

# Global Stocktake at COP28

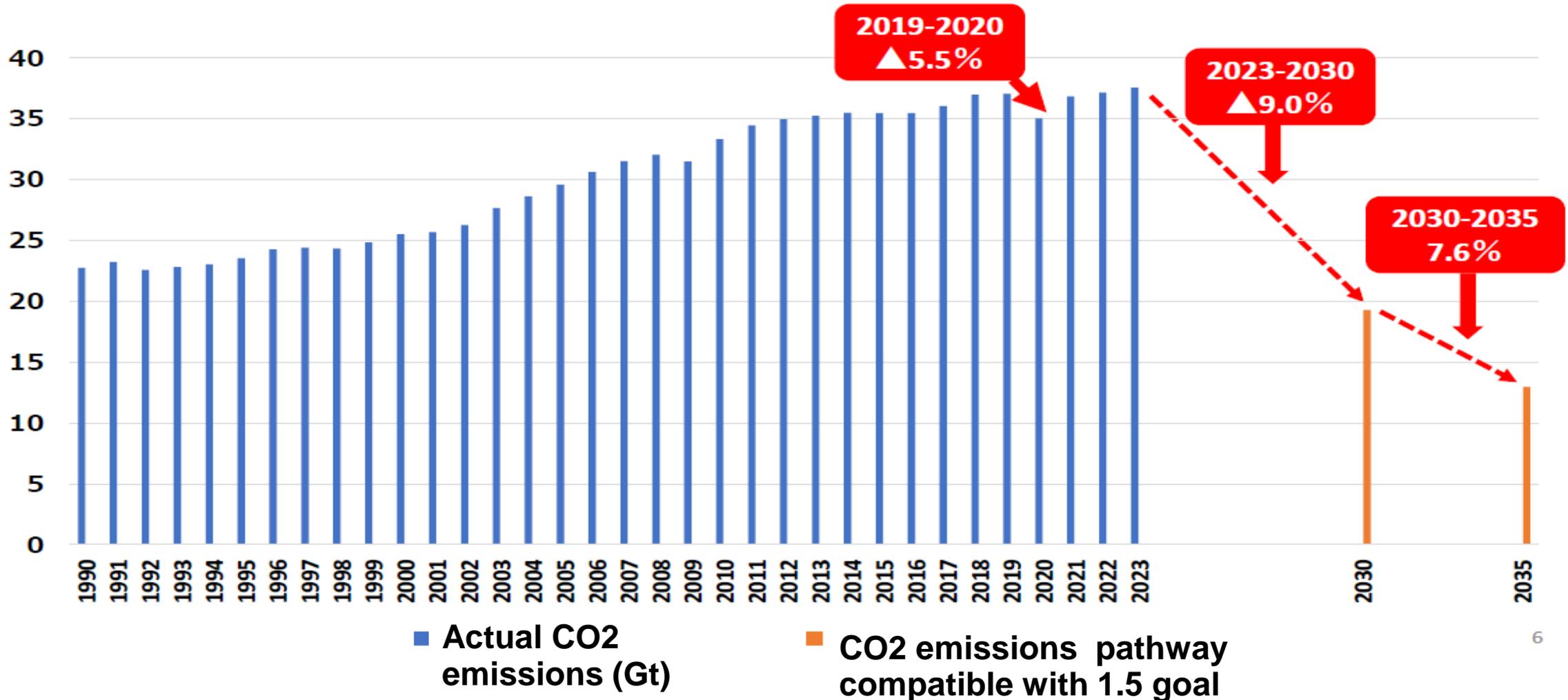
26. Recognizes the finding in the Synthesis Report of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 2 based on global modelled pathways and assumptions, that global greenhouse gas emissions are projected to peak between 2020 and at the latest before 2025 in global modelled pathways that limit warming to 1.5 ° C with no or limited overshoot and in those that limit warming to 2 ° C and assume immediate action, and notes that this does not imply peaking in all countries within this time frame, and that time frames for peaking may be shaped by sustainable development, poverty eradication needs and equity and be in line with different national circumstances, and recognizes that technology development and transfer on voluntary and mutually agreed terms, as well as capacity-building and financing, can support countries in this regard;
27. Also recognizes that limiting global warming to 1.5 ° C with no or limited overshoot requires deep, rapid and sustained reductions in global greenhouse gas emissions of 43 per cent by 2030 and 60 per cent by 2035 relative to the 2019 level and reaching net zero carbon dioxide emissions by 2050;

28. Further recognizes the need for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5 ° C pathways and calls on Parties to contribute to the following global efforts, in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches:
- (a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030;
  - (b) Accelerating efforts towards the phase-down of unabated coal power;
  - (c) Accelerating efforts globally towards net zero emission energy systems, utilizing zero- and low-carbon fuels well before or by around mid-century;
  - (d) Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science;
  - (e) Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production;
  - (f) Accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030;
  - (g) Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero and low-emission vehicles;
  - (h) Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible;
29. Recognizes that transitional fuels can play a role in facilitating the energy transition while ensuring energy security:

39. Reaffirms the nationally determined nature of nationally determined contributions and Article 4, paragraph 4, of the Paris Agreement and encourages Parties to come forward in their next nationally determined contributions with ambitious, economy-wide emission reduction targets, covering all greenhouse gases, sectors and categories and aligned with limiting global warming to 1.5 ° C, as informed by the latest science, in the light of different national circumstances;
67. Highlights the growing gap between the needs of developing country Parties, in particular those due to the increasing impacts of climate change compounded by difficult macroeconomic circumstances, and the support provided and mobilized for their efforts to implement their nationally determined contributions, highlighting that such needs are currently estimated at USD 5.8–5.9 trillion for the pre-2030 period;
68. Also highlights that the adaptation finance needs of developing countries are estimated at USD 215–387 billion annually up until 2030, and that about USD 4.3 trillion per year needs to be invested in clean energy up until 2030, increasing thereafter to USD 5 trillion per year up until 2050, to be able to reach net zero emissions by 2050;
69. Notes that scaling up new and additional grant-based, highly concessional finance, and non-debt instruments remains critical to supporting developing countries

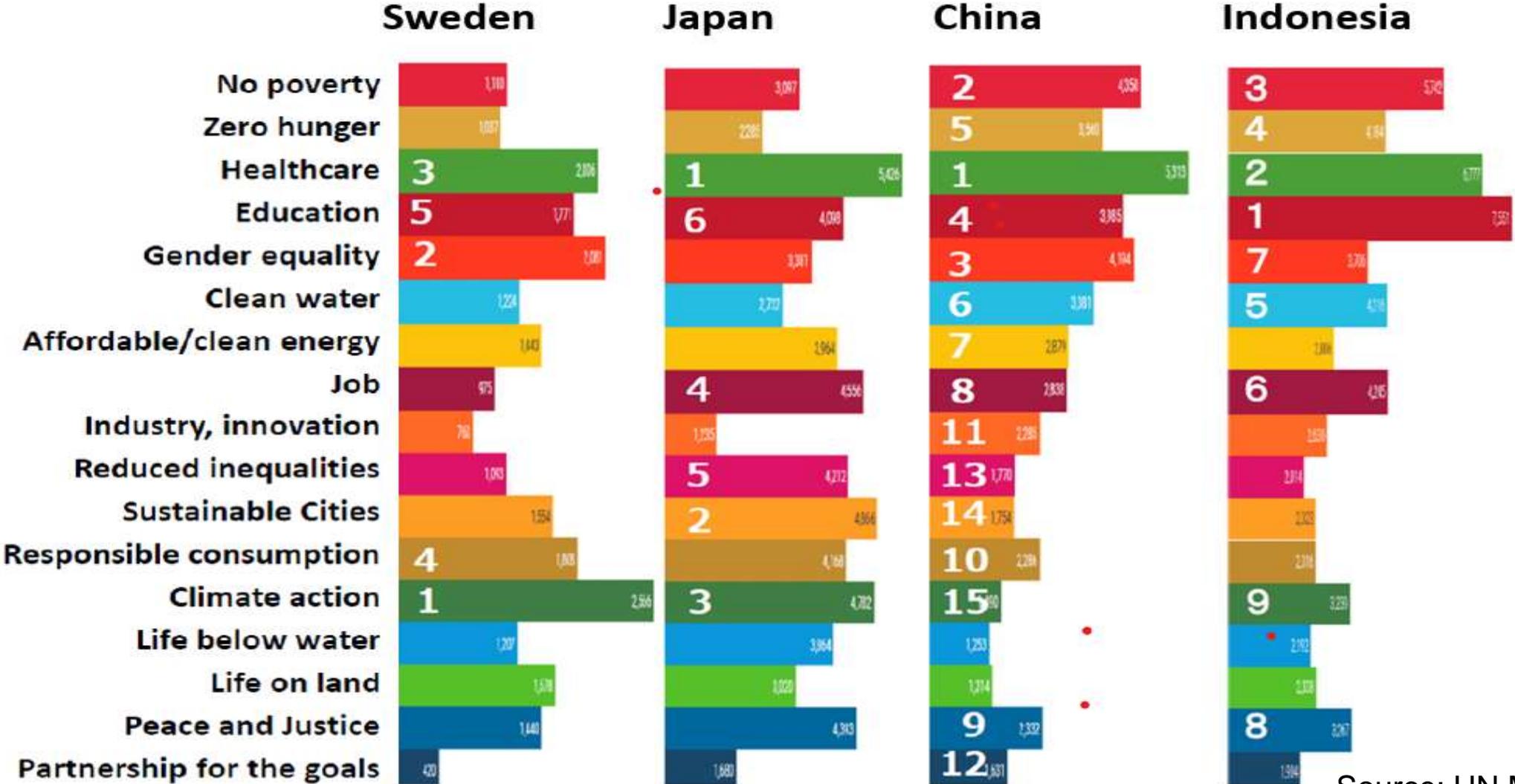
# Global Challenges: Unrealistic Pathway for 1.5 Compatibility

- Japan's NDC and LTS assumes global endeavor towards 1.5 degree and 2050 CN.
- Global emissions is not at all on the track to 1.5 degree pathway



# Global Challenges: Different Priority between North and South

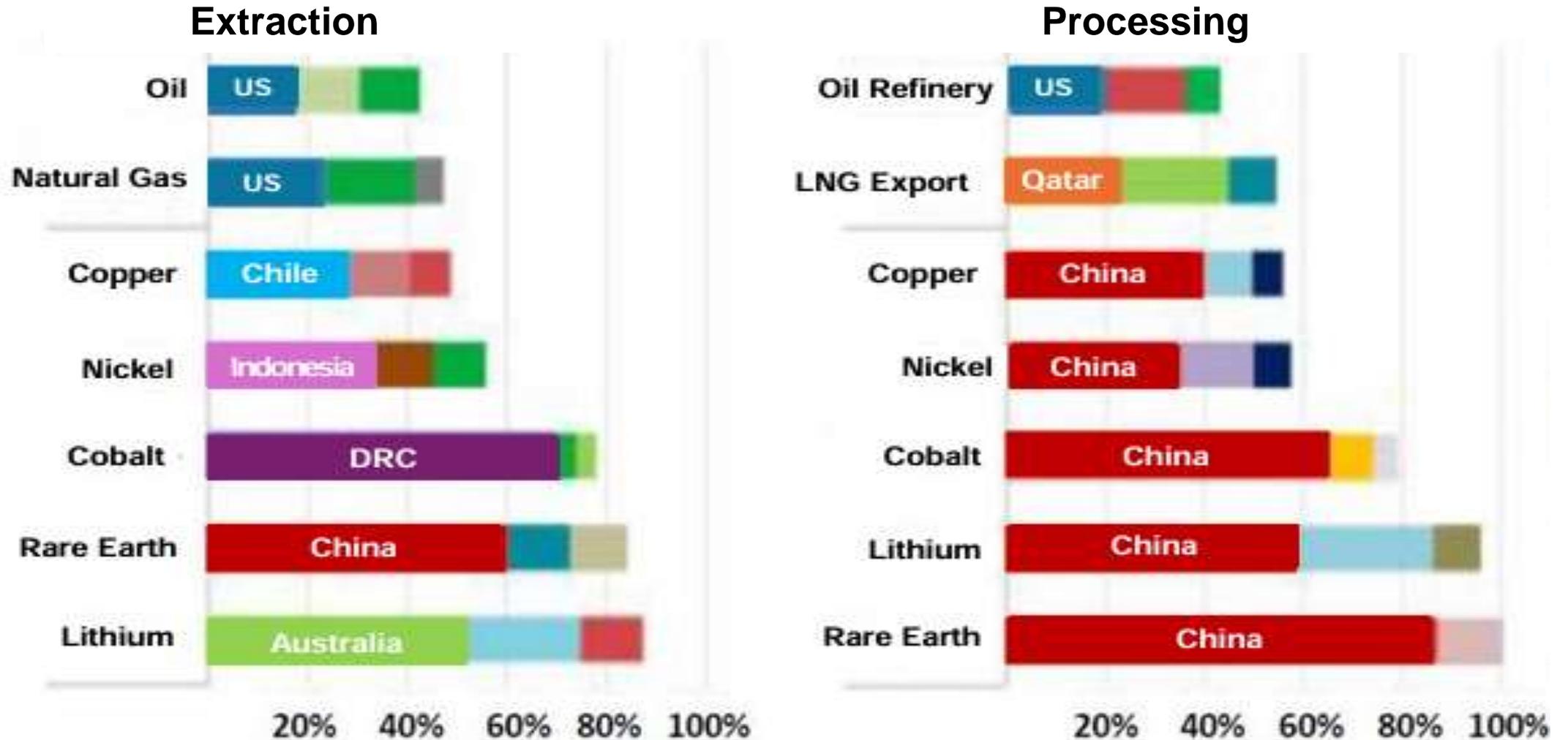
- Global North and Global South are not on the same page in their priority on SDG13



Source: UN My World 2030

# Global Challenges: Supply Security of Critical Minerals

## Share of Top 3 Countries in Resource Extraction and Processing



# Daniel Yeargin's Views on Energy Transformation

- **Technology and economic advantage drove earlier energy transition**

← → **Now, Public policy is the driver.**

- **Previous energy transitions unfolded over the course of a century or more, and they did not wholly displace the incumbent technologies ← → Today's transition is intended to unfold in little more than a quarter-century and not be additive**

- **Four major hurdles for energy transition**

- **Due to the disruptions caused by Russia's war in Ukraine, energy security has become a top priority again**
- **Today's world economy depends on hydrocarbons for over 80% of its energy. Four essential "pillars of modern civilization"- are cement, steel, plastics, and ammonia heavily dependent on the existing energy system.**
- **Priority on climate action and definition of "energy transition" is different between Global North and Global South**
- **Supply-demand crunch of critical minerals**