



# **Opening Green Windows:**

The role of stakeholders &  
international cooperation

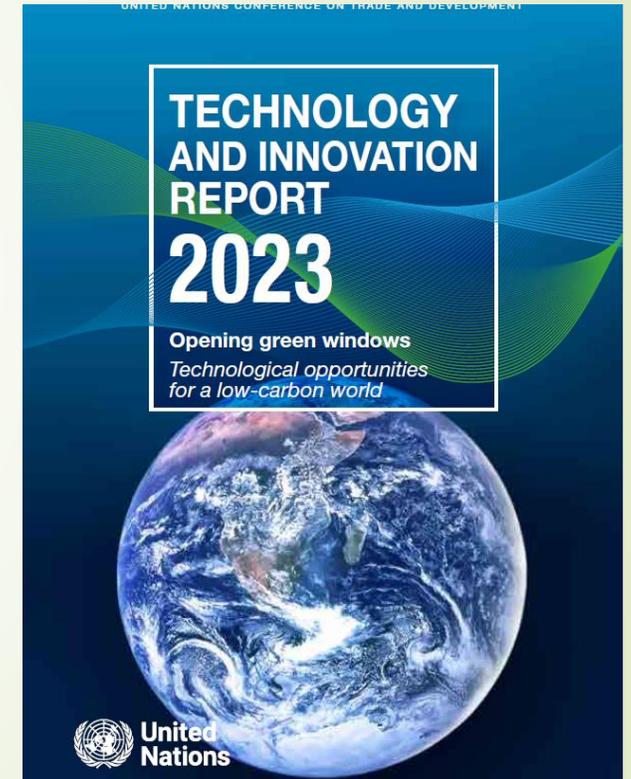
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# Technology and innovation for cleaner and more productive and competitive production

- Address climate change
- Build back better
- Catalyse economic growth
- Structural change
- Achieve the SDGs





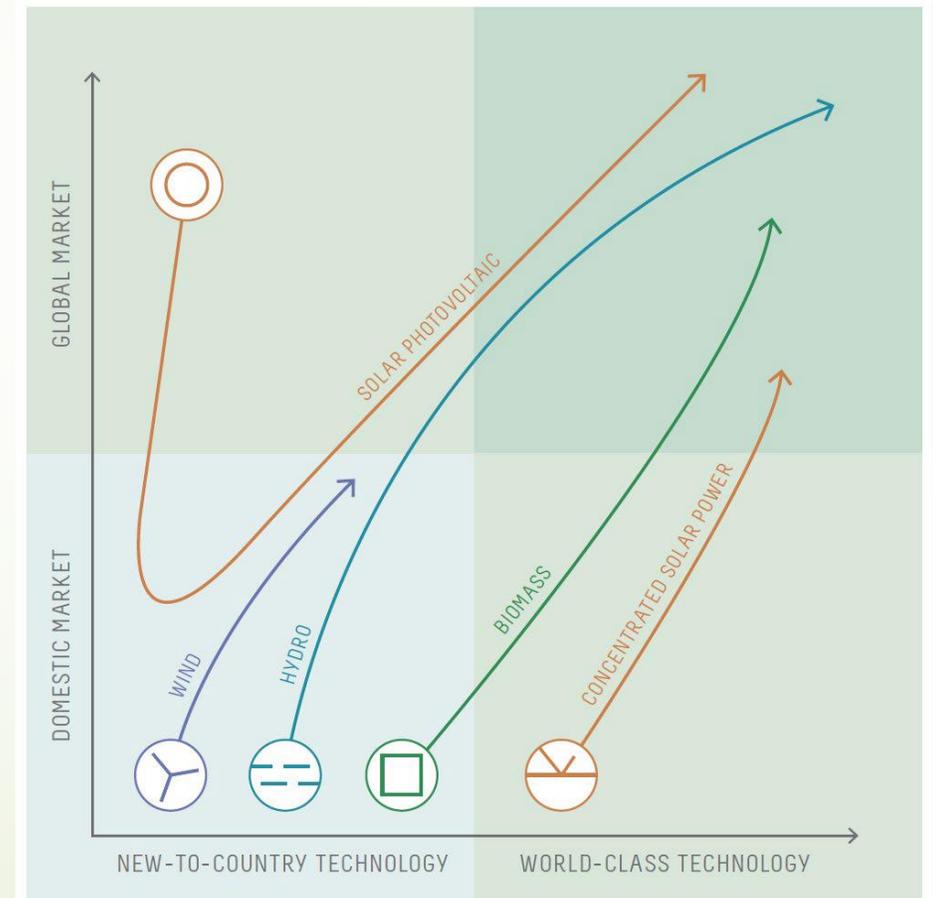
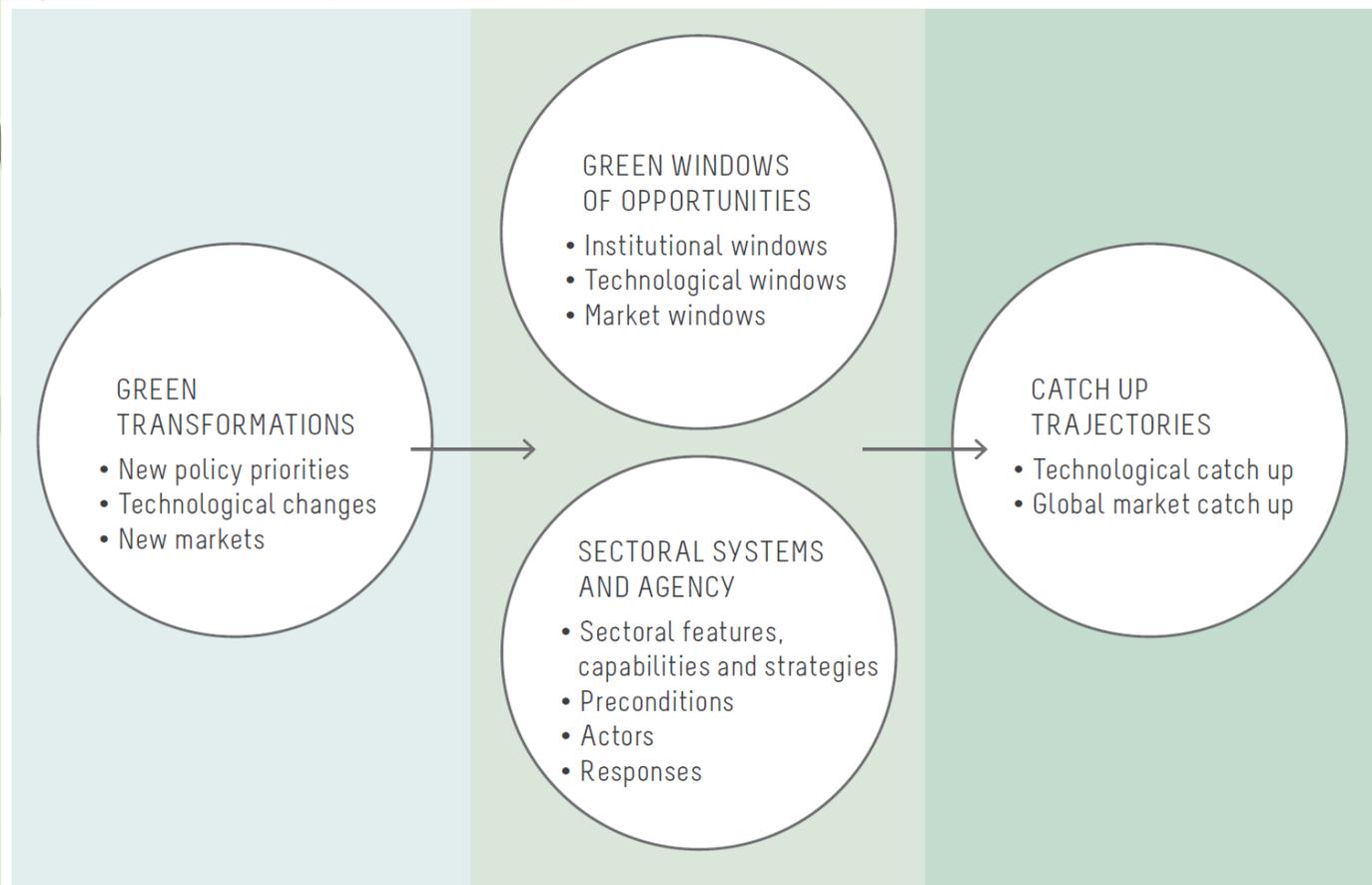
# Challenges

- Limited Progress & significant shortfalls in meeting the SDGs
- Most of the needed technologies are available, but
- Lack of technology capabilities in LDCs
- Lack of finance
- Need of stronger political will



**What should we do?**

- **Green Windows of opportunity:** Institutional, technological or market changes. (Lema, Fu & Rabellotti, 2020)
- Institutional change open new GWOs. e.g. regulatory or policy changes.
- GWO can be created, but need to be able to capture it – national capacities





# The role of political will and policy

- Externalities of environment
- Uncertainties of emerging technology
- Cost of diffusion
- Political resistance and organisational inertia
- Coordinate the sectors and players

Open national innovation system:

**Combine** tech transfer & development of domestic tech capabilities

## Solar PV industries in China and India

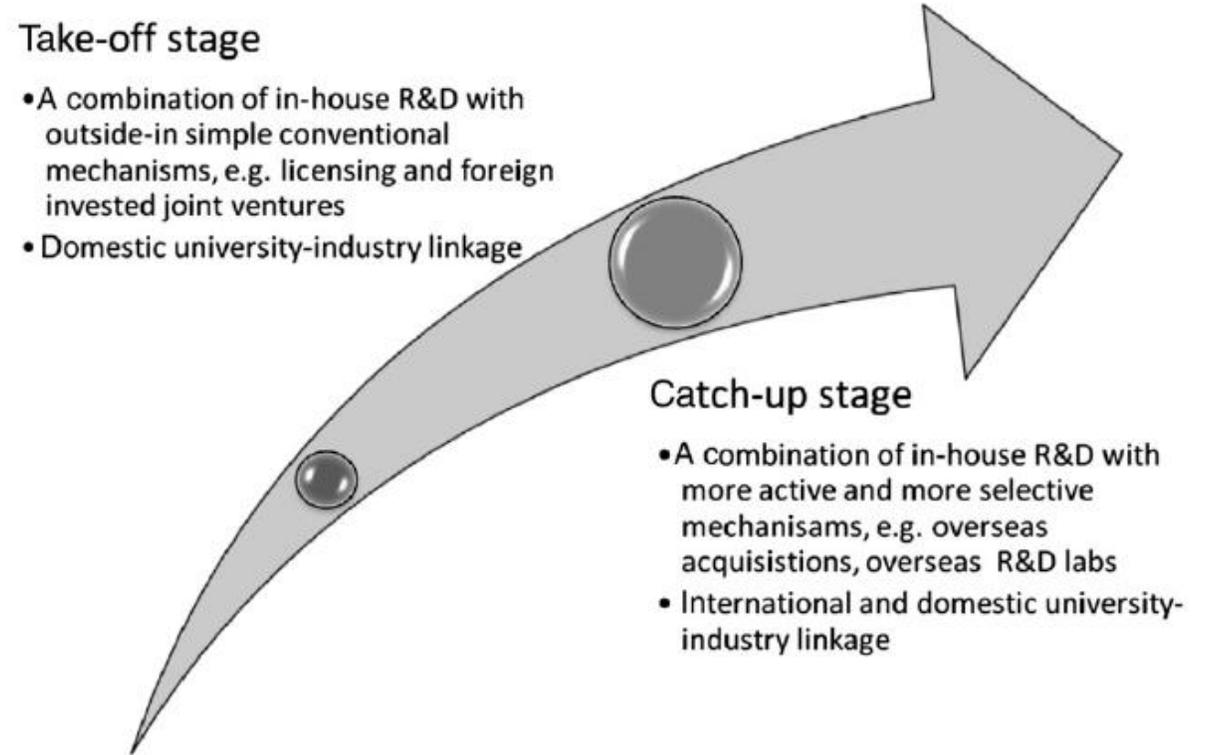


Figure 2. Mixing and sequencing of technology creation and acquisition mechanisms in solar PV industry in China and India.

Source: Fu and Zhang (2011)

# Green technology transfer & the role of MNEs

- *Technology transfer is an important element in international CC negotiation (UNFCCC).*
- **Core drivers:** policies and practices for low carbon development, both pushed by governments & international aid programs, and by firms that expand overseas.
- **Barriers:** a non-existent market; the abundance of cheap fossil fuel resources that price out renewables; Intellectual property rights: mixed evidence
- **Success factors:** suitable government policies; adequate capacities in the recipient country.
- **South-South collaboration** opens an alternative source of technology transfer

Source: Lema, Fu & Rabellotti, 2020; Kircheherr and Urban, 2018

# Emerging technologies enhanced green production

Green AI: Industrial AI; Smart city

Digit transportation - Shared bikes

Digital tech/knowledge sharing – C Live, Connect 2030

Large scale seeding - Drones

Remote working – Microsoft 360, WeCom

Digital transform of industries – sustainable supply chain

Financing - Ant Forrest, NFT fundraising, digit credit

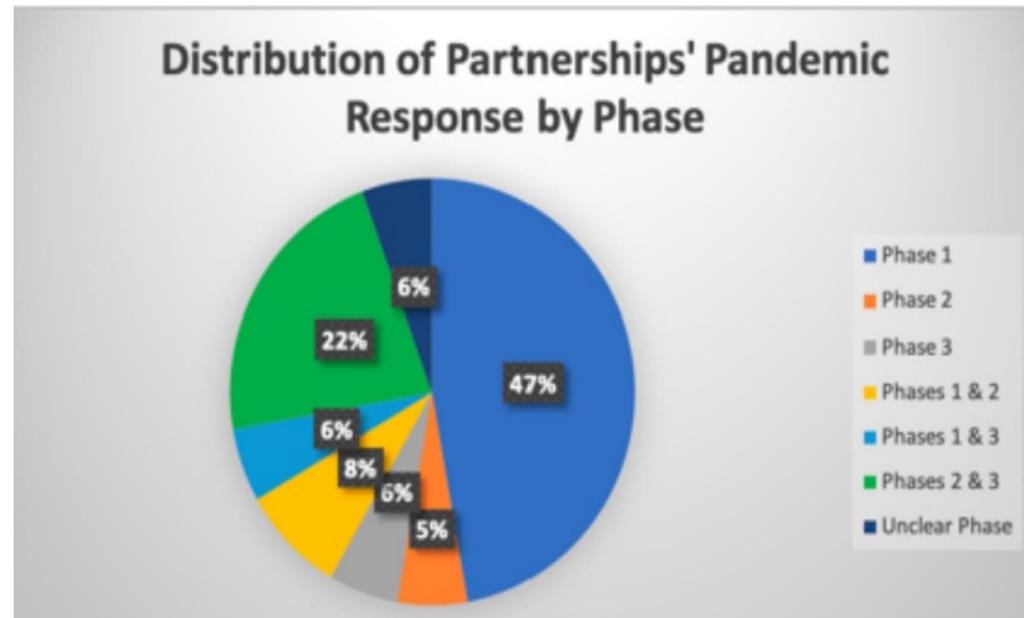
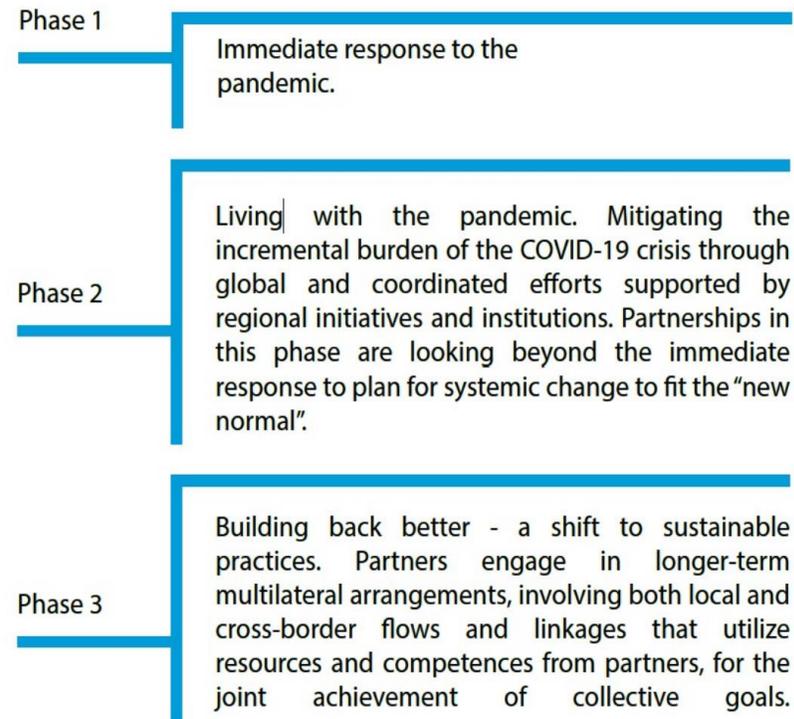
Tech pricing - OxValue.ai





**International collaboration and  
Global industrial policy for  
green and digital transformation**

# International partnership for green transformation: Lessons learned from the pandemic for quick action



Source: UNDESA (2021)

