

# **EGTT contribution to the discussion on realizing the full potential of technologies**

**Chow Kok Kee**

**Chair**

**Expert Group on Technology Transfer**

**Dialogue workshop on realizing the full  
potential of technologies**

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# EGTT | What are the objectives of EGTT and what is the work it undertakes?

**Objectives: to enhance the implementation of the Convention and to advance the technology transfer under the Convention**

**Work: analyse and identify ways to facilitate technology transfer activities, including technology framework, and make recommendations**

## **Thematic areas:**

- **Technology needs assessments**
- **Technology information**
- **Enabling environments**
- **Capacity building**
- **Mechanisms**
  - » Innovative financing
  - » Cooperation with relevant Conventions and instruments
  - » Endogenous development of technology through and joint R&D
  - » Collaborative R&D on technologies

United Nations Framework Convention on Climate Change

UNFCCC

**EXPERT GROUP ON TECHNOLOGY TRANSFER**  
FIVE YEARS OF WORK



# Guiding questions | How they relate to the work done by EGTT?

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What is the role of policy and legislation? → **Enabling environments**

How can the public and private sectors be further engaged and provided with the right incentives at all stages of the technology development cycle? → **Innovative financing**

Investment:

- Could a multilateral fund place low carbon technologies in the public domain and make them available to developing countries?
- What could be the role of concessionary loans, export loans or tax incentives?
- What other instruments are available and what experience do we have with them?

→ **Innovative financing, IPRs**

## **Guiding questions | How they relate to the work done by EGTT?**

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**What action is needed to increase application of technologies (currently available technologies, at the demonstration level or not yet in the markets due to barriers) and to initiate the development of new technological solutions? → Identification of prioritised technology needs, identification and assessment of technologies for adaptation to climate change, access to technology information, capacity building and enabling environments**

**What action is needed to overcome barriers and make use of opportunities for the deployment or development of clean technologies in key sectors? → Enabling environments**

**What are the characteristics of successful technology cooperation? → Round table discussions, workshops on innovative financing and enabling environments**

## **Technology | What action is needed to increase application of available technologies? → Identify priority technology needs of developing countries**

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### **Technology needs assessments (TNAs) – synthesis report (FCCC/SBSTA/2006/INF.1):**

- **Highlights priority technology needs to mitigate greenhouse gas emissions and facilitate adaptation to the adverse impacts of climate change based on information contained in 23 TNAs and 25 initial national communications submitted by non-Annex I Parties (32 TNAs studies completed to date)**
- **Highlights ways used to involve stakeholders in a consultative process to conduct TNAs, including the methodologies and criteria used to prioritise technology needs**
- **Draws attention to specific barriers to technology transfer and suggests measures to address them, including through capacity-building**

## **Technology | What action is needed to increase application of available technologies? → Identify priority technology needs of developing countries**

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**The most common mitigation sectors were energy, industry, and transport**

- **The most common energy generation priorities included renewable energy (solar photovoltaic, biomass, mini- and micro-hydro), combined heat and power and demand-side**

**Technology needs and financial flows:**

**Do they match?**

**Are there any gaps?**

**The most commonly targeted adaptation sectors were agriculture and fisheries, followed by coastal zones, water resources and human health**

- **Most common priorities for coastal zone included technologies to protect against and accommodate sea level rise and retreat from coastal areas**

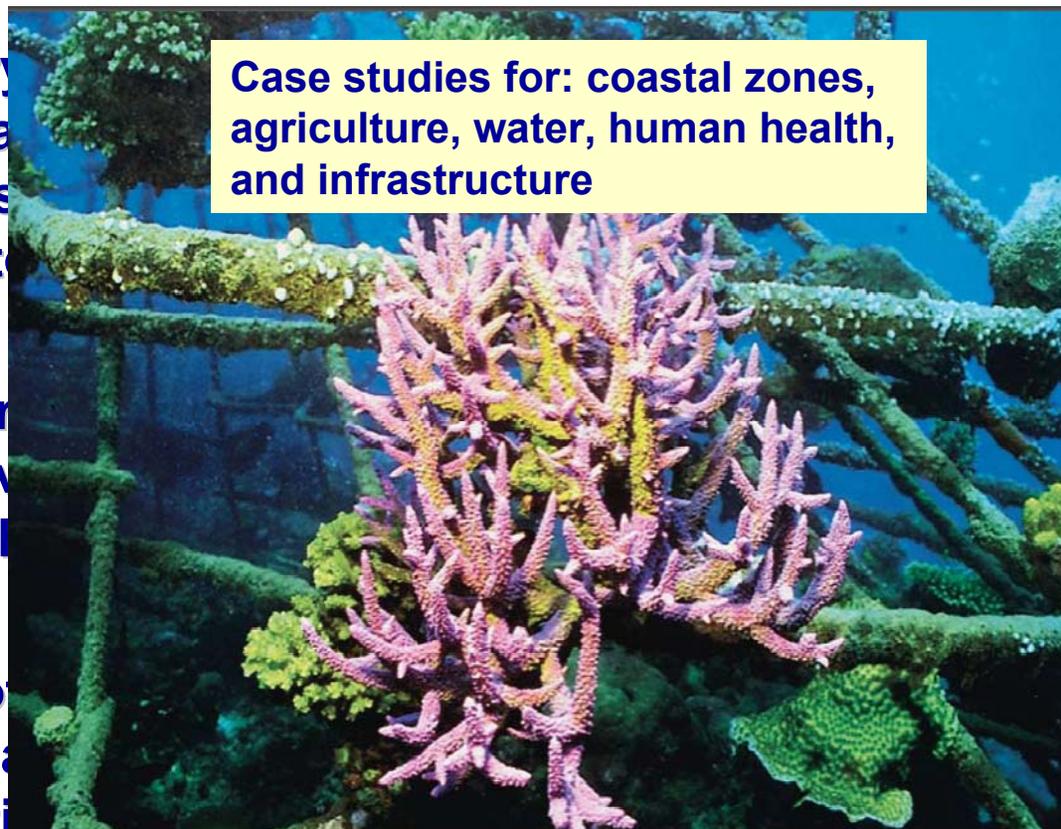
# Technology | What action is needed to increase application of available technologies? → Consider particularities of technologies for adaptation

Society has a long history of dealing with extreme weather events and therefore **exist** to address knowledge of or access to

Existing technologies vary from simple to complex, from inexpensive to requiring technology

The policy implications of such technologies for adaptation and of new technologies via national and of would need to be

Case studies for: coastal zones, agriculture, water, human health, and infrastructure



TECHNOLOGIES FOR ADAPTATION  
TO CLIMATE CHANGE



# Technology | What are the characteristics of successful technology cooperation?

## Private sector participation | Incentives for such participation

could be created through measures, feed-in tariffs, carbon markets and future investment

Collaborated with the secretariat in conducting two senior-level round table discussions on:

- enabling environments for technology transfer (COP 9)
- international technology cooperation and partnerships in the development, deployment, diffusion and transfer of ESTs (COP 12)
- Workshops on innovative financing

Governments establish investment in technology

capacity, and creating cost-competitive technologies

**Better use of existing financial instruments.** Combine multilateral and bilateral, public and private-sector funding more effectively to create a financial multiplier

Consider **a wider process** of technological capacity building in developing countries (relies on the transfer of knowledge and expertise as well as hardware) and of improving the capacity of companies to absorb new technologies

# Technology | How can we build upon successful cooperation?

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**Encourage** a broader technology development process, relevant regulations, voluntary programmes and international cooperation

**Raise awareness** of successful examples of technology cooperation and partnerships, and **identify the gaps** in the process. Promote information exchange on successful cooperation and partnerships, and providing a forum for the sharing of experiences, good practices, and and benchmarks

**Disseminate expertise** in determining the cost-effectiveness of technology options, in order to enable the existing financial resources and environmental expertise to be used in a more efficient way

**Enhance the participation of developing countries** in international technology cooperation and partnerships, and replicating the good experience of existing partnerships with other technologies

# Policy | What is the role of policy and legislation?

**Policies are required to support the low-carbon and high-efficiency technologies for adaptation to climate timescale**

**Example: efficient vehicles**

Policy Choice	Cap and Trade (C&T)	Tax/Subsidy
Increase fuel economy for 2 billion cars from 30 to 60 mpg	Applied upstream. Impact similar to tax on fuel, and depends on price (see next column)	Applied upstream. Impact similar to tax on fuel, and depends on price (see next column)

Source: Scaling Up: Global Technology Deployment to Stabilize Emissions



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ENABLING ENVIRONMENTS FOR TECHNOLOGY TRANSFER

Technical paper\*

**Case studies for: buildings, transport, industry, energy supply, agriculture and forestry, solid waste management and waste-water treatment, human health, coastal adaptation**

\* This paper was prepared by Malini Ranganathan and Els Reynaers at The Energy and Resources Institute (TERI), New Delhi, India. Additional input was received from the third meeting (30-31 May 2003) of the Expert Group on Technology Transfer (EGTT). The technical paper was commissioned by the secretariat of the United Nations Framework Convention on Climate Change. It does not necessarily reflect the views of the secretariat; the responsibility for the text remains with the authors.

# **Policy** | How to overcome barriers and make use of opportunities for technology cooperation and transfer?

## **→ Enable environments**

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Creating effective technology transfer environments frequently involves **fostering changes at local, national, regional and global levels**

Successful technology transfer is highly dependent on the involvement of a wide variety of stakeholders, and **governments have a crucial role** in creating favourable conditions

A multidisciplinary approach and improved **international cooperation** will be important in climate technology **development stages**, including R&D, diffusion and implementation

The creation of enabling environments should take into account **not only trade and investment policies, but environmental policies as well**

# Policy | How to overcome barriers and make use of opportunities for technology cooperation and transfer?

→ Enable environments

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## Barriers to technology transfer exist:

- At **every stage** of transfer and take a variety of forms including technical, economic, political, cultural, social, behavioural and/or institutional
- Because of **public policies** designed to address social, economic or institutional issues other than climate change. Removing barriers can have positive and/or negative consequences in terms of these related issues. These effects should be addressed in considering the best policies for creating enabling environments

Although national circumstances differ widely, **opportunities exist** for facilitating technology transfer through appropriate enabling environments in transferring and recipient countries

# **Policy** | How to overcome barriers and make use of opportunities for technology cooperation and transfer?

## **→ Enable environments**

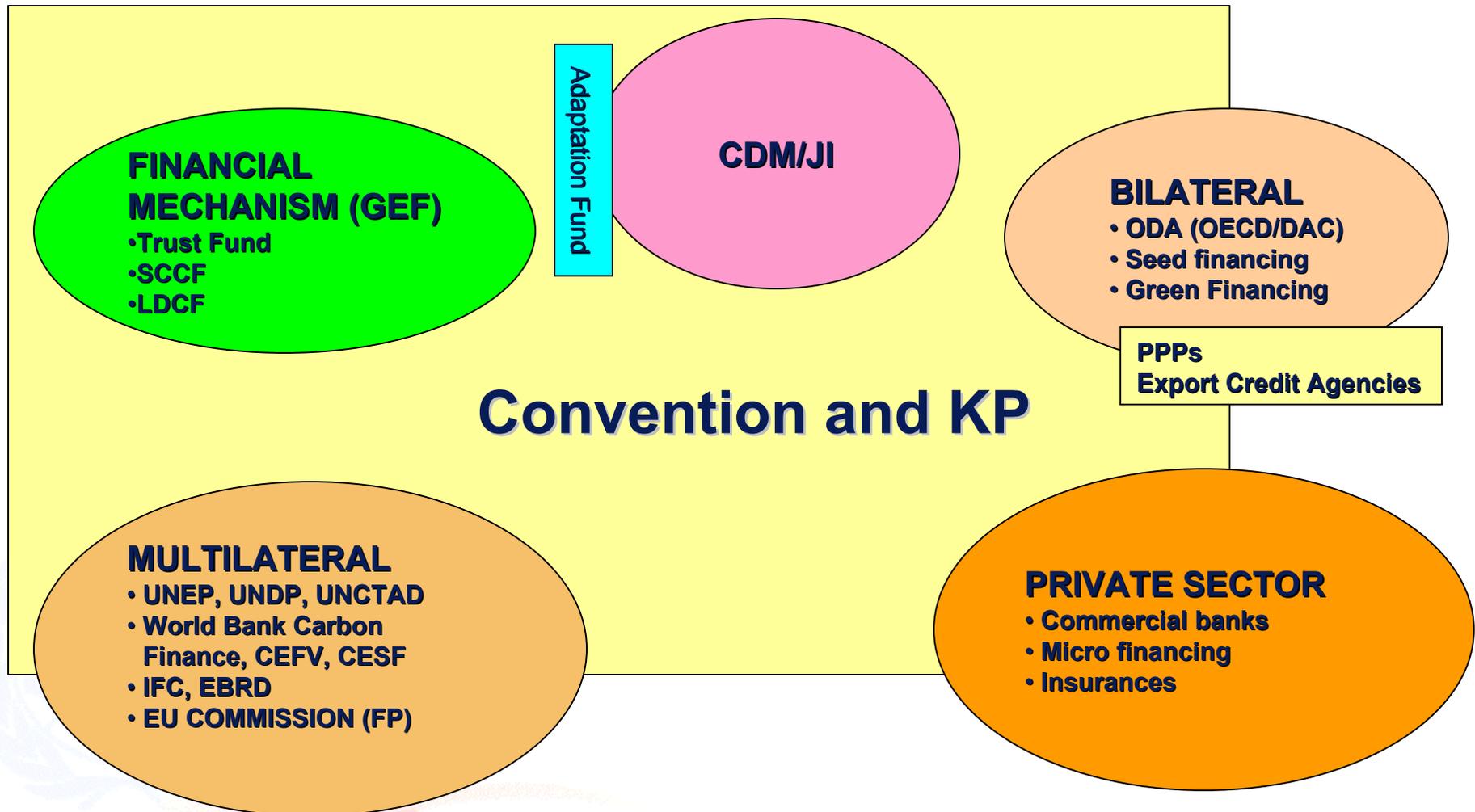
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**International cooperation and partnerships** can enhance the transfer of technology between countries and thus help to meet the objectives of all participating countries and leverage experiences and resources available. This will also assist in the timely identification of issues and the appropriate means for addressing barriers

Although the focus of enabling environments and international technology transfer has been on mitigation technologies, it is important to **foster enabling environments that encourage the transfer of adaptation technologies**. The barriers and effective means for encouraging the transfer of adaptation technologies may be different to those relating to mitigation technologies

Technology transfer is financed through government and the private sector, although the **private sector is by far the largest source of funding**. Opportunities should be realized through all financial flows to increase the transfer of mitigation and adaptation technologies

# Investment | how can the public and private sectors be further engaged → Provide with incentives at all stages of the technology development cycle



## **Investment | how can the public and private sectors be further engaged → Provide with incentives at all stages of the technology development cycle**

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The **GEF trust fund** allocates and disburses about **USD 250 million dollars per year** in projects in energy efficiency, renewable energies, and sustainable transportation. The current strategy focuses on market transformation, policy and structural changes, and in addressing market failures

DAC members provided some **USD 2.8 billions per year** in average through their climate change related bilateral aid and most of support went into energy and transport sectors

The level of FDI, commercial lending, and equity investment all increased greatly in recent years. For example, FDI flows to developing countries continued to grow in 2005, reaching a record level of **USD 237.5 billion**, often in the **industry, energy supply and transportation sectors**

# Investment | How can the public and private sectors be further engaged → Innovative financing

**Innovative financing options combinations or adjustment and resources, rather than n aimed exclusively at address**

- **Introducing financing consider development cycle**
- **Financing continuum: general technology transfer**

**2 workshops – brought together developers and international**

**Technical paper on Innovative (FCCC/SBSTA/2006/TP1)**

United Nations Framework Convention on Climate Change

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**INNOVATIVE OPTIONS FOR FINANCING**

THE DEVELOPMENT AND TRANSFER OF TECHNOLOGIES



# Investment | How can the public and private sectors be further engaged → Innovative financing

There is a need to support projects of project proposals that meet the standards of financial community

- Prepared and disseminate a Practitioner
- Initiated a roll-out programme (regional centres, help desk)

Strengthen the participation of the private

- CTI Private Financing Advisory Network private sector companies / individuals to service to project sponsors & developers international private finance

- EU – Global Energy Efficiency and Renewable Energy (GEEREF) that aims to blend capital of public and support small- and medium-size projects

Available in English, French, Spanish

Preparing and presenting proposals

**A guidebook on preparing technology transfer projects for financing**



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**Many thanks to all EGTG members and to  
the UNFCCC Secretariat!**

