

# Agricultural Methane Confusion

Meat Eating is Small Potatoes

Drawdown Misrepresents Situation

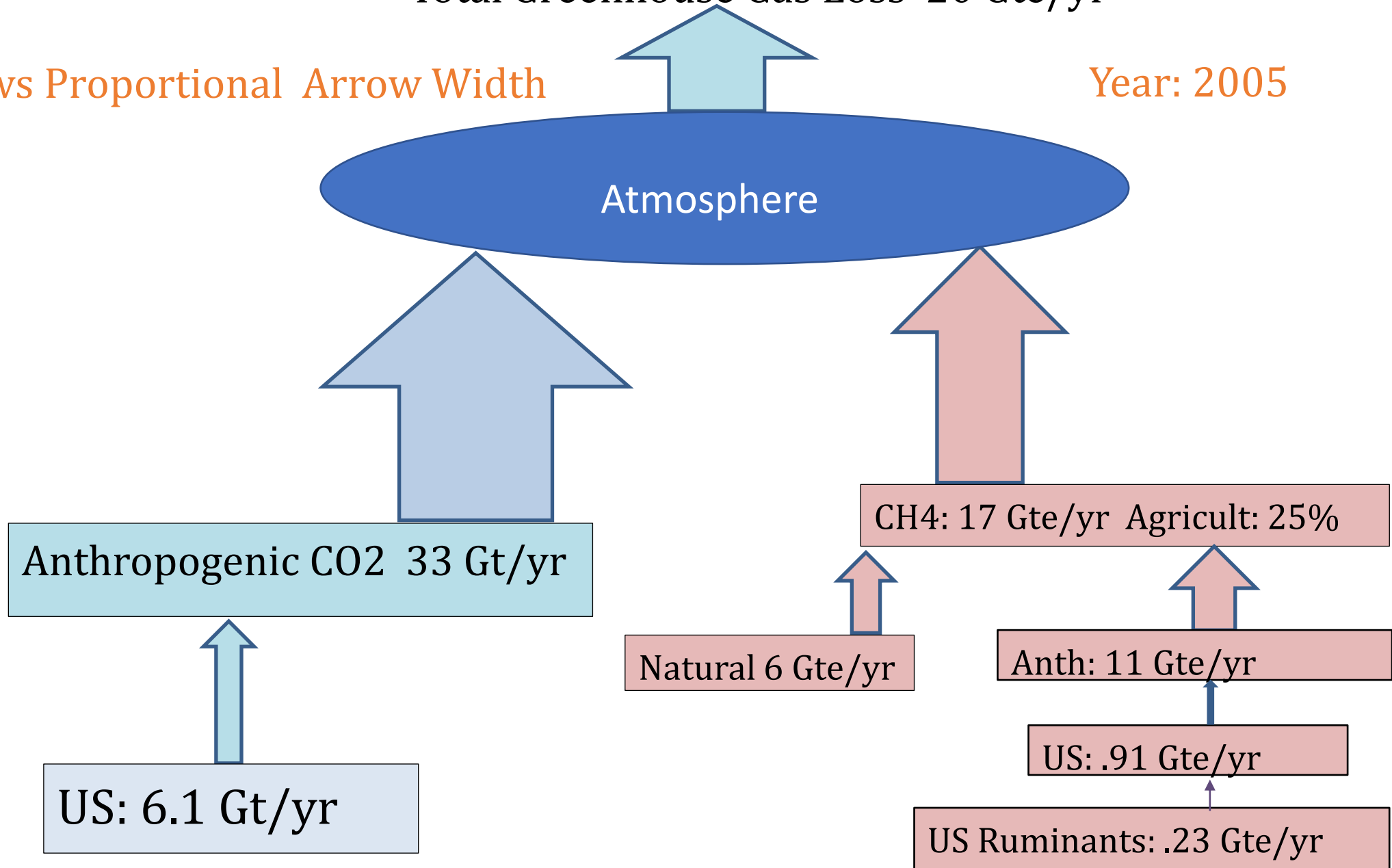
# Primary Sources of Confusion

- The distinction between emissions and forcings since 1750
- Units such as Gt CO<sub>2</sub> equivalent (Gte), Tg CH<sub>4</sub>, ppm, ppmv,.....
- The distinction between total emissions and net emissions
- Natural vs. Anthropogenic Emissions (Emissions due human activity)
- The distinction between US and global emission statistics
- The distinction between on-farm and off-farm carbon emissions
- Percentages are percentages of what (Global greenhouse gases, US CH<sub>4</sub>,.....)
- Years for which published numbers are given

Total Greenhouse Gas Loss 20 Gte/yr

Flows Proportional Arrow Width

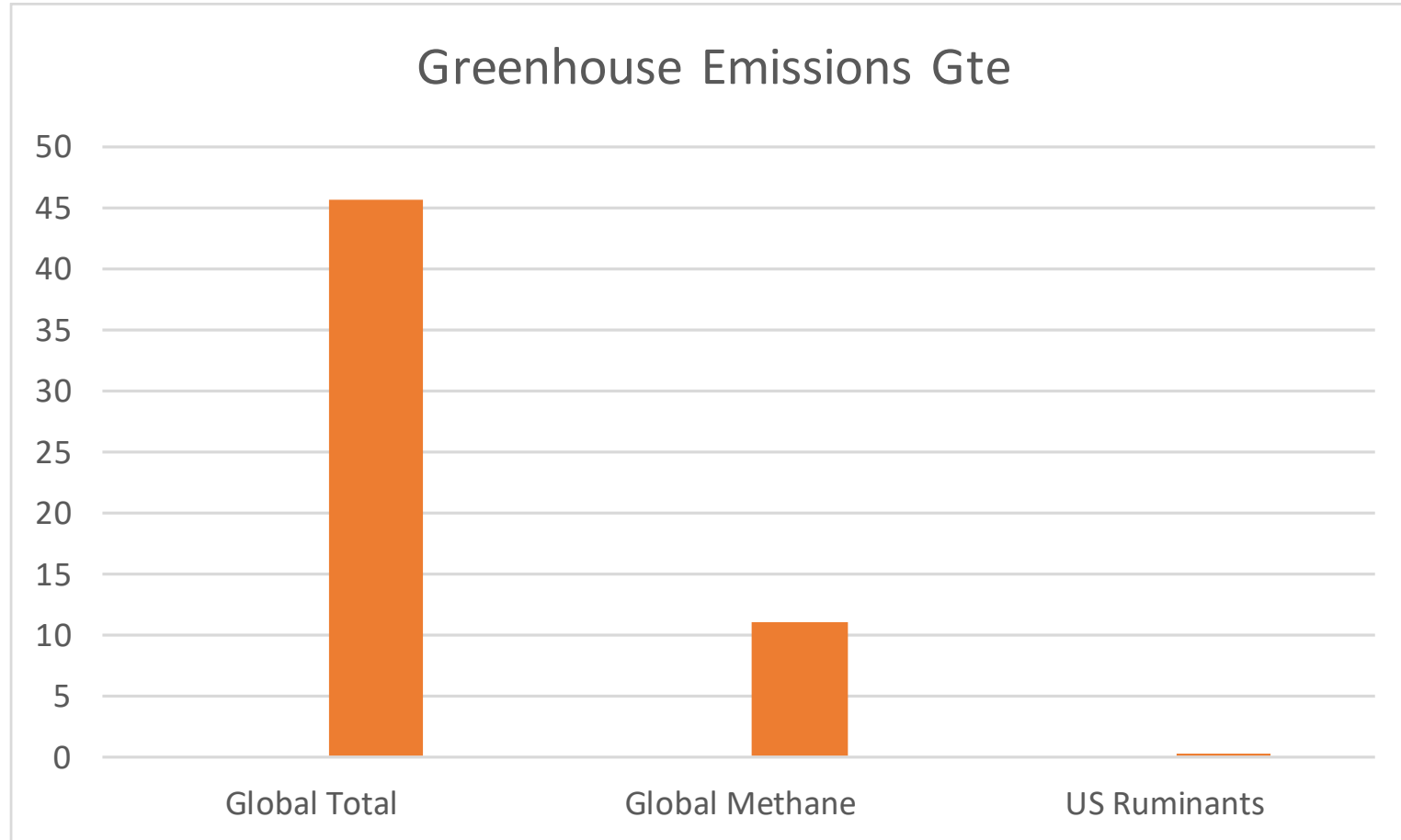
Year: 2005



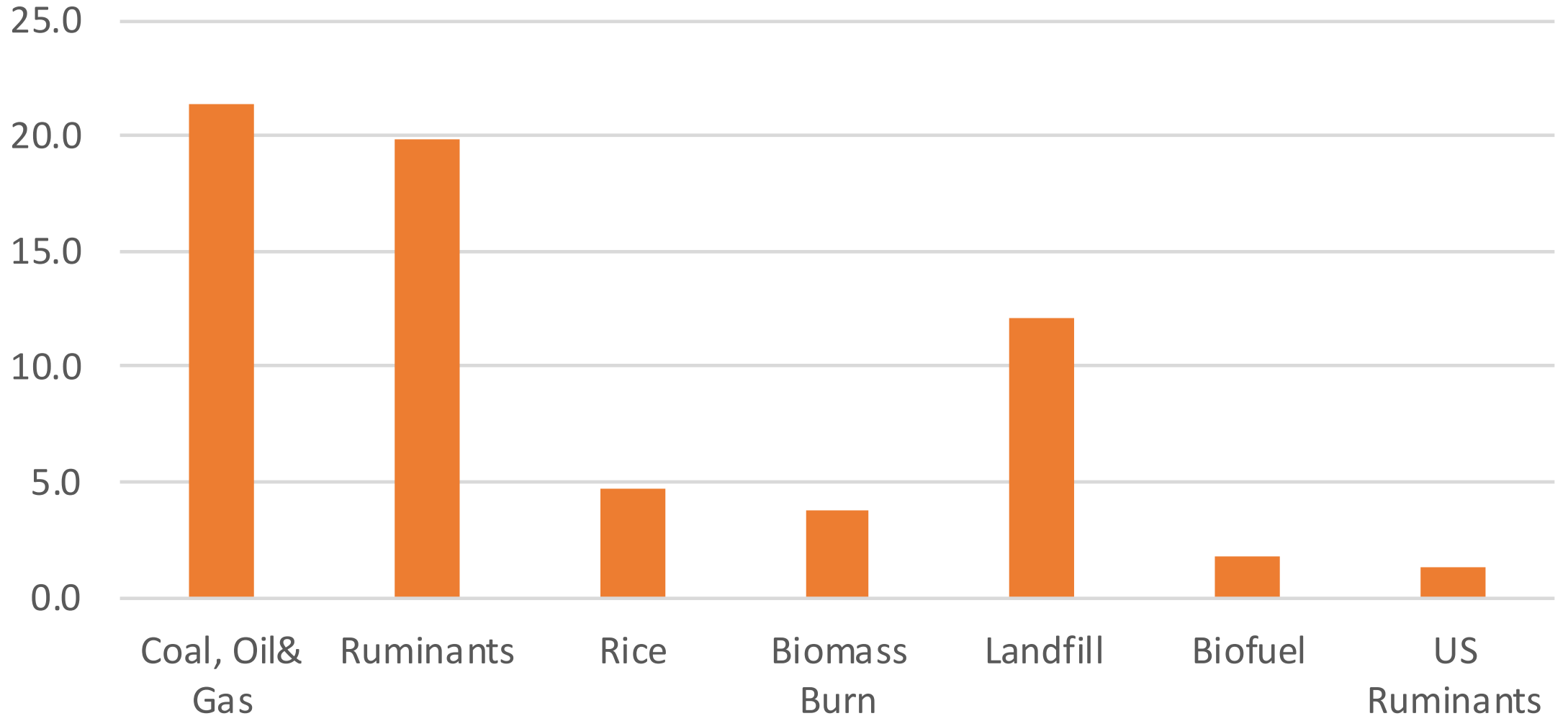
## Summary Conclusions

- Decreasing meat and dairy production in the US should provide some benefits, but to fix the global warming problem requires massive changes in many areas.
- Reducing US meat and dairy consumption would provide a quick if small benefit. (Also, it would improve the health of most Americans.). Meat is Small Potatoes!
- So this step could be considered an example of ‘picking the low hanging fruit’, or digging up small potatoes.

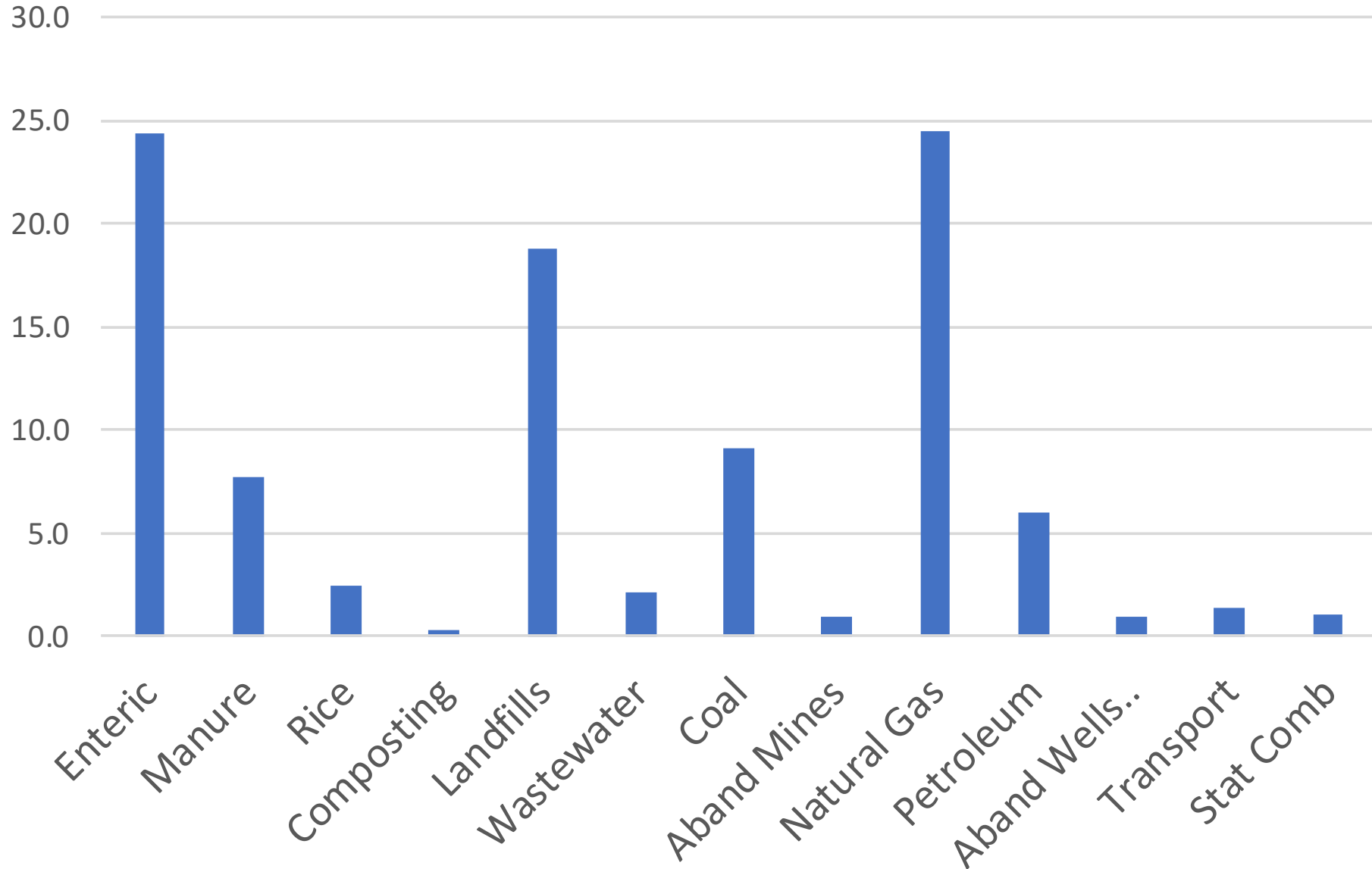
# Comparison of Greenhouse Emissions



# Anthro Methane Sources as % Total Global Methane Sources (Inc Natural)

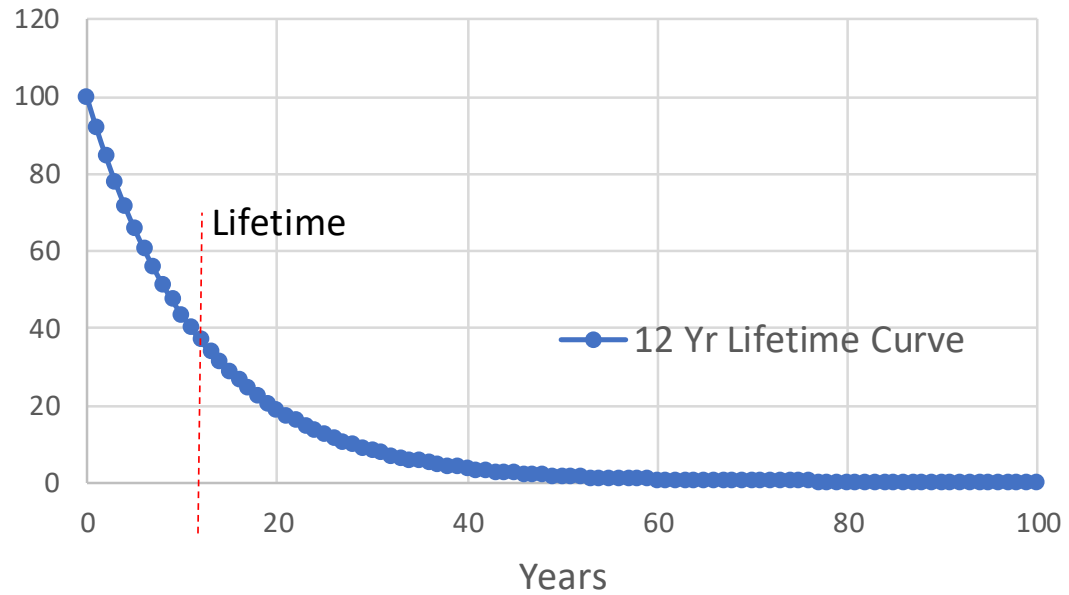


# US Methane % Total US

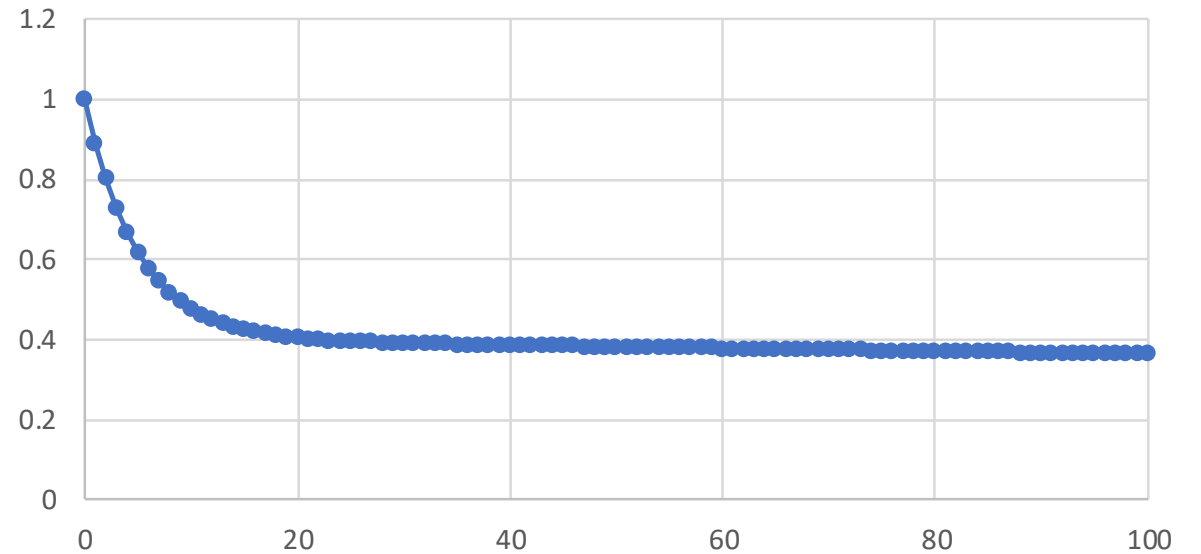


# GWP Ratio Of Time Averages

CH4 Forcing vs Time



CO2 Forcing vs. Time







# Drawdown Concept

- Drawdown Concept is Reduce Anthropomorphic Greenhouse Emissions ~ 44Gte to Less Than Natural Loses ~ 20 GTE
- This Takes About 30 Years
- For Each Action Add Up Cumulative 30 Year Reduction
- Benefit Importance Rated According to Cumulative Reduction
- Also Evaluate Cost

# Conceptual Problems – Cascade Solution

- Overrates Small Immediate Actions versus Big Late Actions
- Uses Global Numbers Which Give Methane Much Higher Importance Than US Numbers (US Emits Disproportionately Large Amount of CO<sub>2</sub>)
- Inappropriate Category Lumping Such as Agriculture Improvements vs Eat Less Meat .....
- Confuses Sociology, Politics & Technology e.g. Women's Education vs Carbon Tax vs Solar Energy
- Need a Cascade Approach – Reduce Greenhouse Gas–  
Technical Reduction Methods – Politics - Education