



# An imperative path toward degrowth from the perspective of ecological economics

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# Abstract

- The purpose of this presentation is to answer the question of why and who are the ones that prefer degrowth as a strategy for human sustainability. It is not easy to persuade people to change their behaviors even though they are fully aware of the climate crisis. Decoupling carbon emissions from economic growth has been believed to be the only economic solution under the circumstances of climate change in the capitalist society. Also, sustainable development goals (SDGs) are the ones that confuse and mislead people into seeing them as the feasible way to prevent the collapse of human civilization within the time limit of climate change. These two solutions – decoupling and setting the goals – only delay the time for human society to properly act. Some ecological economists argue that degrowth would be the only solution that we can take since we don't have any time to delay while others argue that the impact of degrowth (term) could be more harmful than good for the negative impression of the term. Thus, the intervention is important to communicate and becomes the key to leading people's behavioral change in a way of degrowth, which can affect system change. How can we find out the right point (node) to shift human civilization?

# Purpose and Scope

- (Purpose) To answer the question of why we are heading to the point of degrowth which we can transform our society be sustainable under the climate, market and biodiversity crisis.
- (Scope)
  - From weak sustainability to strong sustainability strategies
  - Arguments on the terminology of degrowth

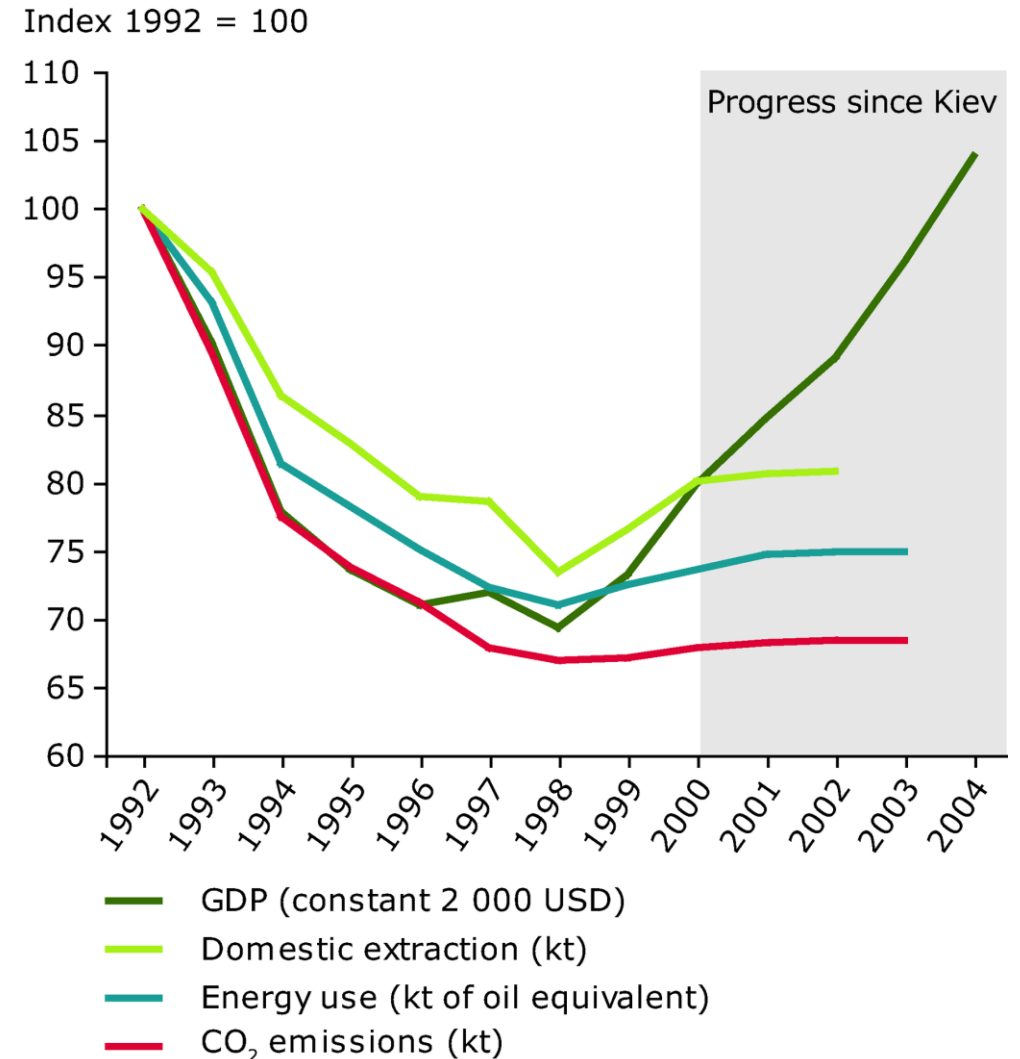
# Exiting suggested strategies responding to the climate crisis

- To be a sustainable society:
  1. Decoupling : continuous economic growth with decreasing emission by green growth and green new deal (Renewable energy and efficiency)
  2. Sustainable development goals including donut economics by monitoring and feedback
  3. Degrowth by changing value system and indicators like a local circular economy, and transition movements (social economy)

# Suggested strategies: 1. Decoupling

## 1. European cases

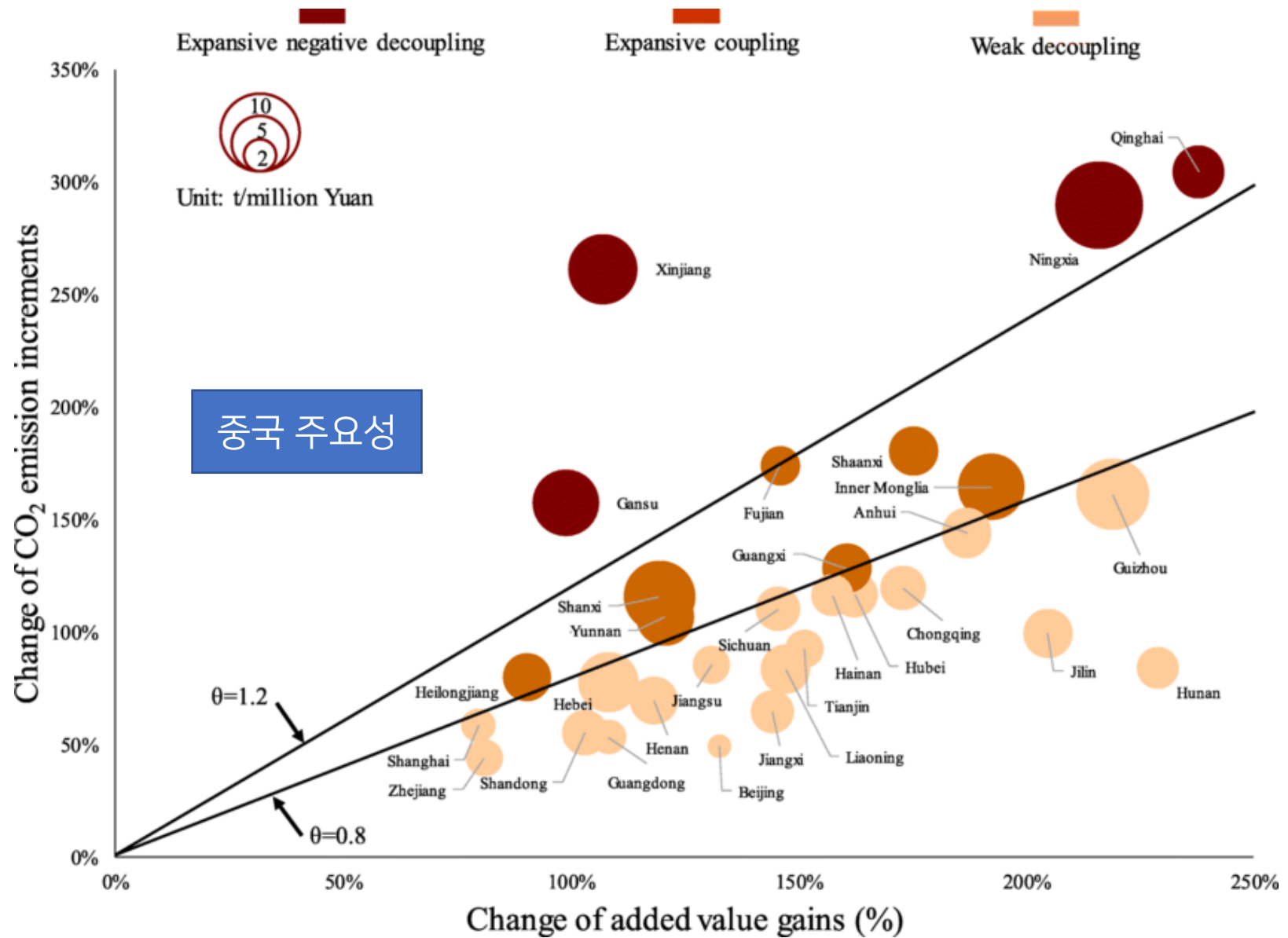
- Partially decoupled
- Low energy use and domestic extraction = low CO<sub>2</sub> emission
- How could they be successful?
- After 2008? Developing countries



# Suggested strategies

## 1. Decoupling

\*Decoupling of economic growth and CO<sub>2</sub> emissions driven by FCF in each province between 2007 and 2012. The size of one bubble refers to the value of embodied CO<sub>2</sub> emission per unit of added value in 2012

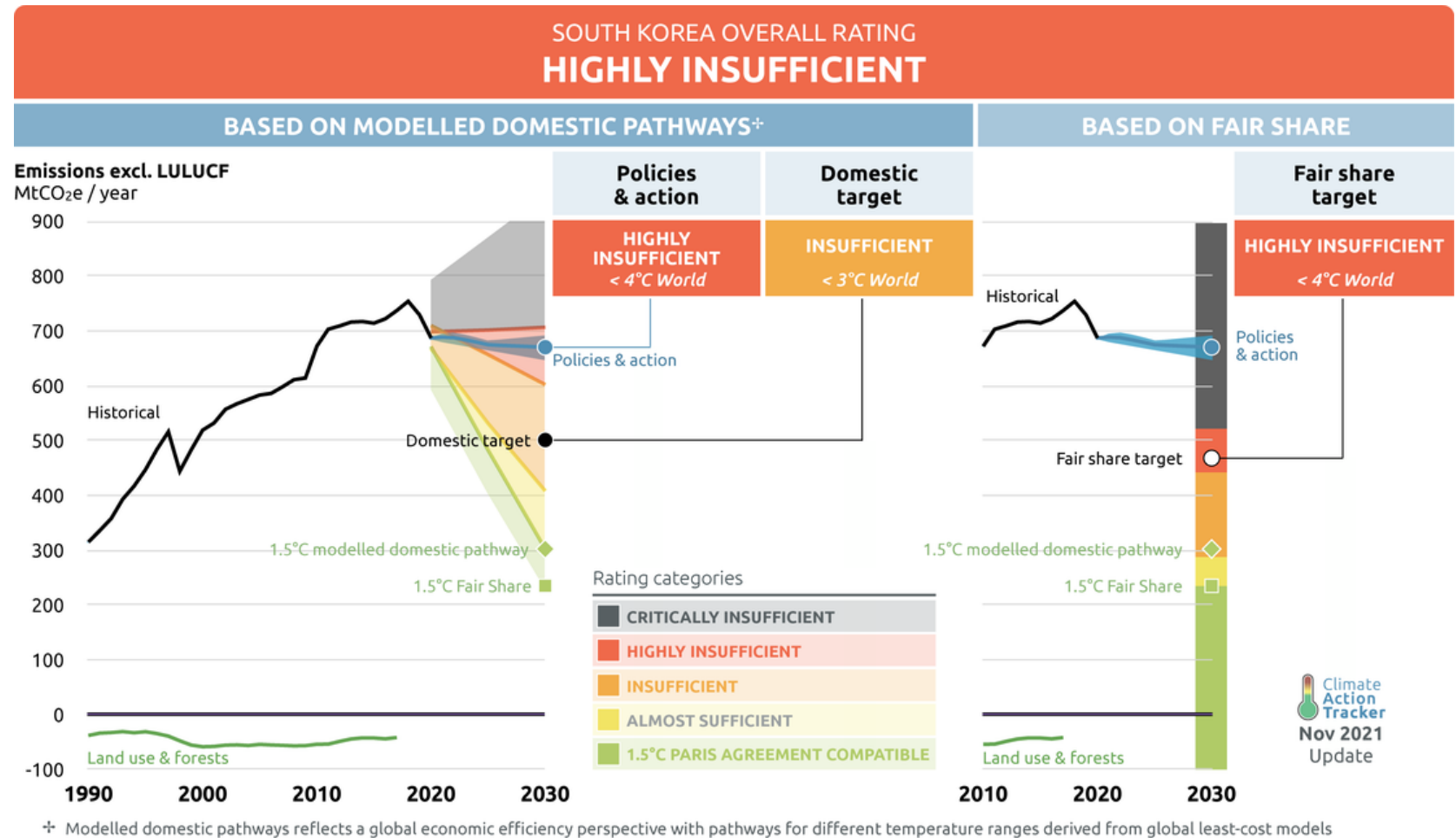


Gao, Ziyang & Geng, Yong & Wu, Rui & Zhang, Xi & Pan, Hengyu & Jiang, Huijuan. (2020). China's CO<sub>2</sub> emissions embodied in fixed capital formation and its spatial distribution. Environmental Science and Pollution Research. 27. 10.1007/s11356-020-08491-z.

# Suggested strategies

## 1. Decoupling

2. Korean green growth  
Highly insufficient result



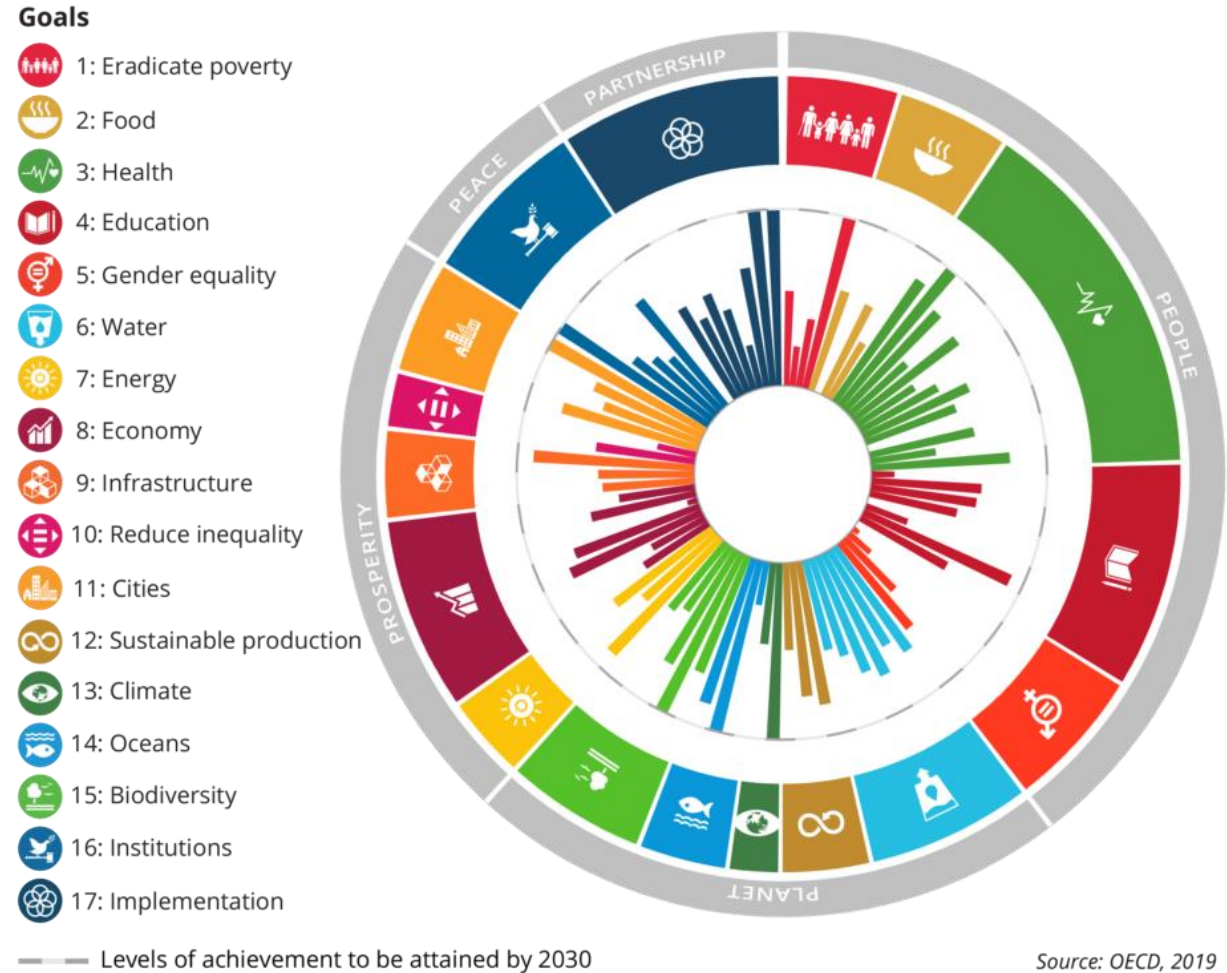
<https://climateactiontracker.org/countries/south-korea/>

# Suggested strategies

## 2. SDGs

Weak sustainability for the lack of enforcement, and voluntary participation

Figure 1. OECD countries' average distance from achieving SDG targets



<https://sdg-action.org/how-to-create-economic-growth-without-carbon-emissions-and-environmental-damage%E2%82%AC%80/>

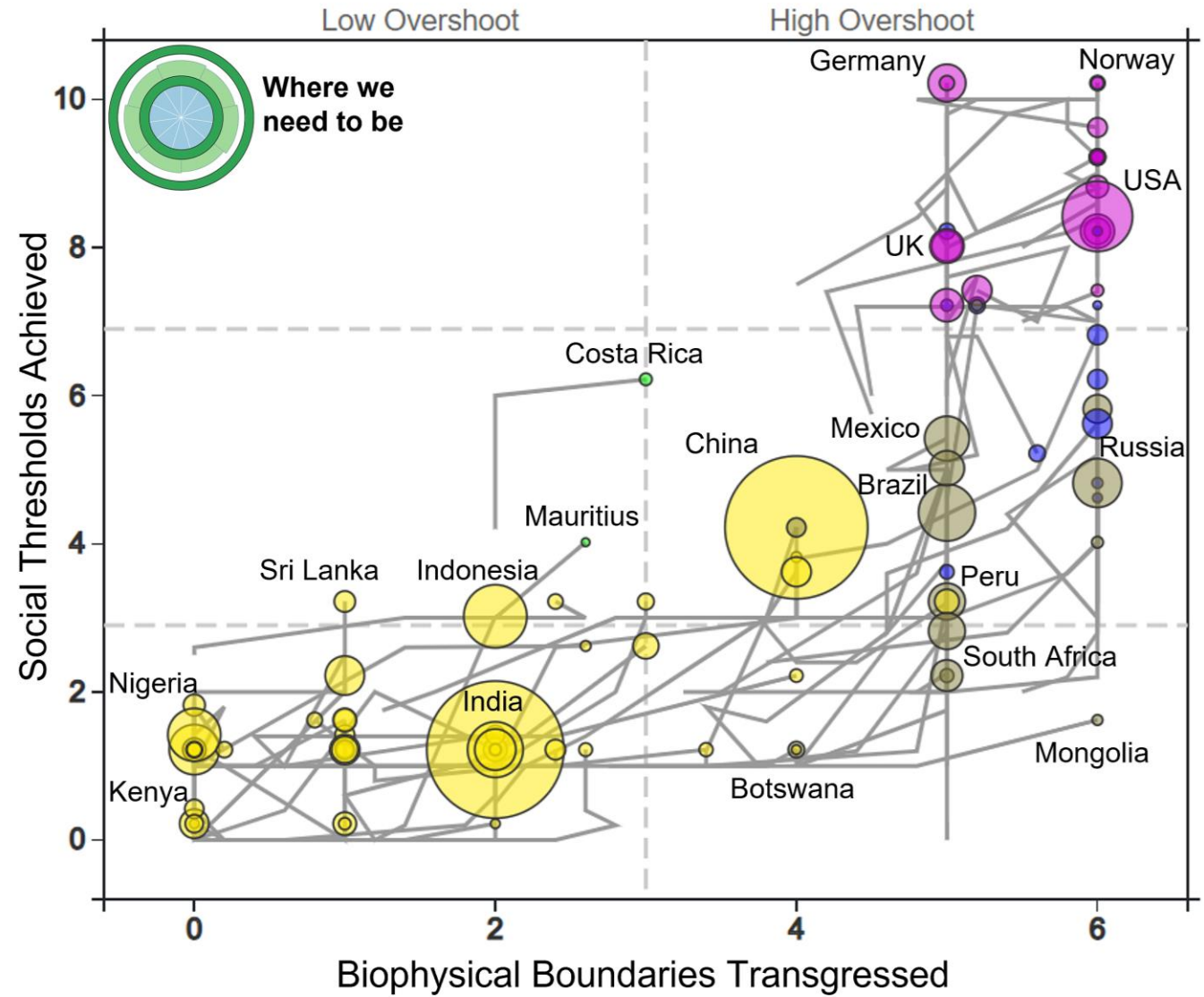


# Suggested strategies

## 3. Degrowth

Breaking ecological boundaries : social thresholds related to ecological exploitation

<https://goodlife.leeds.ac.uk/national-trends/pathways/>



Fanning, A.L., O'Neill, D.W., Hickel, J. *et al.* The social shortfall and ecological overshoot of nations. *Nat Sustain* 5, 26–36 (2022). <https://doi.org/10.1038/s41893-021-00799-z>

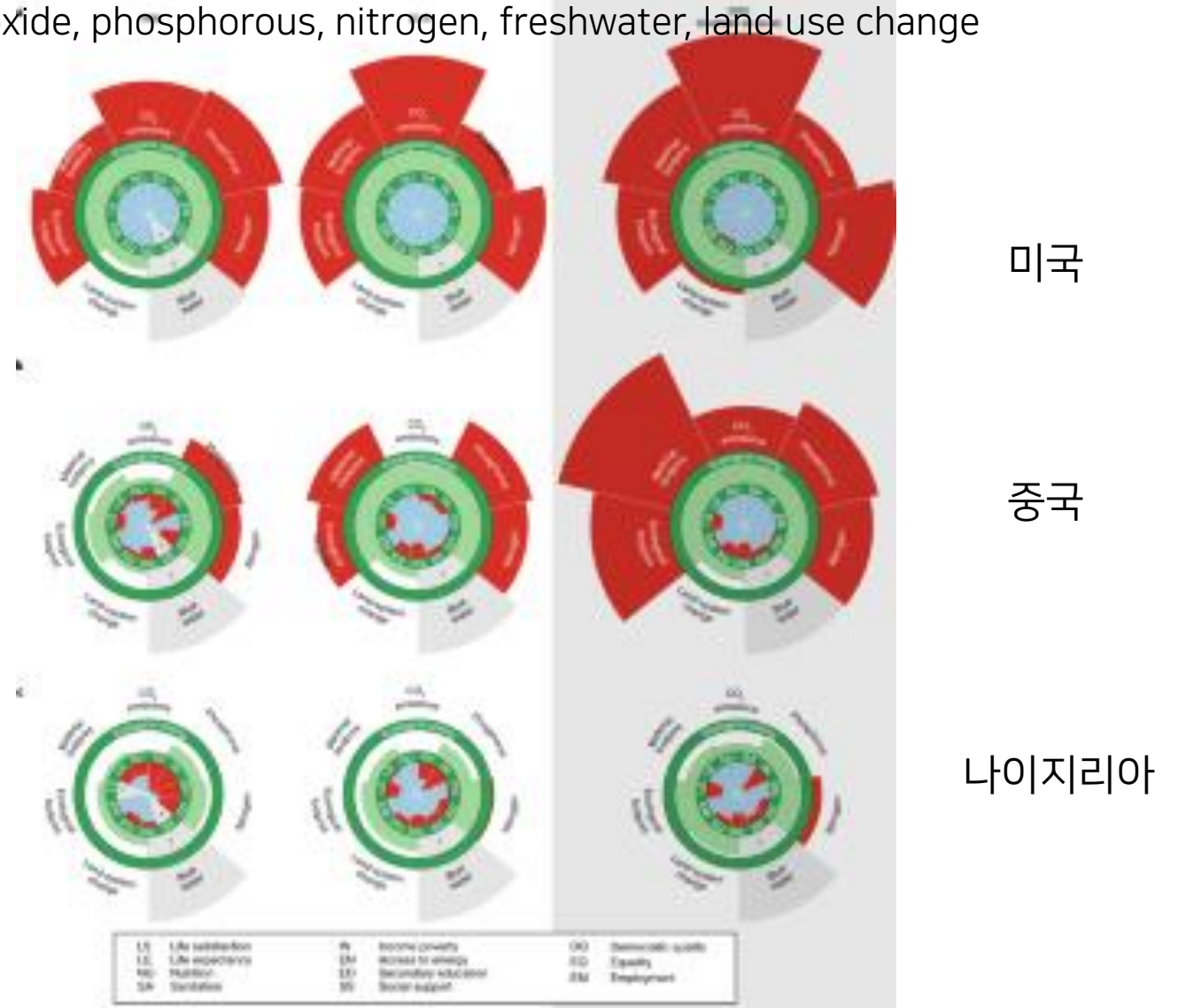
# Suggested strategies

## 3. Degrowth

To restrain from breaking boundaries, need to reduce material footprint

<https://goodlife.leeds.ac.uk/national-trends/pathways/>

Ecological boundaries: material footprint, ecological footprint, carbon dioxide, phosphorous, nitrogen, freshwater, land use change



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# Research saying radical strategies are required

Fanning, A.L., O'Neill, D.W., Hickel, J. *et al.* The social shortfall and ecological overshoot of nations. *Nat Sustain* 5, 26–36 (2022).

<https://doi.org/10.1038/s41893-021-00799-z>

“Wealthy countries must move beyond the pursuit of economic growth, which has been failing to improve social outcomes. It is also driving global climate and ecological impacts that are hitting poorer countries first and hardest. Countries like the US, UK, and Germany should consider post-growth policies that directly target non-material improvements in human well-being and radical reductions in resource use.

Lower-income countries have been imposed on these countries over decades have failed to deliver meaningful outcomes. The existing economic system mobilises Southern resources and labour to support elite consumption and serve the interests of foreign investors, rather than to meet basic needs. This urgently needs to change.

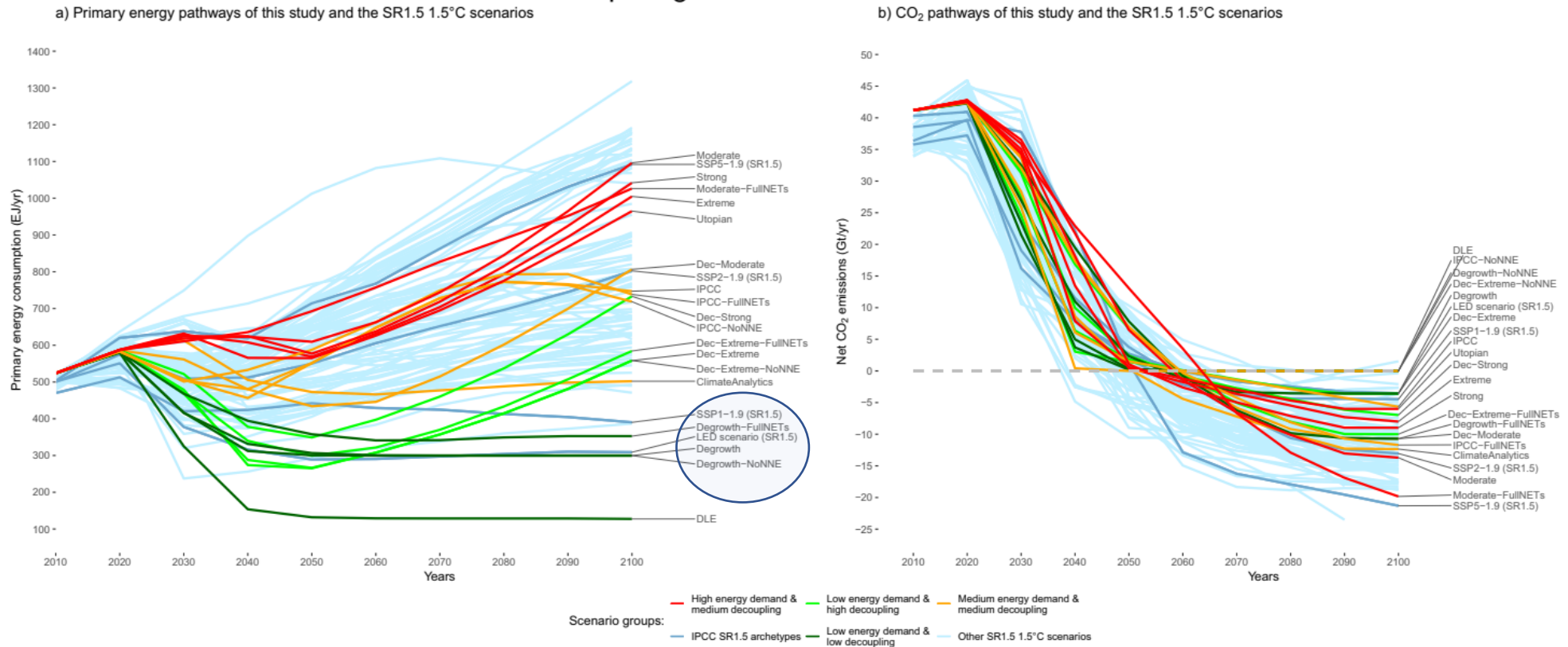
“Non-material resources and radical reduction policies for carbon emission reduction ”

자료(1992~2015)

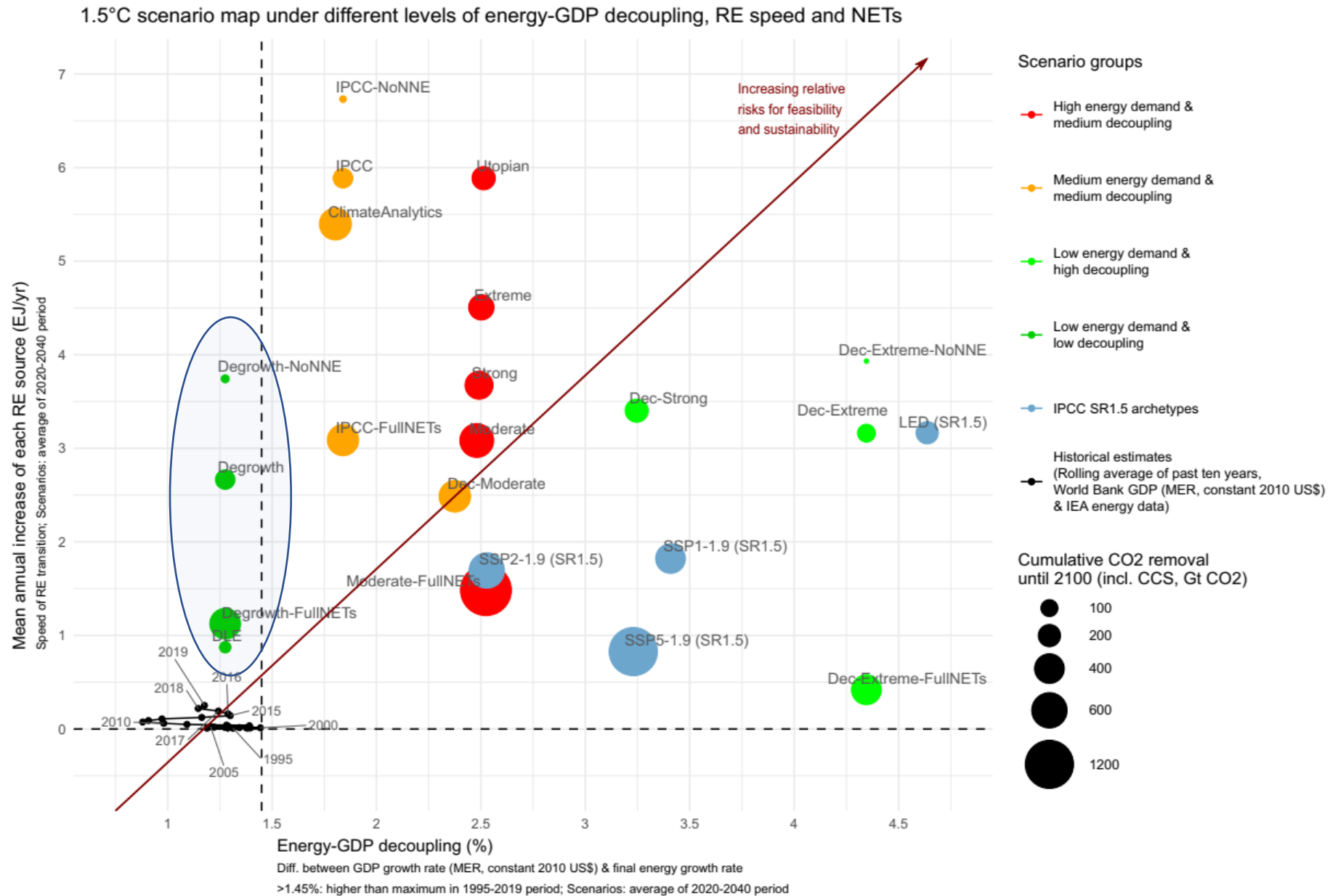
- <https://goodlife.leeds.ac.uk/national-trends/pathways/>
  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#KOR>
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  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#CRI>
  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#BRA>
  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#CHL>
  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#ARG>
  - <https://goodlife.leeds.ac.uk/national-trends/country-trends/#COL>

# Degrowth pathways for 1.5 scenarios

Comparing our scenarios to the IPCC SR1.5



Lorenz T. Keyßer & Manfred Lenzen(2021) "1.5 °C degrowth scenarios suggest the need for new mitigation pathways" Nature Communications (2021)12:2676



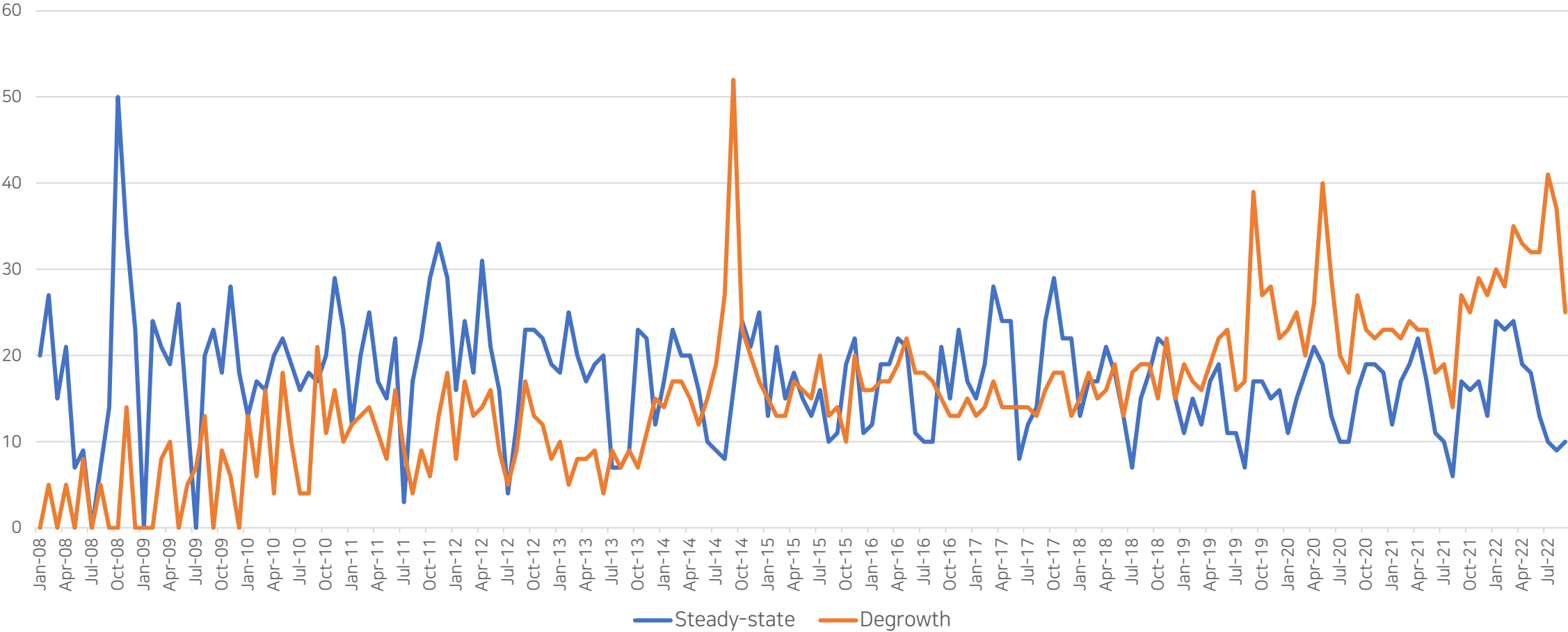
Lorenz T. Keyßer & Manfred Lenzen(2021) "1.5 °C degrowth scenarios suggest the need for new mitigation pathways" Nature Communications (2021)12:2676

# The emergence of degrowth

- 1970s <The limits to growth>(1972), Stockholm Human Environment Conference, UNEP – Earth limits and environmental pollution will be the causes of the limits of economic growth
- 1987 <Our common future> and Rio summit in 1992 “Sustainable Development” as a solution of the time when environmental problems holding back the economy
- Development is based on economic growth, so that sustainable economic growth cannot be feasible for the limited resource in the earth – qualitative development
- 1990s, Daly and ecological economists argued that steady-state economy should be taken for sustainable development
- Anti-globalization group – localization and degrowth
- Post 2008 economic crisis = anti-financing and gender inequality group – Anti-financing movement
- Since 2001, “Décroissance” appeared in a demonstration in France, degrowth has been the subject to hundreds of research papers and books.

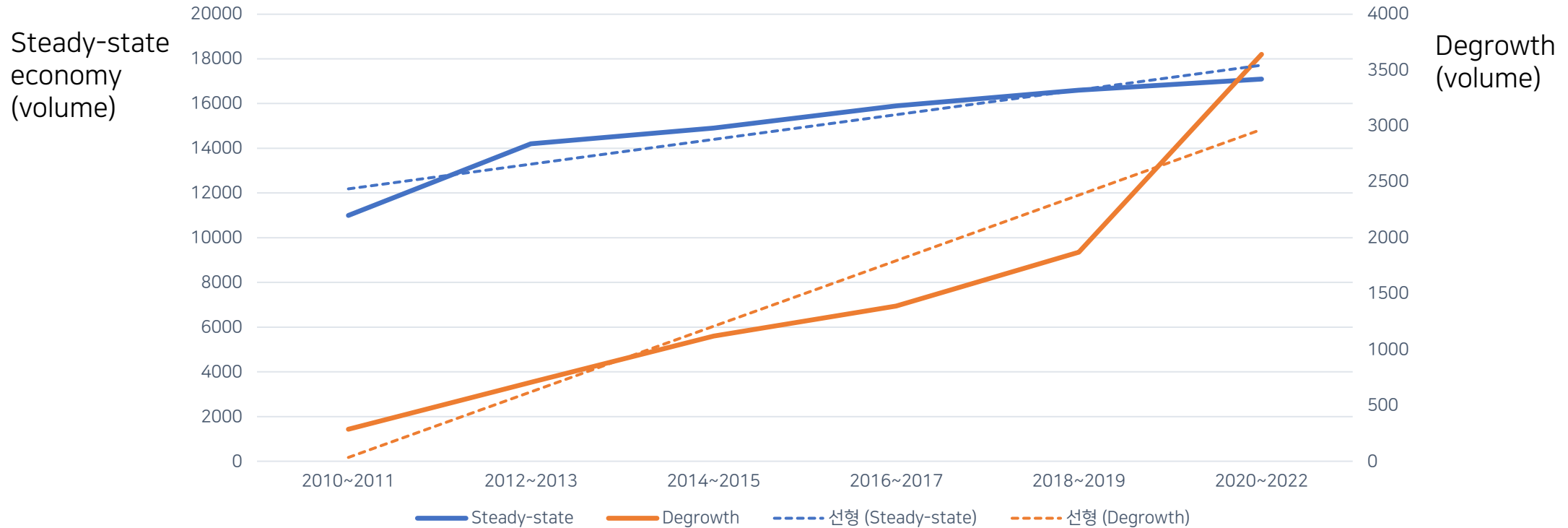
# The emergence of degrowth

Google Trends : Steady-state economy vs. Degrowth (2008.1~2022.8)



# The emergence of degrowth

Google Scholar search (2022.9.10)  
Steady-state Economy vs. Degrowth (EE)



	2010/11~2012/13	2012/13~2014/15	2014/15~2016/17	2016/17~2018/19	2018/19~2020/22
SE증가율	29.1%	4.9%	6.7%	4.4%	3.0%
DG증가율	146.0%	58.6%	24.1%	34.5%	94.7%



# Arguments about the term 'degrowth'

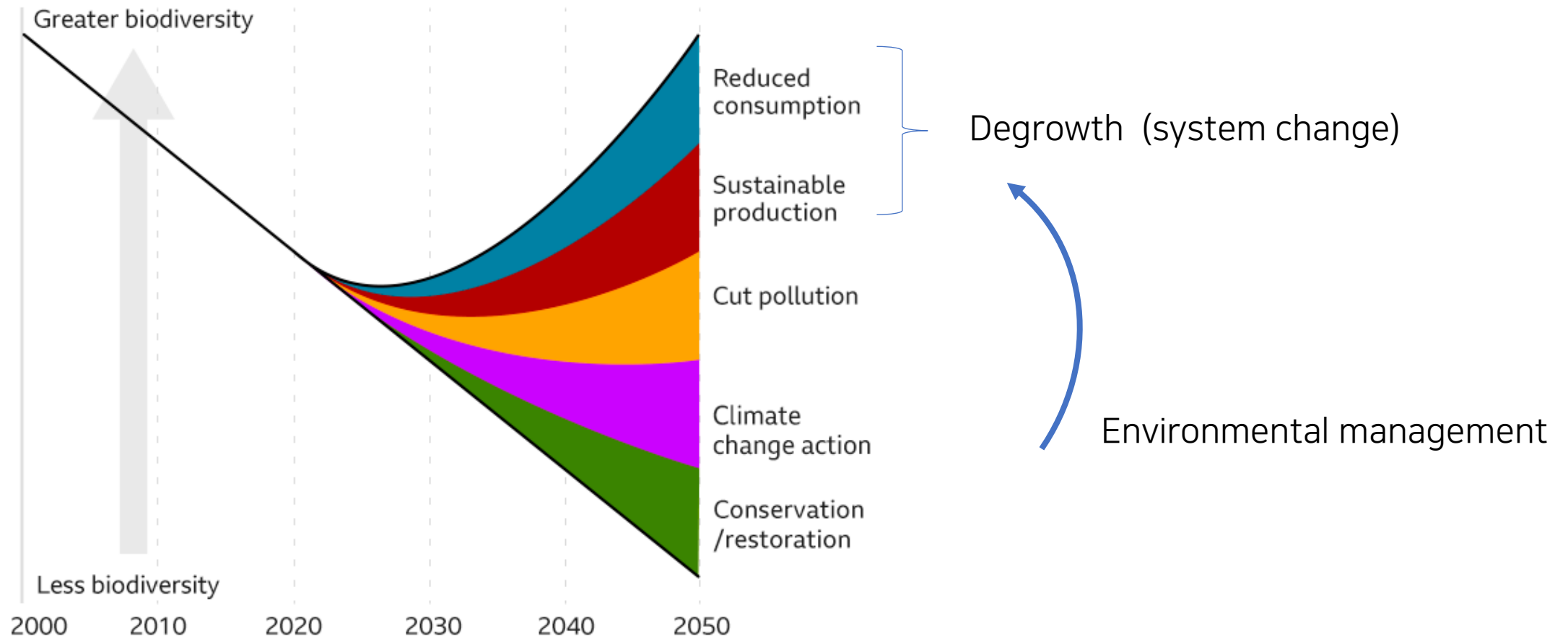
- Agreed by ecological economists, environmental activists
  - Current problems of economic growth should be reflected (Marinez Alier, D'Alisa)
  - Strong words can arouse people's attention
  - The needs to conceptualize good life by voluntary reduction of material uses
  - Decoupling and sustainable development have confused people, and co-potation occurs
- Disagreed by social-cultural scholars (including Noam Chomsky)
  - Since degrowth is an abusive term, it will rather produce side effects. Beliefs, attitudes, and values that have been hardened for a long time unconsciously judge the first impression of the term 'degrowth' negatively.
  - Degrowth group (progressive group)'s radicality matters

# Two propositions by ecological economists

- Achieving social foundation (goals) is almost impossible without trespassing ecologically safe boundaries under the current economic model.
- Degrowth is taken to be a path/strategy toward sustainable society.
  - They don't agree with the idea that a single economic index (GDP growth indicator) can express the well-being, health and pleasure of human society, and we need an economic model that focuses on the depth and continuity of relationships, connectivity, and mutual aid relationships.
  - Theory of earth limits (called Planetary Boundaries) emphasizes that the Earth system affects other factors by propagation when any one of them is exceeded. Climate crisis, biodiversity, soil pollution by excessive use of phosphorus and nitrogen, plastic marine pollution, etc. are currently approaching the limits quickly.

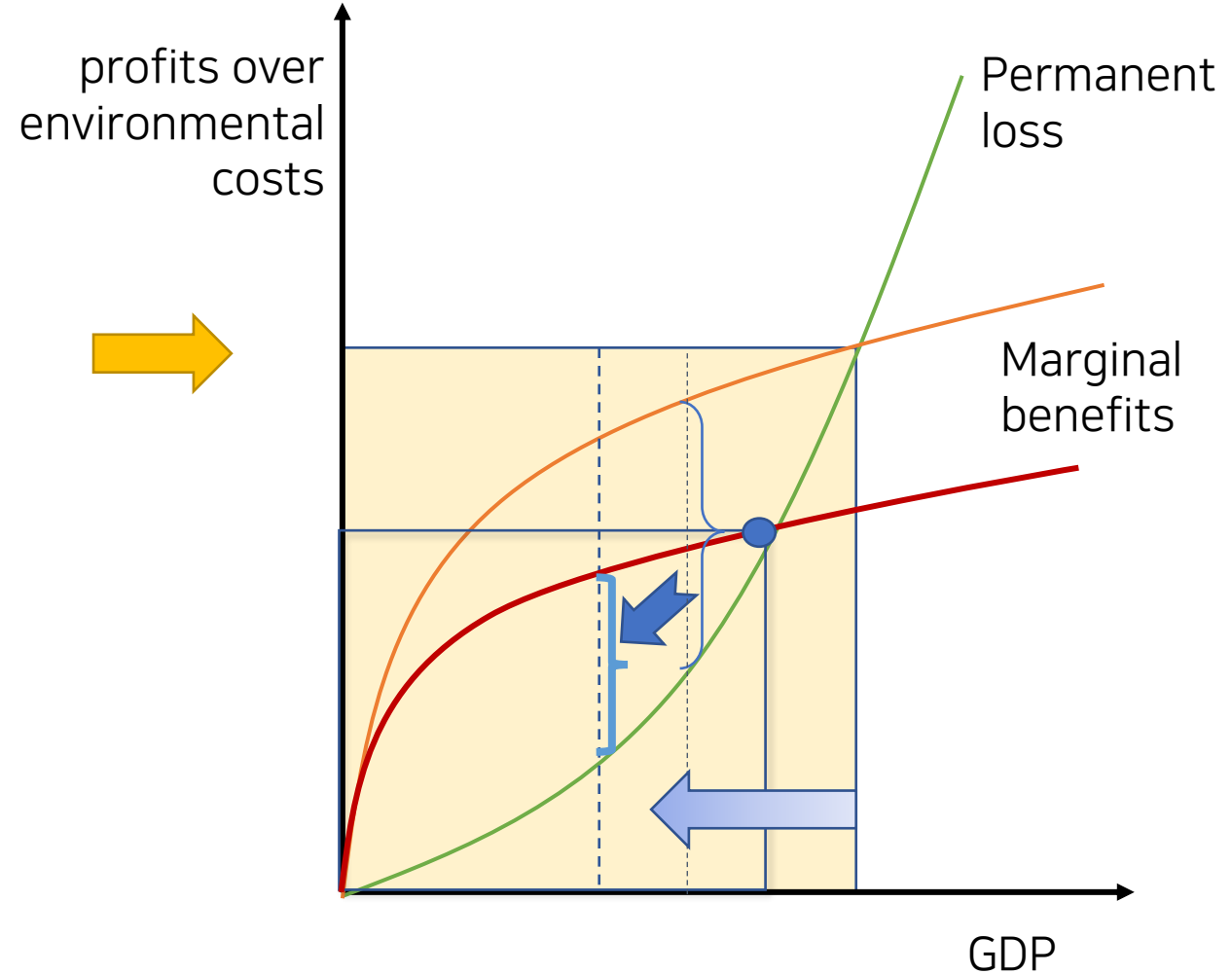
# Biodiversity perspective

How different actions could help restore biodiversity

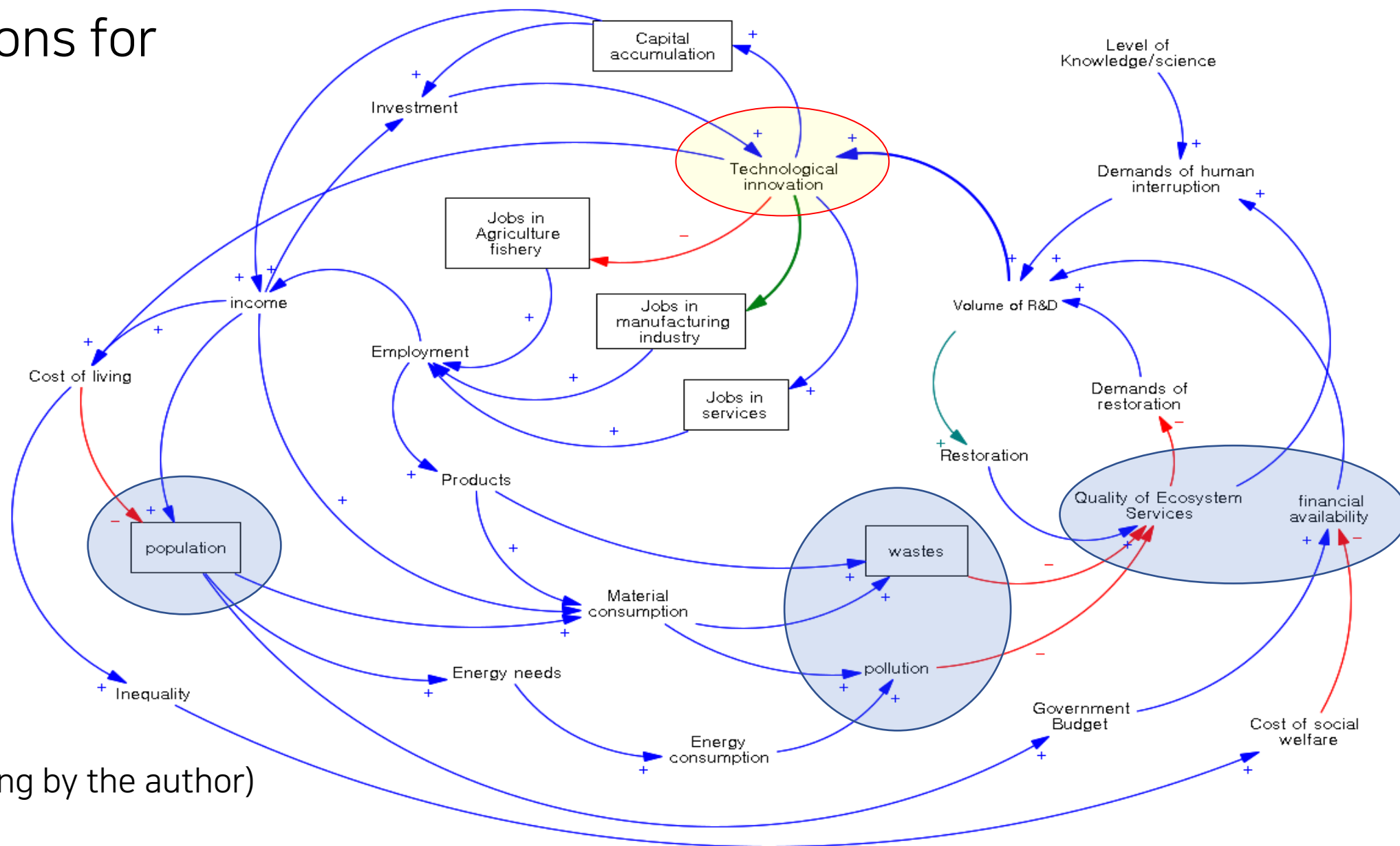


# Pathways to degrowth by ecol. econ

- Recognition of ecological limits – equity between generations
- Steady-State Economy (SE)
- Social foundation under ecological health = SD implies pathways of degrowth
- Recovery of nature's bless/gift (ecosystem services for free)
- Redistribution of profits circulates the continuous flow of energy and materials



# Possible and effective interventions for degrowth



\*(still developing by the author)

Thank you for your  
attention.