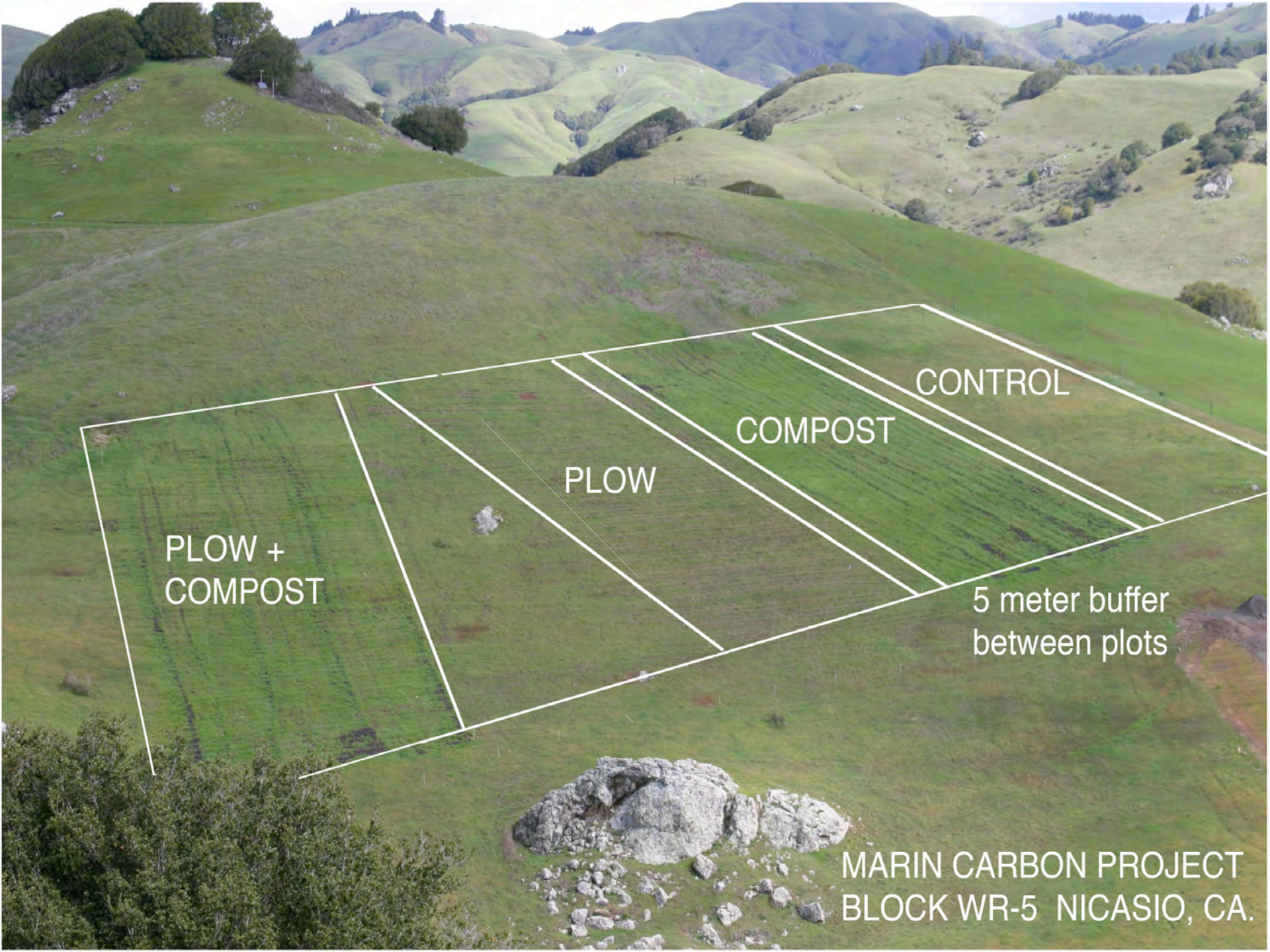
And Money

Zero Waste and Soil are Connected

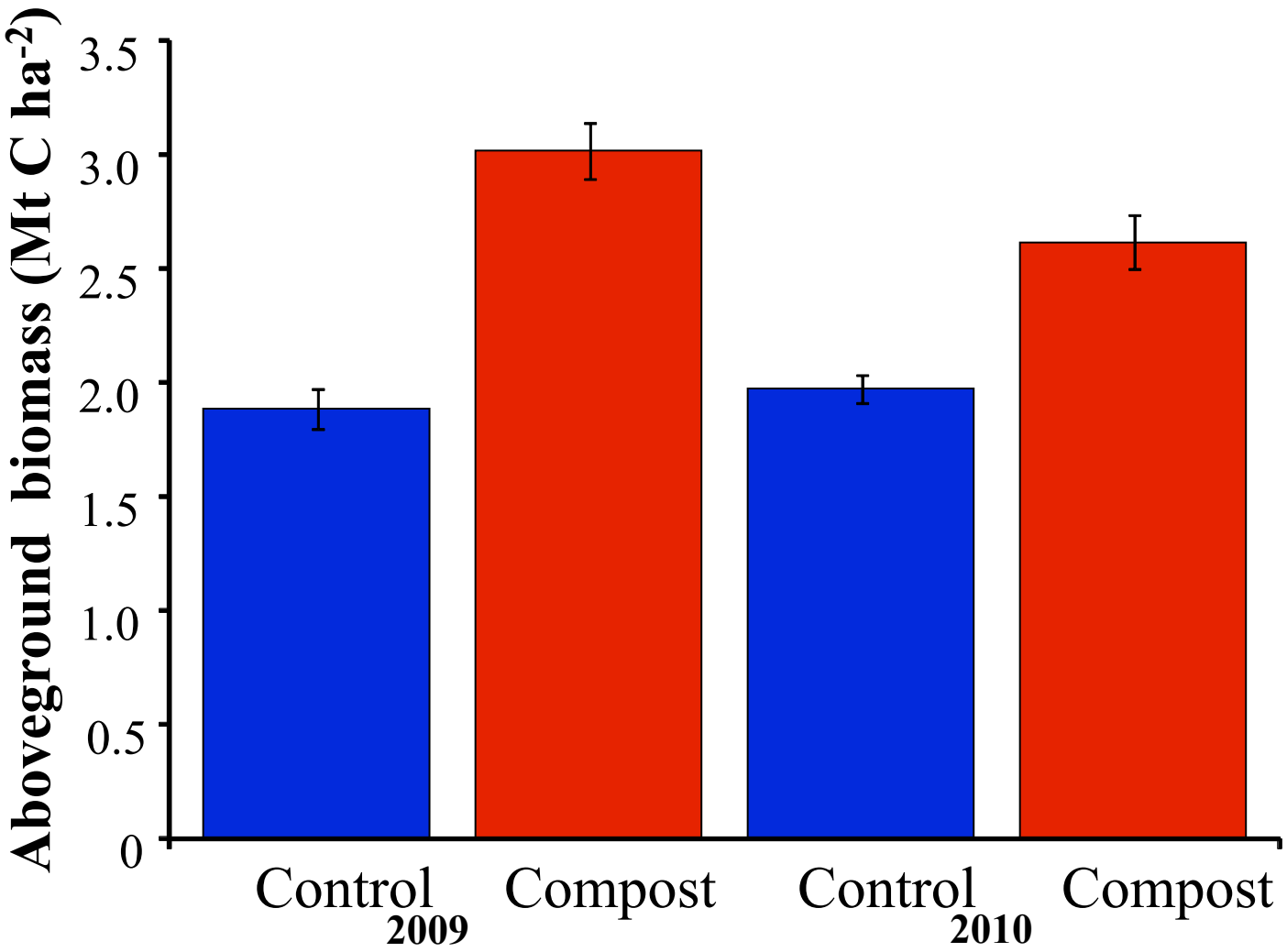
- Climate Action Plans (CAPS) are the mechanism through which we can balance carbon pools and restore overall system health and function. This is the impact that we have control over.
- Local Governments have the role of embracing this opportunity and providing leadership through strategic incentives.
- Organics Don’t Belong in Landfills!

Matthew Cotton

Integrated Waste Management Consulting, LLC

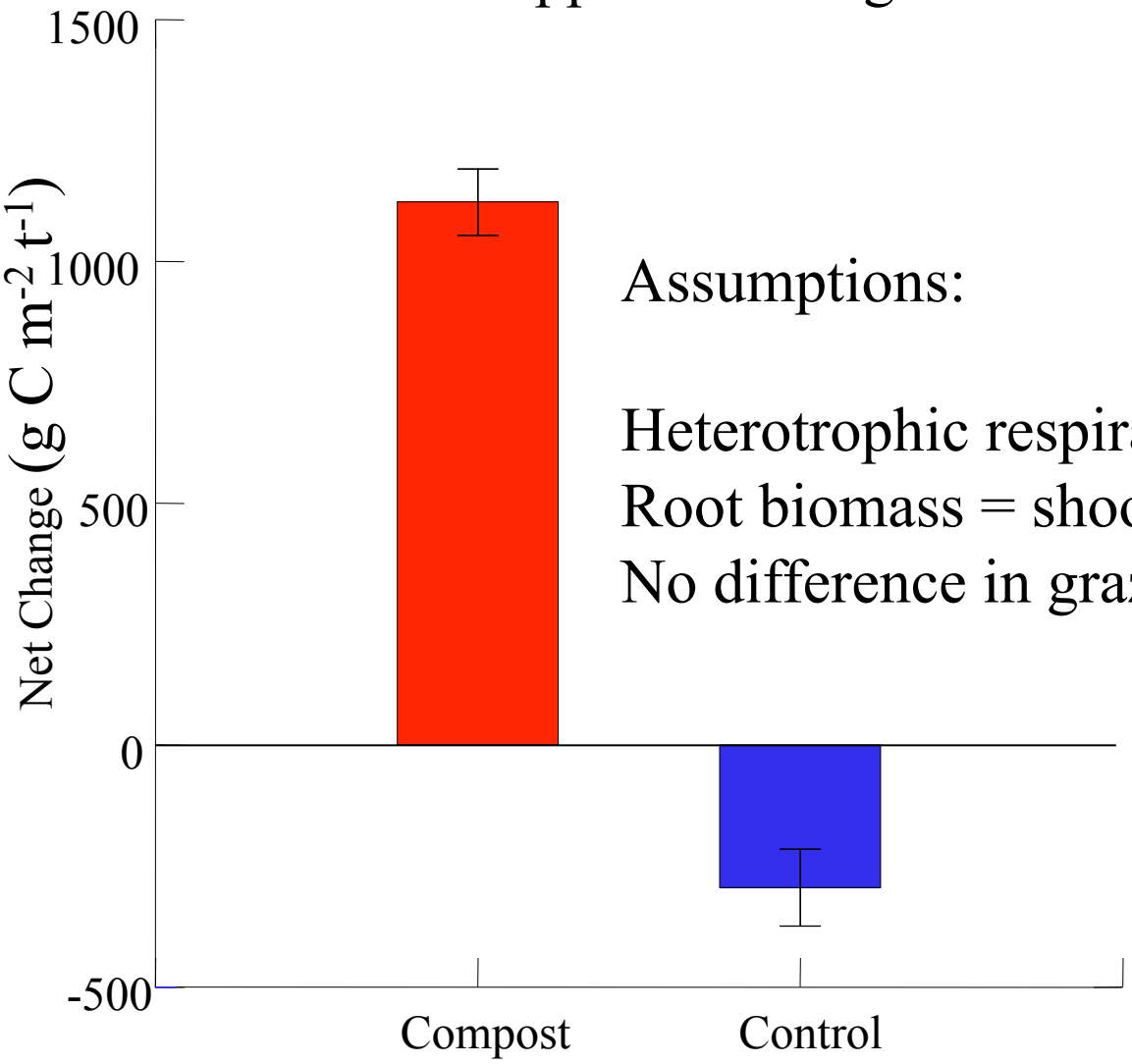

CONTROL
COMPOST
PLOW
PLOW +
COMPOST
5 meter buffer
between plots
MARIN CARBON PROJECT
BLOCK WR-5 NICASIO, CA.

Compost significantly increased plant and forage production



Browns Valley, Ryals and Silver in prep

Organic amendments increased system carbon by over 14.8 Mg C/ha in year 1; net gain, **beyond compost additions** was approx. 0.8 Mg C/ha.

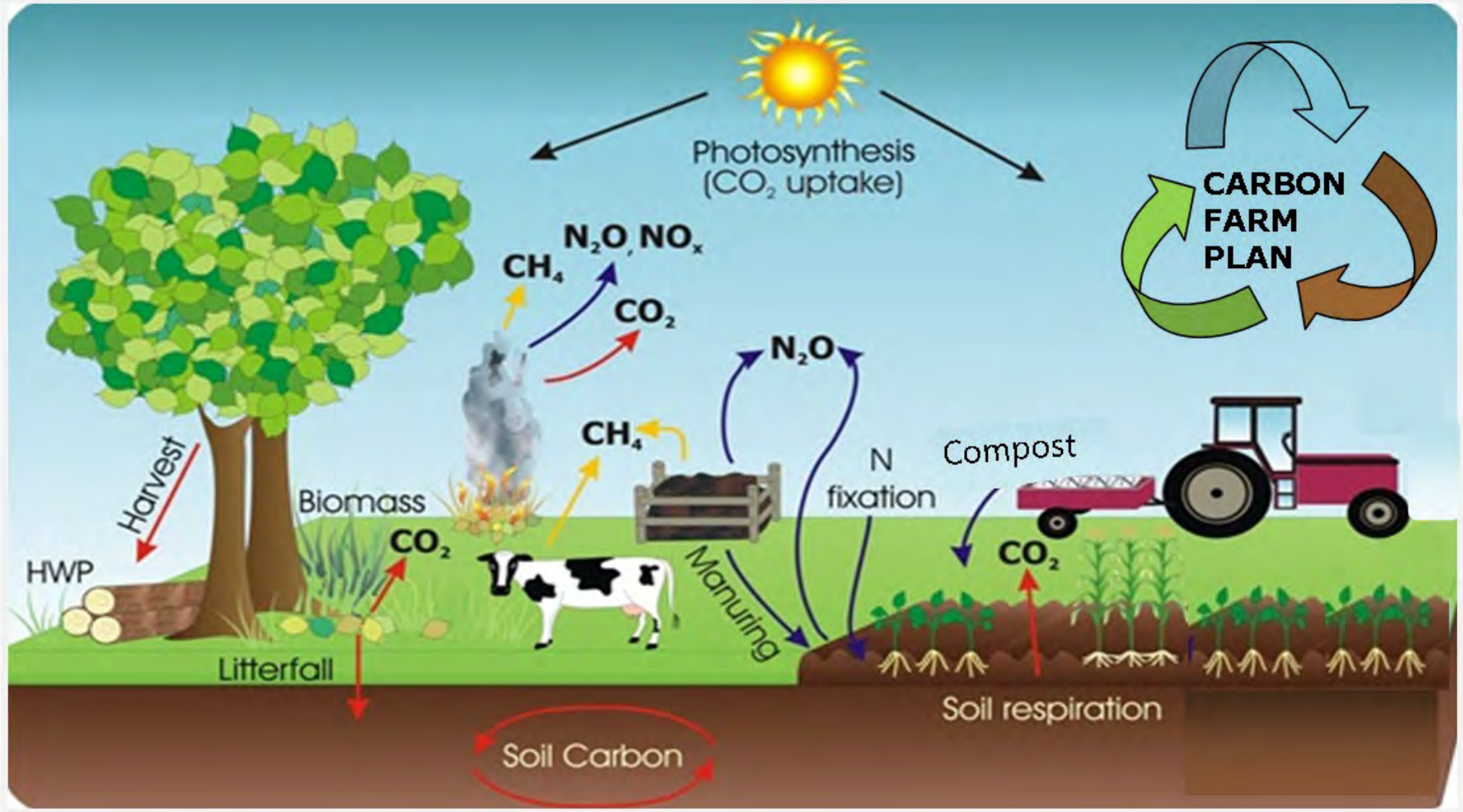


Assumptions:

Heterotrophic respiration = 50% of total
Root biomass = shoot biomass
No difference in grazed biomass

Nicasio, Ryals and Silver in prep

MARIN CARBON PROJECT



http://www.marincarbonproject.org/