

1.5 Degrees, Decarbonisation and Shipping

GREEN HOUSE GAS EMISSIONS FROM SHIPS - the cost of birdseed

Photo credit: © LUKASZ WARZEDCHA 2018

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Dr Peter Nuttall
Scientific and Technical Advisor

Q. Why does the Pacific have a dog in the shipping emissions fight?



Science & Environment

Global shipping in 'historic' climate deal

David Shukman

Science editor

🕒 13 April 2018

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The global shipping industry has for the first time agreed to cut its emissions of greenhouse gases.

PACIFIC

Pacific at forefront of shipping industry emissions reductions

From **Dateline Pacific**, 3:05 pm on 16 April 2018

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Pacific Island nations have been central to efforts to get the international shipping industry to commit to reducing greenhouse gas emissions.

More than 170 countries have struck a deal at the International Maritime Organization, or IMO, to halve emissions by 50 percent by 2050 compared to 2008 levels.

It's the first time the industry has committed to such a target.

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Pacific islanders: Shipping must comply with Paris climate goals

Published on 03/07/2017, 11:26am

Representatives of four Pacific island nations join today at the IMO in London to ask the shipping industry to do its part to cut carbon emissions

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Pacific states call for emission reduction from shipping at MEPC

At the IMO MEPC 71 being held in London this week, a joint coalition of Pacific Island ministers addressed a global urge to the shipping industry to cut greenhouse gas emissions. The call was an urge towards IMO member states to limit global warming to 1.5 degrees celsius above pre-industrial levels.

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Shipping firms to halve greenhouse gas emissions by 2050 as part of historic agreement

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Kiribati ferry disaster: 22 schoolchildren among those feared lost

The MV Butiraoi is believed to have sunk in the Pacific with 88 people on board



▲ The ferry MV Butiraoi, which is believed to have sunk in the remote Pacific. Photograph: AFP/Getty Images

Twenty-two school children on their way to start a new term are among those feared to have died on a ferry missing for 12 days between remote islands in

Ships are the lifeline of our maritime island world.

Shipping is the last sector to decarbonize

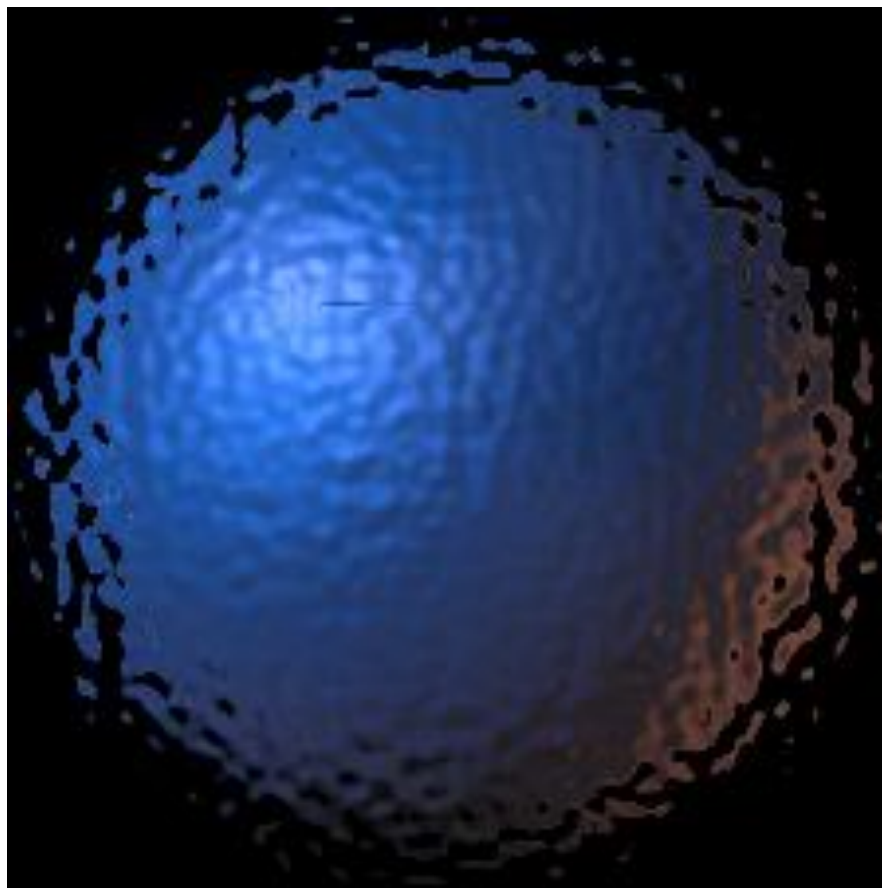
We need this happen at all levels – from the global to the village

The Pacific has led the IMO calling for emissions targets

The Pacific has the highest transport costs in the world

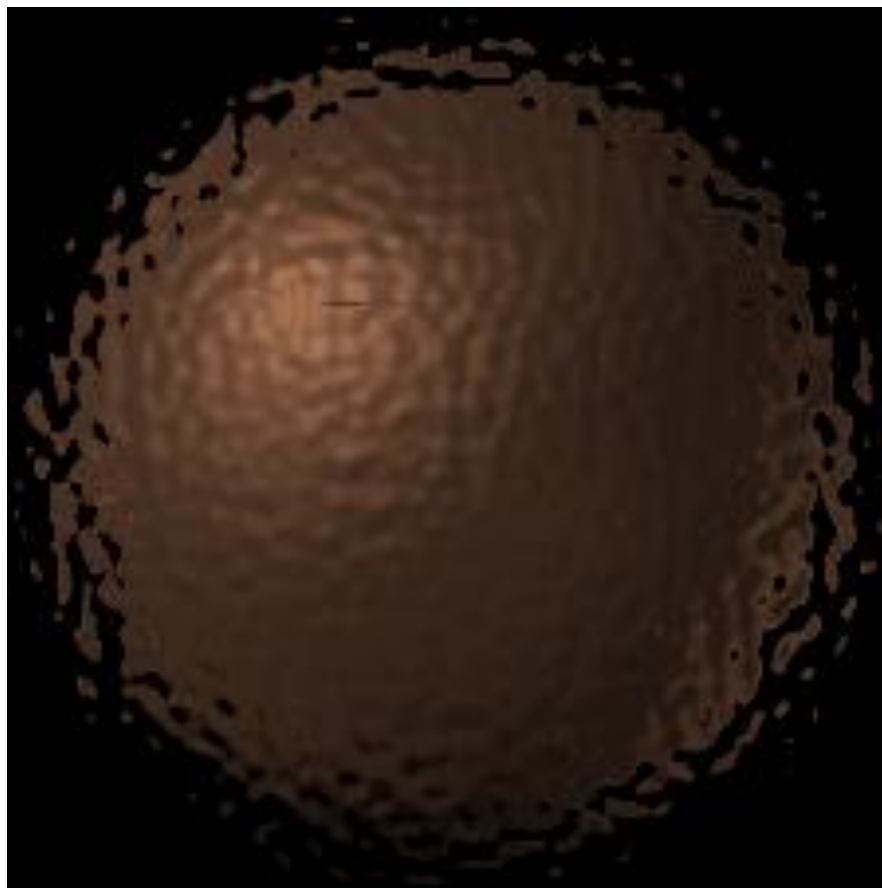
We have the worst ships





Increased sea level rise

Increased storm intensity



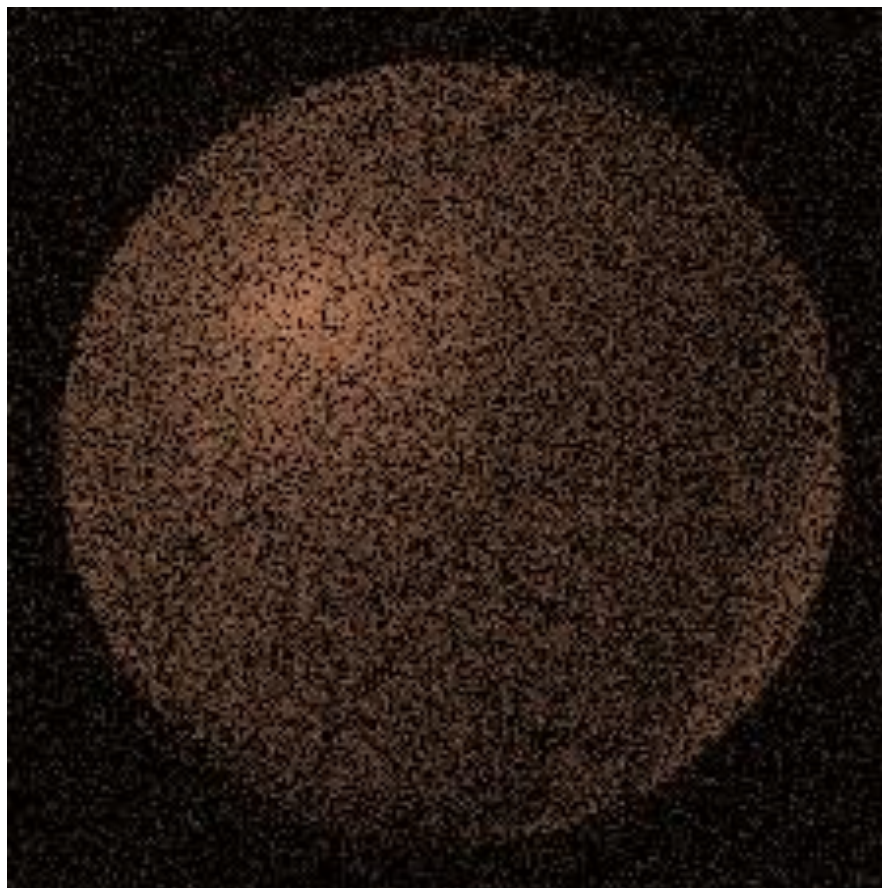
Increased sea level rise

Increased storm intensity

Increased sea temperature

Decreased coral and fish

Increased acidification



Increased sea level rise

Increased storm intensity

Increased sea temperature

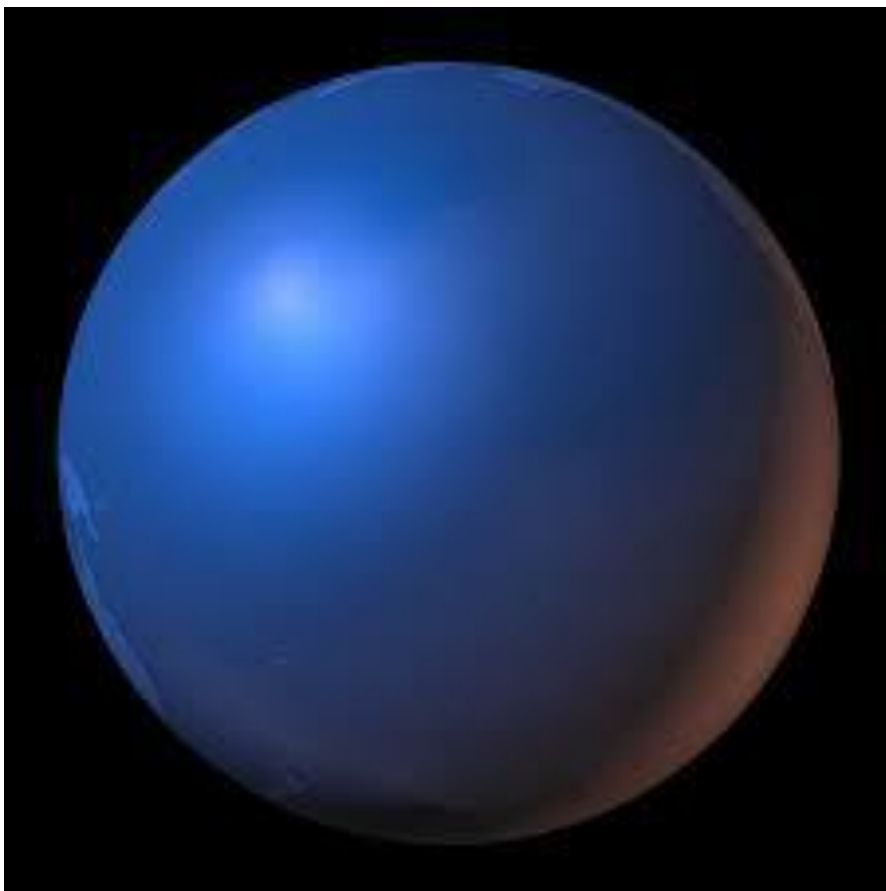
Decreased coral and fish

Increased acidification

Increased plastic pollution

Increased extreme heat
event

Increased extreme
drought event

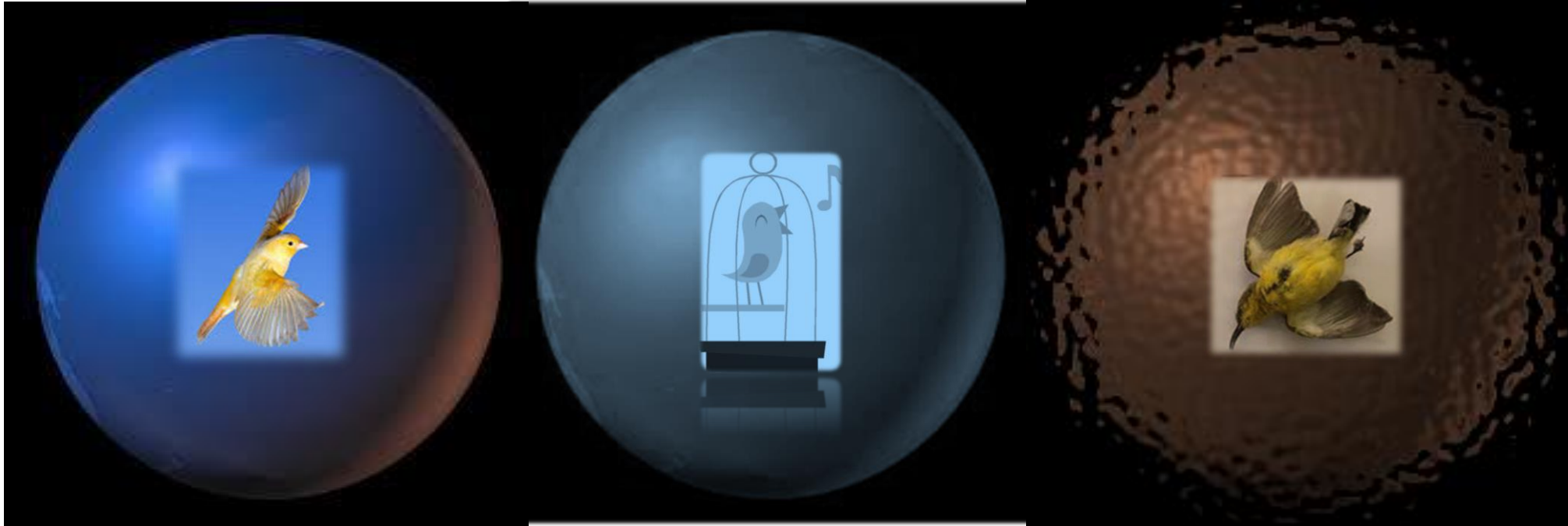


- 25,000 islands
- 15 nation states, 7 territories
- 10 million people (7m PNG)
- 3000 languages
- Ancient civilizations
- 0.00x% Contribution to global warming
- \$0.00x Contribution to global Economy
- 2m - Moral High Ground Index (MHG)
- 0.000mm - Proximity to Climate Change Frontline
- 1 – highest shipping costs per capita

0 ---- yesterday

today -

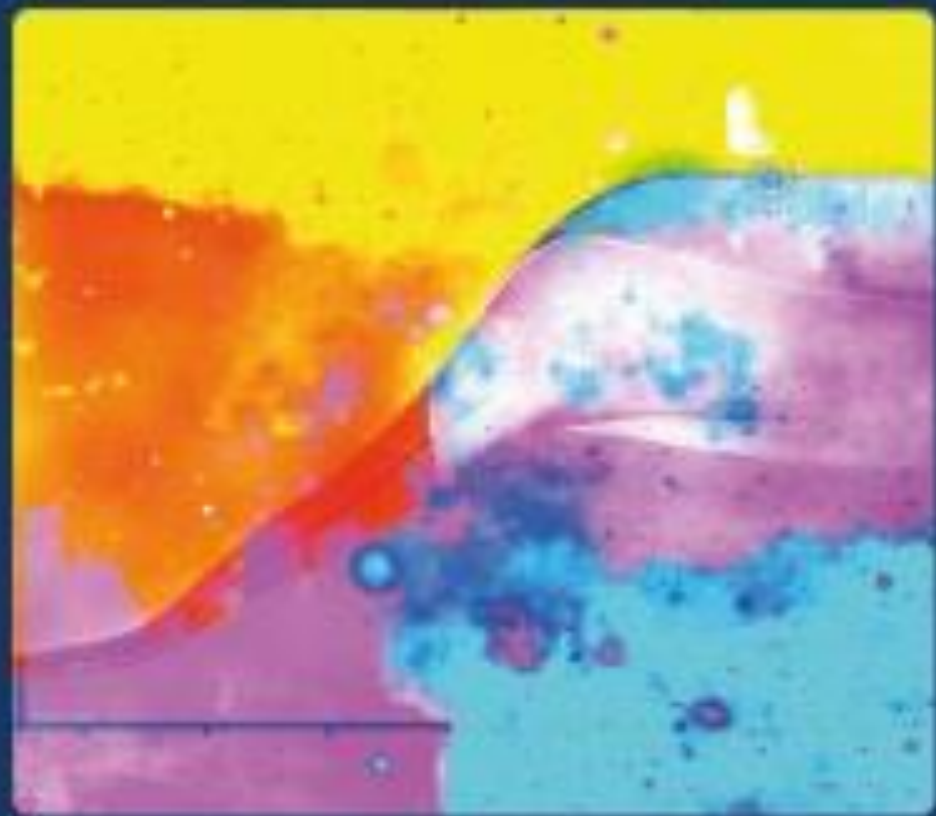
tomorrow



ipcc
Intergovernmental Panel on Climate Change

Global Warming of 1.5°C

An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty



WARMING: WHAT HALF-DEGREE CHANGE MEANS

Extreme Heat

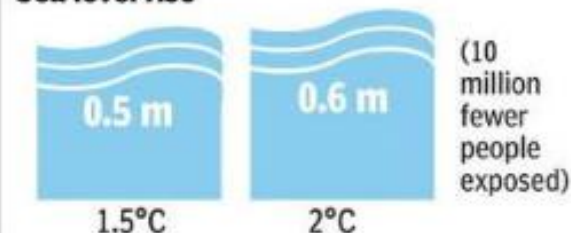
(% of global population exposed to severe heatwaves)



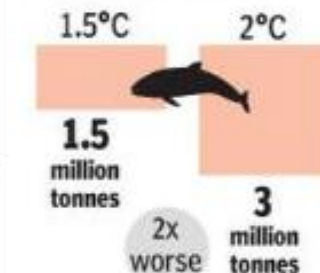
Arctic Ocean Free of Sea Ice In Summer



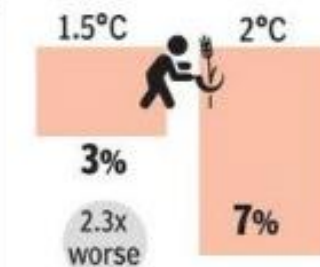
Sea level rise



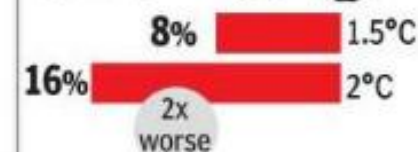
Decline in annual catch of marine fisheries



Crop yield (Reduction in maize production in tropics)



Species Loss (Plants)



Species Loss (Vertebrates)



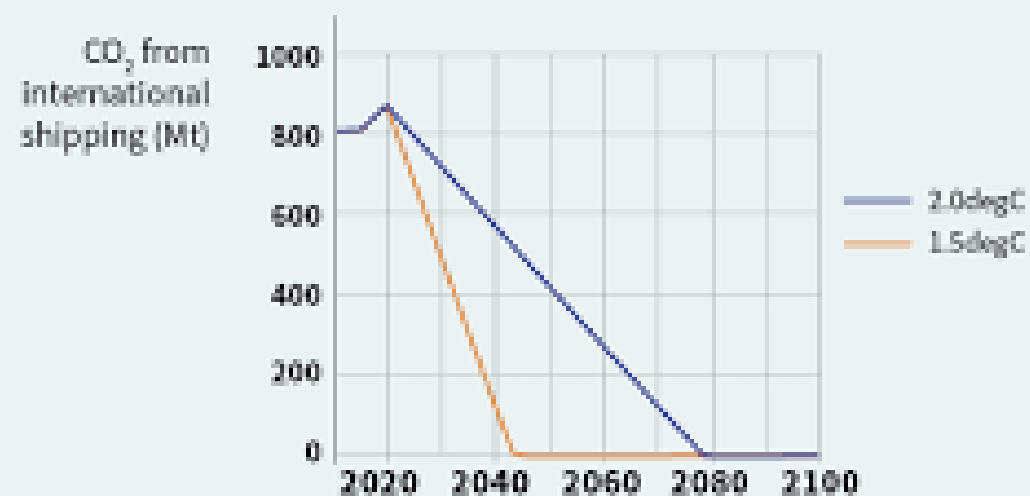
Decline in coral reefs



“Science has spoken”

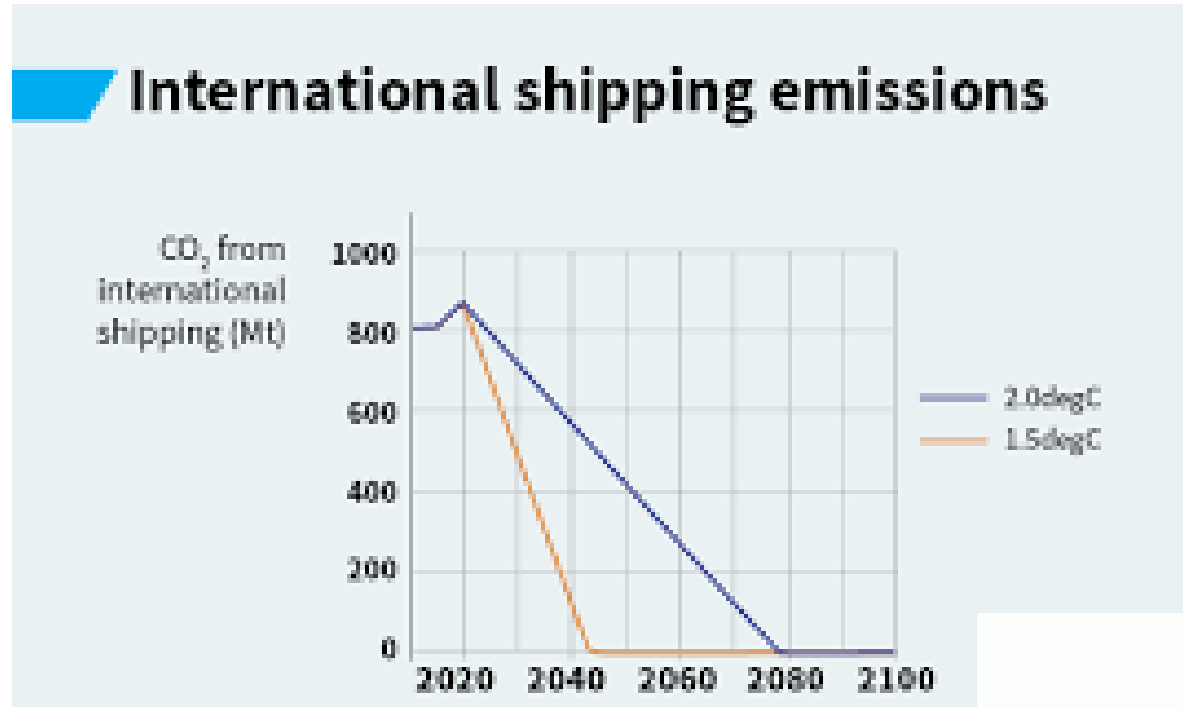
The report claims it's possible to meet the new warming target, provided nations together take “rapid and far reaching” transitions over next 10 to 20 years ...

International shipping emissions



A. No one has a bigger dog in this fight.

We may be the smallest actor but we have the most to loose.



2 dogs actually, the spectre of climate change and the potential of better, more affordable shipping



Is it necessary to decarbonize shipping?

Yes.

Is there a cost to decarbonisation?

Yes, + or - unknown

Is the speed of transition related to the cost and market forces?

Yes

Then clearly we need two things:

Adequate knowledge of the cost

Adequate knowledge of the MBMs needed

What is the cost of decarbonisation to the world?

Is it positive or negative?

What is the cost of decarbonisation to the Pacific

Is it positive or negative?

Both unknown but we assume the cost to the Pacific will be disproportionate

tomorrow

If it gets to this – what will be the effect on global trade and therefore shipping profitability?

What is the effect on transport cost and shipping profitability of 2 degrees, of 3 degrees, of 4 degrees?



Who pays how much to who?

What is the cost of decarbonisation to the world?

Is it positive or negative?

At a minimum we assume a short term cost.

Either a [bunker/carbon] tax [levy] or an ETS are possible. An ETS is not preferred.

If a tax then, how much tax and what is it spent on and who gets to spend it?

This can be answered on a scale from:

Low (so as not scare)

Reinvested in industry R&D

High (to drive rapid and irrevocable change)

Invested in climate mitigation and adaptation for the most vulnerable, including shipping

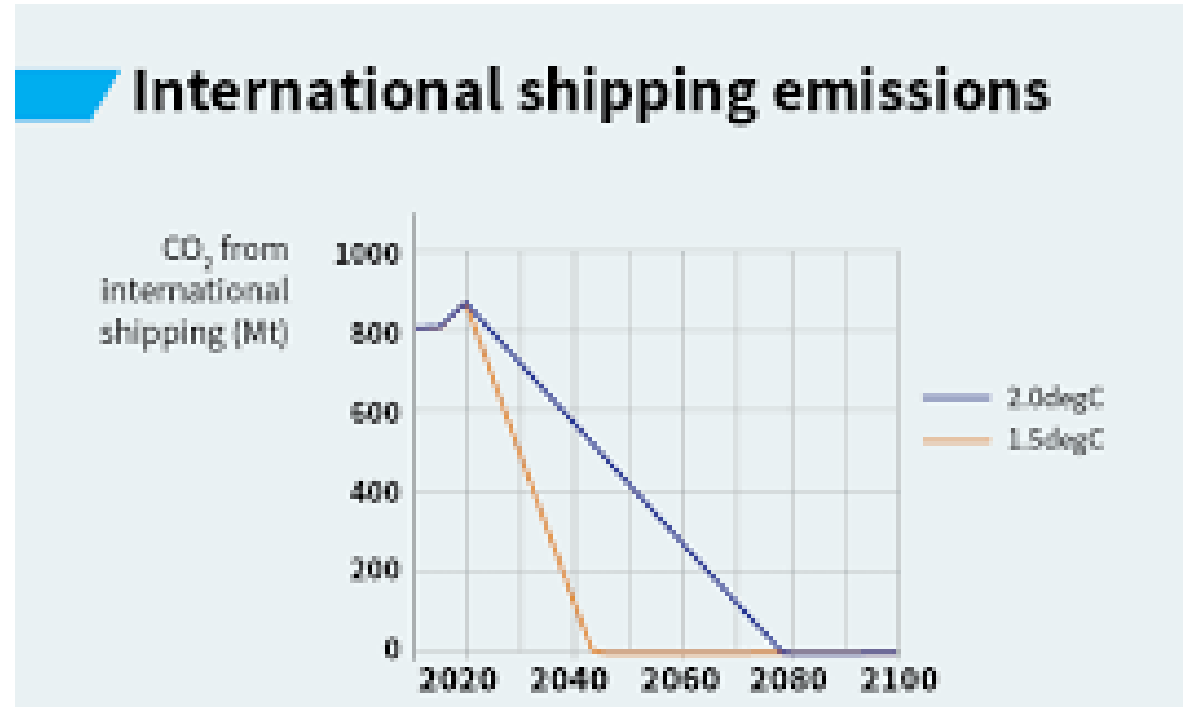
Who pays how much to who when?

We need to peak as soon as possible and decline rapidly

The IMO Roadmap is a faltering first step

What other options are there for accelerating a mature debate on

- Transport cost?
- MBMs?
- Equity?



1.5 Degrees to stay alive!



Thank you

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