

BBC

## NEWS

Thursday, 31 July 2008 22:51 UK

**UK in 'delusion' over emissions**

By Roger Harrabin

The UK has been living under a delusion over its claim to be cutting greenhouse gases, according to two reports that will shake the climate change debate.

They show that instead of falling since the 1990s, UK greenhouse emissions have been growing... dependent on... imported goods being counted.



The UK exports its emissions to China, the report suggests

BBC

## NEWS

05:23 GMT, Tuesday, 17 March 2009

**China seeks export carbon relief**

China has proposed that importers of Chinese-made goods should be responsible for the carbon dioxide emitted during their manufacture. China's top climate change negotiator, Li Gao, said his country should not pay for cutting emissions caused by the high demands of other countries....

“These products are consumed by other countries... This share of emissions should be taken by the consumers but not the producers.” Li Gao, China's Climate change negotiator



# World AP

Friday, 03.27.09 Welcome Guest Login Register  
Posted on Monday, 03.16.09

HOME DELIVERY  
Sunday's  
Miami Herald  
6 Months for \$20!

Current: 77°  
75° / 67°

## U.S., China worlds apart on climate change curbs

RENEE SCHOOF  
McClatchy Newspapers

**WASHINGTON** – China's top climate change negotiator's visit to Washington Monday sent a fresh signal that the two countries...accountable for emissions it produces to make goods for export...

...15 percent to 25 percent of its emissions that result from making products for the rest of the world, said Li, ...

Department of Climate Change in China's National Development and Reform Commission...



## ...a painter's impact on nature

**International Development**

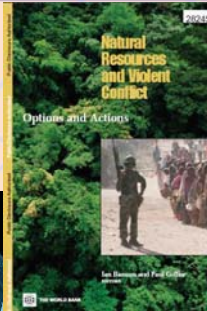
### Mine 'threatens' Madagascar's biodiversity



Madagascar's biodiversity is under threat from mining activities. The island's unique species, including lemurs, are being lost due to deforestation and habitat destruction caused by mining operations. Conservationists are calling for stricter regulations to protect the island's rich natural heritage.



# the mobile phone, a call to war



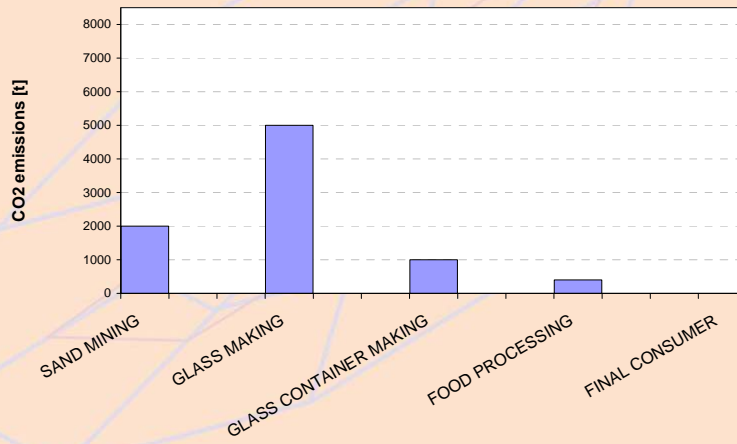
## How does it work ?

*(Thanks to Tommy Wiedmann for slides)*



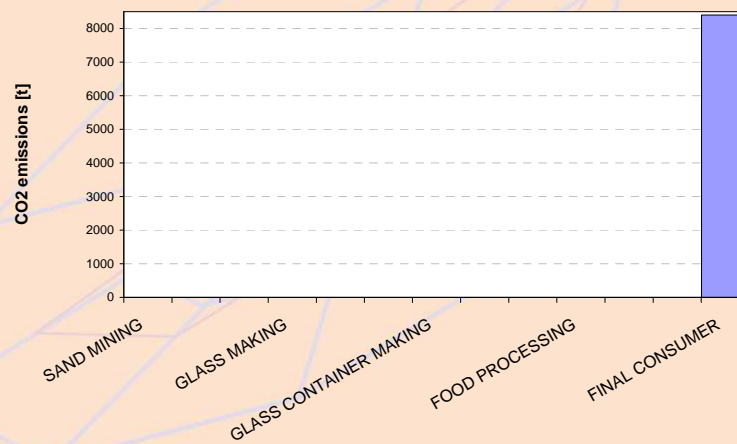
### Full (100%) Producer Responsibility

>> only on-site impacts!



### Full (100%) Consumer Responsibility

>> all upstream impacts with the consumer





*Economic Systems Research*  
Vol. 17, No. 4, 365–391, December 2005



## A Consistent Input–Output Formulation of Shared Producer and Consumer Responsibility

BLANCA GALLEGO & MANFRED LENZEN

*School of Physics, The University of Sydney, Australia*



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### METHODS

## Shared producer and consumer responsibility — Theory and practice

Manfred Lenzen<sup>a,\*</sup>, Joy Murray<sup>a,1</sup>, Fabian Sack<sup>b</sup>, Thomas Wiedmann<sup>c</sup>

<sup>a</sup>ISA, School of Physics A28, The University of Sydney NSW 2006, Australia

<sup>b</sup>Sydney Water Corporation, 115–123 Bathurst St, Sydney NSW 2000, Australia

<sup>c</sup>Stockholm Environment Institute - York, University of York, Heslington, York, YO10 5DD, UK



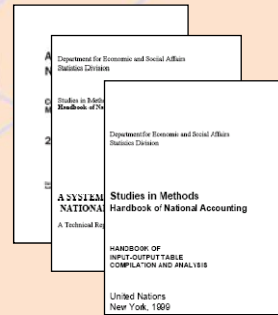
### Input-Output Tables: mapping the structure of the economy

#### Australia

	Iron ore	Steel	Cars						
Iron ore		\$							
Steel			\$						
Cars									

Regularly published

UN Standard



### Globalising

	Australia				US				China ...							
	NSW	Vic	QLD		Iron ore	Steel	Cars		Iron ore	Steel	Cars		Iron ore	Steel	Cars	
NSW	Iron ore				Iron ore	\$			Iron ore	\$			Iron ore	\$		
	Steel				Steel		\$		Steel		\$		Steel		\$	
	Cars				Cars				Cars				Cars			
Vic		Iron ore														
		Steel														
		Cars														
...																
US					Iron ore	\$			Iron ore	\$			Iron ore	\$		
					Steel		\$		Steel		\$		Steel		\$	
					Cars				Cars				Cars			

Shared responsibility

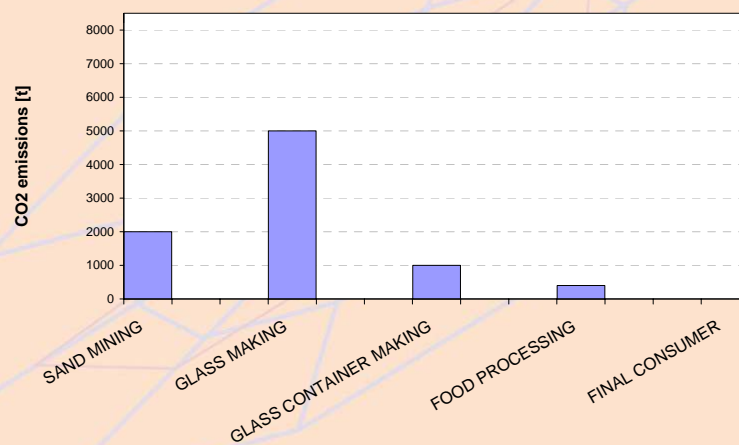
Assigns responsibility to industries and consumers according to a prescribed combination of intermediate output and final demand.

$$F_j = \sum_k f_k l_{kj}^{(\alpha)} [y_j + \underbrace{(1 - \alpha)(x_j - y_j)}_{\text{value added / net output}}]$$

$$\sum_j F_j = F$$

$$x_k = \begin{cases} \beta y_k \rightarrow \text{assigned to final consumers of sector } k \\ + \\ (1 - \beta)y_k + (1 - \alpha)(x_k - y_k) \rightarrow \text{assigned to industry } k \\ + \\ \alpha(x_k - y_k) = \alpha \sum_j a_{kj} x_j \rightarrow \text{assigned to sectors } j \text{ downstream from } k \end{cases}$$

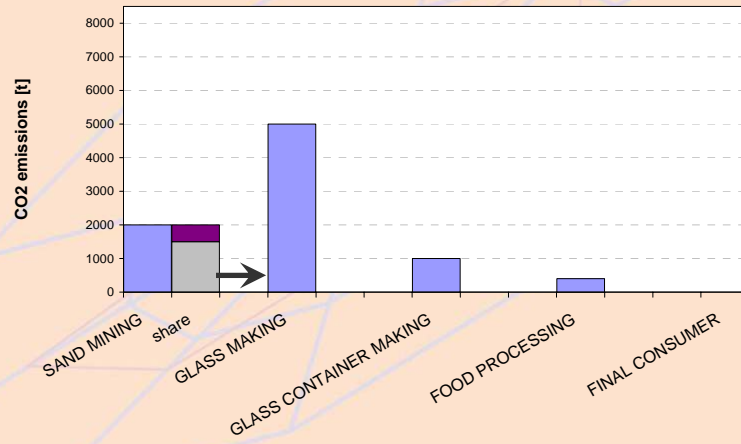
## Sharing responsibility ...



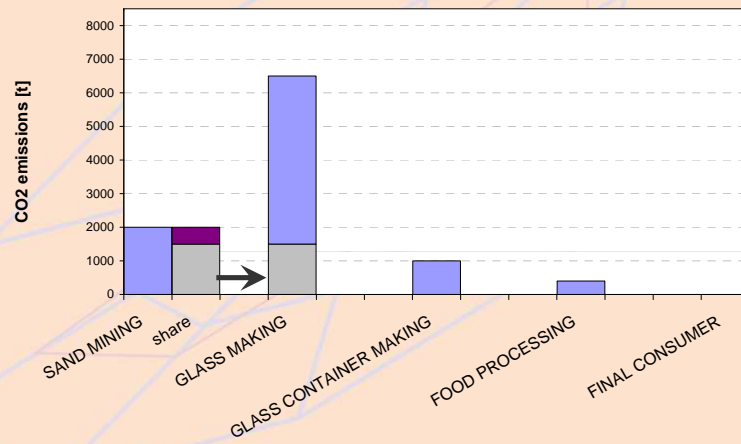




### Sharing responsibility ...

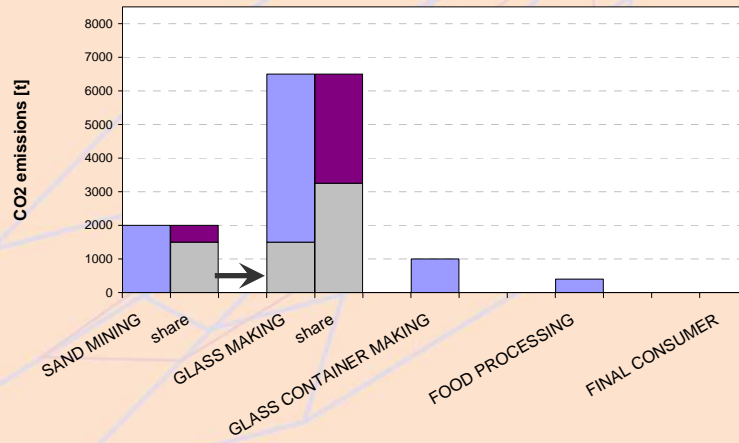


### Sharing responsibility ...

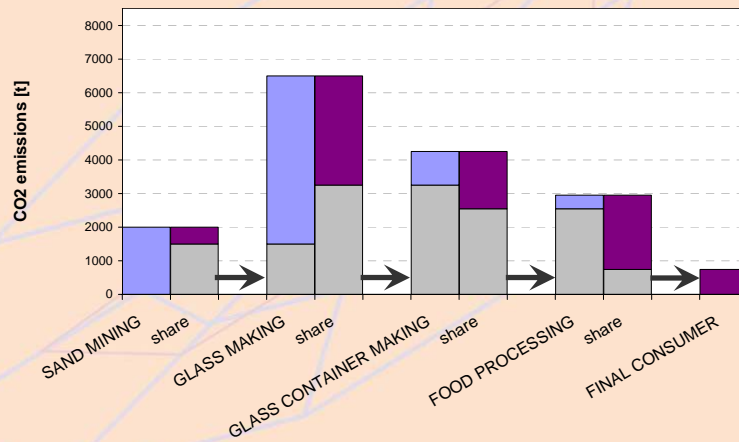




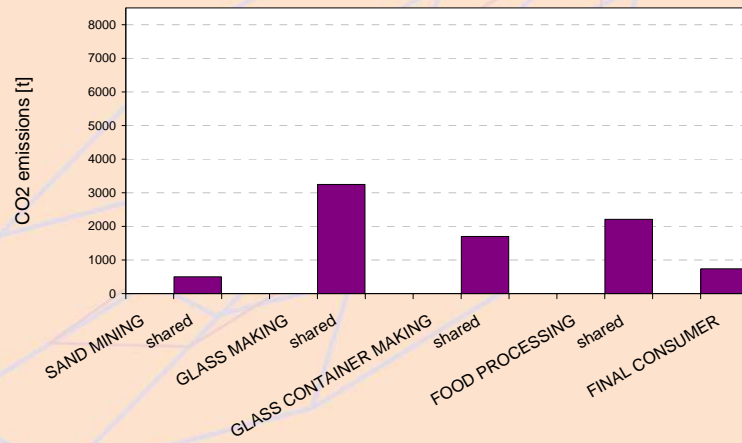
### Sharing responsibility ...



### Sharing responsibility ...



## ... shared responsibility



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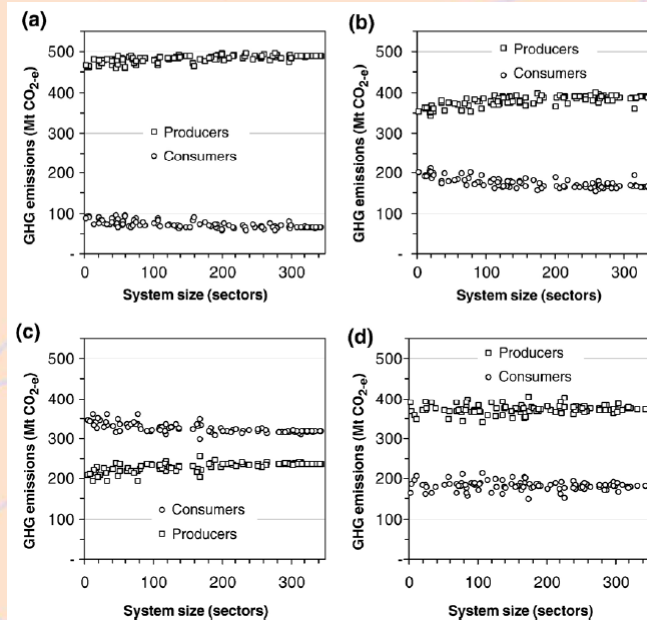


COMMENTARY

### Aggregation (in-)variance of shared responsibility: A case study of Australia

Manfred Lenzen\*

ISA - Centre for Integrated Sustainability Analysis, A28, The University of Sydney NSW 2006, Australia



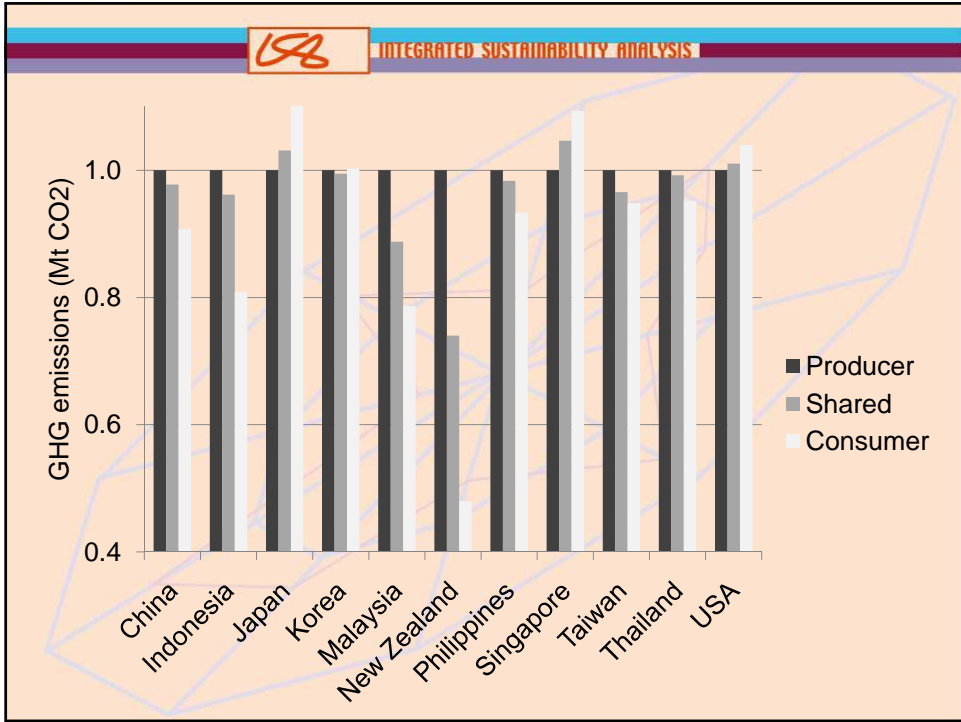
Andrew, R. and V. Forgie (2008) A three-perspective view of greenhouse gas emission responsibilities in New Zealand. *Ecological Economics* 68, 194-204.

Lennox, J. and R. Andrew (2006) *Reforming water use rights in Canterbury: a shared responsibilities perspective*. Sendai, Japan, Internet site [http://www.iioa.org/pdf/Intermediate-2006/Full%20paper\\_Lennox.pdf](http://www.iioa.org/pdf/Intermediate-2006/Full%20paper_Lennox.pdf).

### How Does Trade Adjustment Influence National Inventory of Open Economies? Accounting embodied carbon based on multi-region input-output model

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