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ACCELERATING LOW-CARBON TECHNOLOGY TRANSFER: HELPING DEVELOPING COUNTRIES IMPLEMENT NATIONALLY DETERMINED CONTRIBUTIONS

Dr. Krishnan S. Raghavan
Coordinator, Technology Transfer
Asian and Pacific Centre for Transfer of Technology
of the United Nations Economic and Social Commission for Asia
and the Pacific (APCTT-UNESCAP)
New Delhi, India

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OUTLINE OF PRESENTATION

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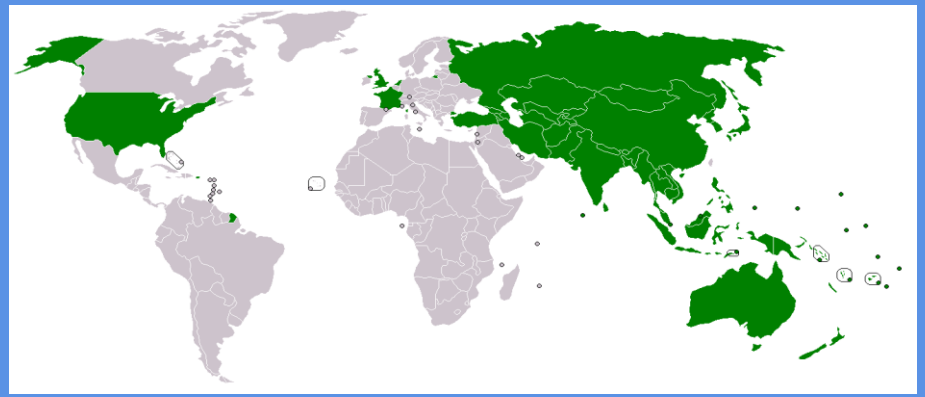
- National Innovation System and Technology Transfer
- Sustainable Energy Strategy for Lao PDR – Assessment of Technology Innovation Ecosystem
- Key Findings
- Recommendations

Introduction to APCTT-ESCAP

Asian and Pacific Centre for Transfer of Technology (APCTT) was established in 1977 as a Regional Institution of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP)



The APCTT building inauguration on 16th July, 1977 Bangalore.

APCTT serves all the 53 Member States and 9 Associate Member States of ESCAP

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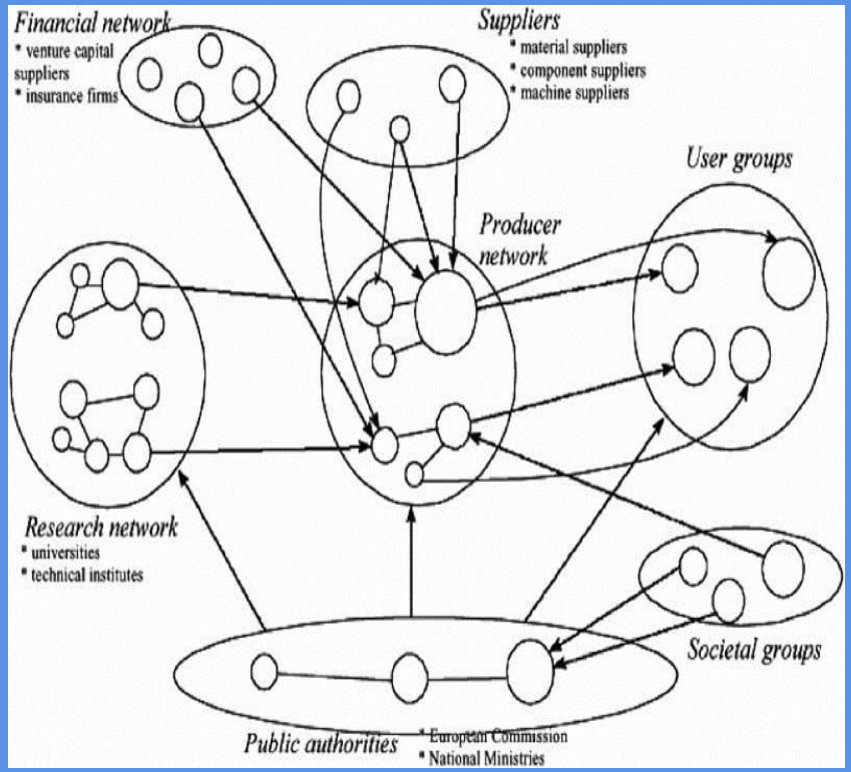
National Innovation System and Technology Transfer

"Network of actors (e.g. firms, universities, research institutes, government departments, NGOs) within which technology development, transfer, and uptake occurs, the strength and nature of the relationships between those actors, and the institutional environment within which they operate".

(**Source**: David Ockwell & Rob Byrne; Climate Policy 2016, 16, 836-854)



Sustainable Energy Strategy for Lao PDR – Assessment of Technology Innovation Ecosystem

- The Renewable Energy Development Strategy (REDS) of Lao PDR targets an increase the share of renewable energy in total energy consumption to 30% and replacement of 10% of transport fuels by biofuels by 2025

- The Law on Electricity amended in the year 2008 spelt the need for using the natural resource potential in an economical and sustainable manner. The Law also mentions use of off-grid RE based generation technologies to facilitate rural electrification.

Sustainable Energy Strategy for Lao PDR – Assessment of Technology Innovation Ecosystem

- Lao PDR is immensely blessed with economically viable hydropower potential— one of the cleanest and least cost option for energy generation. The solar insolation level and traditional agrarian base of the country indicates ample solar and biomass resource availability.

- The Lao government has successfully implemented few off-grid RE based rural electrification Programs in which the use of solar home lighting systems have been successfully demonstrated in rural un-electrified areas. The public-private partnership mechanisms like those of Provincial Energy Service Companies (PESCO) and Sunlabob (Laos based full-service energy-provider selling hardware and providing commercially viable energy services for remote areas) have been successfully implemented

Sustainable Energy Strategy for Lao PDR – Assessment of Technology Innovation Ecosystem

- Power export to the neighboring countries is an important policy objective of the Lao government. Revenue generated from power export in the form of royalties, taxes and dividends are important sources of income for Lao

- There is presence of government academic institutions, international institutes working on Renewable Energy, private entrepreneurs providing energy services in rural areas

Key Findings

- Renewable energy is so far not integrated into the national agenda such as the Socio-Economic Development Plan, Rural Electrification Plan, industrialization and modernization strategy, etc. which creates gap in system for promoting low-carbon, sustainable energy technologies in the country

- REDS is more focused towards the promotion and development of bio-fuels to be used as transportation fuel. However, there are gaps in REDS as it does not suggest any clear strategy for promotion of other off-grid sustainable energy options / services

- There are gaps with respect to scientific resource assessment studies for estimating the RE potential

Key Findings

- The Law on Electricity for Lao (2011) does not have any enabling provisions for promotion of sustainable energy options in Lao

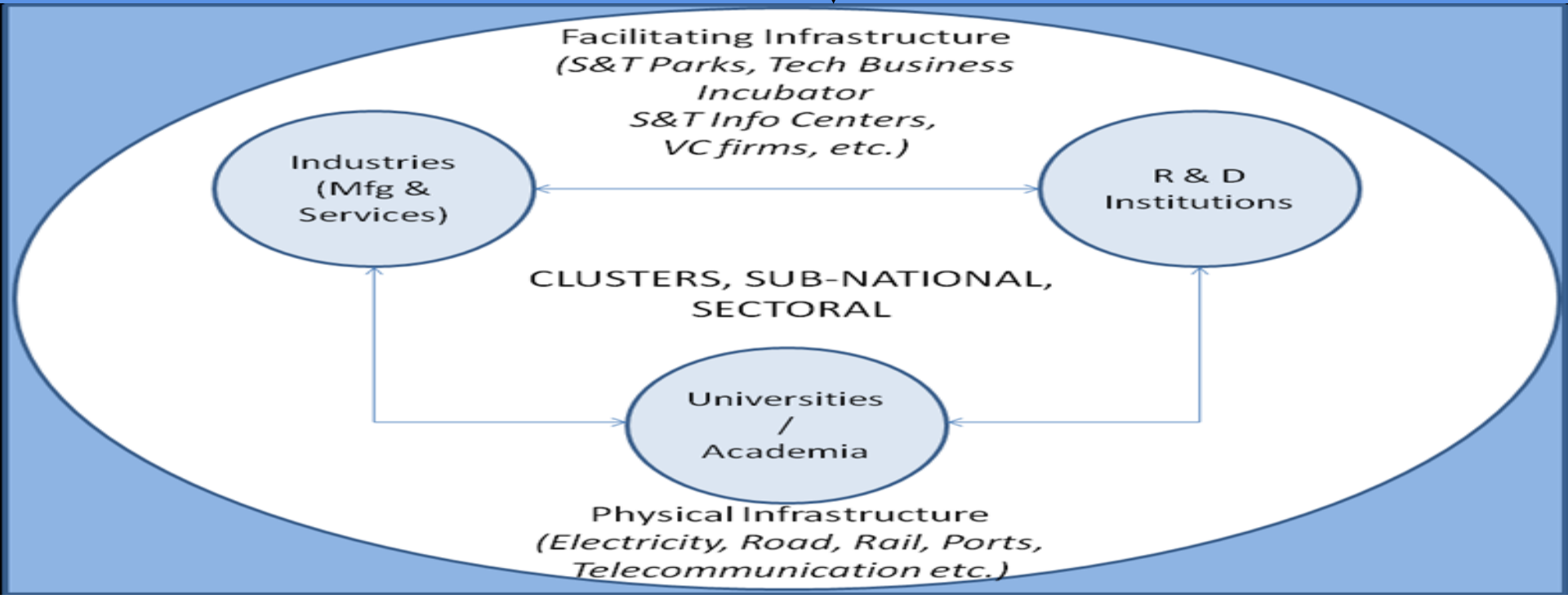
- There are gaps in financing low-carbon technologies (subsidies, bank loans, longer repayment time and so on) as budgetary provision from own resources is limited. The Government so far relies mostly on the international funding and donor contribution to support RE Programs in country

- No special financial / fiscal incentives for encouraging sustainable energy options are available which creates gaps in investment environment

- No independent ‘Electricity Regulator’ creates gaps in the system for tariff determination and monitoring the power sector operations in Lao.

Recommendations

Government Policies
Targets, Programs, Strategies



Recommendations

- For creating enabling environment for fostering low-carbon technology transfer, the role of each of the actors in NIS is important.

- The government's role is vital in designing appropriate policies and implementation programs signaling the potential low-carbon technologies / services and targets to be achieved.

- South-South cooperation and experience-sharing with other countries should also be encouraged.

- For encouraging participation of SMEs in low-carbon technology development / RE manufacturing, special incentive structures and financing mechanisms need to be devised.

Recommendations

- Role of banking institutions particularly the agricultural promotion bank in providing soft loans for encouraging the sustainable energy technologies in rural areas shall be important.

- Equally important is the coordination between the government institution, R&D institution and academia, and other institutions working in the field of sustainable energy technologies and services

- For effective promotion of sustainable energy technologies and applications at the national level, the role of REMI is important

Thank You

Asian and Pacific Centre for Transfer of Technology
of the United Nations Economic and Social Commission for Asia and the Pacific
C-2, Qutab Institutional Area
New Delhi - 110016, India
Tel: +91-11-30973700
Fax: +91-11-26856274
E-mail: srinivasaraghavan@un.org
Web: www.apctt.org

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