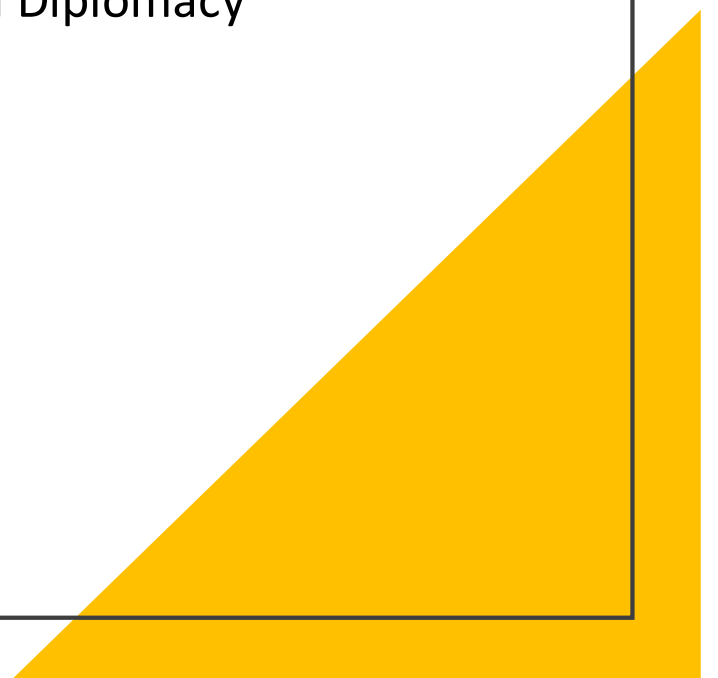


**Using the Pandemic  
Recovery to Spur  
Climate Resilience  
and Transitions to a  
clean more inclusive  
economies:  
Opportunities and  
Potential Pitfalls**

Rachel Kyte CMG

The Fletcher School of Law and Diplomacy  
Tufts University

August 19<sup>th</sup>, 2020





## What are we learning from COVID-19?

- Resilience undermined by deep inequality
- Some systems lacking resilience – brittle global energy, food and financial systems
- Traditional mechanisms of multilateral cooperation straining to be equal to the task
- Depth and breadth of COVID-19 inspired recession will test international solidarity even further
- The risks in plain sight we ignore

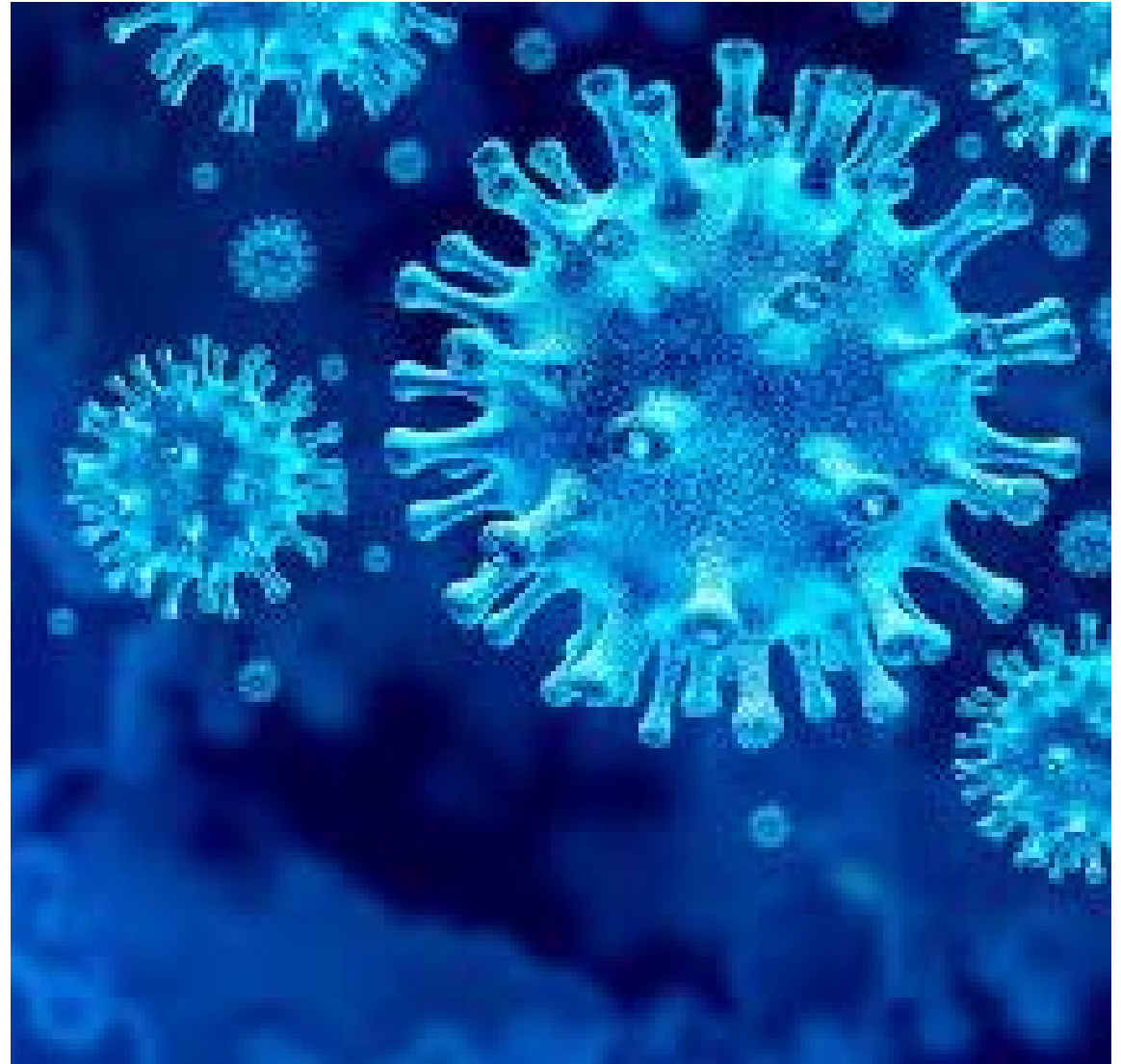
# The Concept of a Gray (Grey) Rhino

- Not a **black swan** (description of the 2008 financial crisis)
  - (Nassim Nicholas Taleb)
  - Not improbable and not unpredictable
  - Black swans can be understood in a rear-view mirror
- **Gray swans** are according to Michele Wucker
  - Large, dangerous, risks, probable events in front of us and in full view
  - Reactions to Gray Rhinos sequence from:  
Denial, Muddling, Diagnosing (blaming), Panic, Action
- Is COVID-19 a gray rhino?
- Is climate change a gray rhino?


# GPMB's Warning

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- A rapidly spreading pandemic due to a lethal respiratory pathogen (*whether naturally emergent or accidentally or deliberately released*) poses additional preparedness requirements. **Donors and multilateral institutions must ensure adequate investment in developing innovative vaccines and therapeutics, surge manufacturing capacity, broad-spectrum antivirals and appropriate non-pharmaceutical interventions.** All countries must develop a system for immediately sharing genome sequences of any new pathogen for public health purposes along with the means to share limited medical countermeasures **across countries.**





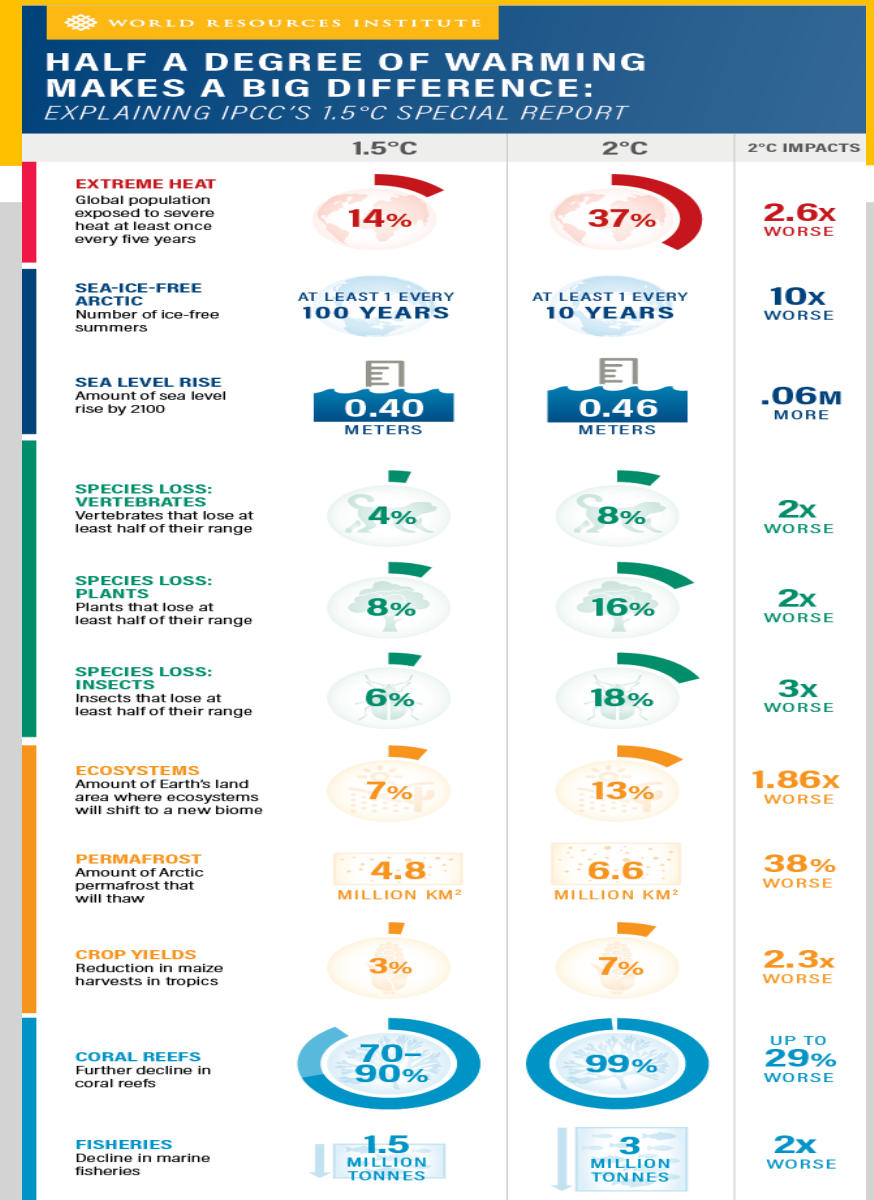


**Climate  
Change:  
The Ultimate  
Gray Rhino**

# The Most Recent Climate Warning

- The Paris Agreement in 2015 responding to the available science called for warming to be limited to “well below 2 degrees. Invited the IPCC to examine pathways to 1.5 degrees and whether it was possible to get there.
- The difference between 2 and 1.5 seems small but research reveals the implications of 2 degrees as opposed to 1.5
- The call for “1.5 to stay alive” from the Marshall Islands and others didn’t seem so exaggerated in retrospect

Data Source: World Resources Institute





# Economic and Financial Crisis

**Health-related** disruptions impact on economic activity.

- Don't know end point. Don't know length of disruption

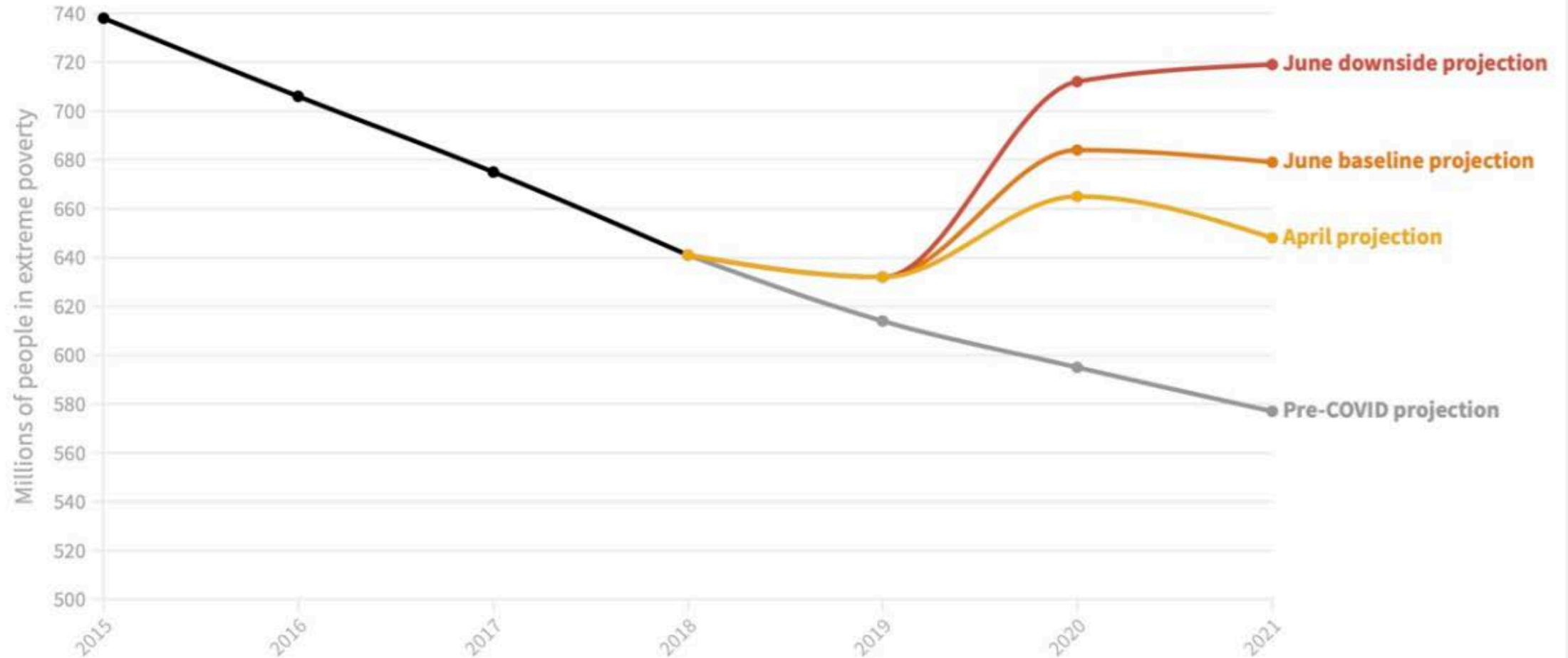
**Third economic shock** in 10 years

- Great Financial Crisis - 2008
- US China trade war 2017-18
- COVID-19

COVID-19 - and global and comprehensive economic and then financial crisis

- Affects households, public and private sector.
- Real economy and financial sector.

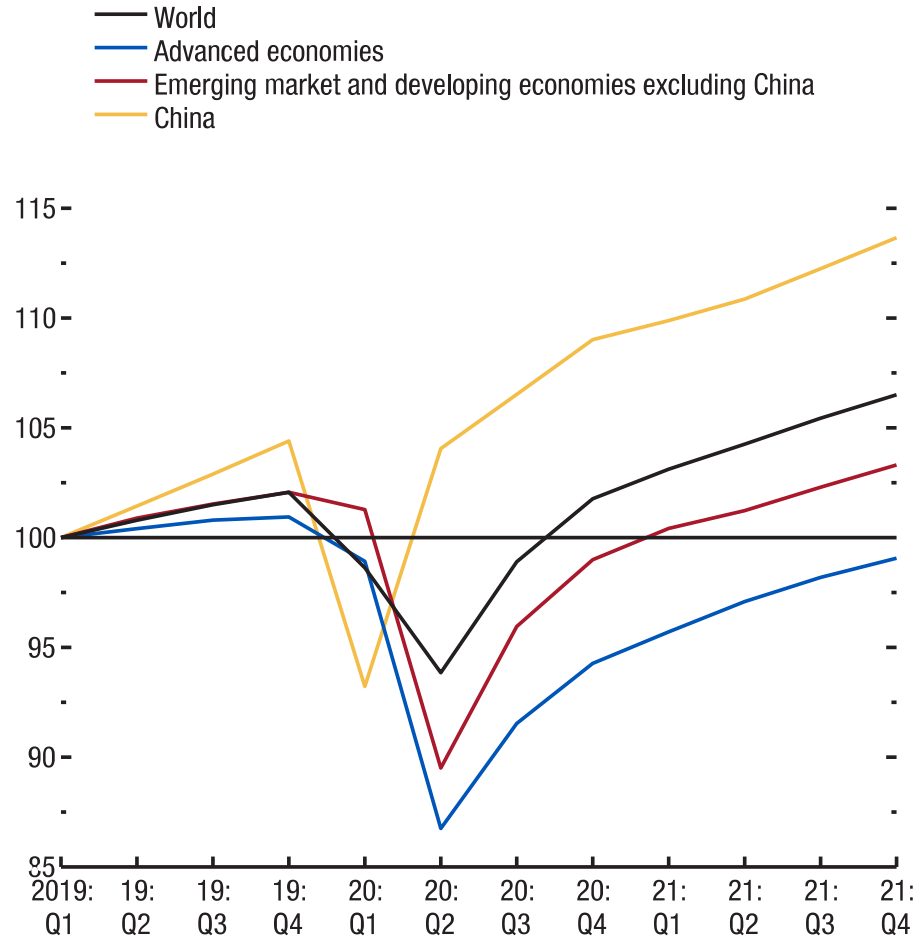
## The Impact of COVID-19 on Global Extreme Poverty



Source: [Lakner et al \(2020\)](#), [PovcalNet](#), [Global Economic Prospects](#), • Extreme poverty is measured as the number of people living on less than \$1.90 per day.



**Figure 1. Quarterly World GDP**  
(2019:Q1 = 100)



Source: IMF staff estimates.

# Impact of COVID-19

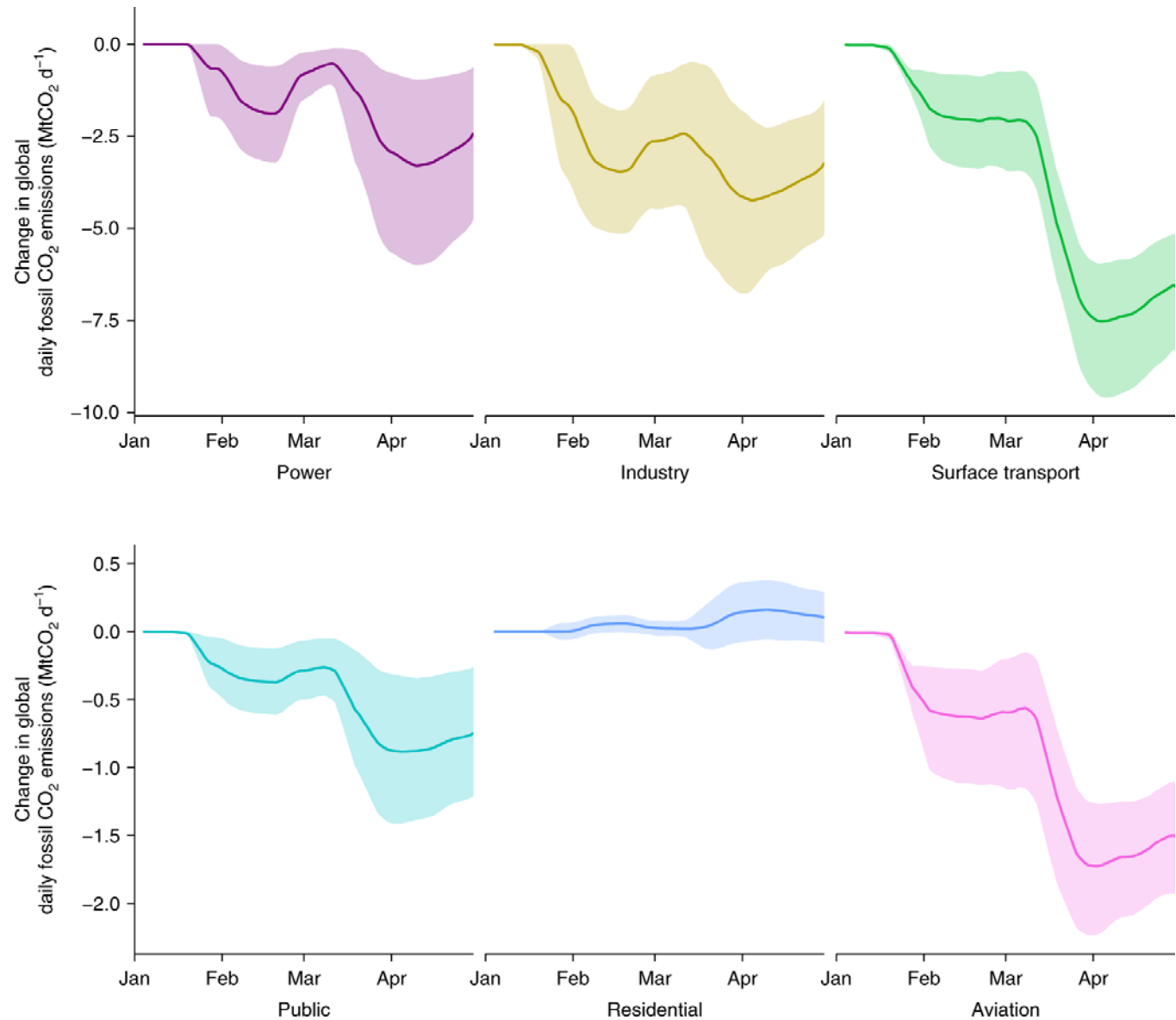
## IMF World Economic Outlook



# Impact of COVID-19 on the Energy Transition

- OECD suggests global GDP will contract by 6% in 2020
- Global energy demand is estimated to fall by around 6% in 2020 relative to 2019.
- IEA/IMF estimates that around 8% of the 40 million jobs directly provided by the energy sector are at risk or have already been lost.
- Electricity from renewables could be the only energy source to grow in 2020, thanks to new capacity additions and priority dispatch.
- Attention is now turning to longer term recovery plans. Decisions made now will inevitably shape infrastructure and industries for decades.
- Annual global CO<sub>2</sub> emissions are expected to fall by around 8% in 2020, but recoveries from previous global economic crises have been accompanied by increases in emissions. A similar rebound in emissions can be expected after COVID-19 unless governments place clean energy transitions at the heart of the economic recovery.

# Change in global daily fossil CO<sub>2</sub> emissions by sector (MtCO<sub>2</sub> d<sup>-1</sup>).



Source:

<https://doi.org/10.1038/s41558-020-0797-x>

# The world's 'green recovery' plans to cut emissions after coronavirus

Sort the entries by column header or filter via the search box



Filter:

Country	Sector	Subsector	Description	Date	Status	Amount (USD)	Amount (local)	Type	Source document	Further coverage
	Agriculture		The European Commission's plan includes an increase to the budget for the European Agricultural Fund for Rural Development, given the role farmers have in the 'green transition'.	27/05/2020	Proposed	\$16.9bn	15.0bn	Spending	<a href="http://eur-lex.europa.eu">eur-lex.europa.eu</a>	
	Buildings	Energy efficiency	Extra funding for a CO2-focused building renovation programme, with an additional €1bn in 2020 and 2021 taking the annual totals to €2.5bn.	03/06/2020	Agreed	\$2.5bn	2.0bn	Spending	<a href="http://www.bundesfinanzministerium.de">www.bundesfinanzministerium.de</a>	<a href="http://www.cleanenergywire.org">www.cleanenergywire.org</a>
	Buildings	Adaptation	Support for smaller municipalities to access the national climate protection initiative, with extra funds during 2020 and 2021.	03/06/2020	Agreed	\$0.1bn	0.1bn	Spending	<a href="http://www.bundesfinanzministerium.de">www.bundesfinanzministerium.de</a>	
	Buildings	Energy efficiency	Aim under the European Commission's proposal would be to "at least double" the annual renovation rate of existing building stock through regulatory and financial support, such as doubling th...	27/05/2020	Proposed	-	tbc	Spending / Regulation	<a href="http://eur-lex.europa.eu">eur-lex.europa.eu</a>	<a href="http://www.euractiv.com">www.euractiv.com</a>
	Buildings / Industry		For the 'green transformation of living infrastructure', 5.8tn won will be spent by 2022 and 89,000 jobs will be created, according to the government's plan. This will go towards transitioni...	01/06/2020	Proposed	\$4.8bn	5,800.0bn	Spending	<a href="http://www.gov.kr">www.gov.kr</a>	<a href="http://www.koreatimes.co.kr">www.koreatimes.co.kr</a>
	Employment	Green jobs	The European Commission's plan includes a proposal for an €32.5bn boost for the Just Transition Fund to 'alleviate the socio-economic impacts of the transition'. This would bring the total a...	27/05/2020	Proposed	\$36.6bn	32.5bn	Spending	<a href="http://eur-lex.europa.eu">eur-lex.europa.eu</a>	<a href="http://www.euractiv.com">www.euractiv.com</a>
	Employment	Green jobs	New public sector loan facility in the European Commission's proposal 'that forms the third pillar of the Just Transition Mechanism', supported by €1.5bn from EU budget and €10bn in lending ...	27/05/2020	Proposed	\$13.0bn	11.5bn	Loan	<a href="http://eur-lex.europa.eu">eur-lex.europa.eu</a>	
	Energy	Electricity bills	Cutting the renewable energy levy on electricity bills, currently €0.068/kWh, to €0.065/kWh in 2021 and €0.06/kWh in 2022. According to Clean Energy Wire, the levy could otherwise have increased next ...	03/06/2020	Agreed	\$12.4bn	11.0bn	Spending	<a href="http://www.bundesfinanzministerium.de">www.bundesfinanzministerium.de</a>	<a href="http://www.cleanenergywire.org">www.cleanenergywire.org</a>
	Energy	Renewable electricity	National solar capacity cap to be immediately abolished and the expansion target for offshore wind raised from 15 to 20GW in 2030. A national rule restricting the development of onshore wind within 1,...	03/06/2020	Agreed	-	-	Policy	<a href="http://www.bundesfinanzministerium.de">www.bundesfinanzministerium.de</a>	<a href="http://www.reuters.com">www.reuters.com</a>
	Energy	Hydrogen	National hydrogen strategy backed by investment in domestic hydrogen production, transport and use. Includes SGW of renewable production capacity by 2030 and potentially another 5GW by 2035.	03/06/2020	Agreed	\$7.9bn	7.0bn	Spending	<a href="http://www.bundesfinanzministerium.de">www.bundesfinanzministerium.de</a>	<a href="http://www.cleanenergywire.org">www.cleanenergywire.org</a>



# Suggested policy priorities for the energy transition in recovery plans

## Shovel ready

- Compatible with the energy transition pathway

## New project pipeline

- Planning, incentives, public financial support

## Rescue plans for distressed industries

- Conditionalities for industries to pivot greener
- Stranded asset management

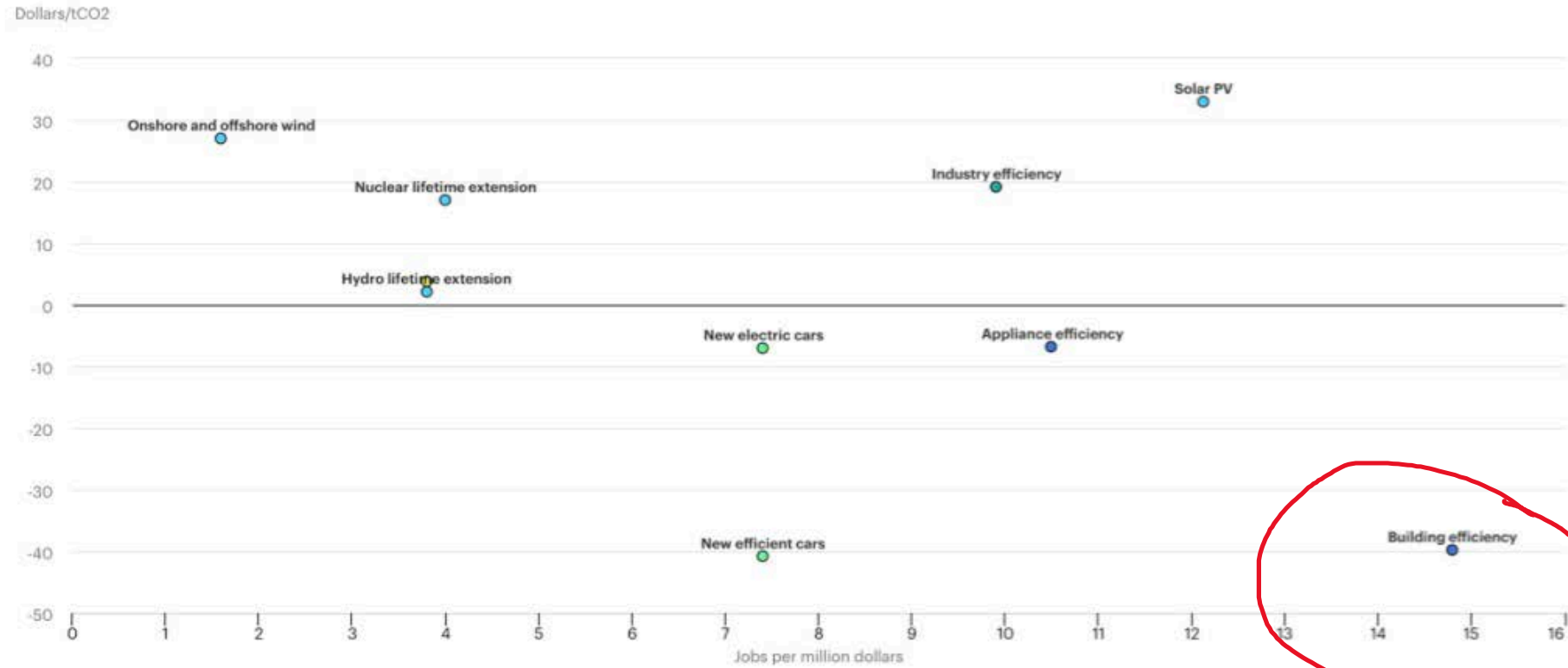
## Private finance and investment

- Carbon pricing and other policy measures

## International Cooperation

- Clubs, projects





Global average jobs created and cost of effectiveness of emissions reductions for selected energy sector measures

# Violent agreement?

- IEA IMF
  - boost global economic growth by an average of 1.1 percentage points a year
  - save or create roughly 9 million jobs a year
  - reduce annual global energy-related greenhouse gas emissions by a total of 4.5 billion tonnes by the end of the plan
- Smith School Hepburn, Stiglitz and Stern
- Private sector – Danfoss, Iberdrola, Mahindra, Cambridge Business Leaders Group
- OECD, IMF, IEA, FT



## So how can we become fit for the impacts of climate change in our recovery from COVID?

- Search for the sweet spot of short term growth and jobs, clean development (decarbonization) and inclusion (IMF IEA recovery plan)
- Deal with debt and decarbonization together
- Focus on key sectors: energy, food and health

## What will that take?

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- Recovery plans we like at the moment – Europe
- Financial innovation – debt
- System change – deeper reset – GDP, different table for financial institutions and economic decision making



# Recovery

Stages of recovery:

- **Relief** - Never seen a lockdown of the global economy before. Spillovers to developing countries are enormous. The relief effort focuses on getting to the most vulnerable quickly.
- **Reemerge** – “If you go too fast, you risk dying from the infection. If you go too slow, you risk dying from hunger.”
- **Rebalance** - of health and economic risks

Private sector view

The corporate sector is shifting its emphasis from **efficiency to resilience**, moving gradually away from long-embraced notions of just-in-time inventory management and **cost-effective global supply chains**, to more **localization** of supply chains to make the system more resilient. - Mohamed El Erian, Chief Economist Allianz



# Why rebuild the old world, when we wanted a new one? (Vestager)

## Conditionality

### Airline Bailouts within EU

- France and Netherlands \$7.9 billion and \$3.8 billion, respectively—for Air France–KLM.
  - Air France and KLM to [halve their CO2 emissions](#) per passenger kilometer by 2030, compared with 2005 levels.
  - Short-haul routes cut where more environmentally friendly rail connections exist.
- France \$16.8bn for the aerospace sector
  - 1/10<sup>th</sup> package be spent on speeding up the development of a carbon-neutral, hydrogen-powered plane by 2035.
- UK – Jet Zero separate from discussions of support for airlines
- Germany Lufthansa 9bn Euro – weak conditionality

Crisis support for carbon-intensive industries/firms could require commitments to emissions reduction targets and/or ensuring an equitable transition to a low-carbon economy

- paying to close coal mines and providing early retirement and re-training packages for workers
- sales shares for zero-emission vehicles, and
- developing clean fuels for international transportation).

Large firms that receive longer-term public support could be required to disclose their carbon footprints (TCFD).

# Pricing carbon – necessary if insufficient

## Price carbon right

- Low oil prices and the need to rebuild fiscal positions provide opportunity to raise carbon taxes (or closely related instruments, such as fuel taxes) and eliminating fossil fuel subsidies
  - For many countries, a \$75 per ton carbon tax would increase pump prices by less than the recent collapse in global oil prices.
- Carbon taxes can usefully be reinforced with measures like feebates to promote zero-emissions vehicles and improvements in energy-efficiency
  - Support with measures to assist low-income households and disproportionately affected workers and communities.
- Support to transport and other sectors most directly affected should not be provided in forms that undermine carbon pricing objectives, for example, by reducing fuel or trip-related expenses.
- To scale up mitigation and avoid one country's efforts being undermined by others, like-minded countries could agree to a carbon-price floor, with a higher floor for advanced countries.
  - Consideration could also be given to complementing a carbon-price floor with a “carbon border adjustment” applied to the carbon content of imports from countries not taking adequate steps on mitigation.

# Assess climate impact of support

- Stimulus measures should be screened for their climate impact, both positive and negative. Environmental standards should not be relaxed. Stimulus measures could be required to be assessed on their climate impact and reported in the budget, provided it does not result in significant delay.
- Make financing green
  - Consider financing the additional climate spending with green bonds.
  - Private finance could be mobilized for green investment (e.g., through targeted and transparent guarantees).
  - Require banks that receive public support to disclose the climate readiness of their portfolio
- Coordinate and support others

## Scaffolding and scholarship (new design)

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- SDR issue for IMF assuring ability to lend to more than 100 countries
- Additional capital to MDBs
- Debt standstill
- Bond issues including green bonds



# Cathedral thinking solving debt and climate crisis at same time?

- \$118 trillion sovereign debt (230% global GDP)
- Estimates of investment needed for green growth over next decade and recovery in the same ball park
- Can swaps help
  - Calls for debt standstill – other debt crises
  - Shield green recovery (UNSC Resolution 1483)
  - G20 – central bank swaps
- Principles to adhere to
  - All creditors must be in – London and Paris clubs and including private with collective action clauses and non-OECD bilateral creditors
  - Urgent and important



# Climate for Debt Swaps?

- Solve for: climate crisis, sovereign debt crisis, pandemic recovery
- Not a new idea – 2019 ECLAC put forward a plan
  - Debt for nature swaps date back to 1980s – sovereign debt written off in return for environmental action
- Whose debt this time - sovereign debt owned by China as well as the Paris club and IFIs.
- Private debt?
- Clear metrics – carbon intensity? Overall emissions reduction? Just GHG or methane?
- Delivery institutions – projects against which debt relief is used
- Monitoring and verification
  - Block chain – end to end encryption – funds go to project specified
  - Satellite tracking
  - Machine learning capability
- New generation of nature swaps could still be part of global scheme (Blue Bonds for Seychelles).
- Time for IMF to push beyond GDP?
- Transparency and accountability

# New Bretton Woods?

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- Reset at moment of maximum risk
- New threats to come
- Resilience in a system that is weak measured badly for stated goals
- Where would we meet
- Who would need to be there
- Govern ourselves and new technology
- Opportunities for transparency
- Leadership – tools in hands of those who can look at a gray rhino and not blink!



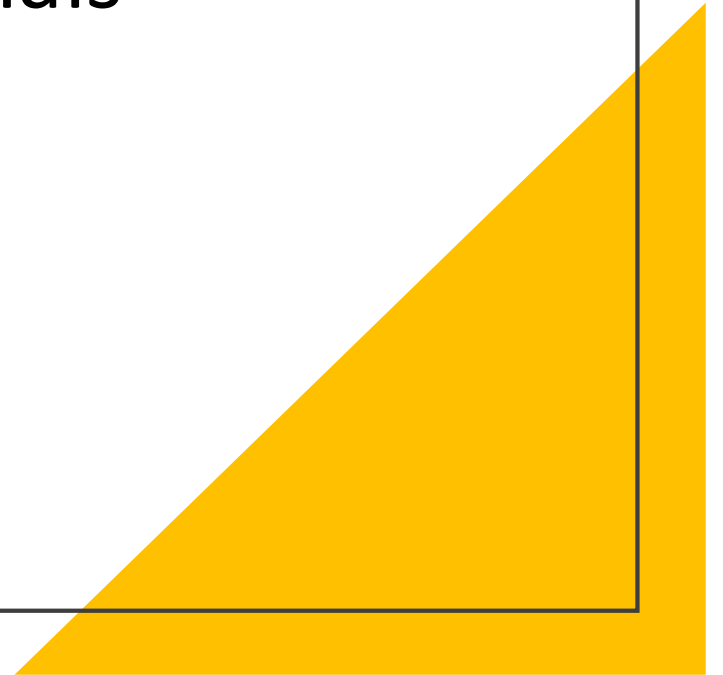


# Implications for today's policy maker

- **Urgency**  
Energy transition already underway – once in a generation opportunity to give it a nudge.
- **Systems change**  
Use opportunity to unfix old system (fossil fuel subsidies, hydrogen economy)
- **International cooperation**  
Clubs, cross border projects, regional markets
- **The price of inaction**  
Missing job creation for new economy, embedded costs of poor health, bailouts to zombie industries

**Annex**

Additional materials



# Global Preparedness Monitoring Board

- Formed in by WHO and World Bank in 2018  
Co-chairs: Gro Harlem Brundtland and Elhadj As Sy
- Origins in **lack of readiness for public health emergencies** including the West African Ebola outbreak
- *“From never again to new normal”*
- Despite progress in many areas, **gaps, weaknesses and inefficiencies** within and between **countries** remained
- First annual report issued in September 2019

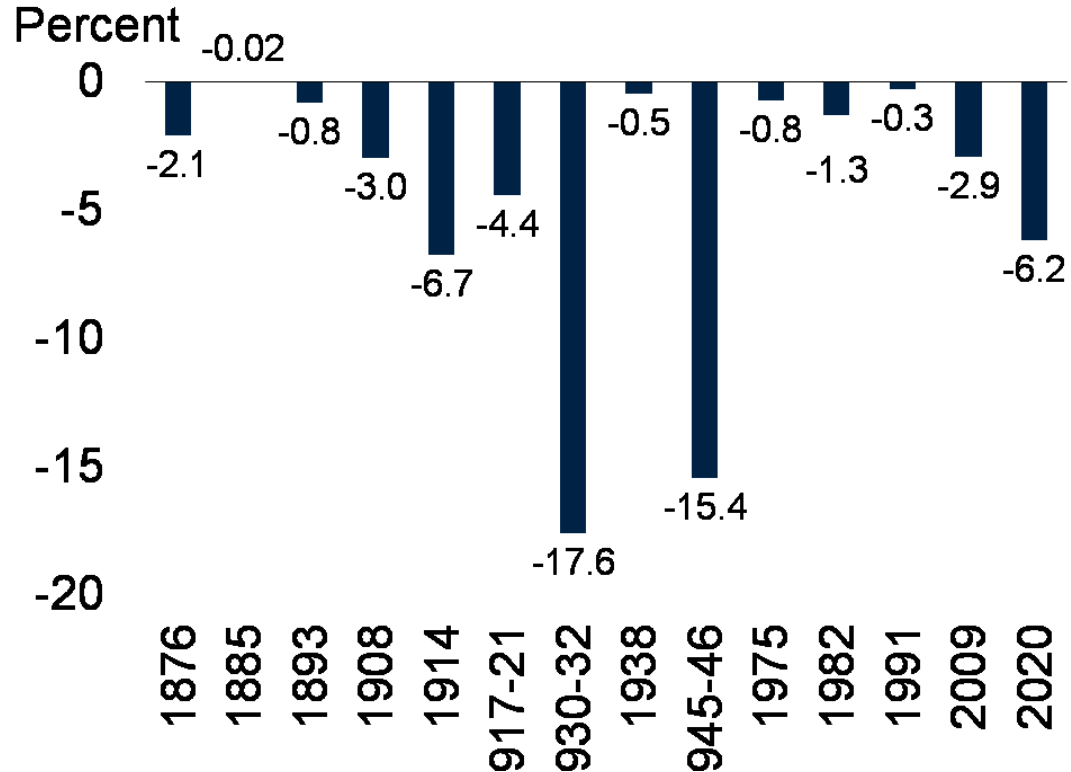
# What did the GPMB say?

## Seven urgent actions:

- Countries commit and invest in obligations under the 2005 International Health Regulations
- Regional organizations and the Gs (7 and 20) follow through open support for preparedness
- Countries must build strong systems
- **Everyone - countries, donors, MDBs, UN system, prepare for the worst**
- Financial risk planning and preparedness should be integrated
- ODA should incentivize preparedness
- UN strengthen international coordination



# How deep a recession will this be?

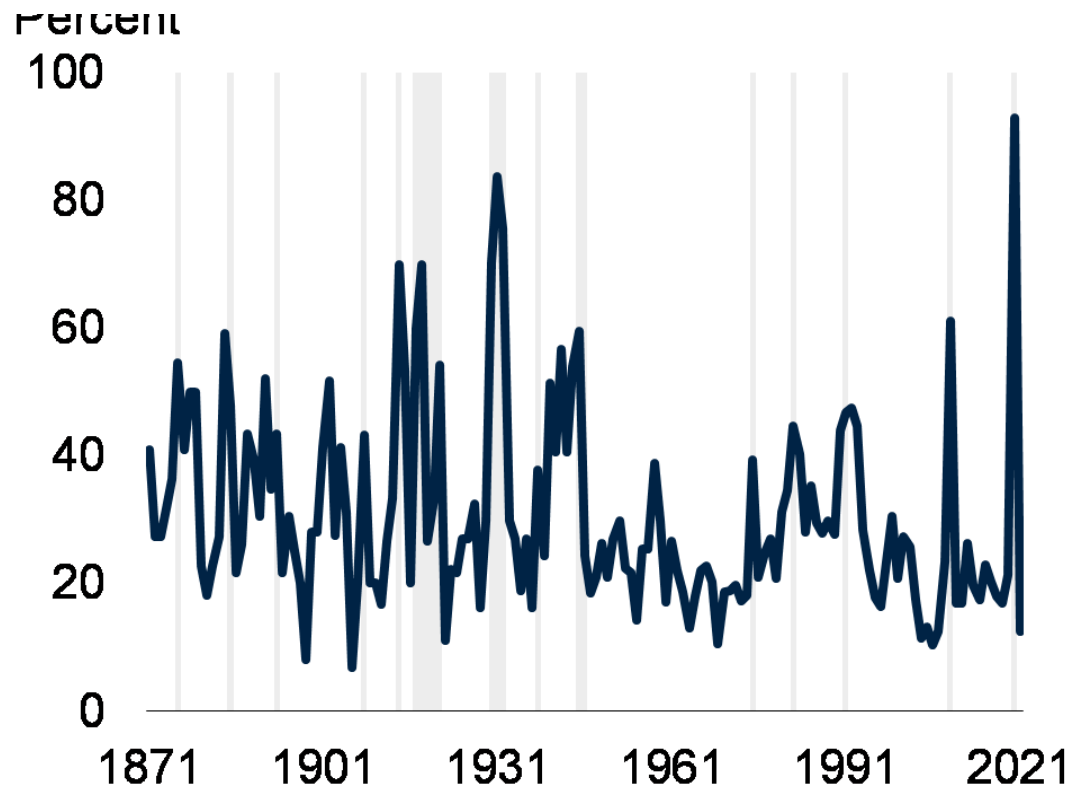


## Deepest global recession since World War II

- The global economy has experienced 14 global recessions since 1870: in 1876, 1885, 1893, 1908, 1914, 1917-21, 1930-32, 1938, 1945-46, 1975, 1982, 1991, 2009, and 2020. The COVID-19 recession will be the deepest since 1945-46, and more than twice as deep as the recession associated with the 2007-09 global financial crisis.

- World Bank
- World Economic Forum

# A global recession: synchronization of national recessions



- **Highest synchronization of national recessions since 1870**
- In 2020, the highest share of economies will experience contractions in annual per capita gross domestic product (GDP) since 1870. The share will be more than 90% higher than the proportion at the height of the Great Depression of 1930-32.
- World Bank
- World Economic Forum

# How to create jobs, boost the economy and make energy more sustainable

	Timeliness	Near-term employment effects*	Provision of jobs for displaced workers	Long-term benefits	Current cost effectiveness of emissions reductions*
<b>Electricity</b>					
Expand and modernise grids	●	●	●	●	●
Wind and solar PV	●	●	●	●	●
Lifetime extensions of nuclear and hydro power	●	●	●	●	●
New unabated gas	●	●	●	●	●
New unabated coal	●	●	●	●	●
<b>Transport</b>					
New electric and high efficiency cars	●	●	●	●	●
High speed rail	●	●	●	●	●
Urban infrastructure	●	●	●	●	●
<b>Buildings</b>					
Retrofits and more efficient new buildings	●	●	●	●	●
Appliance efficiency	●	●	●	●	●
Clean cooking	●	●	●	●	●
<b>Fuels</b>					
Reduce methane from oil and gas operations	●	●	●	●	●
Reform inefficient fossil fuel subsidies	●	●	●	●	●
Biofuels	●	●	●	●	●

IMF, IEA  
Sustainable Recovery,  
2020

# Impact of COVID-19 on Food Systems

## Three main disruptions

### Introduction of protectionist measures

- 21<sup>st</sup> Century Tracking of Pandemic Era Trade Policy in Food and Medical Products tracked 40 measures in 29 countries – international pressure has removed many – but examples include Russia restricting cereal exports from Ukraine and stockpiling

### Interruptions in supply chains

- Downstream – supply chains for food service and retail not easily adaptable
- Upstream – meat processing interrupted due to worker safety concerns, Indian harvest worker shortages, refrigerated container shortages

### Trade tensions and their knock-on effect

- Australia vs China – barley, beef, US vs China Phase 1 of trade agreement US exports to China were \$1.03bn compared with \$2.79 bn before trade tensions

# Disproportionate impact on vulnerable

## Low income countries

- 820mn people are chronically food insecure
- 135mn acute food insecurity – rising after COVID19 to 265mn by end 2020 (WFP)
- Food price surges supply chains break down, logistics disrupted.
- Ample staples supply but if disruption goes on then land uncutivated, migrant works cannot work – example from Ebola in Liberia and Guinea
- Many developing countries dealing with cumulative stresses – conflict, climate, pests and plagues

# Policy Tools and options for Food System Resilience

Turning point for how we

PRODUCE

PROCESS

DISTRIBUTE and

CONSUME FOOD

And how we prevent and manage

FOOD WASTE

- Safety nets – nutrition smart  
Government procurement
- Public distribution
- Social protection to small farmers
- Essential workers in the food industry
- No protectionist trade measures
- Local food supply
- Nature's resilience

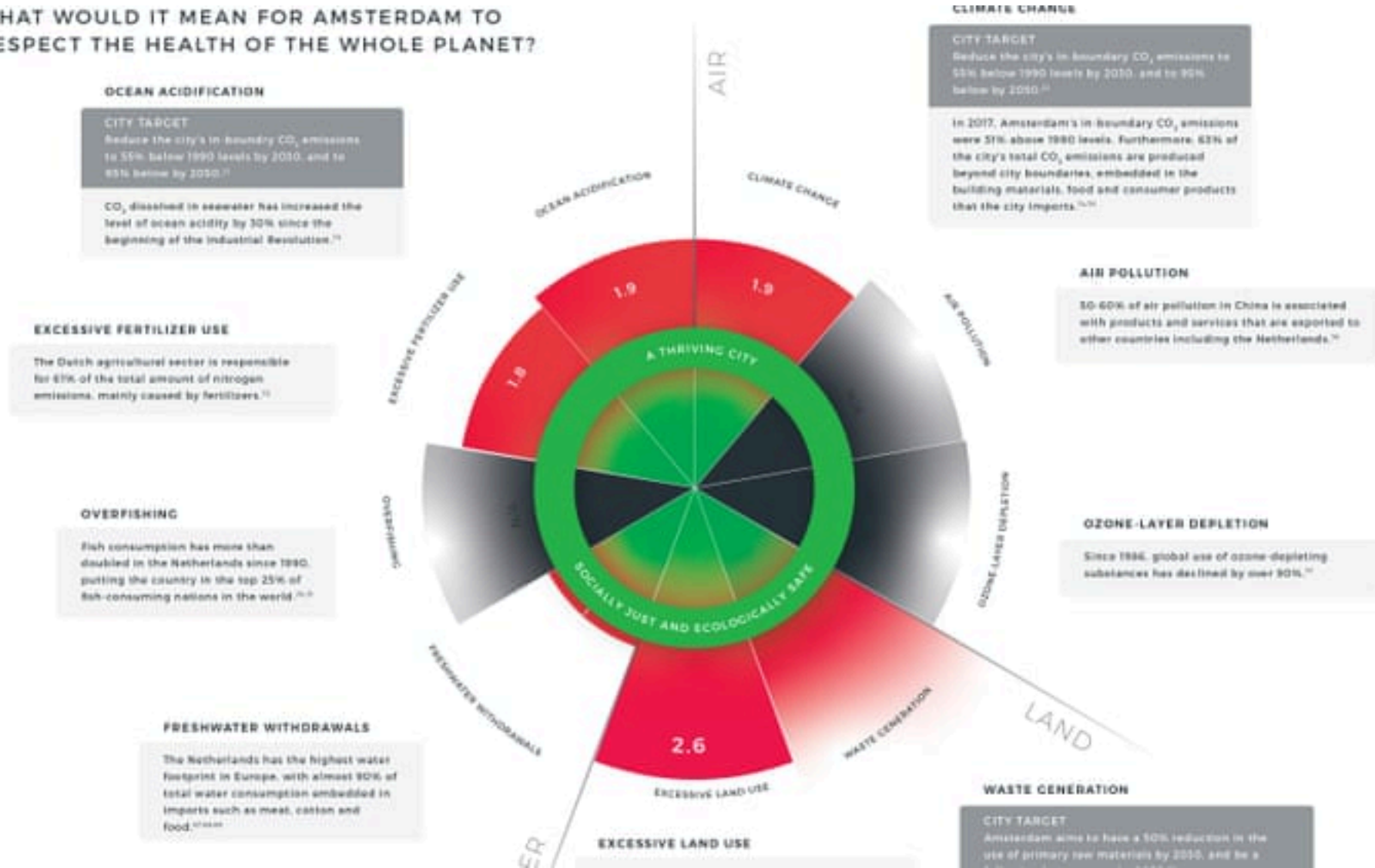


# Cities leading the way?

Amsterdam, Copenhagen scaling down and adopting the Doughnut Economic Model

Kate Raworth. [Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist](#),

## WHAT WOULD IT MEAN FOR AMSTERDAM TO RESPECT THE HEALTH OF THE WHOLE PLANET?



# State of Play – Central bank cooperation

- Central Bank cooperation - NGFS
- Today (Nick Robins – Grantham Institute)
  - 1) Awareness raising and capacity building.
  - 2) Micro-prudential supervision.
  - 3) Macro-prudential action and financial stability
  - 4) Monetary policy.
  - 5) Scaling up green finance.
- Toolbox for central bank supervisors for sustainable crisis response measures

# State of Play – IMF

- Unresolved issue of SDRs for IMF – capital adequacy
- Green recovery (discussed last week)
- Advice on COVID recovery – from state owned enterprises, food markets, budgeting, digital solutions, cash management, incentives
- Violent agreement – Gita Gopinath and Laurence Boone (IMF and OECD chief economists to UK Treasury select committee early July)
- Will this spur changes in the way they do business
  - Could there be debt sustainability studies with the World Bank?
  - Green FSAPs
  - Article 4 reviews

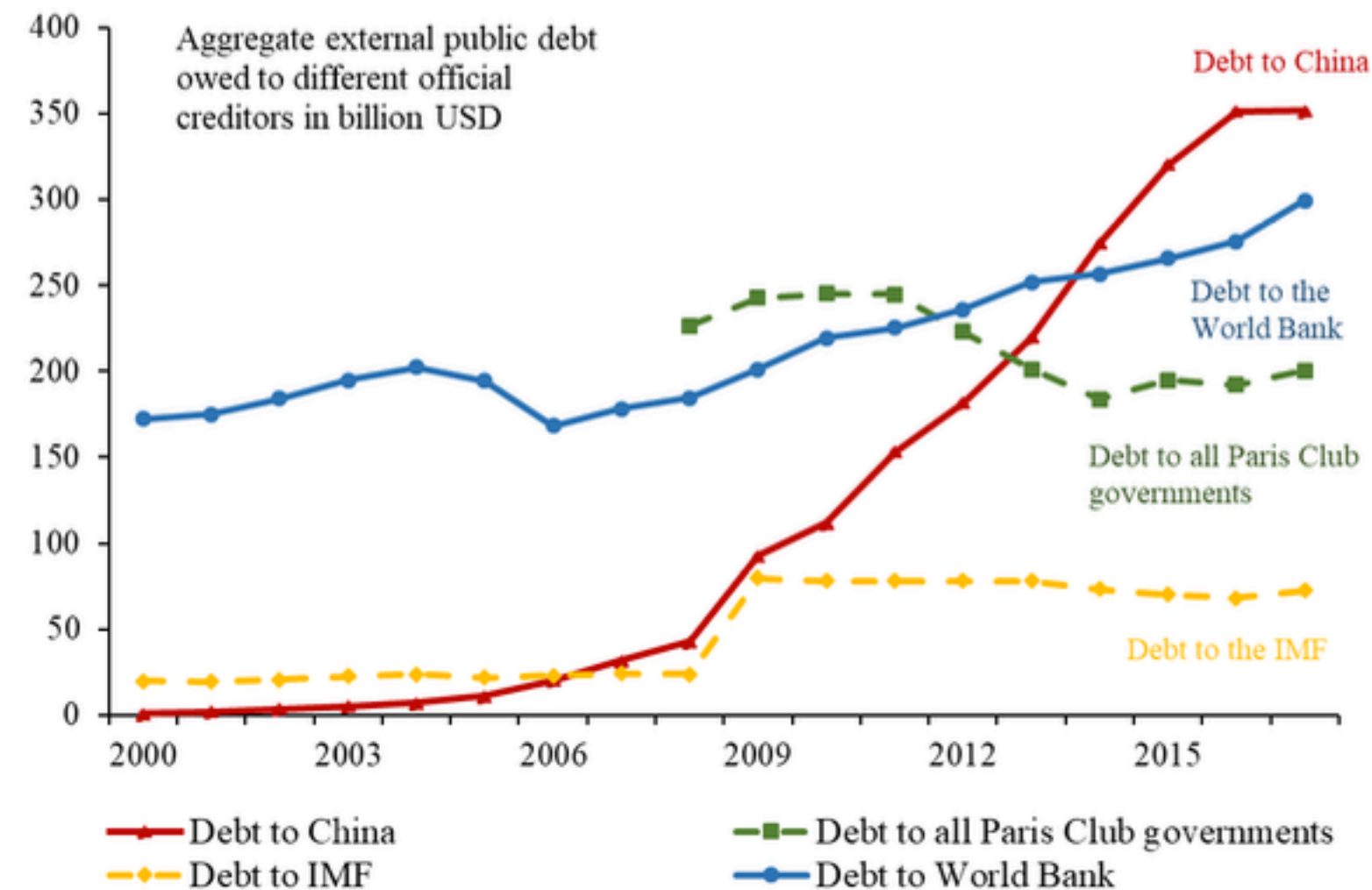
# State of Play – multilateral development banks

- Climate finance
  - “MDB climate finance” refers to the financial resources (own-account and MDB-managed external resources) committed by MDBs to development operations and components thereof which enable activities that mitigate climate change and support adaptation to climate change in developing and emerging economies.
- MDBs committed US\$ 43,101 million in climate finance in developing and emerging economies in 2018 (2019 figures)
  - US\$ 30,165 million or 70 per cent for climate change mitigation finance
  - US\$ 12,936 million or 30 per cent for climate change adaptation finance.
- The net total climate co-finance committed during 2018 alongside MDB resources was US\$ 68,050 million. When combined with the MDB climate finance, it brings the year’s total climate finance to US\$ 111,152 million.

# MDBs and COVID response

- Traditional role – countercyclical
- No signal/instruction from G20 (unlike 2009)
  - MDBs told to mobilise and step up (100bn)
  - Important as sends signals to markets
- World Bank – US\$12bn package headline helps
- But depth and breadth of crisis – need more?
  - Banks have received additional capital since 2009
  - \$300bn - \$400bn over next two years

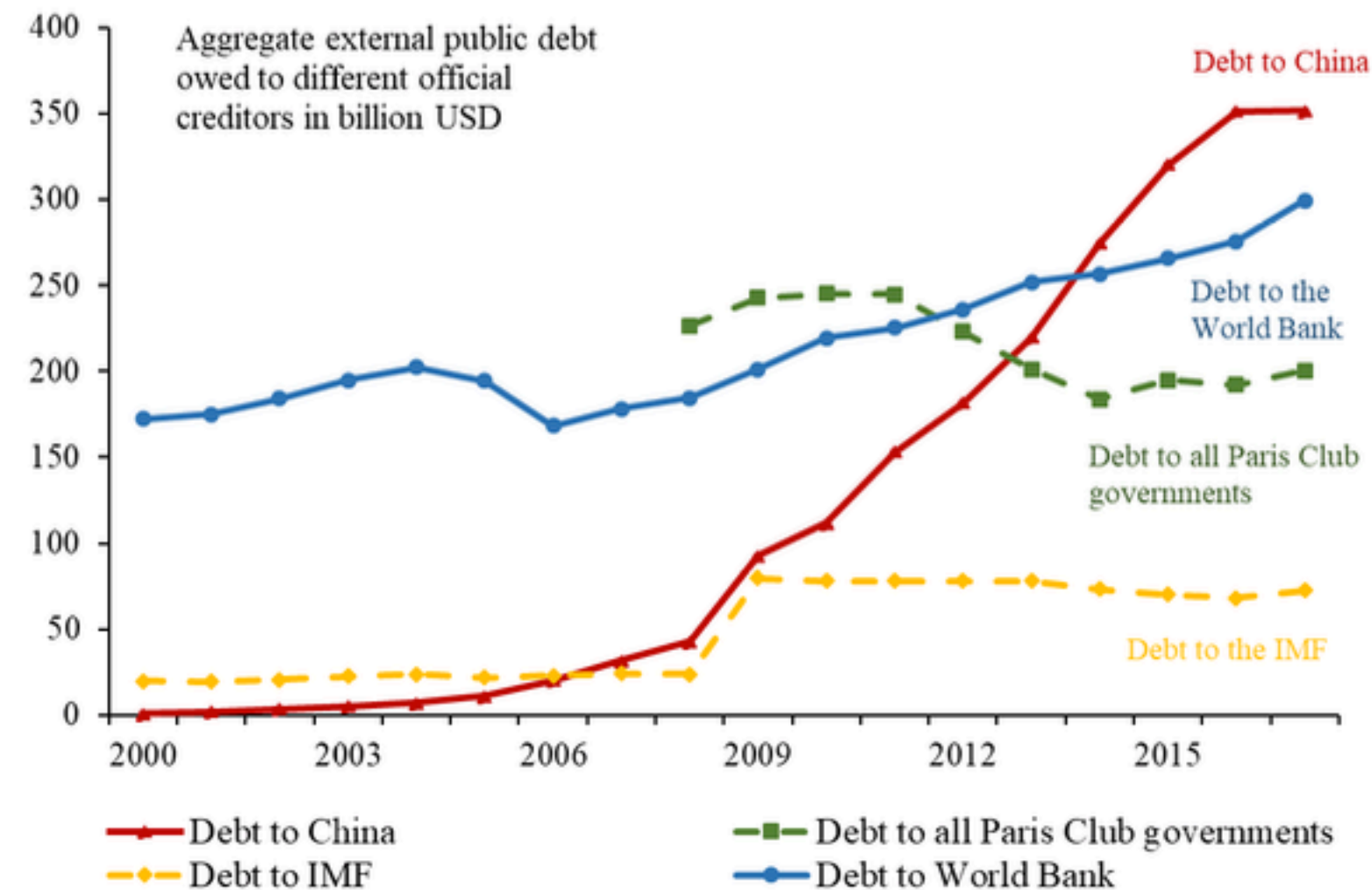
# China's overseas lending and the looming developing country debt crisis



Horn, Reinhart and Trebesch, 2020



# China's overseas lending and the looming developing country debt crisis



Horn, Reinhart and Trebesch, 2020