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## Low carbon technology collaborations in Asia: Fostering technology transfer and co-innovation

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# Role of low carbon technology collaboration in Asia and its support in towards SDGs

Developing countries typically rely on foreign technology suppliers to meet national climate and energy goals

UNCTAD estimates annual global investment gaps towards climate change mitigation to be in the range of 380 - 680 billion dollars

COVID-19 pandemic has brought an unprecedented disruption in trade and availability of advanced technology equipment and machinery critical for climate mitigation initiatives.

Green technologies unlock immense opportunities in SDG areas: Environment, climate, biodiversity, sustainable production and consumption (Goal 7), clean air and water (Goal 6), sustainable industries (Goal 9) and sustainable agriculture (Goal 2)



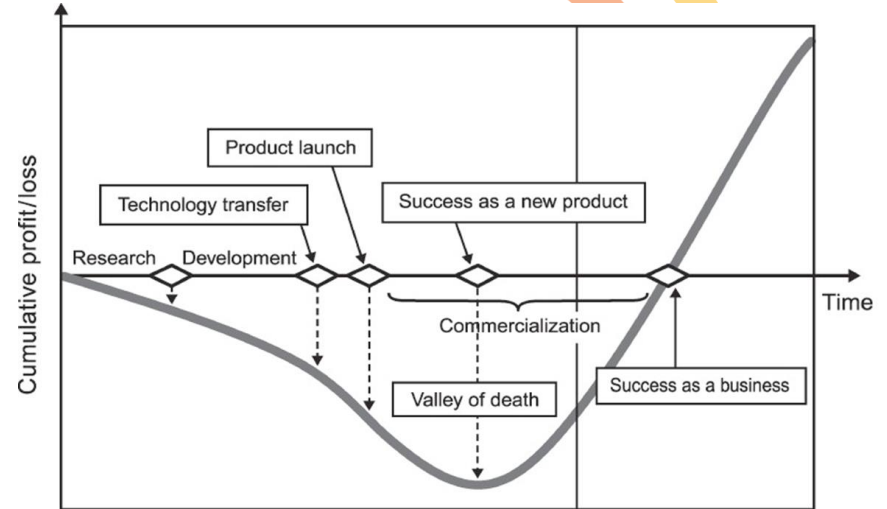
**“Co-innovation is a collaborative and iterative approach to jointly innovate, manufacture and scale up technologies” (IGES, July 2020)**

## Main components of co-innovation:

- Joint research and development and development of concepts
- Transformation of concepts into innovation

## Technology commercialization challenges

## Specific challenges related to developing countries



# Main driver of co-innovation in developing countries

**Transnational Corporations (TNCs) & Foreign Direct Investments (FDIs)** are the keys

In advanced economies, **private firms** undertake the bulk of R&D

TNCs have: research and development capacities and low carbon technologies, funds to invest in overseas, capacity to manufacture, brand name, linkages with global value chains and access to global markets

TNCs -- through FDIs can create jobs and provide opportunities for co-innovation to the recipient country

COVID-19 will cause dramatic drop in FDI in 2020 (up to 40%); thereafter it is uncertain. Developing economies likely to see the biggest fall; flows to developing Asia will be severely affected (- 35-45%)



# Strategies for Developing Countries to Foster Co-innovation with developed countries

## Strengthen National Innovation System, in particular:

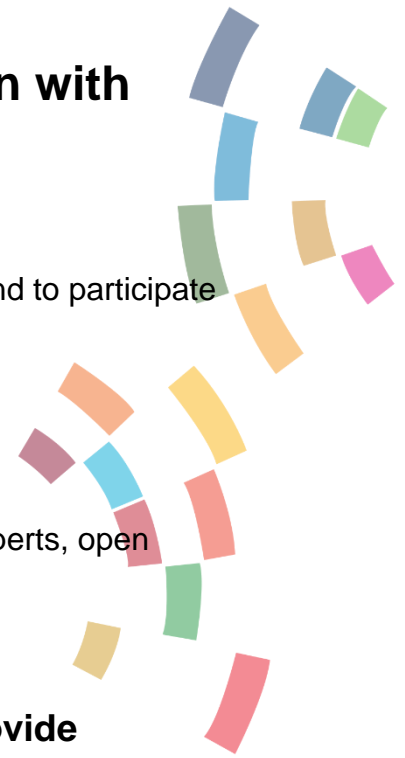
- Enhance local technological capabilities to increase absorptive capacities for technology and to participate in co-innovation;
- Improve linkages between innovation stakeholders;
- Protect and enforce intellectual property;
- Ensure good infrastructure (e.g. low cost broadband access), free movement of foreign experts, open trade & low import tariffs.

## Promote technology-oriented FDI

## Encourage high value- added activities to foster technology upgrading & provide incentives to for technological collaborations and technology transfers

**Increase demand for innovation:** public procurement (e.g. large-scale purchases to increase domestic demand)

## Integrate the technological needs when discussing Official Development Aids



# Can Co-innovation Accelerate Japanese Technology Transfer to Asia?

- Japan is amongst the world's largest investors in science and innovation, spending almost 3.5% of GDP on research and development
- Low openness to foreign knowledge and technology – evidenced by the low levels of international co-authorship and co-invention and the low levels of foreign direct investment in Japan, compared to other developed countries.
- Important to further enhance the **openness of the Japanese economy to foreign knowledge and technology**, including by continuing to encourage greater **international mobility of researchers**.



# Thank you



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