

# 글로벌 탄소중립 혁신과 연대를 위한 협력 포럼

International Innovation Forum on Solidarity and Cooperation for Carbon Neutrality

기조연설

## 지속가능한 시장과 녹색경제를 위한 혁신

Limits of current global climate regime  
and New Climate Economics

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## Limits of current global climate regime and New Climate Economics

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## Einstein

- We cannot solve our problems with the same thinking we used when we created them.

## Root Cause of Climate Crisis

- Free Market Economic system: air, water, climate → free goods
- Sustainable Market: internalize the price of air, water, climate, ecosystem into the market price
- New Climate Economics: constructing a market that internalizes carbon price into the market price/stimulating economic growth and job creation <Green Growth>

## Limits of Free Market Economics

- Climate Change: consequence of **Conventional Free Market Economics** focused on short term Economic Growth
- From WWII until 1970s, during the golden age of Capitalism, Economic Growth improved Quality of Life and Env. Performance
- Since the Globalization of 1990s based on Neo-Liberalism, Economic Growth → worsening Quality of Life/Exacerbating Climate Crisis
- Accelerating Extreme Competition & Short-termism

## Fundamental System Change needed

- Free Market → Sustainable Market
- Conventional Economics → Sustainable Economics
- Conventional Economics: A Tool for Maximizing Short Term Economic Growth: Human & Natural Resources; inputs for Production, Cost & Benefit analysis
- Sustainable Economics: Making Economics a Tool for Long Term Quality of life & Ecological Sustainability: Human & Natural Resources are Asset for long term Higher Growth & Job Creation, climate spending as investment for GDP & Job creation

## Evolution of ECONOMICS Needed

- From a Tool for short term GDP Maximization to a Tool for enhancing Quality of Life & Ecological Sustainability
- Free Market Economics<People & Planet as Externality>→ Sustainable Market Economics <Internalizing People & Planet> → New Climate Economics<Planet> + New Inclusive Economics<People>
- Social/Ecological cost & benefit have to be internalized into the Market Price;

## Externalities that has to be internalized

- Under-invested Mass Transport: Traffic Congestion Cost, in Korea 3.6% of GDP
- Minimum wage & Increasing Temporary Jobs/platform workers: not paying the social benefit & Cost
- Price of fossil Electricity:
- Feasibility of Infrastructure Investment: internalize carbon price into Return on Investment <ROI>

## Global Climate Regime: What have we done?

**\* We have been making & breaking promotes:**

1992 UNFCCC,  
1997 Kyoto Protocol,  
2009 Copenhagen Accord,

**\* Wasted 3 decades;** ending up in  
Non-binding Paris Climate Agreement:

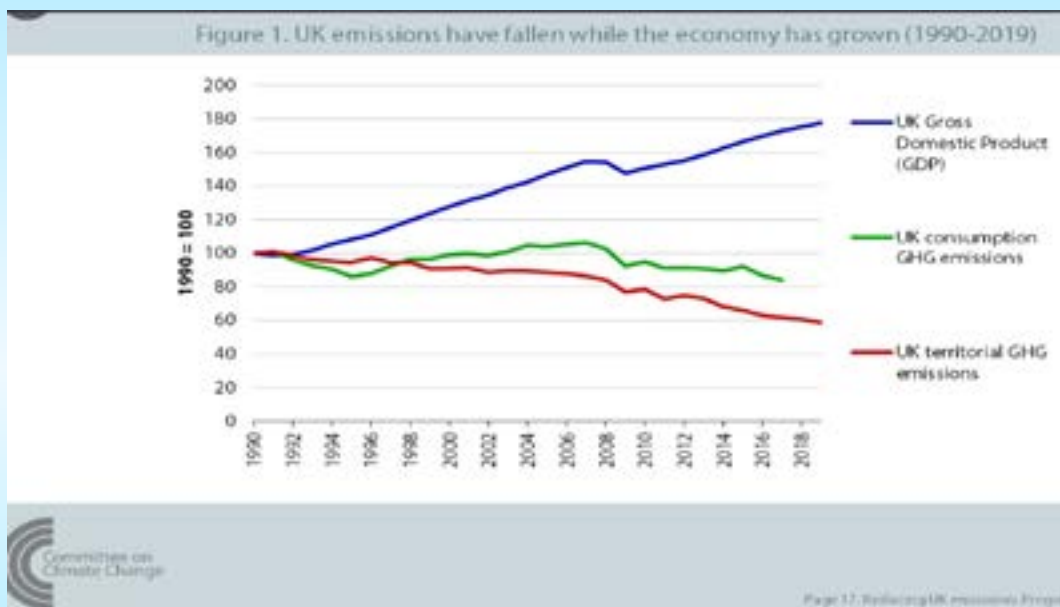
**\* NDC of Paris Climate Agreement:**

**Can we fulfill our promises  
for Net Zero?**

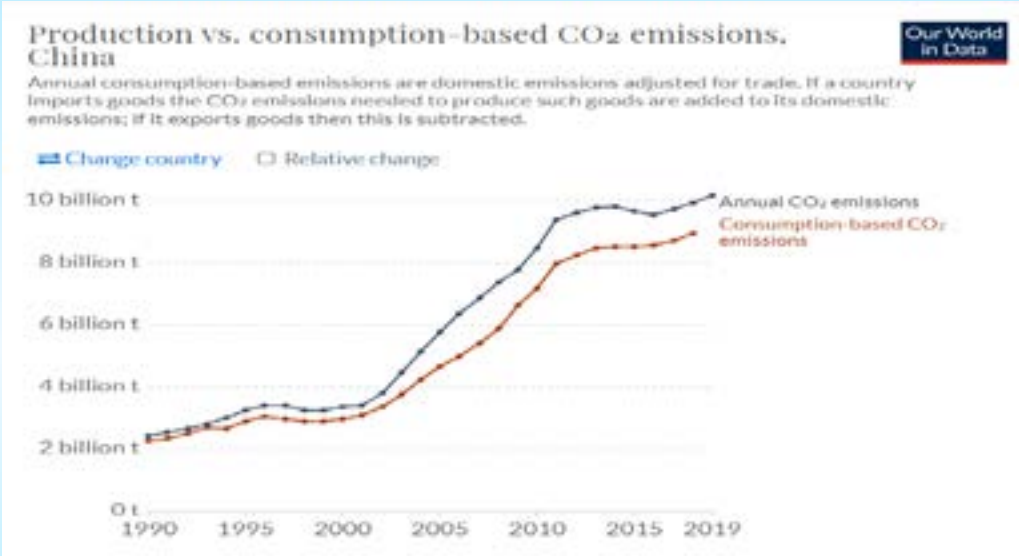
## What went wrong?

- \* Focusing on Energy transition & Technological Innovation → Net Zero became an issue of money & Technology → Then what about DC lacking money & technology
- \* by Government & Business
  - Consumer left out as bystander
- \* CO<sub>2</sub> Emission based on Production<GDP>
  - Carbon leakage <Inconvenient Truth>
  - Blaming China & Korea

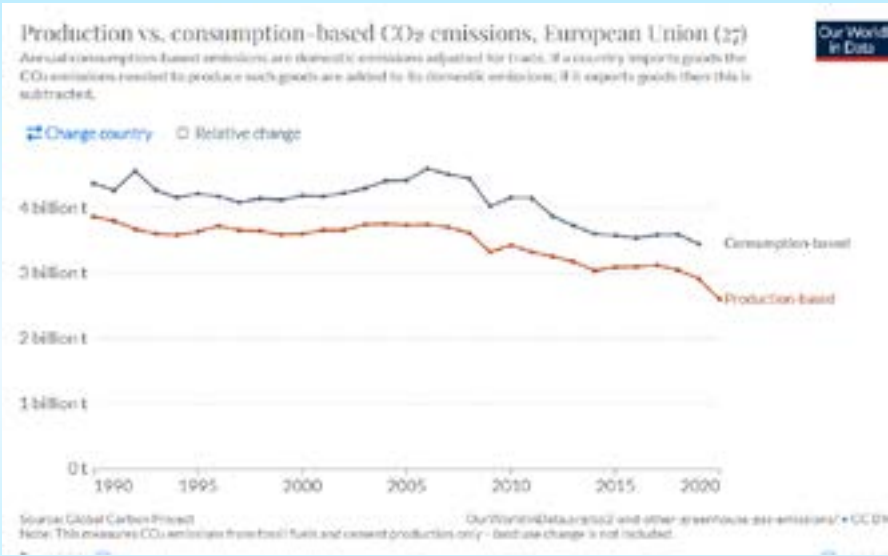
## UK GDP/Production/Consumption Emission



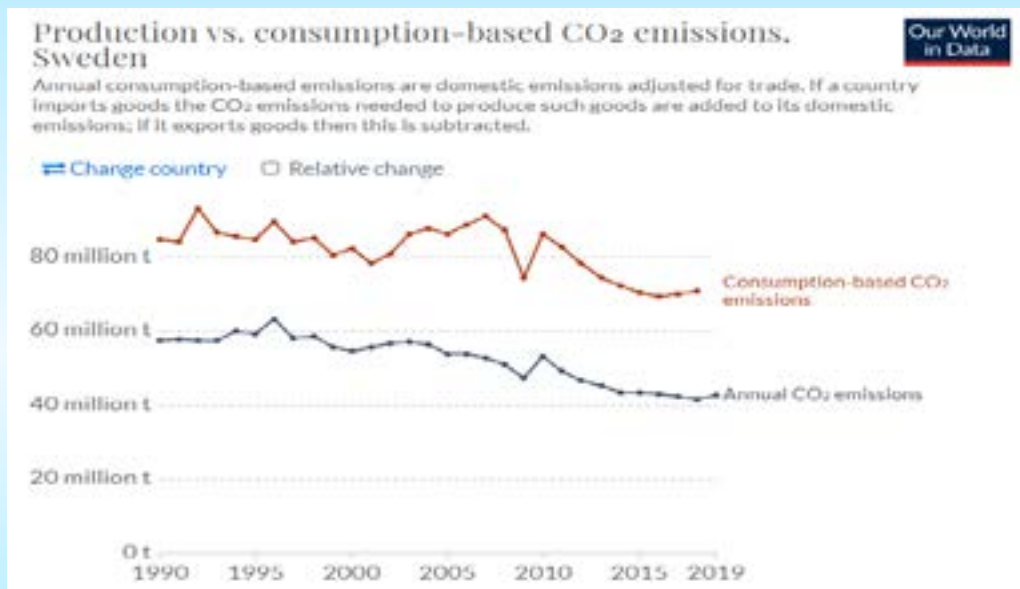
# China



# European Union



## Sweden Case



## Focusing on Production not Consumption

- confuses carbon leakage from EU, US, etc to developing country as Climate Mitigation; emission reduction by relocating energy intensive industries to developing countries
- Framing China, India , Korea etc. many Non-Annex 1 countries as climate rascal
- Over-consumption of developed countries is left out of the global climate agenda: for global net reduction, we have to focus on consumption not production

## Focus on cost/benefit analysis

- Economics of climate change: Niclaus Stern; \$1 mitigation investment will incur \$5-20 climate benefit.
- Bjorn Lomborg: \$1 mitigation investment will incur only 11cents climate benefit.
- CGE Modelling projections: always estimate that mitigation will reduce economic growth; fixed perception that emission recution/mitigation/clean energy transition will reduce economic growth
- Is this really true?

## Focus on mitigation investment multiplier effects

- static cost/benefit CGE modelling to dynamic investment multiplier effects
- clean energy transition investment will trigger economic growth in the long run
- in the short run; mitigation can be a cost but in the long run; opportunity for growth
- need perception change that clean energy transition is not cost/burden but opportunity for economic growth/job creation

## What has to be done?

- Not just mobilizing Money & Technology but internalizing carbon price: carbon pricing as a new tool:  
Free Market → Sustainable Market
- Stop blaming Government & Business → Design a green electricity price system for Business/Consumers to choose voluntarily to use green energy at higher price than fossil electricity price
- Stop measuring Emission from **Production** → but from **Consumption** to avoid carbon leakage/for global net reduction.
- \*Stop static cost/benefit CGE Modelling → Initiate mitigation investment long term multiplier effects for economic growth/job creation

## Applying carbon pricing: maximizing positive Minimizing negative impact by gradual step by step introduction

- **start by voluntary carbon payment by providing options to share the responsibility: differentiated price**
- **Counting the cost of CO<sub>2</sub>**: making invisible Carbon cost visible: Traffic Congestion Cost/Korea: 3.6% of GDP 2018, National Defense Budget GDP2.55%/2020.
- **Apply shadow price of Carbon** for large investments to justify Green Investment for mass transit etc.
- **Ecological Tax Reform**: Reducing income tax/ Increasing Carbon Tax → Double Dividend Effect
- **Global Sectoral Roadmap for Energy Intensive Industries rather than CBAM/EU**

## Making Invisible Carbon Visible

- Apply shadow price of Carbon for large investments: change the way we do Cost/Benefit accounting for Rail, Subway, Green Infra.
- Gradually introduce carbon tax while reducing income tax  
→ improve carbon efficiency of production and consumption pattern
- Global Roadmap for Energy Intensive Industries rather than Border Tax(EU)
- Build Private car free urban mobility<Invest in Green Mobility>: Tokyo, Osaka,
- Reduce by half the Traffic Congestion Cost/Korea: 3.6% of GDP 2018, National Defense Budget GDP2.55% in 2020. Massive investment in public transport<KTX, GTX, Subway, BRT>

## What can be done by Consumers?

- Public opinion Jan 2022 Korea: 48% YES for Doubling electricity price in 10 years, 45% No.
- Need to develop System for Voluntary Renewable Energy Consumption & Pay Carbon Emission. ICE/Germany: Green ticket
- Support NDC<Nationally Determined Contribution>of Paris Climate Agreement with **PDC<Personally Determined Contribution>**: social campaign for Voluntary RE purchase.
- Stop blaming Gov/Business but design a system consumers can volunteer to buy RE and determine their own personal contribution<**PDC**> by paying their emission:
- **Me First Campaign** to encourage PDC

## From Free Market Economics

- towards New Climate Economics:
- all the agenda suggested above are the key issues for New Climate Economics;
- New Climate Economics is a new thinking to solve the problems of climate crisis and create new opportunities for economic growth and job creation while reducing the risk of climate disaster for our future generation.
- New Climate Economy Center needed.