

The Green Economy:

Oxymoron vs. Coexistence or Can an Oxy-Moron Learn to Coexist?

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ECONomics: The Green Economy Summit by RCBC

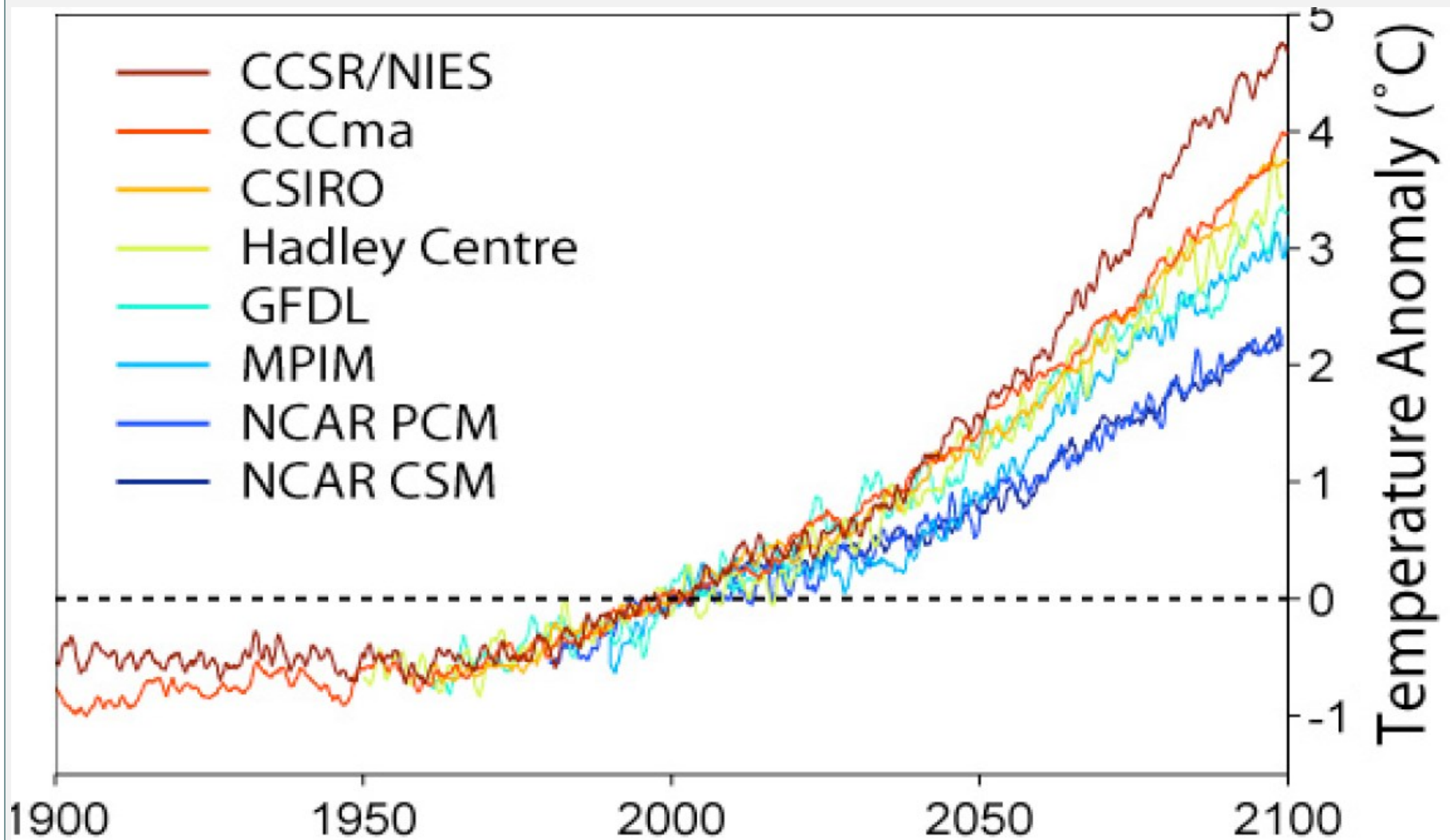
Technological progress is like an axe
in the hands
of a pathological criminal!

Albert Einstein

We'll start with extraction, which is a fancy word for natural resource exploitation, which is a fancy word for trashing the planet. What this looks like is we chop down the trees, we blow up mountains to get the metals inside, we use up all the water and we wipe out the animals!

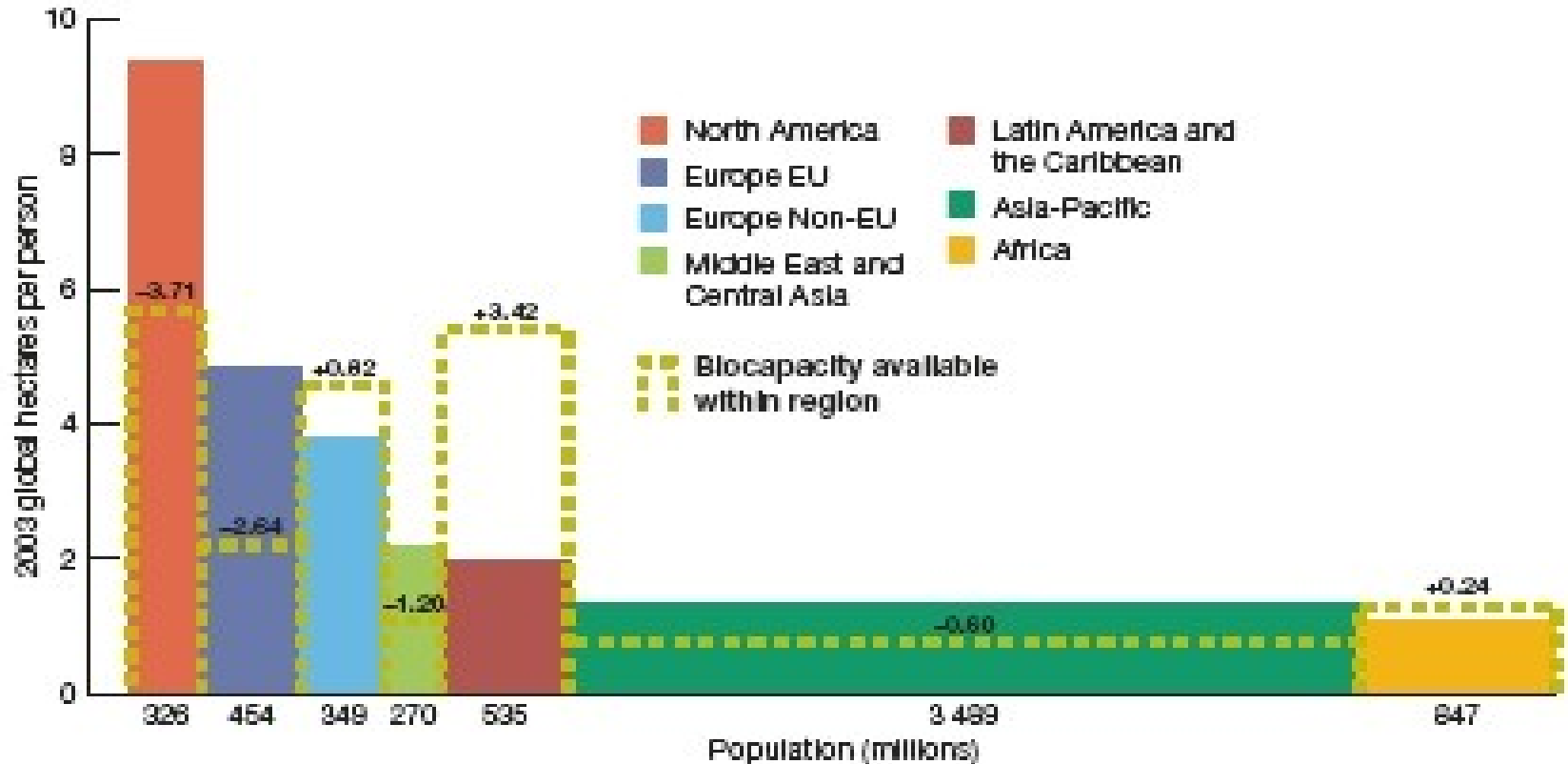
Annie Leonard, *The Story of Stuff*

Climate Models Projections



Consumption vs. Biocapacity

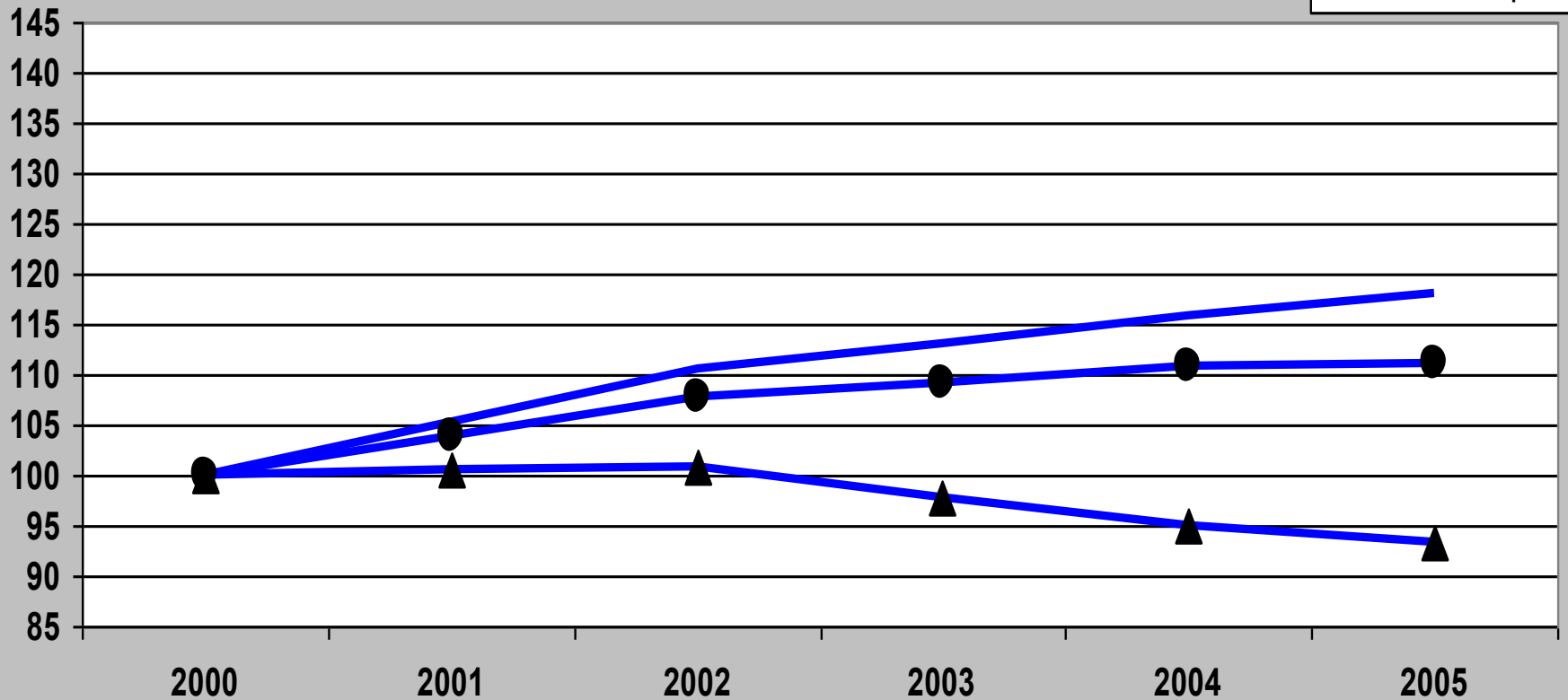
ECOLOGICAL FOOTPRINT AND BIOCAPACITY BY REGION, 2003



Washington State Consumers' Climate Impact

Consumer Climate Change Index (2000 = 100)

- Aggregate
- Per Person
- Per \$ Spent



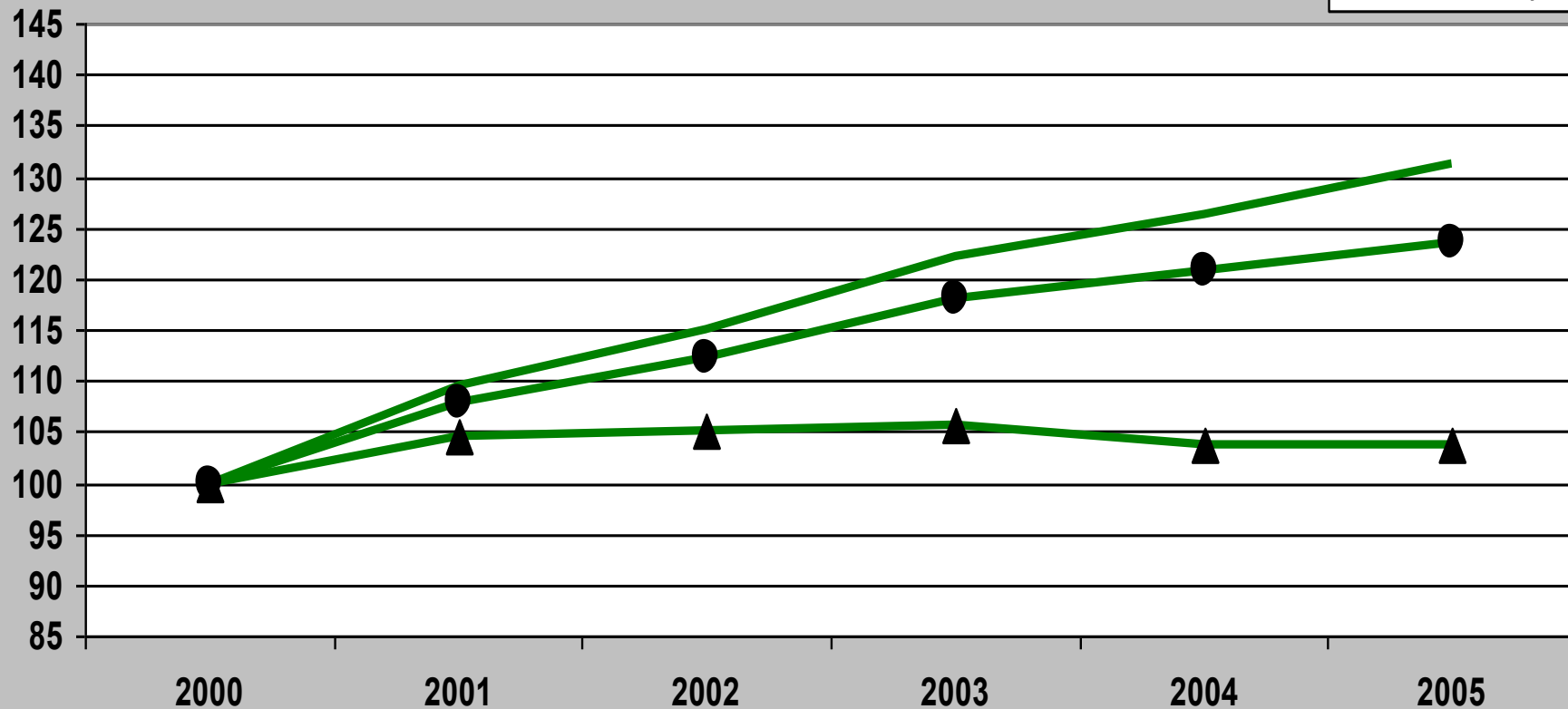
A Cyclops Can't See 3D!

Morris & Matthews, *A Consumer Environmental Index (CEI) to Track the Environmental Impact of Consumer demand for Goods and Services: Results for Washington State Consumers*

Washington State Consumers' Ecosystems Impact

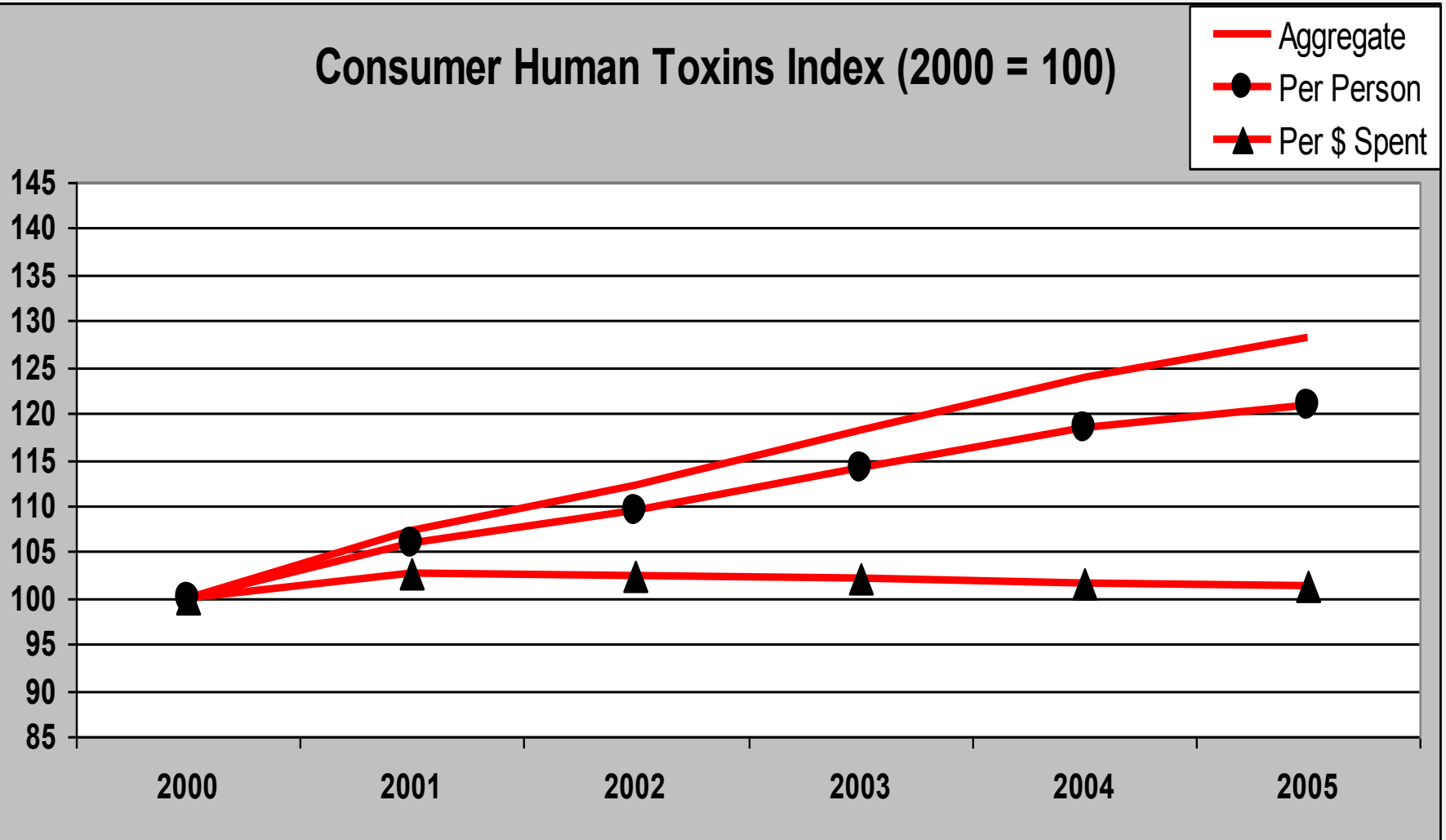
Consumer Ecosystems Toxicity Index (2000 = 100)

- Aggregate
- Per Person
- Per \$ Spent



Washington Consumers' Human Toxicity Impacts

Consumer Human Toxins Index (2000 = 100)



Clowns to the left of me,
Jokers to the right,
Here I am
Stuck in the middle with you.

Egan & Rafferty, *Stuck in the Middle with You*



G. A. HARKER-

WHY SO SERIOUS?



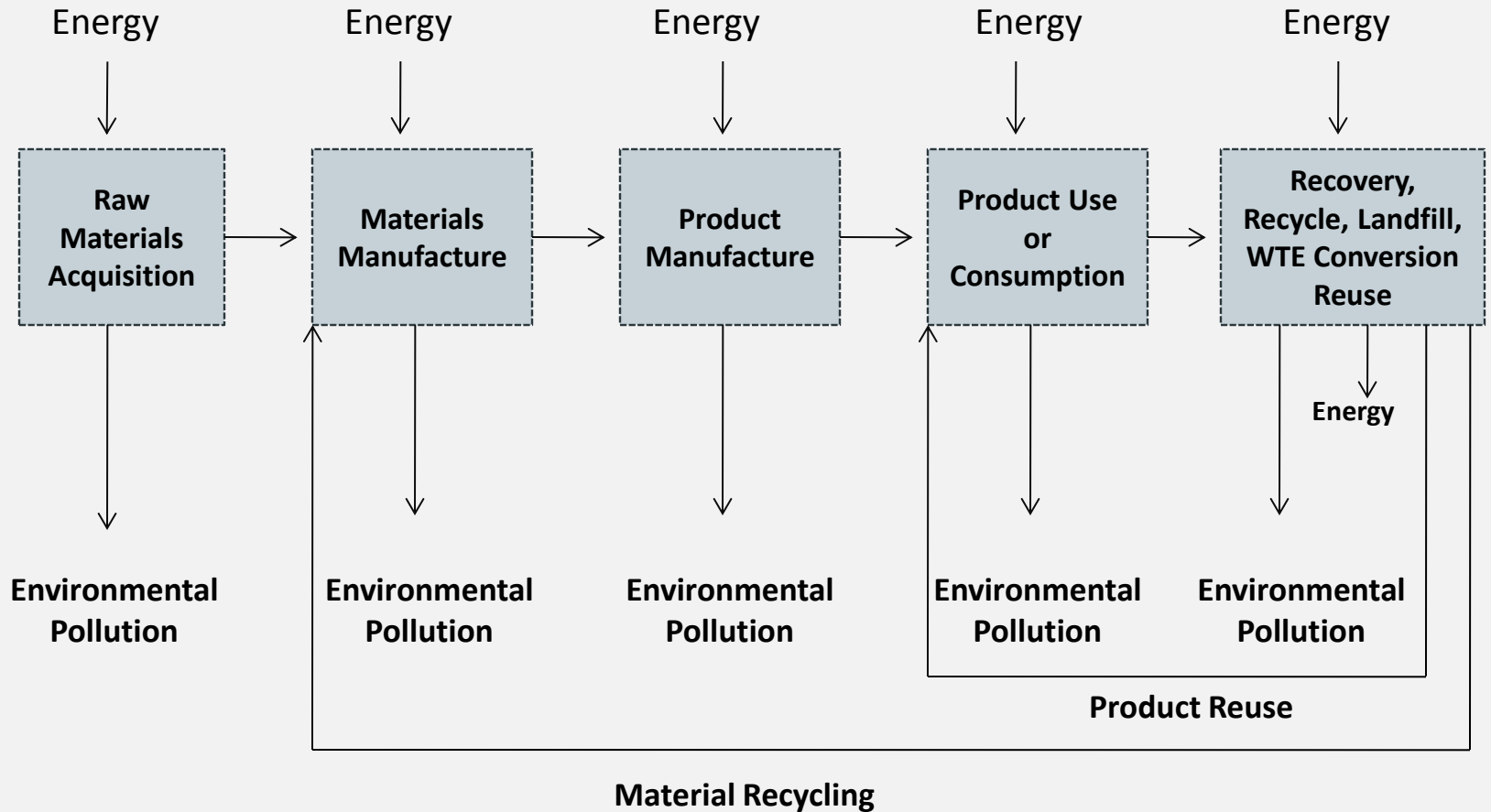
The Purpose of Human Civilization

Tralfamadorians manipulated primitive humans to evolve a civilization that could build a part for their spaceship that stalled long ago in our solar system. Stonehenge, the Great Wall of China and the Kremlin are all messages in the Tralfamadorian geometrical language telling of our progress on this task.

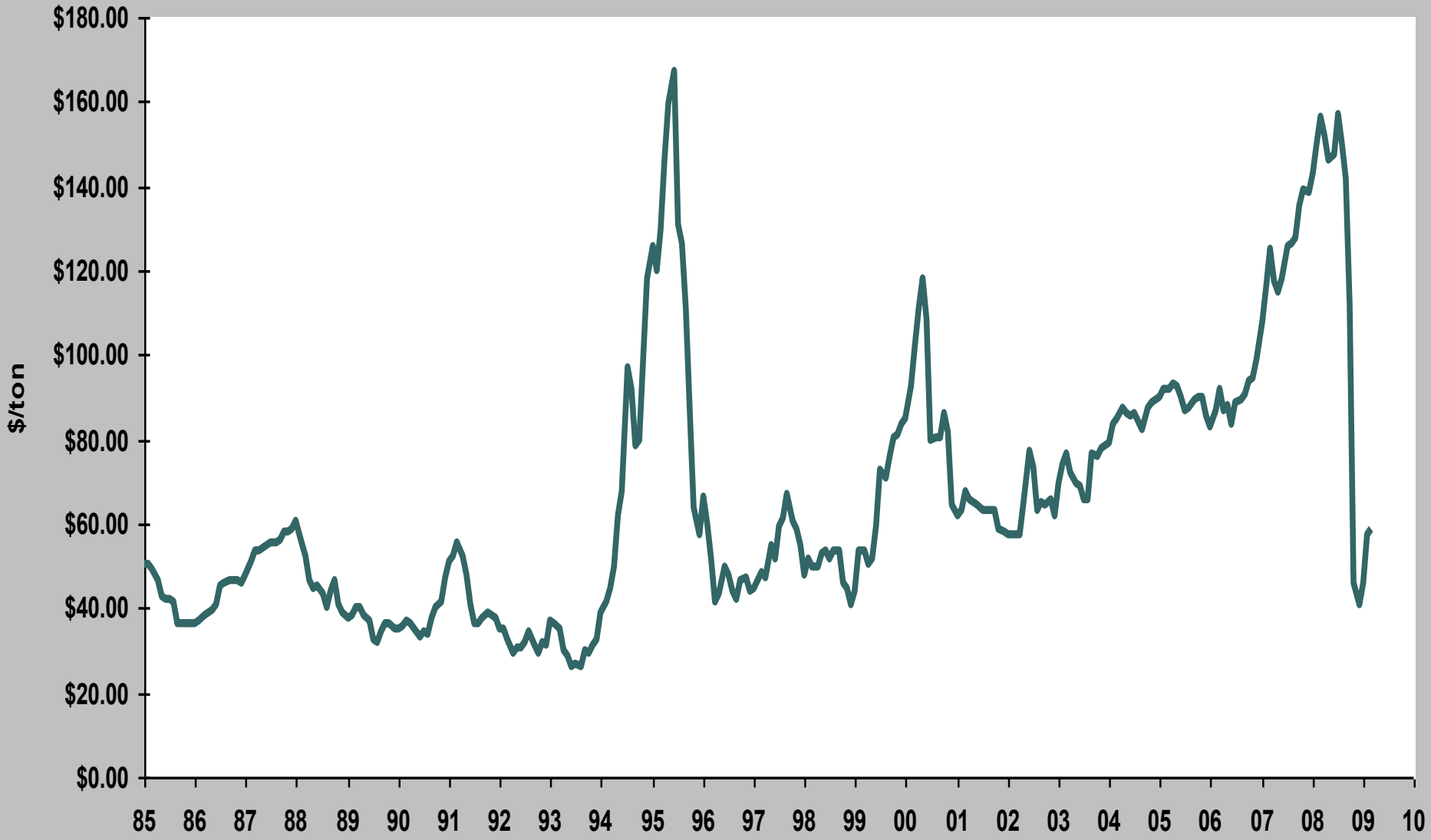
Kurt Vonnegut, *The Sirens of Titan*

What Can We Do?

Life Cycle Analysis (LCA)



Average Value for Curbside Recycled Materials Pacific Northwest, 1985-2009



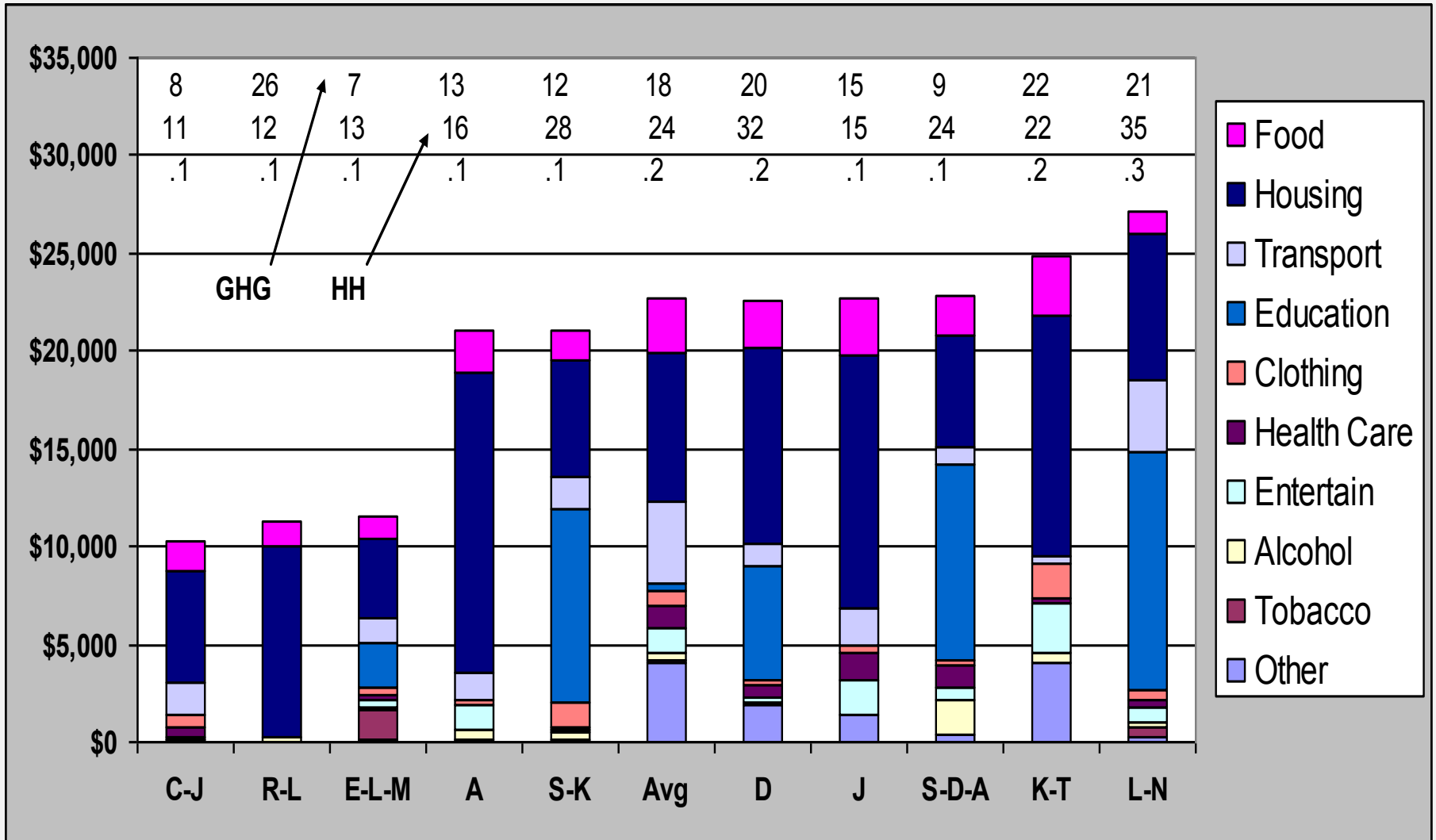
Value of Pollution Reductions

LCA Impact	Economic Cost (Cn\$/tonne)
Climate Change	\$50 eCO ₂
Human Health - Particulates	13,800 ePM _{2.5}
Human Health - Toxins	160 eToluene
Human Health - Carcinogens	4,200 eBenzene
Ecosystems Toxics	4,500 e2,4D
Acidification	670 eSO ₂
Eutrophication	6 eNitrogen

Environmental Value of Reuse & Recycling

Diversion Program	Environmental Value (Cn\$/tonne)
Blue Box – average	\$370
– range	70 (hdpe bottles) – 1,950 (aluminum)
WEEE Reuse – average	\$72,750
– range	3,750 (TV) – 116,250 (laptop)
WEEE Recycling – average	\$640
– range	230 (TV) – 980 (desktop)
MHSW – average	\$350
– range	60 (hdpe oil bottles) – 740 (paint)

Lifestyles of Evergreen MES Students & Faculty



Twice as much
Ain't twice as good,
And can't sustain
Like one half could.

John Mayer, *Gravity*

Carbon Tax

- ❖ US\$1 per MTeCO₂ implies US\$0.01 per gallon gas.
- ❖ BC carbon tax is Cn\$10 per MTeCO₂ up to cn\$30 in 2012.
- ❖ Stern Review of the economics of climate change estimated current cost of future climate change at US\$85 MTeCO₂.
- ❖ Long run price elasticity of gas consumption is -0.6. This means to get a 60% reduction we have to double the price of gas from US\$2 to US\$4 per gallon. 50% reduction requires 83% price increase, or US\$1.66 per gallon.
- ❖ US\$1.66 per gallon is a CO₂ price of \$US166 per MTeCO₂, about double the Stern review estimated cost of climate change.

The 3Es of Sustainability

- ❖ Economy – bottom line
- ❖ Environment – multi-dimensional
- ❖ Equity – multi-generational and multi-species

The End
Thank you.