IPCC AR6 Seminar

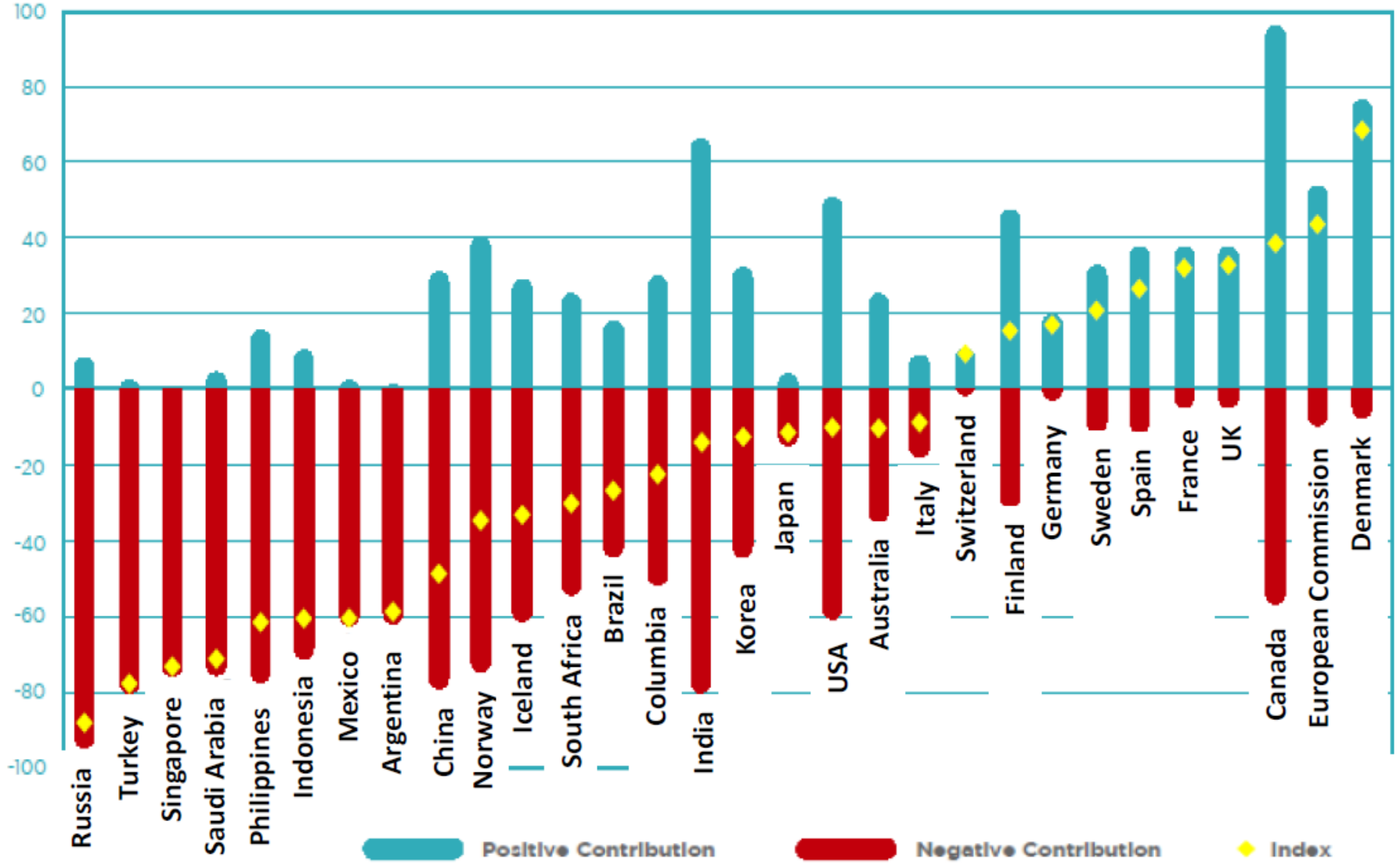
1.5 Celsius Goals: Challenges Ahead

19 May 2022

Jun ARIMA

Project Professor, GraSPP U-Tokyo

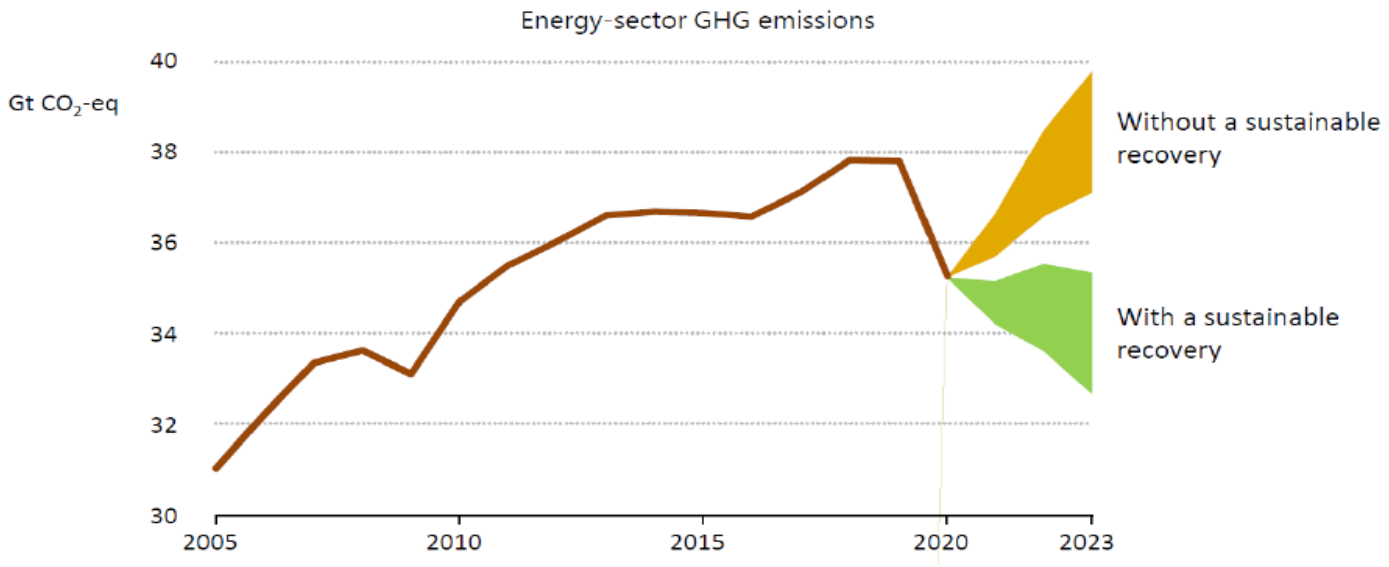
“Greenness” of COVID-19 Recovery Package



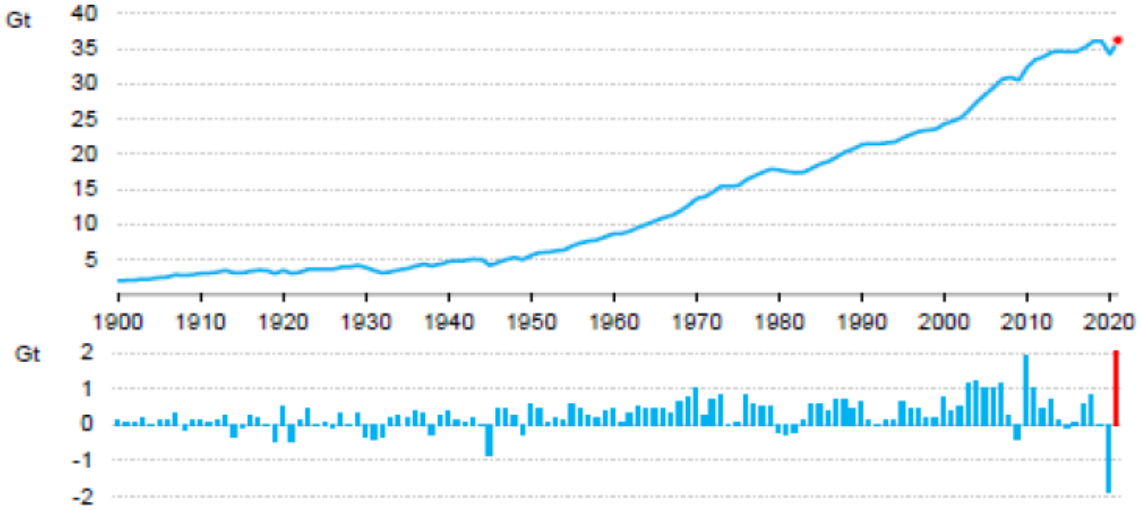
Source: Vivideconomics

Vision vs Reality in Recovery from COVID-19

Sustainable Recovery Vision



Reality



Source: IEA

Strong Momentum in 2021

- **Biden Administration and Climate Action Summit**
- **G7 and G20 with strong focus on climate change**
- **Glasgow Climate Pact**
  - **Resolves to pursue efforts to limit the temperature increase to 1.5 degree Celsius**
  - **Require rapid, deep and sustained reductions in global GHG emissions, including reducing global CO2 emissions by 45% by 2030 below 2010 and net zero around mid-century**
  - **Establish a work program to urgently scale-up mitigation ambition and implementation during the critical decade of the 2020s**
  - **Phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies**

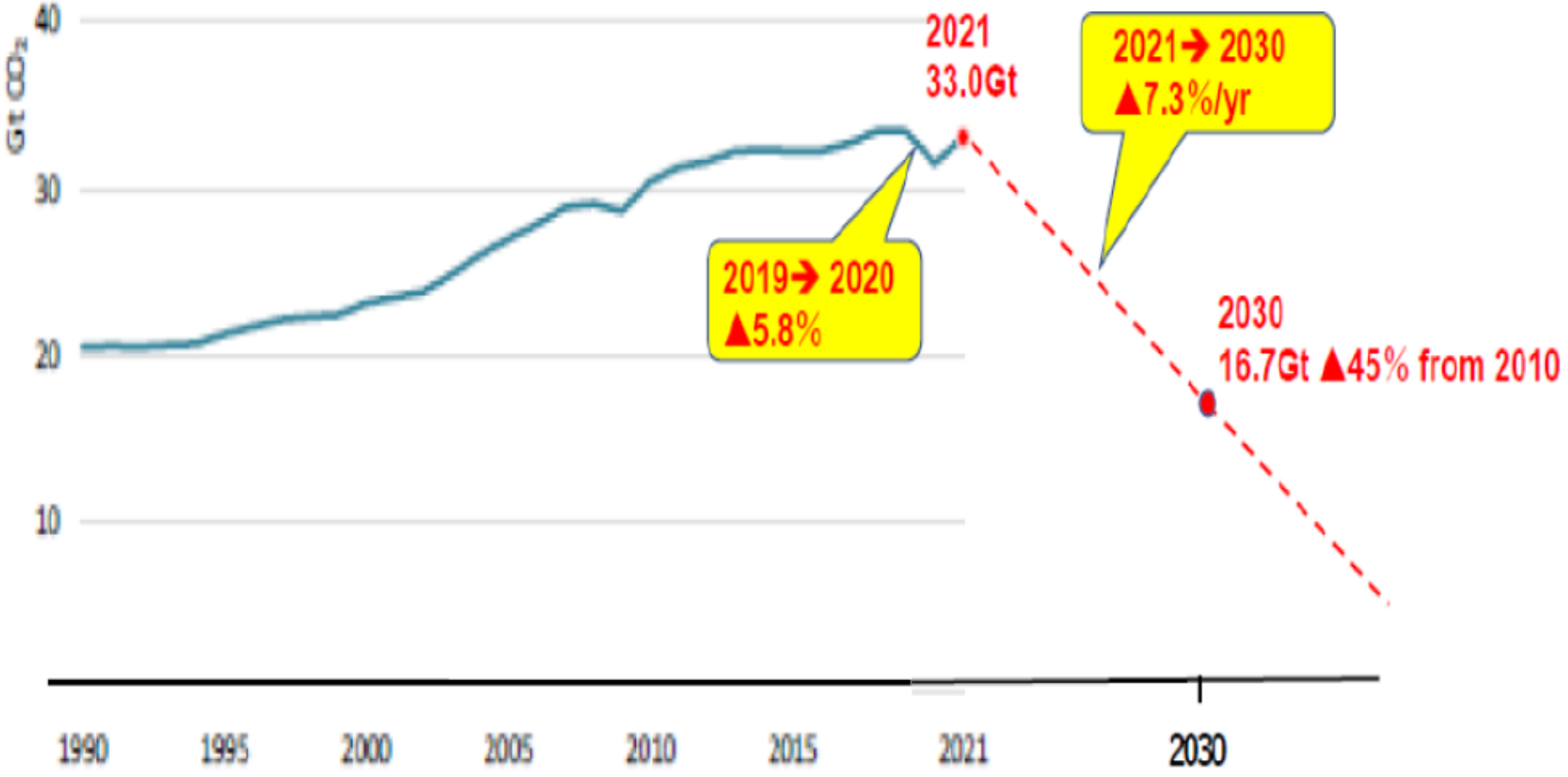
UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH ITALY

Various “Gap”s

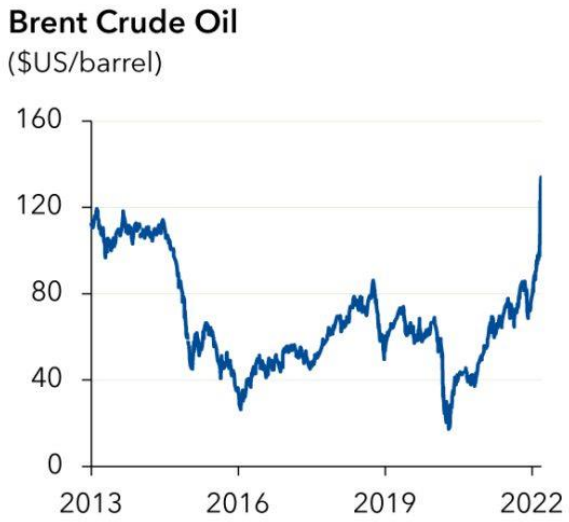
- Gap between 1.5 pathway and NDC pathway
  - -- Ambition gap
  - -- Policy gap
  - -- Finance gap
- Gap between “COP world” and “real world”
  - Gap among various countries’ priority among SDGs
  - Gap between model analysis (e.g. global uniform carbon price, global policy coordination) and actual political economy (e.g. patchy actions across countries)
  - Gap between statement and action (willingness to pay)

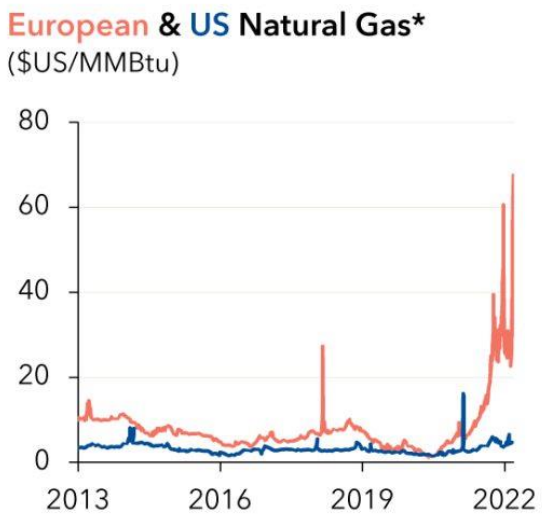
Implication of 45% Cut by 2030

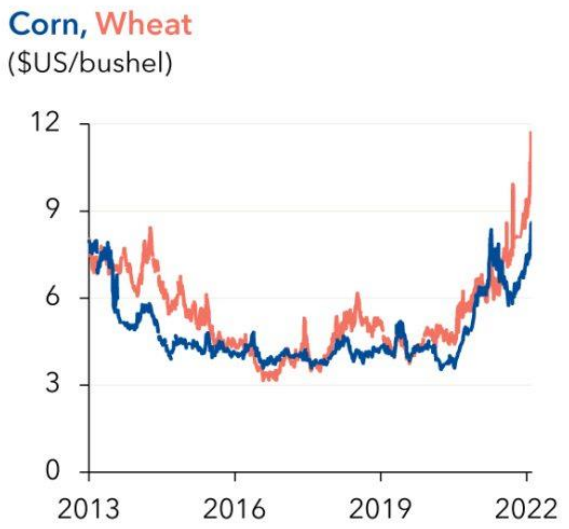


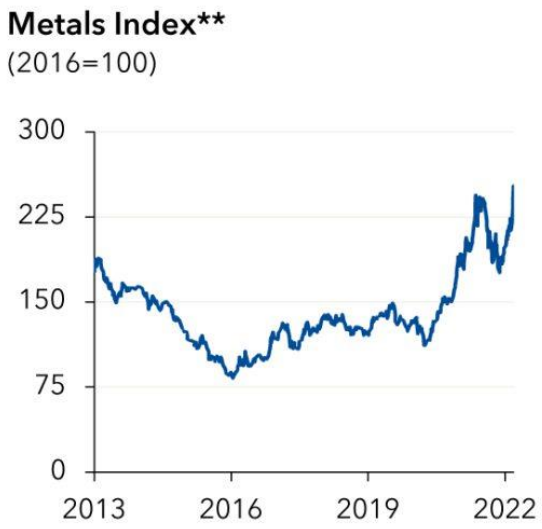
Source: IEA Global Energy Review 2021

Energy, Grains and Metals Price Hike in Ukraine War



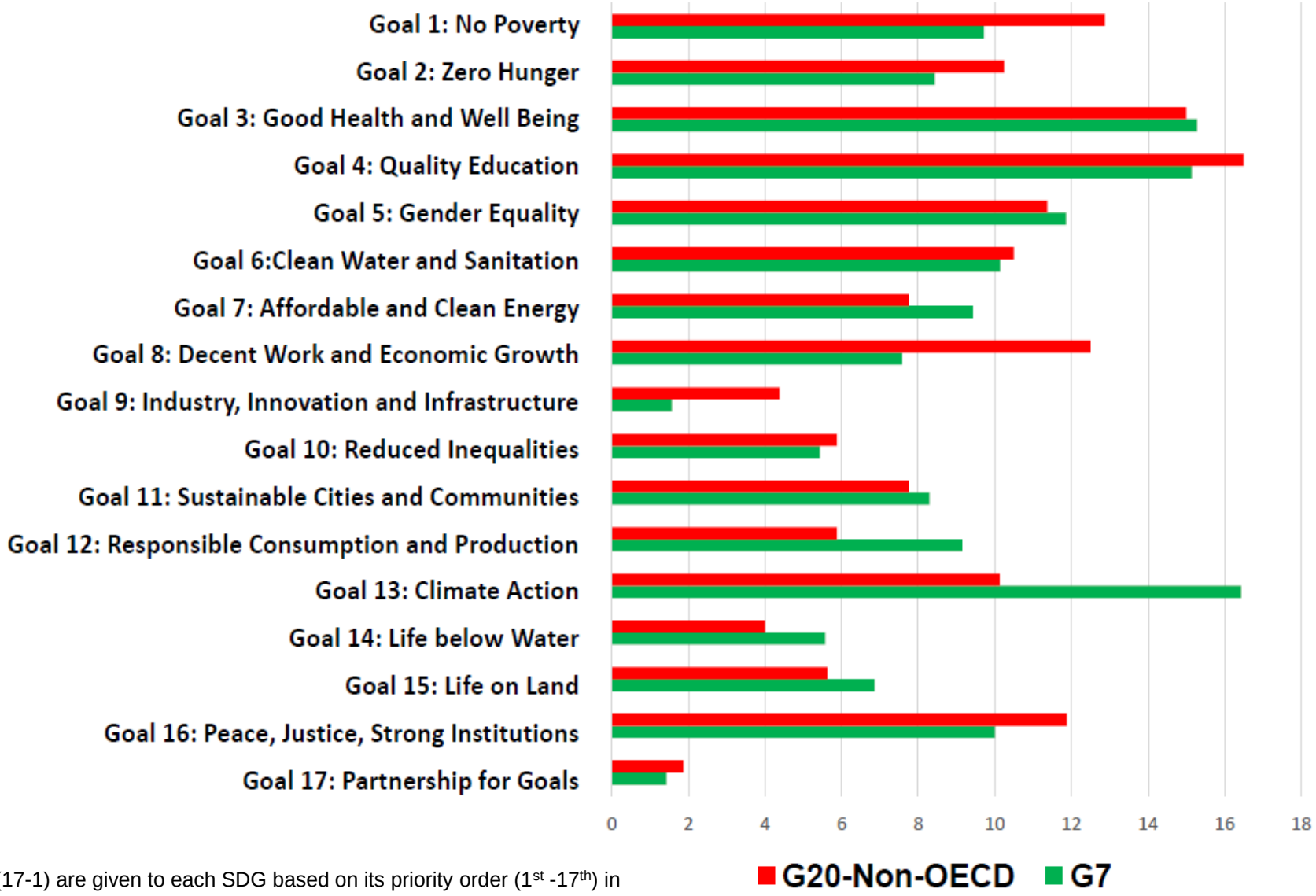






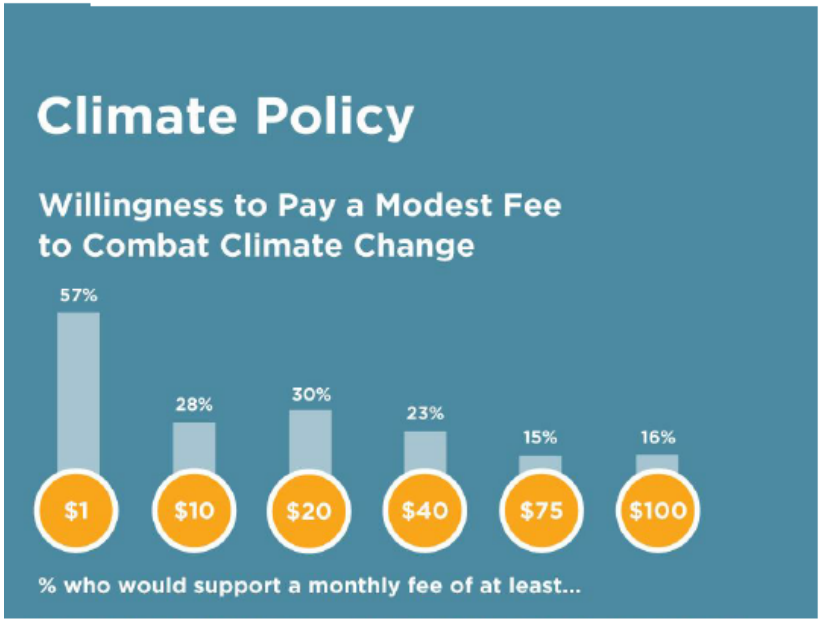
Source: IMF

Huge Gap between G7 and Non-OECD G20 Countries on Priorities among 17 SDGs



Points (17-1) are given to each SDG based on its priority order (1st -17th) in each country based on the voting outcome in UN My World 2030 Survey

High Willingness to Pay in Developed Countries?



- 57% is willing to pay 1 $/month (12 $/year)
- 68% is opposed if the fee goes up to 20$/month (120$/year)

Source:The Associated Press-NORC Center for Public Affairs Research. 2019. Is the Public Willing to Pay to Help Fix Climate Change? http://www.apnorc.org/projects/Pages/Is-the-Public-Willing-to-Pay-to-Help-Fix-Climate-Change-.aspx

Table 2.2 ▹ CO_2 prices for electricity, industry and energy production in the NZE

USD (2019) per tonne of CO_2	2025	2030	2040	2050
Advanced economies	75	130	205	250
Selected emerging market and developing economies*	45	90	160	200
Other emerging market and developing economies	3	15	35	55

* Includes China, Russia, Brazil and South Africa.

- Advanced economies need to bear 75 $/t-CO2 in 2025 and 130 $/t-CO2 in 2030 for achieving 1.5 degree target.
- Per capita CO2 emissions in US is 15.56 t-CO2 (2018) ➔ Per capita annual burden should be 1167 $ in 2025, 2023 $ in 2030.

US Voters' View on Gas Prices and Climate Change

(National telephone and online survey by Rasmussen Reports and the Heartland Institute on 28 April and 2 May 2022)

- **82% of Likely U.S. Voters are concerned about rising energy and gasoline prices, including 60% who are Very Concerned. Only 14% aren't concerned about the rising price of energy.**
- **60% favor a law that would dramatically increase oil and gas drilling in the United States, including 47% who would Strongly Favor such a law. 30% would oppose a law to increase drilling, while 11% are not sure.**
- **52% of voters believe Congress and President Joe Biden should focus more on increasing oil and gas drilling to help reduce energy prices, but 34% think the policy focus should be more on limiting carbon dioxide emissions in an attempt to reduce climate change.**

- **Global mitigation efforts are facing challenges by COVID-19 in 2020-2021 and by Ukraine War now.**
- **Various "gaps" are emerging**
- **"Divided world" after Ukraine war is not conducive to global cooperation (e.g., financial flow to developing countries)**

➔ **Will Ukraine war accelerate or delay clean energy transition? Amid simultaneous risk of resources price hikes and economic slowdown, how to maintain momentum for clean energy transition?**

➔ **On-going energy crisis necessitates fossil fuel investment. However, new investment could be discouraged by "stranded assets" narratives. How to overcome dilemma between short-term energy security and long-term decarbonization?**

➔ **How to boost technology development and deployment of clean energy technologies and their dissemination to developing countries with continuously high dependence on fossil fuels?**

➔ **What are the role of industry and financial sectors in the above endeavor?**