



GEOFFCARMODY
&ASSOCIATES

Reducing emissions contributions to global warming: should policies actually *work*?

Pricing CO₂, etc, emissions via national consumption: addressing the 'trade-exposed' sector properly, eliminating/reducing the 'prisoners' dilemma'

Geoff Carmody

The image shows three large, jagged icebergs floating in a dark, choppy sea. The icebergs are white and blue, with some showing deep cracks. The sky is overcast and grey. The text "What are we trying to do?" is overlaid in orange in the center of the image.

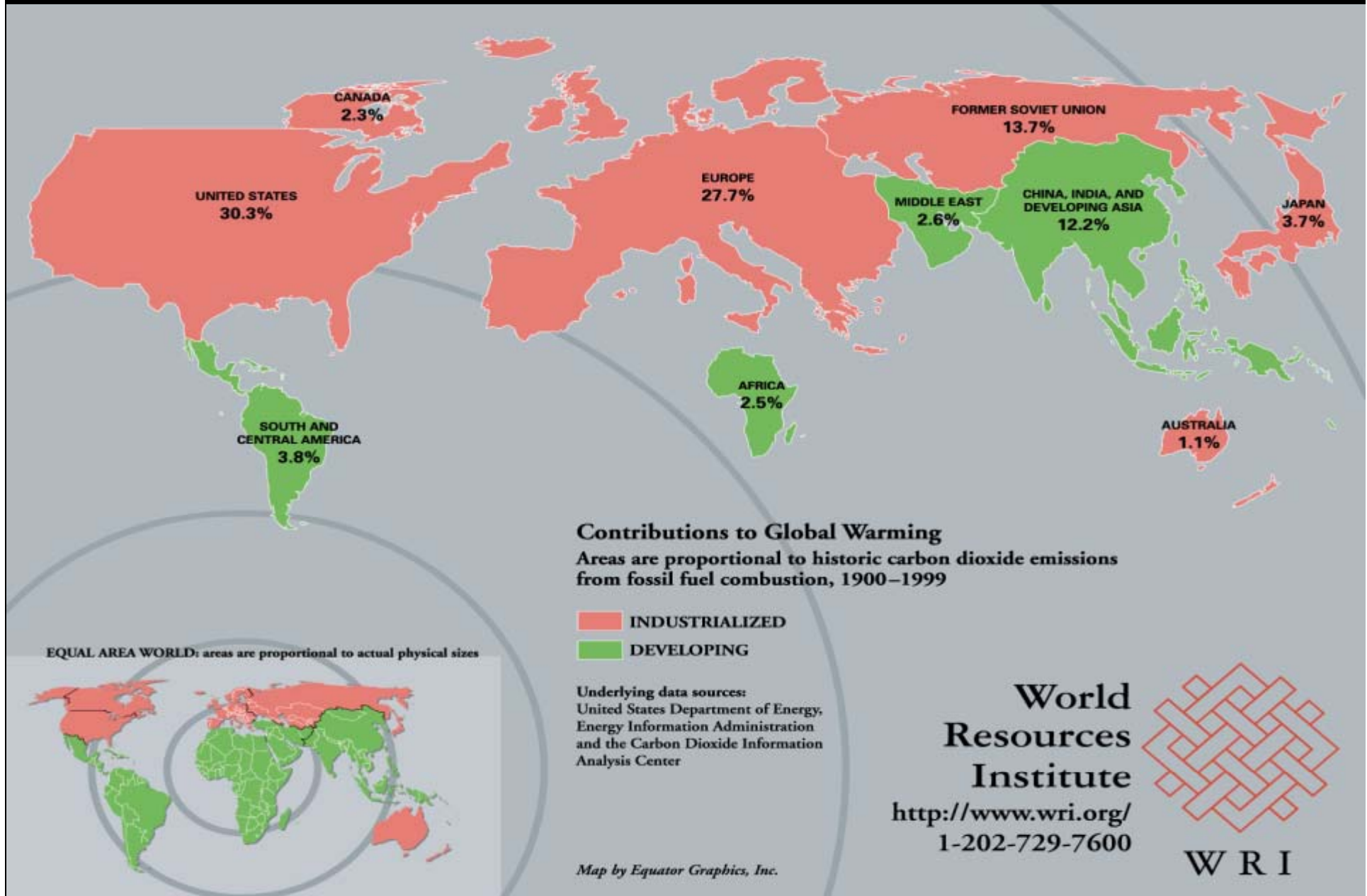
What are we trying to do?

The policy task: steps to a global deal

1. Agree on global warming limit (eg, +2°C over pre-industrial level?)
2. Agree global GHG concentration that delivers this (eg, ≤ 350 ppmv?)
3. Agree on global GHG reduction needed (rel. to BAU or base year?)
4. Agree on criterion for national burden-sharing (a zero-sum game)
5. Agree on distribution of 3. between all countries, based on 4.
6. Get each country to accept these shares as a commitment
7. Ensure each country acts sufficiently to deliver on 6.

Even if we succeed re. 1 – 3, achieving 4 – 7 will be *increasingly difficult*

The policy task: getting emitters 'on board'



My main message

The CPRS won't work. *Non-harmonised national climate policy action* is the reason. But there's a superior alternative to the CPRS that just *might* work:

- that is *practical & WTO-compliant*
- that *removes 'carbon leakage' & job losses as impediments to unilateral national action & maximises chances of getting a global deal as a result*

That alternative is *a national emissions consumption-based carbon tax policy model*



Analytical framework

Policy model choices

Broadly, two sets of design features are 'up for grabs':

A. To what national emissions base will the policy apply?

1. A national emissions *production base* (eg, CPRS), or
2. A national emissions *consumption base*

B. What policy instrument will be applied to that base?

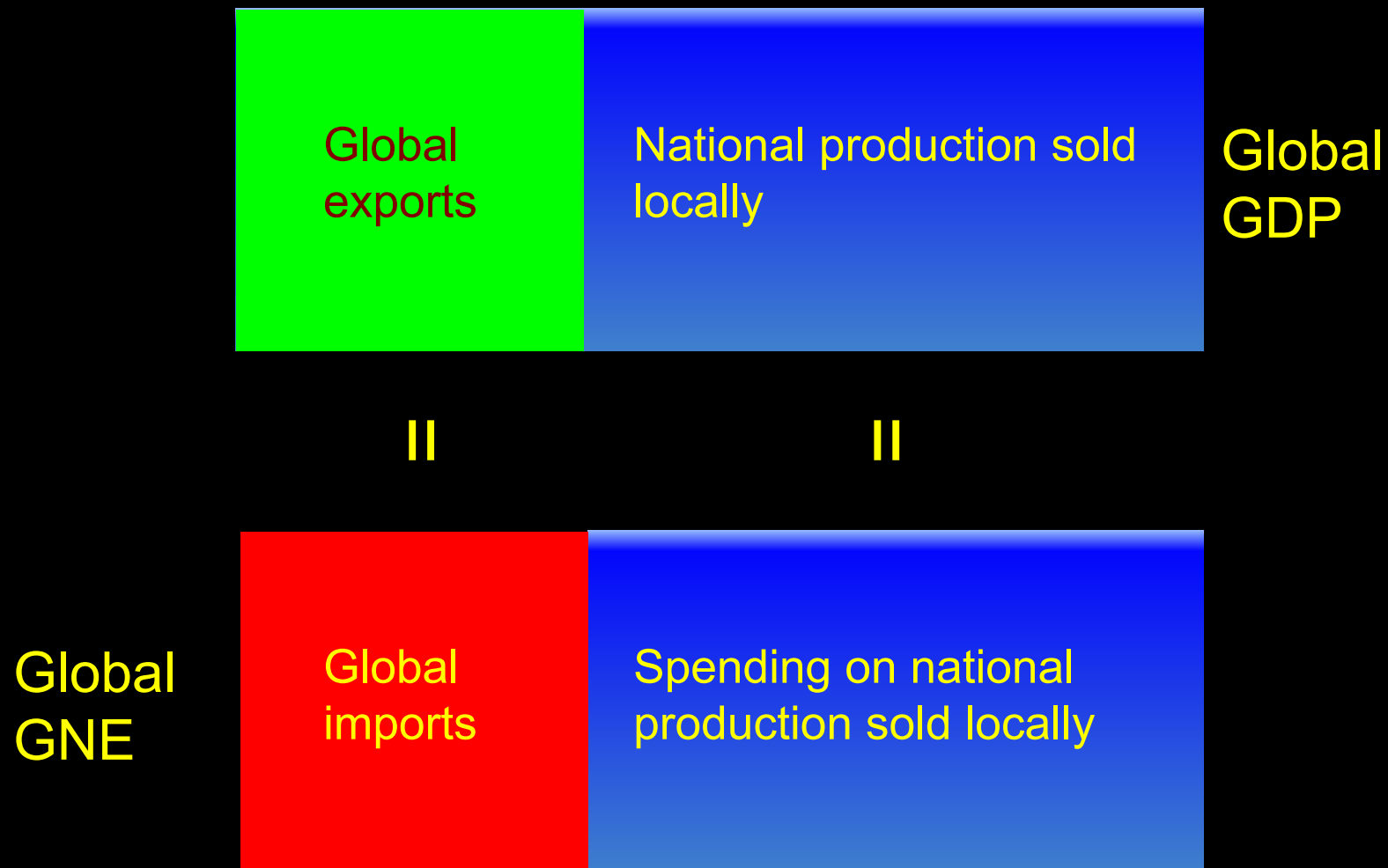
3. A *carbon tax*, or/and
4. A '*cap and trade*' emissions trading system (ETS)



Consumption- & production-based approaches: some broad principles

Production vs consumption: a global view

Emissions embedded in global GDP = Emissions embedded in global GNE



Production vs consumption: a country view

Emissions embedded in national GDP \neq Emissions embedded in national GNE
Even if they were equal, the policy treatment of exports & imports differs.

More export potential



GNE (consumption)



More import-competing

Incentive effects embedded in the CPRS

Under Kyoto/UNFCCC models, 'first movers' suffer. They lose competitiveness versus 'late movers'. As a result, 'late movers' have an incentive *not* to act

Unilateral action under a Kyoto production-based model:

- IS EQUIVALENT TO **NEGATIVE** PROTECTION
- A TAX IS IMPOSED ON OUR EXPORTS
- A SUBSIDY IS EFFECTIVELY GIVEN TO IMPORTS

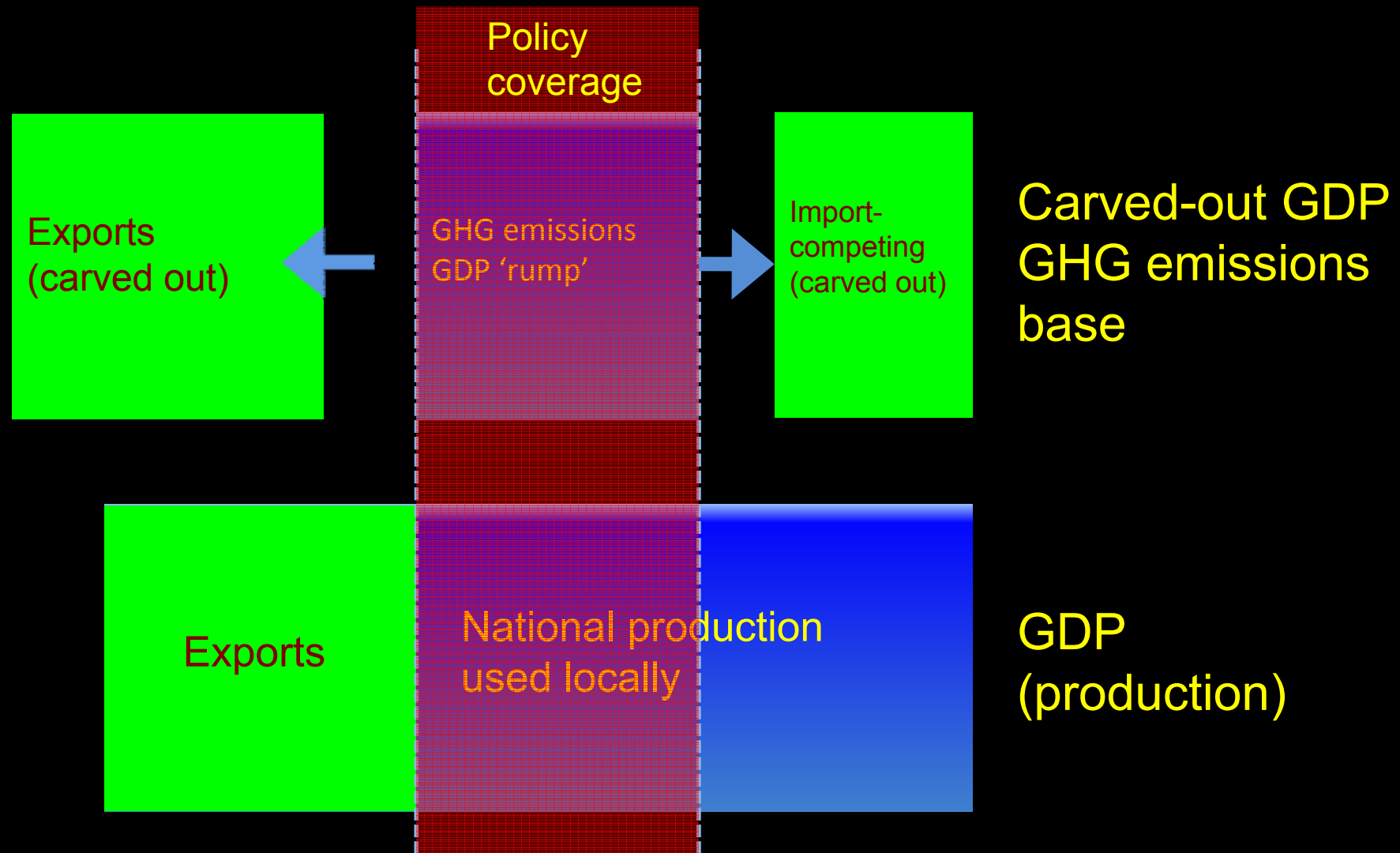
Policy **MUST** eliminate *negative protection* features.



Flaws in the CPRS approach:
some suggestive partial evidence

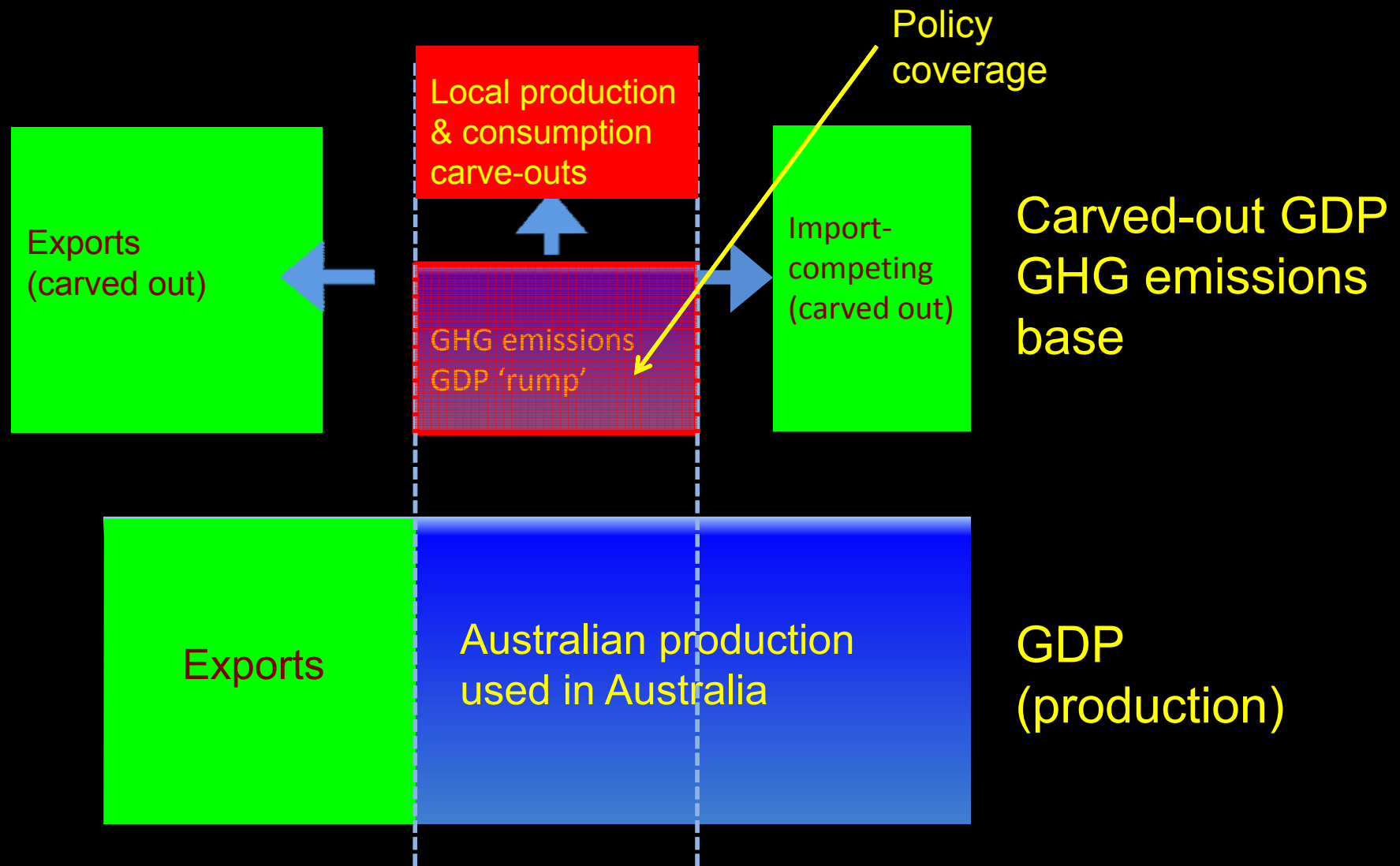
The reality: a 'carved out' production base

Countries that have 'acted', have adopted 'Clayton's' Kyoto policies:
They've 'carved out' most emissions and/or have set very low carbon prices.



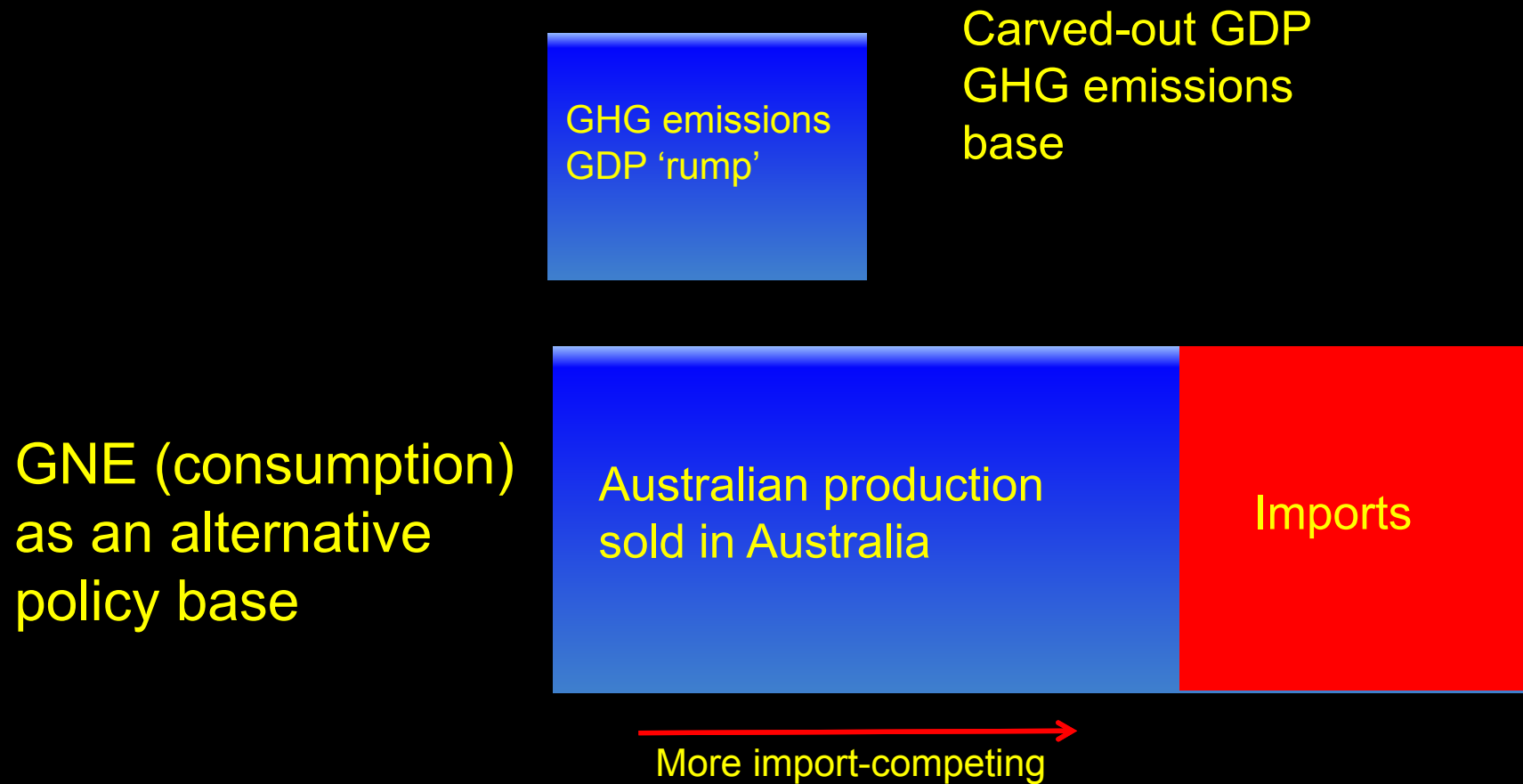
The reality: a 'carved out' production base

Countries that have 'acted' have also compensated local production sold locally



A practical consumption base is larger

A consumption base is larger – maybe 60% or more larger.



Some historical evidence – Kyoto '97-date

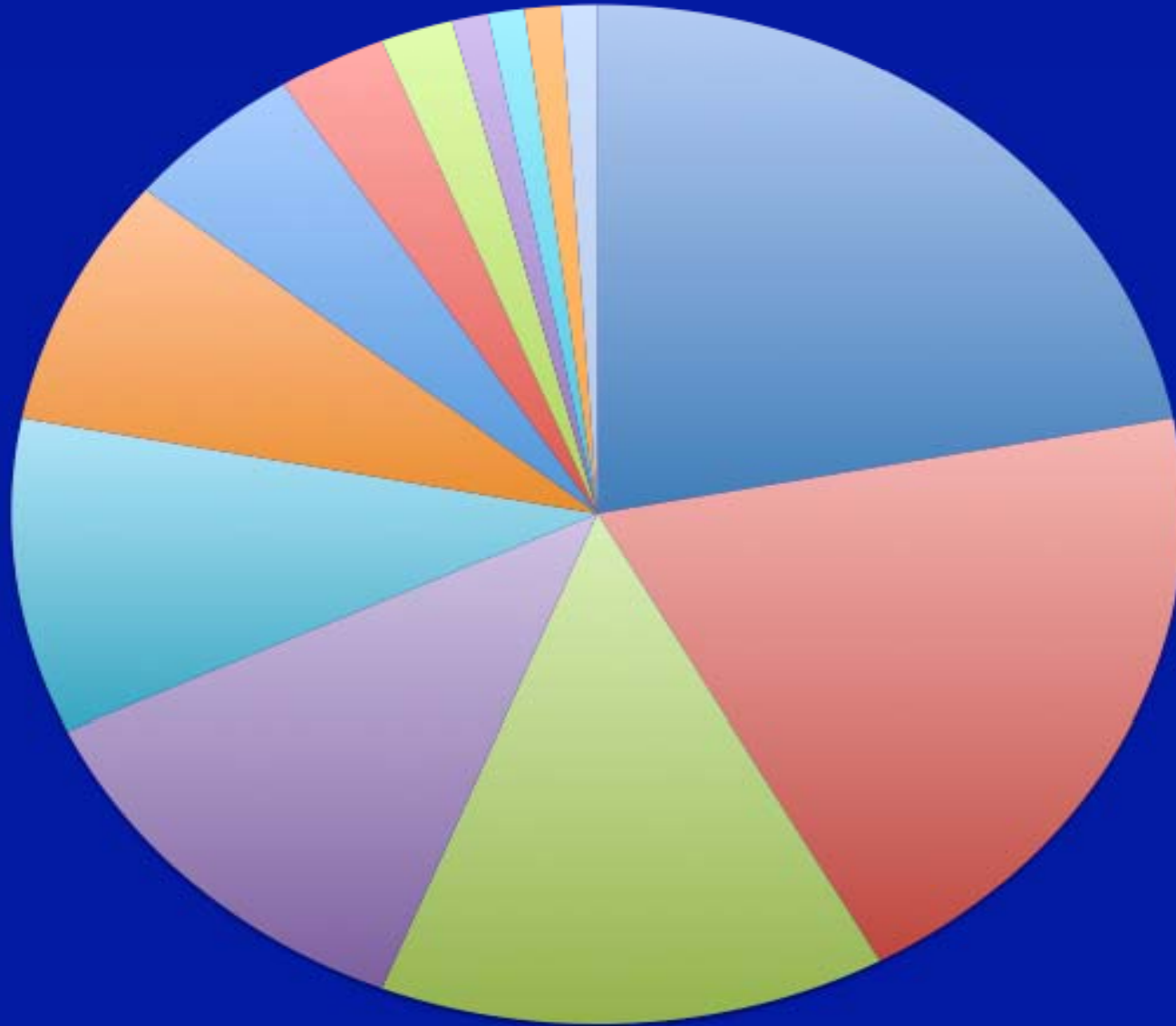
- Kyoto 'ratified' after *8 years* (2005) – symbolic act
- Major emitters still effectively/actually not 'on board'
- Most accepting targets will miss them
- ETS adopters so far haven't really capped emissions
- Over-allocation of permits and/or low CO₂ prices
- The EU CO₂ price is low. Australia will start lower
- ETS adopters have 'carved out' most emissions
- Border tax adjustments to imports threatened
- Underlying cause? Lost trade competitiveness fears



Where is the world going?

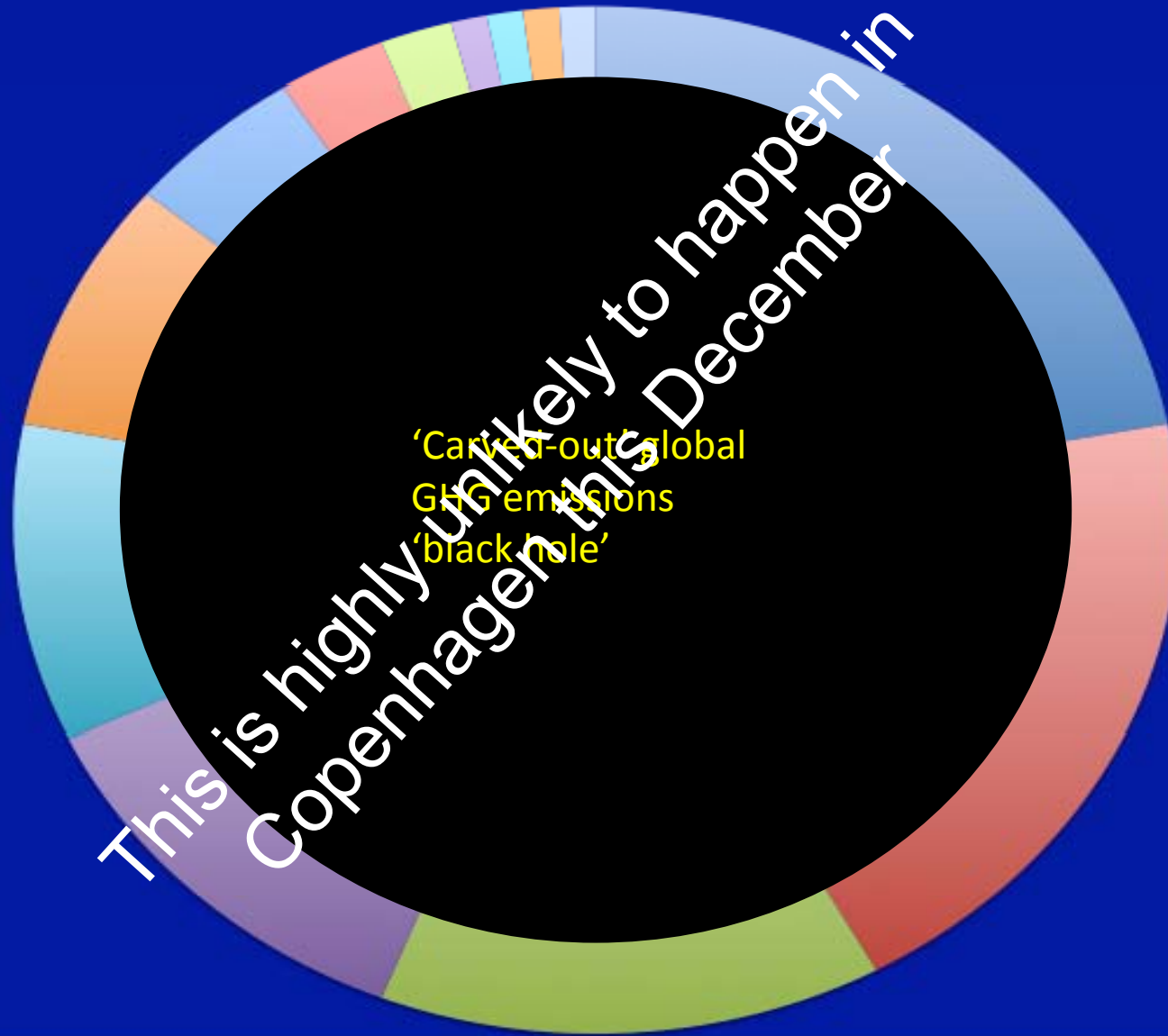
The global goal: all emissions covered

GHG emissions share



The 'Copenhagen *Carved-out Compact*'

GHG emissions share



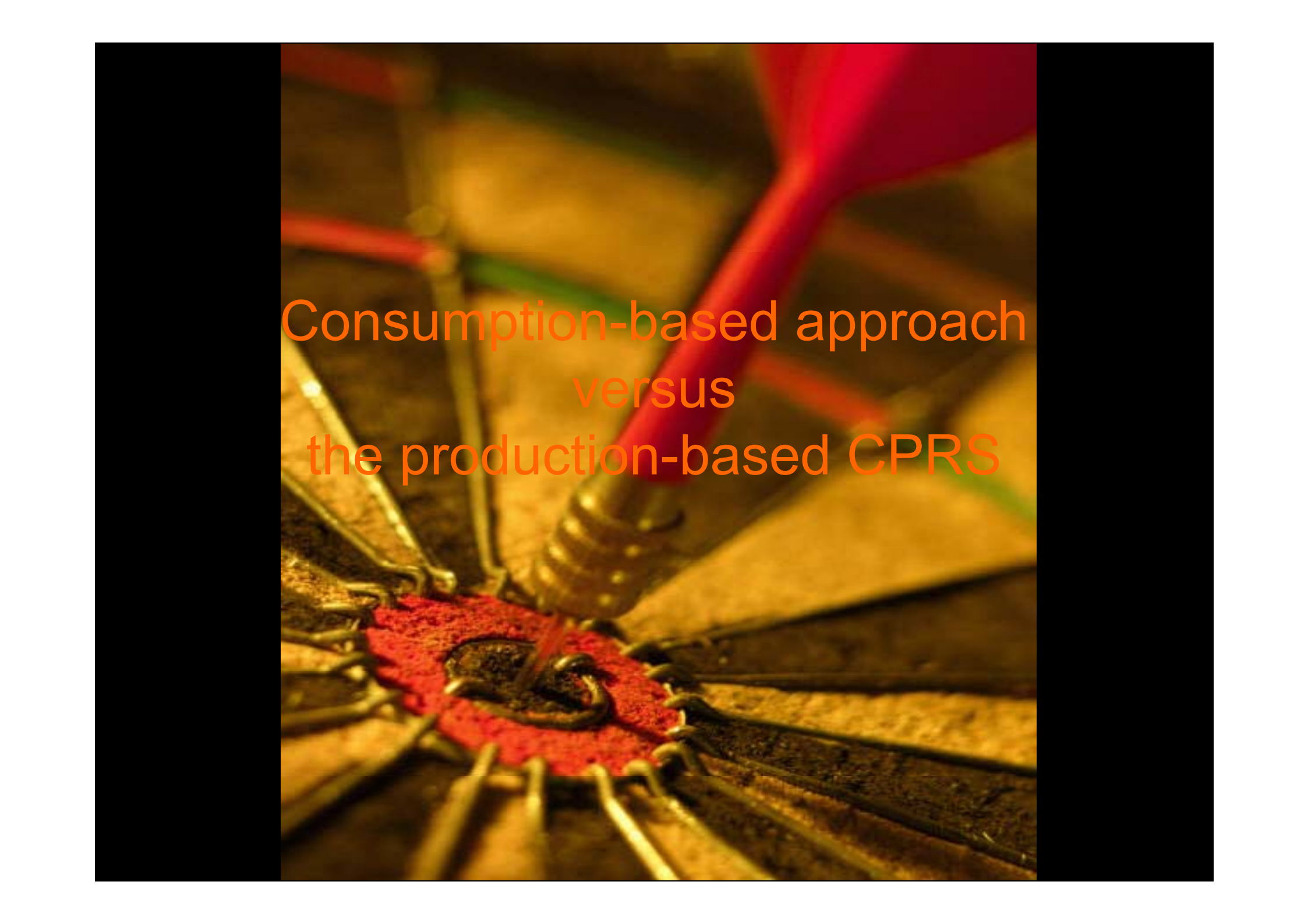
Prospects: what do others *say* they'll do?

- The EU (20-20-20 'agreement'): more of the same?
- The USA: maybe like EU + 'credits' + BTAs?
- NZ: align with Australia?
- China: nothing – waiting on West – consumption?
- India: nothing – stressing equal per capita emissions
- Canada: might align with USA?
- Japan: EU-lite?
- Indonesia: nothing (save some forest incentives)?
- Other Asia/Oceania: nothing?
- BRICs (apart from China): nothing?
- Latin America (excl. Brazil): nothing?
- Africa: nothing?

What can we expect in Copenhagen?

As the Prime Minister reportedly concluded:

NOT A LOT



Consumption-based approach
versus
the production-based CPRS

Why choose a consumption base?

There are five reasons to favour a consumption base:

1. It's much broader – so policy is more effective
2. It treats the trade-exposed sector consistently
3. It obviates need for 'special deals' & 'rent seeking'
4. It eliminates/reduces the 'prisoners' dilemma'
5. It therefore maximises chances of a global deal

Consumption base: out of step with others?

Some suggest that if Australia adopts a consumption base for its emissions policy, it will be out of step with other countries

This is largely a fallacy or is irrelevant

Other countries 'carve out' exports and threaten BTAs on imports: a consumption base just does the same thing in a principled, comprehensive way

Other countries' policies are not working anyway: do we *really* want to emulate such policies?



Consumption-based approach:
empirical evidence
based on modelling analyses

Modelling evidence – Australia #1

The Senate Select Committee on climate policy recommended five CPRS substitutes be modelled:

1. A 'baseline & credit' option
2. An 'intensity' option
3. A carbon tax (national production-based)
4. A national consumption-based carbon tax
5. The McKibbin-Wilcoxon 'hybrid' option

Modelling evidence – Australia #2

The Government's response to the Select Committee's request for additional modelling can be summarised in *one word*:

NO

Modelling evidence – Australia #3

The Opposition/independent parties' response to the Select Committee's request for additional modelling can be summarised in *nine* words:

NO (except for option 1., and bits of 2.)

Modelling evidence – Australia #4

‘Allocations based on production are likely to result in higher welfare costs for Australia than allocations based on consumption.’

(Treasury modelling report on CPRS, page 84)

The Climate Change Minister says the CPRS (a production-based policy model) is the lowest-cost option for dealing with carbon pollution.

Can both propositions be correct?

Modelling evidence – European Community

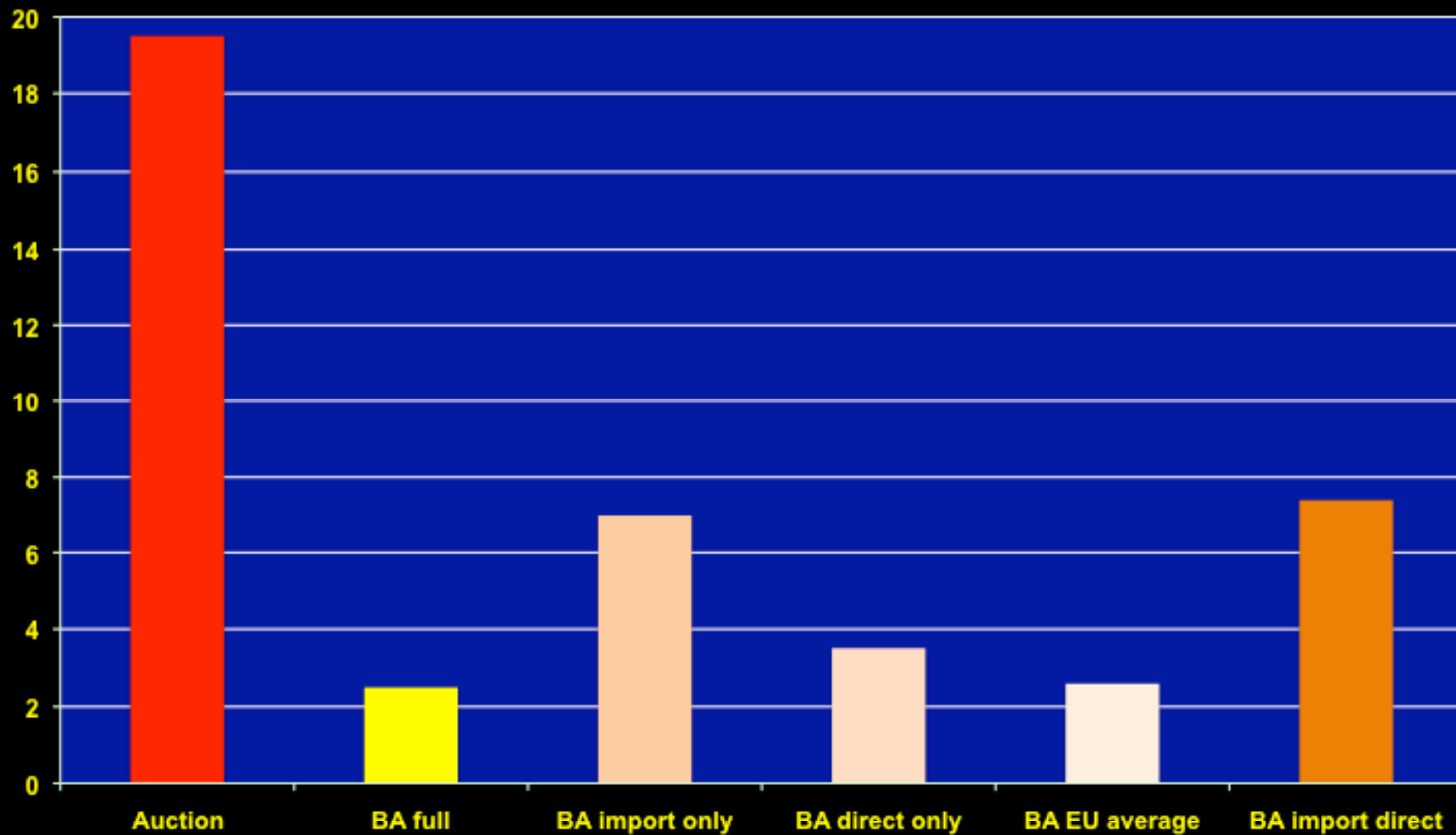
A draft report by *Climate Strategies* looks at 'carbon leakage' from the EU assuming the EU acts first, based on EU and world-wide prices

It looks at 'carbon leakage' (competitiveness loss) for three 'trade-exposed' industries: cement, steel and aluminium

It compares a production model ('auction') with 5 consumption models; 'BA full' being closest to our consumption approach. The 'BA full' model *consistently delivers the lowest 'carbon leakage'*

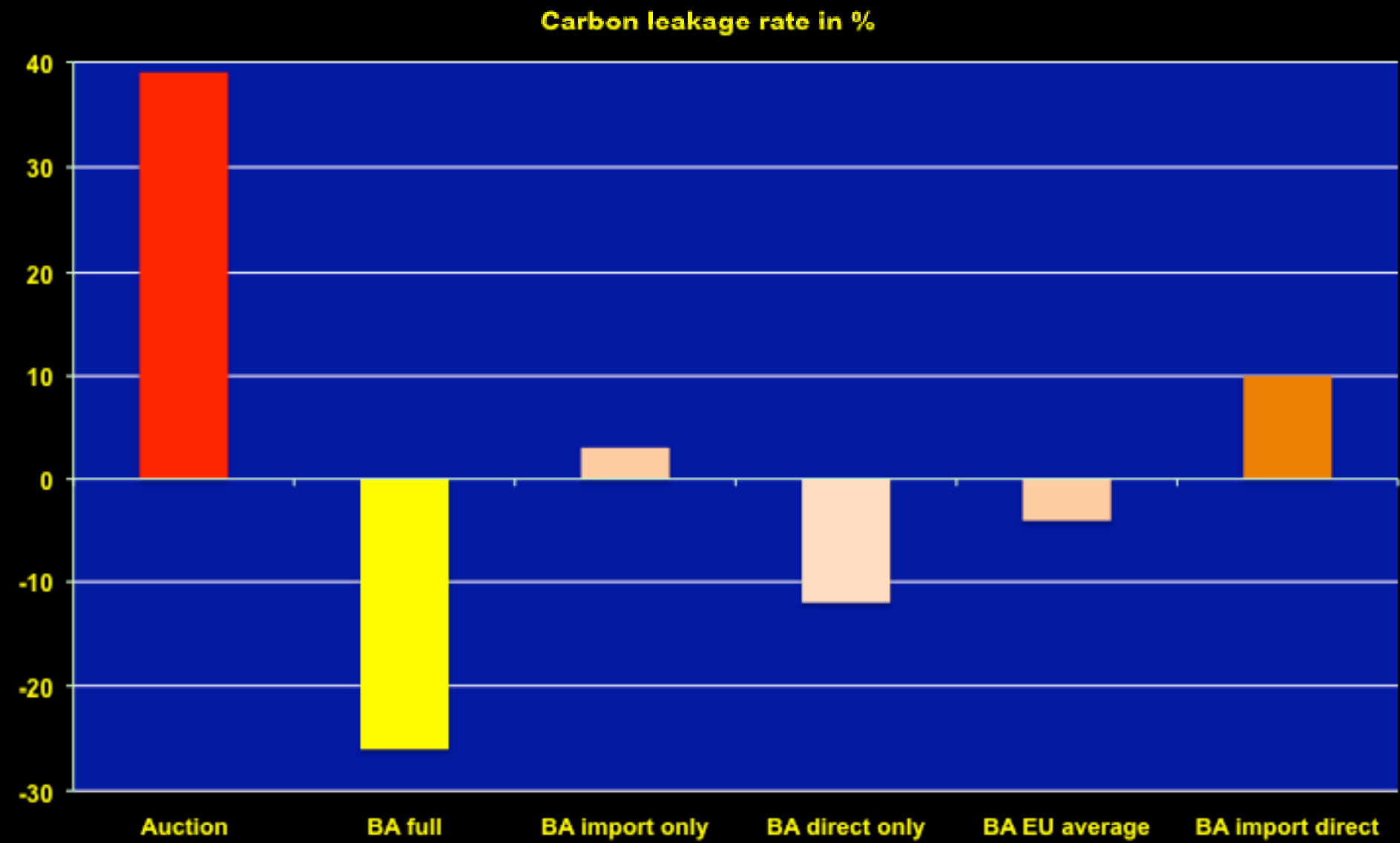
Modelling evidence – EU: Cement

Cement: Carbon leakage rate in % - production vs consumption bases



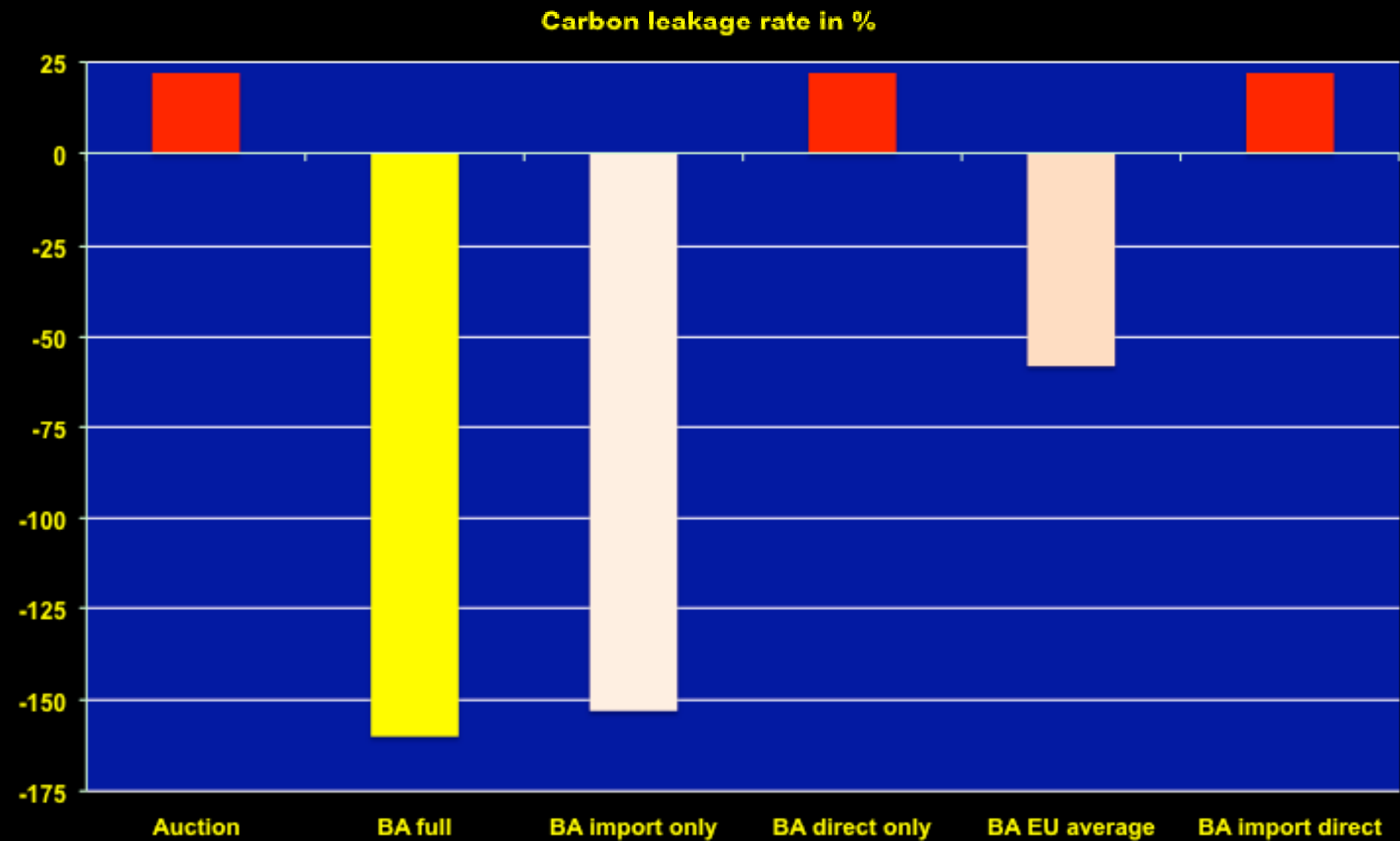
Source: Climate Strategies draft report.

Modelling evidence – EU: Steel



Source: Climate Strategies draft report.

Modelling evidence – EU: Aluminium



Source: Climate Strategies draft report.

Emissions trading schemes: a final word

Emissions *trading*, per se, does not reduce GHG emissions by *one gramme*. It just *shuffles* them.

Banks *love* it. The shuffling *might* be sensible (within an economy) or crazy (when it involves buying cheap permits overseas from systems of doubtful provenance). More generally, in practice:

ETS are simply dishonest

A photograph of a lone, leafless tree standing on a grassy hill. The scene is shrouded in a thick, grey mist or fog, creating a somber and atmospheric mood. The foreground is filled with tall, brownish grasses. The text "The way forward" is overlaid in the center of the image in a bright orange color.

The way forward

Including developing economies (*essential*)

Important as it is to get the developed world to act, success here will count for little without action by the developing world (including China, India, and others)

The CPRS provides a strong incentive for these countries *not* to act (over and above 'moral' arguments about past GHG emissions) due to *negative protection*

The consumption-based model eliminates this concern for *all* countries, including industrialising and other developing economies

It's a fairer approach, with no trade risk attached

A new start: seven principles for global deal

- I. Raise relative price for CO₂, etc., but minimise real income effects
- I. National emissions reductions = same contribution to global cuts
- II. Minimise 'free rider' impediments to a global deal
- III. Minimise national 'carve outs' causing intra-national 'carbon leakage'
- IV. Ensure national policies are trade competitiveness-neutral
- V. Allow countries choice of modality, subject to principles I. – V.
- VI. Minimise national compliance costs

These sound like 'motherhood'? Good. They might be globally agreed

Concluding comments

This *is* a 'diabolical' policy area (Garnaut's right on this)

Costs come early; benefits come late & are uncertain; *and* those benefits are only measurable against a 'do nothing' (BAU) scenario in the distant future

We should design policy carefully, avoiding the obvious pitfalls, eg, the 'free rider' or 'prisoner's dilemma' problem

*If we don't, there's almost **NO CHANCE** of getting an effective global deal. We have 12-17 years (at least) of history that proves this*

