NZSSES

sustainable otautahi christchurch

phase 2 The strong sustainability think tank

Energy and Debt:

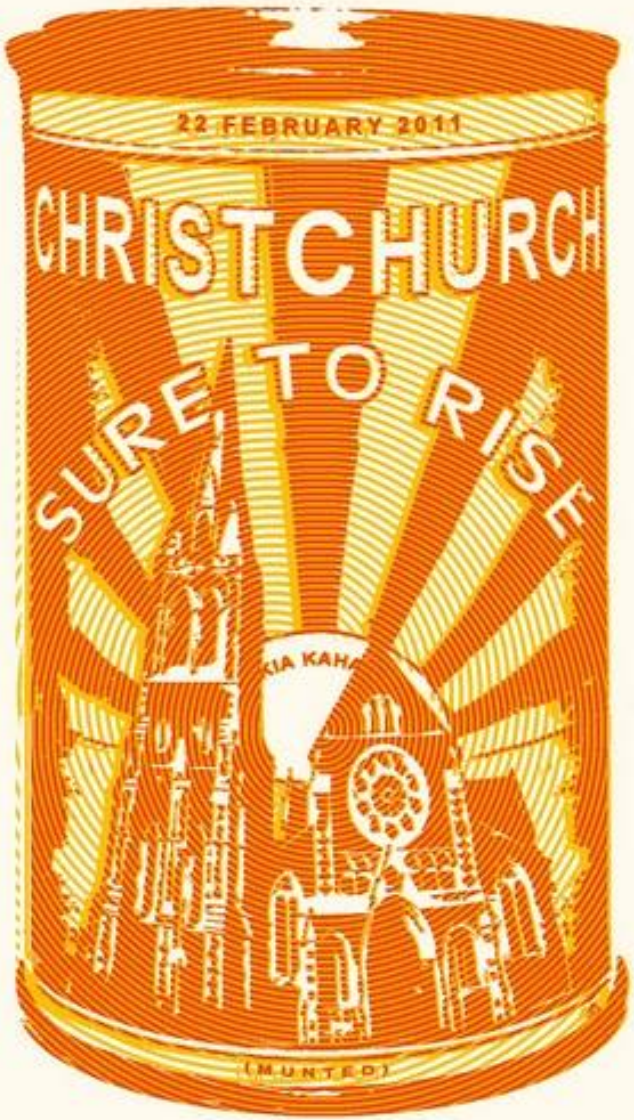
Is there a Connection?

Dr John Peet

Chair, Sustainable Aotearoa New Zealand

ESR engineers for social responsibility

NETWORK Waitangi OTAUTAHI


22 FEBRUARY 2011
CHRISTCHURCH
SURE TO RISE
KIA KAHA
(MUNTED)

The Problem facing us all

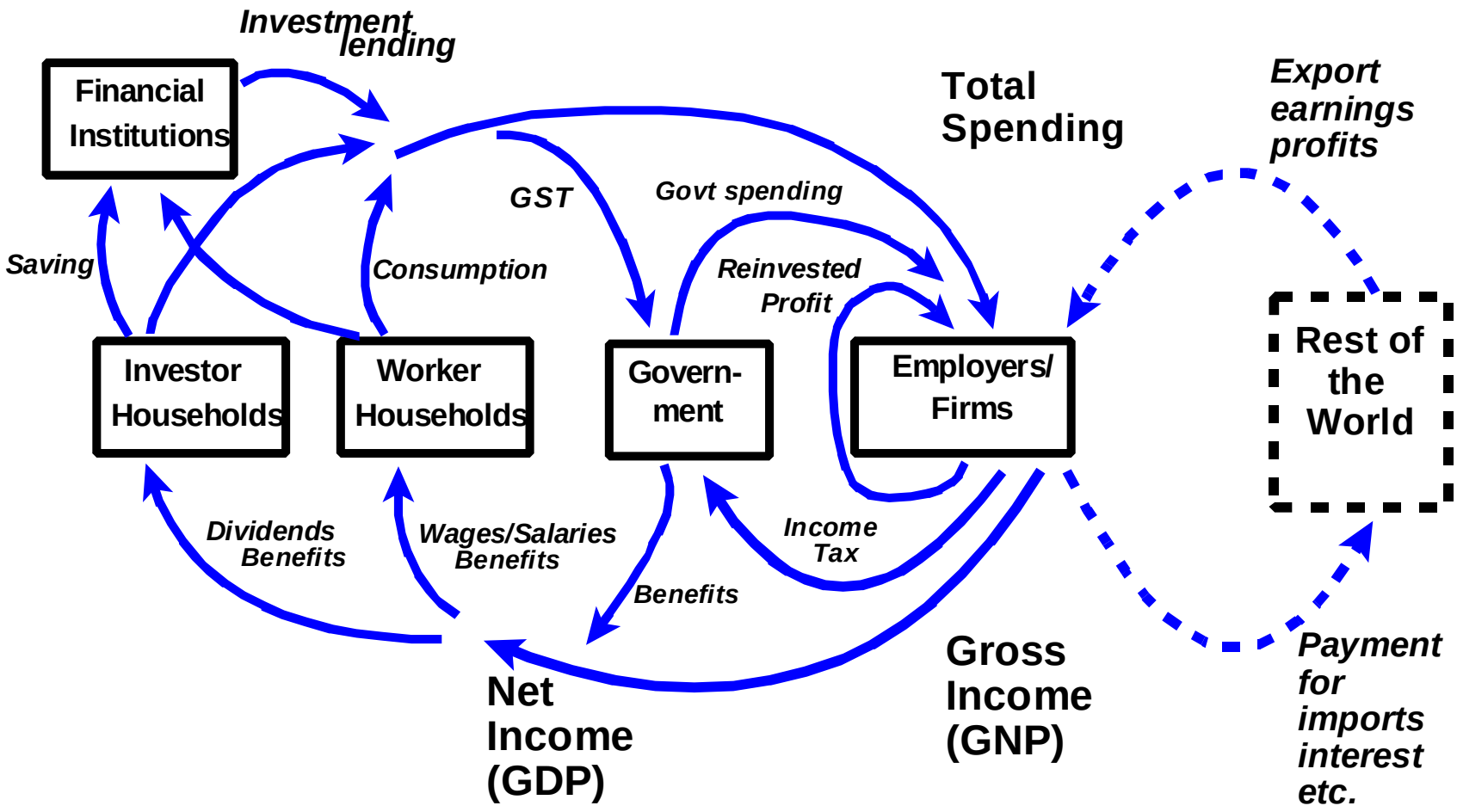
The root cause of unsustainability – and of climate change - is our approach to economics

Sustainable Aotearoa New Zealand (SANZ)

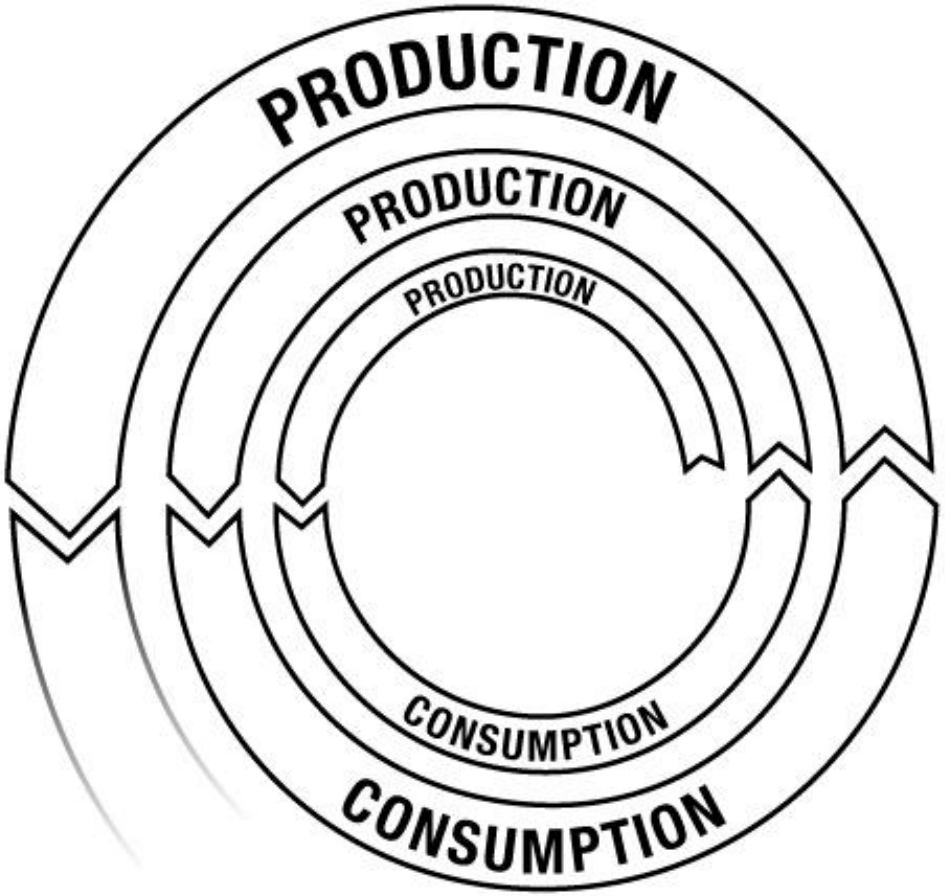
Strong Sustainability for New Zealand: Principles and Scenarios, 2009

www.phase2.org

Circular flow macroeconomic model of the NZ economy



Standard Economics



Daly, 1986

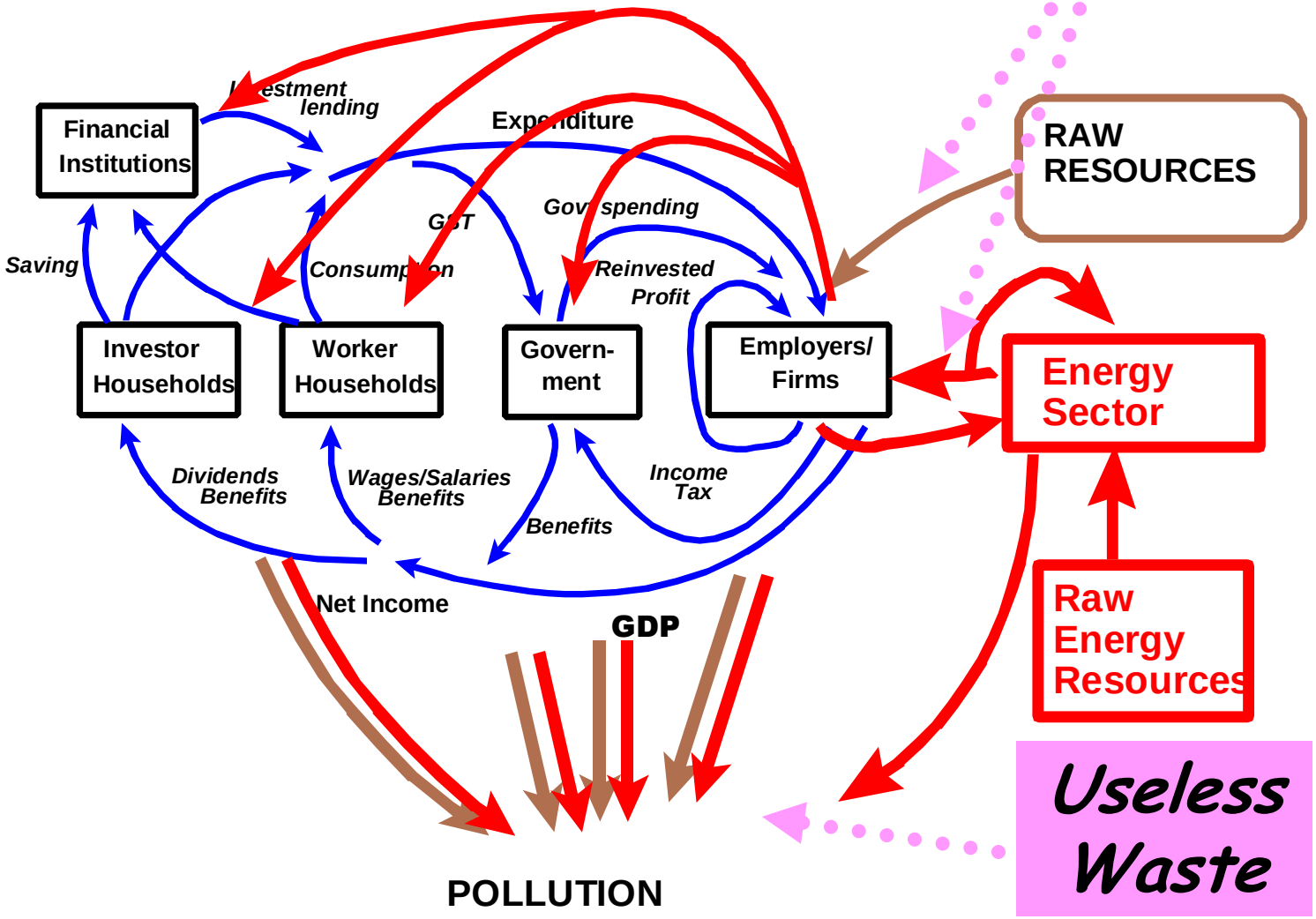
Limits to Growth?

- 1970s: There are no limits
- 1980s: There might be limits but they are far away
- 1990s: The limits might not be too far away, but the market will solve the problem
- 2000s: The markets might not function, but technology will save us

- *(2010s: Nothing can save us, let's party!)*

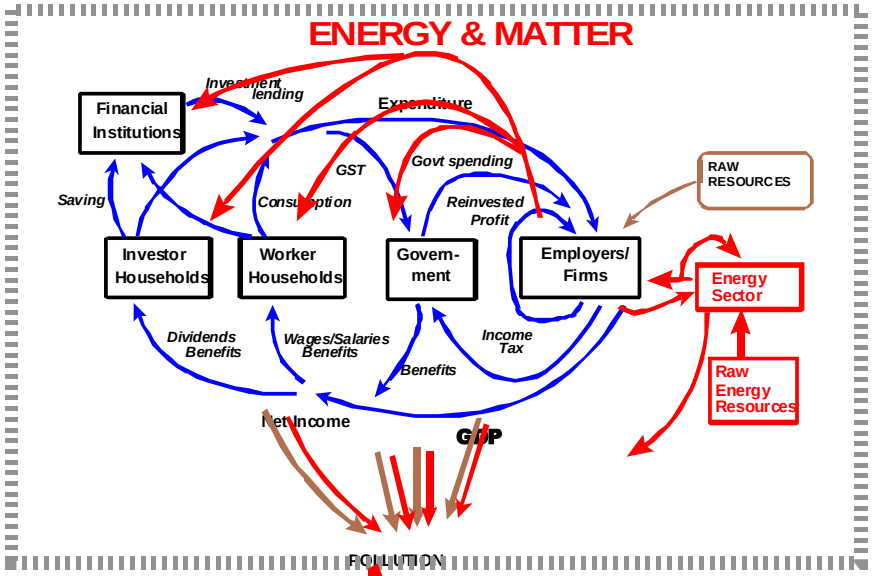
The Biophysical Economy

Goods & Services – Energy & Matter



Sun

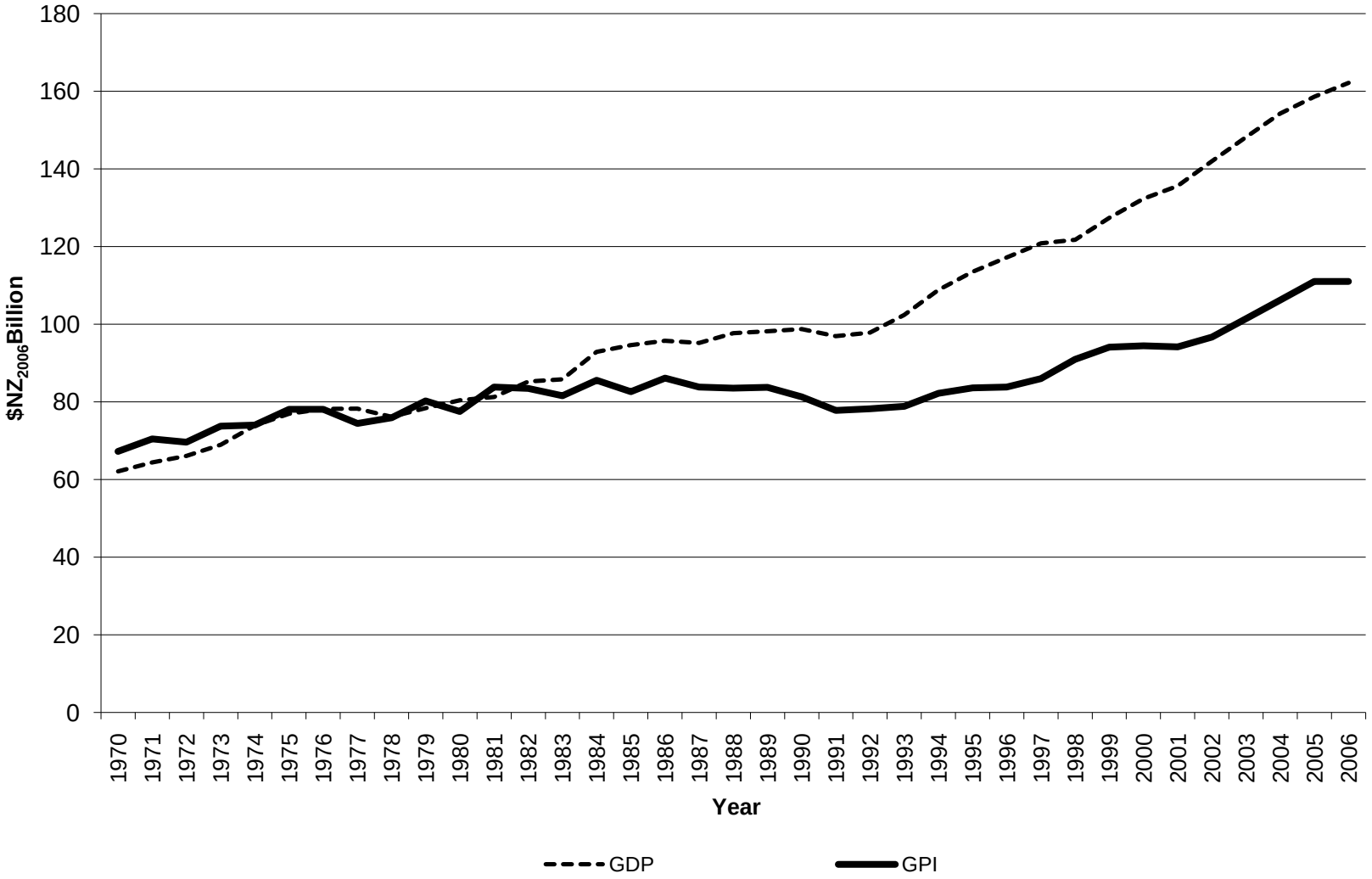
ECOSYSTEM



Ecosystem services

Outer Space

NZ GPI versus GDP - EERNZ



Adapted from: Forgie, V.E., McDonald, G.E., Zhang, Y. Patterson, M.G. D.H. Hardy. 2008. In 'Sustainable Welfare in the Asia-Pacific: Studies Using the Genuine Progress Indicator' pp-126-152. Lawn, P.A. and Clarke, M. Edward Elgar, Cheltenham

The Dilemma of Economic Growth

Side A	**Side B**
Economic growth is unsustainable	Failure to grow is destabilising

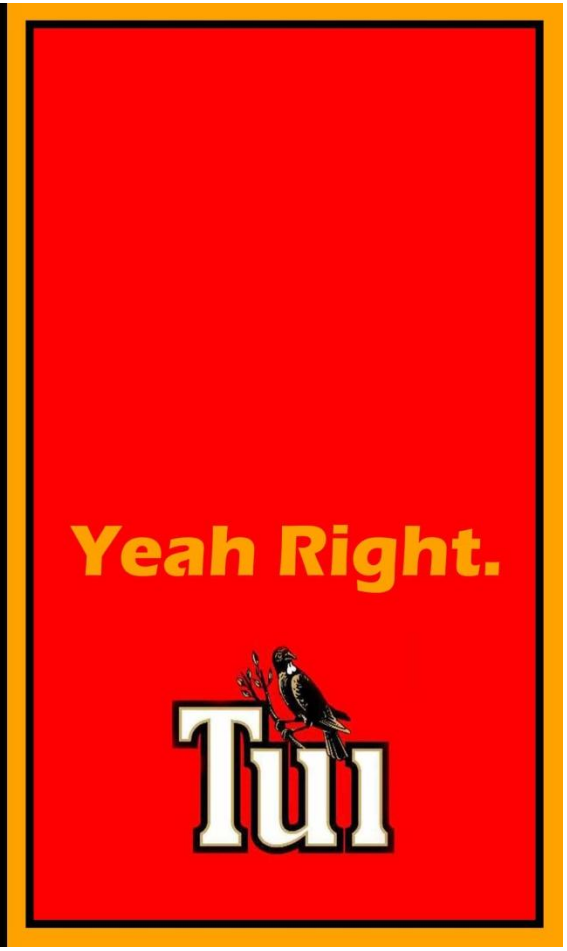
Jackson, 2009; Dietz, 2010

Myths of Neoclassical Economics

1. A theory of production can ignore physical and environmental realities
   a. The economy can be described independently of its biophysical matrix
   b. Economic production can be described without reference to physical work
2. A theory of consumption can ignore actual human behaviour
   a. Homo Economicus is a scientific model that does a good job of predicting human behaviour
   b. Consumption of market goods can be equated with well-being and money is a universal substitute for anything.

Gowdy, Hall, Klitgaard and Krall, 2010

Economics trumps the environment



So – what's the problem with debt, then?

- Borrowing increases consumption in the short term, on the assumption that it will be paid back – with interest – through economic growth
- The real – marginal - costs of pollution and of key resources such as oil are increasing, at the same time as people are encouraged to consume more through easy finance
- Debt (and derivatives) trading now exceeds goods and services trading, worldwide, by several orders of magnitude
- From the biophysical economic viewpoint, printing and borrowing money simply builds up resource problems for the future.
- Mother Nature doesn't do bailouts!

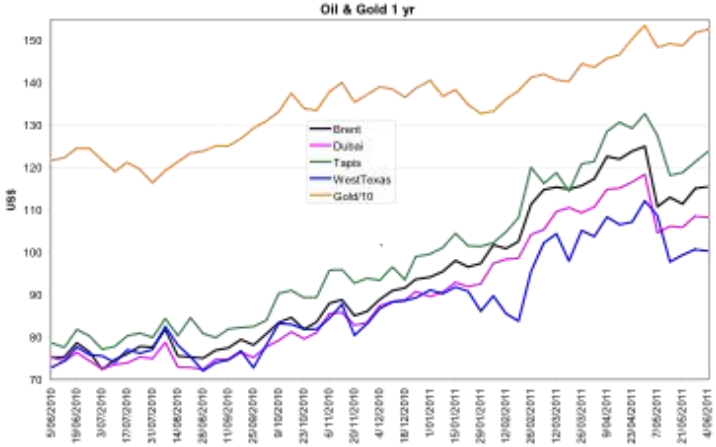
The central issue

- The much-vaunted productivity of developed nations is the result not of the magic of the market, human innovation, creative finance or "technology"
- It is due to the magic of fossil fuels
- Without cheap, mainly petroleum-based energy, the staggering economic growth of most of the last century would not have happened
- Given the unfolding realities of Peak Oil, it will probably never happen again

Crude Oil Prices

This chart shows the prices of crude oil at weekly intervals from 29 May 2004 to 4 June 2011.

The next chart is expanded to show the same information for the year 5 June 2010 to 4 June 2011.

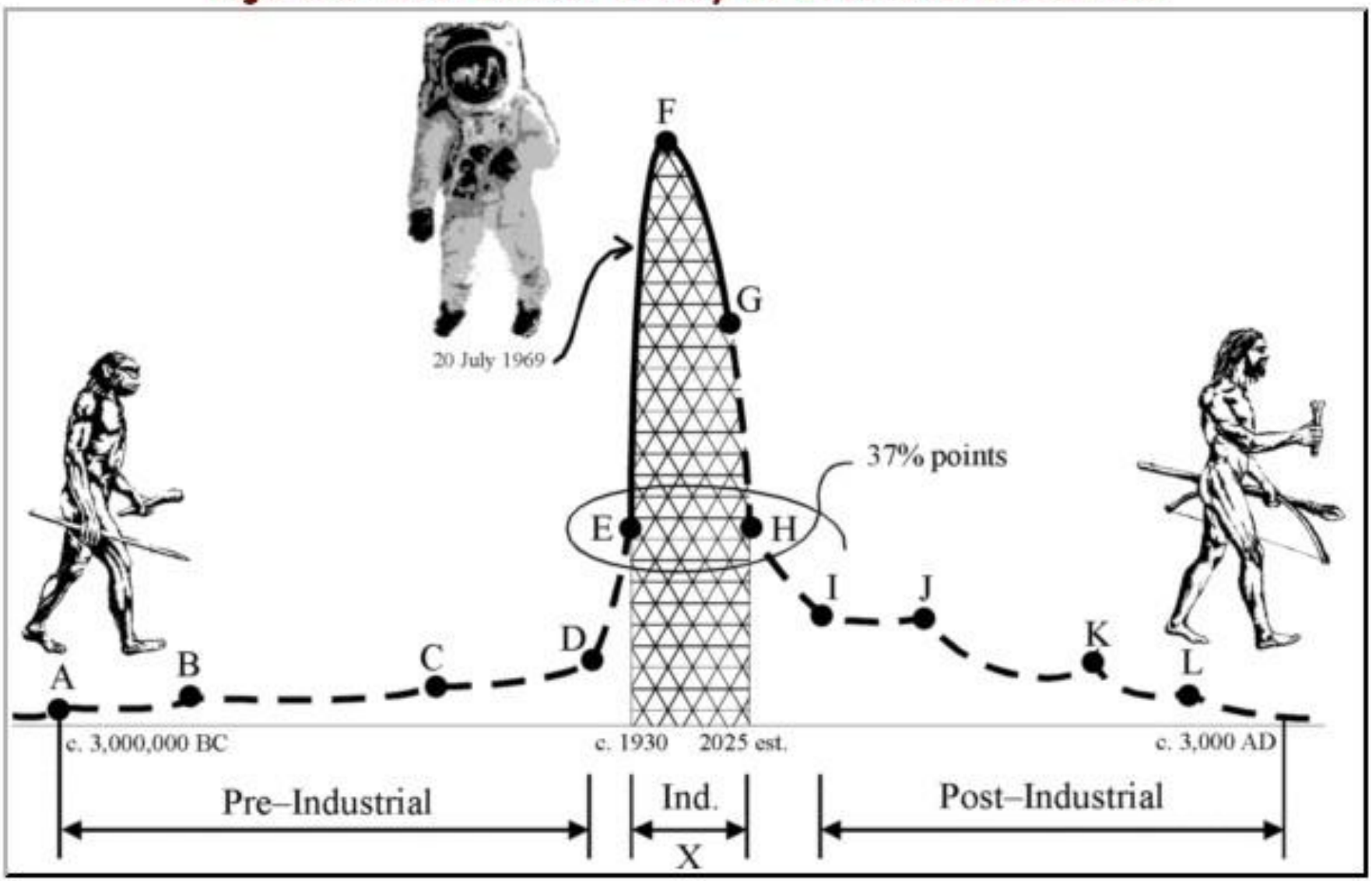


The main feature of interest is the more or less steady rise over the past nine months after nearly a year of relative stability. After a sharp drop through April the steady rise has resumed in all except West Texas.

Ref: Neil Mander

www.sef.org.nz/views.html

A possible (post Peak Oil) future?!



3 Parts to a New Economics

1. Use NCE wherever it is applicable, but use laws of thermodynamics to incorporate the reality of limits
2. Incorporate modern psychology and sociology
3. Clarify the ethical imperatives under which humans actually operate

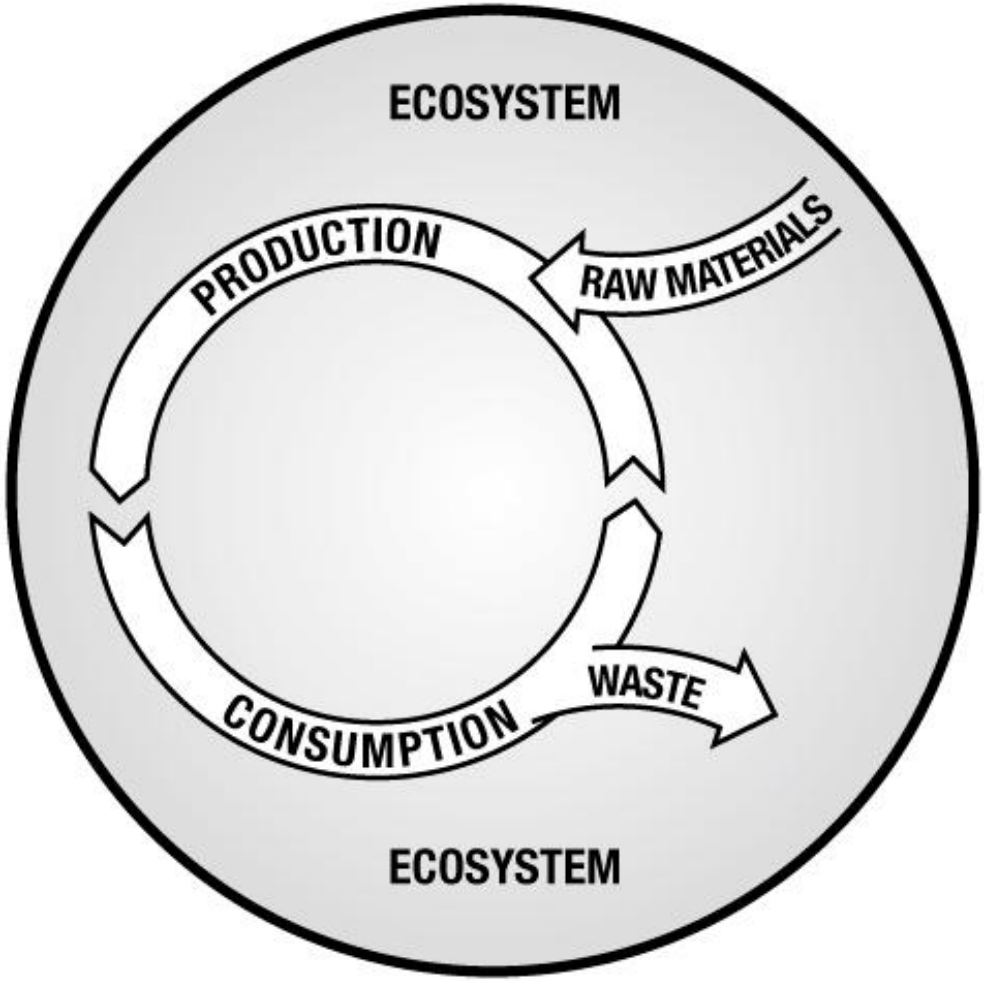
Ethics and Values for Strong Sustainability

A very different ethical stance is needed by people committing to strong sustainability; ethics that:

- Ensure (universal) material Basic Needs of people are satisfied
- Place much greater importance on non-material sources of happiness
- Remove the perceived linkage between economic growth and success
- Affirm the deep interdependence of all people and mutual respect between all
- Value nature intrinsically through knowing that human society and its political economy is an integral and interdependent component of nature and the ecosphere of Earth. Humans have reverence for nature and consider themselves stewards of it.

SANZ, 2009

Steady-State Economics



Daly, 1986

A GUIDE TO

WHAT'S WRONG WITH ECONOMICS

EDITED BY

EDWARD FULLBROOK

THE ENVIRONMENTAL ENDGAME

MAINSTREAM ECONOMICS, ECOLOGICAL DISASTER, AND HUMAN SURVIVAL

ROBERT L. NADEAU

'Business as usual is not an option.'
Oliver James, author of *Affluenza*

PROSPERITY WITHOUT GROWTH

Economics for a Finite Planet

TIM JACKSON

WITH FOREWORDS BY
HERMAN DALY, BILL MCKIBBEN,
MARY ROBINSON & PAVAN SUKHDEV

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Managing Without Growth

Slower by Design, Not Disaster

Peter A. Victor

Advances in Ecological Economics
SERIES EDITOR: JEROEN C.J.M. VAN DEN BERGH

Enough is Enough

Ideas for a Sustainable Economy in a World of Finite Resources

The Report of the Steady State Economy Conference

casse

Economic Justice For All

http://steadystate.org/enough-is-enough/