

MESTECC – APCTT 2018 Conference on the Fourth Industrial Revolution

New and Emerging Technologies for Achieving Sustainable Development Goals
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Regional Cooperation on New and Emerging Technologies for Achieving SDGs

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Outline

- STI is key to achieve SDGs
- Innovation for inclusive and sustainable development
- Regional networking platforms and tools
- Promoting new and emerging technologies – key highlights of APCTT
- Concluding remarks

Sustainable Development Goals



- 2030 Agenda for Sustainable Development
- 17 Sustainable Development Goals (SDGs) and 169 Targets
- To eliminate poverty and hunger and provide a life of dignity to all

STI and Collaboration are Key to Achieve SDGs

- **Science, Technology and Innovation (STI)** are key means to achieve SDGs
- **SDG 9 and 17** provide the framework for promoting innovation and regional cooperation



- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



- Strengthen the means of implementation and revitalize the global partnership for sustainable development

Innovation for inclusive & Sustainable Development

Key messages of SDGs:

- Technology to address **economic, social and environmental challenges**
- Sustainable technological **solutions for local problems**
- Emphasis on **green and climate-friendly technologies**
- **Affordability and accessibility** of technologies to reduce technology inequality
- Innovation through **collaboration**

Low cost and affordable water purification Nanotech-based solution in the Philippines



- Developed by Industrial Technology Development Institute (ITDI) of Department of Science and Technology (DOST), Philippines
- Ceramic water filter made of red clay coated with an anti-microbial agent that can substitute the chlorination process for purifying water
- Low cost, affordable, widely deployed, particularly in the far flung areas

Regional Technology Cooperation

APCTT strategy

- Promote **North – South, South – South, Triangular** regional and international cooperation
- Strengthen **National Innovation Systems (NIS) and technology transfer capacity**
- Promote development, transfer, and commercialization of **environmentally sound technologies (ESTs)**
- Promote **new and emerging technologies** that have transformative potential for helping countries to achieve SDGs

APCTT Focus New and Emerging Technologies

- Renewable / Sustainable Energy
- Nanotechnology
- Biotechnology
- Sustainable / Climate-smart agricultural technologies

APCTT's Regional Networks and Platforms

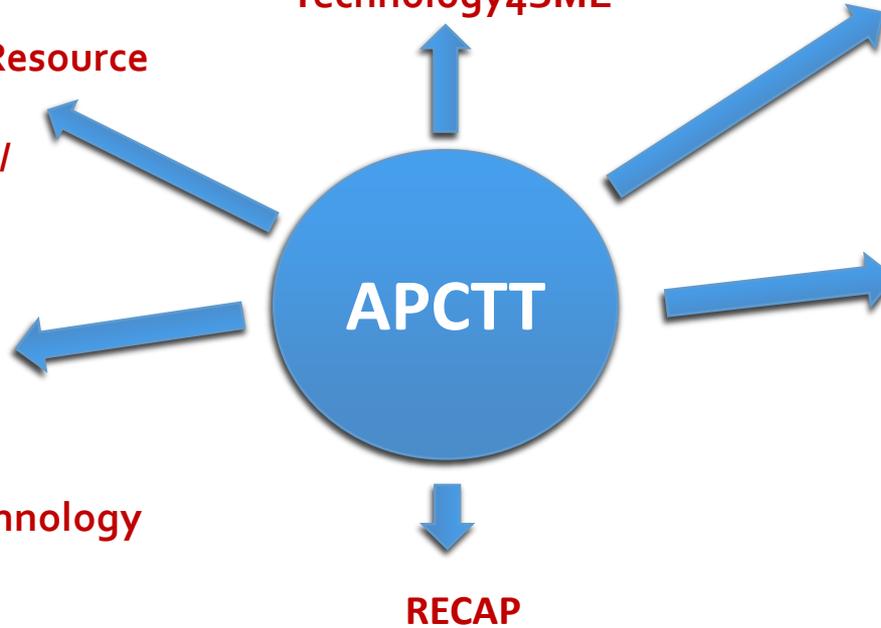


Technology4SME

Technology Intelligence
<http://www.techmonitor.net>



Asia-Pacific
Nanotechnology R&D
Management Network
<http://apctt.org/nanotech/>



Asia-Pacific Online NIS Resource
Centre
<http://apctt.org/nis/>



Renewable Energy Technology
Bank

RECAP

Diagnosis of National Innovation Systems in Nepal and Lao PDR



In partnership with Science and Technology Policy Institute (STEPI) of Republic of Korea, assisted Nepal and Lao PDR to:

- Analyze STI framework conditions
- Develop strategies to strengthen NIS enabling environment and promote technology based entrepreneurship

Piloting NIS Resource Centres



- Pilot version of **Asia-Pacific NIS Online Resource Centre**
- Supported development of online **national NIS Resource Centres** in **Indonesia** (<http://sinas-indonesia.org/>) and **Nepal** (<http://www.recast.edu.np/>).

- Policy makers in **Indonesia, Lao PDR and Nepal** were trained on the **importance and structure of national On-line NIS Resource Centres** for the benefit of NIS actors.

Renewable Energy Cooperation-Network for the Asia-Pacific (RECAP)

- APCTT, with active involvement of 15 countries in the Asia-Pacific region established RECAP as an institutional cooperation mechanism for promoting renewable energy in the region (In Support of ESCAP Resolution E/ESCAP/64/L.13/Rev. 1 dated. 29 April 2008)

- A Renewable Energy Technology Bank (RET-Bank) was established as an on-line repository of information on tested and proven pro-poor renewable energy technologies

- Trained over 350 participants from 15 RECAP member countries on technical, policy as well as business facilitation aspects.

The screenshot displays the RECAP website interface. At the top, the title 'Renewable Energy Cooperation-Network for the Asia Pacific' is prominently displayed in green and blue. Below the title, it states 'An initiative of the Asian and Pacific Center for Transfer of Technology (APCTT)' and features the ESCAP logo. A navigation menu includes 'Home', 'About Us', 'Target Countries', 'Services', 'Solution Centre', and 'Contact Us'. A search bar is located on the left side. The main content area features a large image of hands holding a small green plant, with the text 'Plant For Planet Campaign' overlaid. Below this image, a 'Welcome to the Renewable Energy Cooperation-Network for the Asia Pacific' section provides a brief overview of the network's purpose. A 'Quick Links' sidebar on the left lists various services and resources. A 'News From UN' section highlights recent developments. At the bottom, there are sections for 'Upcoming Events' and 'RECAP Events', along with a 'Solution Centre' sidebar on the left and a 'Publications' section at the bottom right.

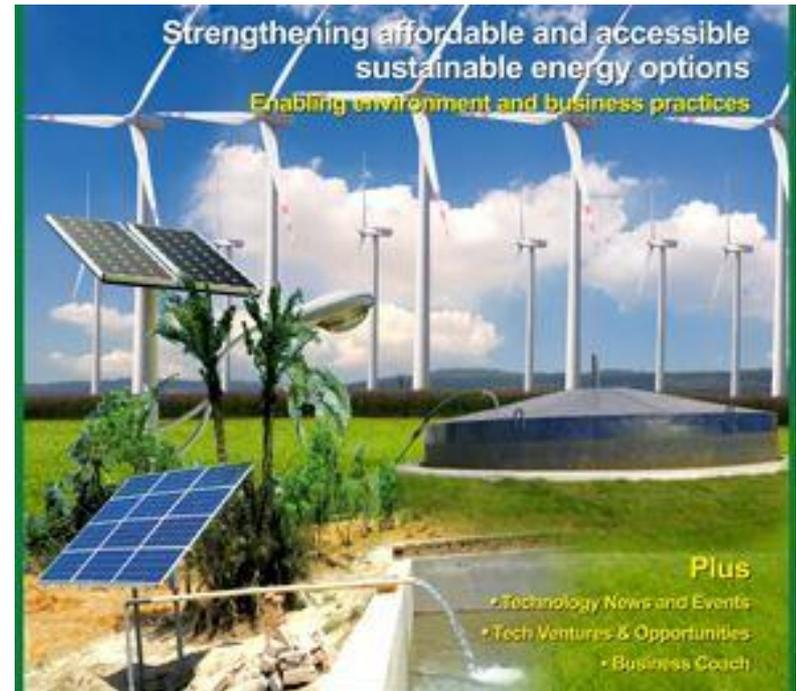
Sustainable Energy

Lao PDR, Indonesia

To increase **accessibility and affordability of sustainable energy options** in terms of enabling policy tools/incentives, technology, cost effectiveness, and business environment.

APCTT supported in:

- National Assessment of Sustainable Energy
- National Sustainable Energy Development Strategy



Sustainable Agricultural Technologies



SATNET
ASIA PACIFIC

Home About Announcements Discussions Resources Contact

Home / Database

Technologies And Good Practices In Sustainable Agriculture

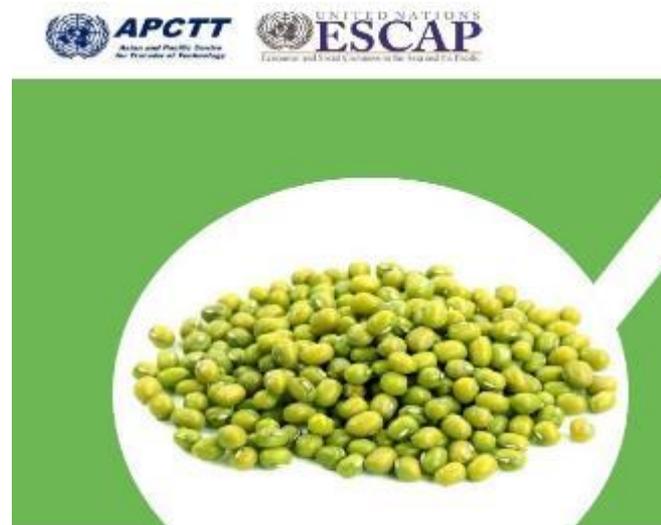
This database contains information on sustainable agricultural technologies and good agricultural practices promoted by development practitioners & implemented by small farmers in various countries of South and South-East Asia. It is the result of research by the SATNET Asia – an open network institutions and individuals sharing a common interest and concern in addressing the urgent need for innovative approaches to increase agricultural productivity to feed the growing population in a sustainable manner.

The Food Security Centre of the University of Hohenheim, Germany, had led the collection and analysis of technologies in this database. For more information on the experts who contributed to the database, please consult the list of contributors.

- **Trained** over 300 participants from **Afghanistan, Bangladesh, Bhutan, India, Pakistan and Nepal.**
- **Established** the first **manufacturing facility for bio control agents** at the National Plant Protection Centre (NPPC), Bhutan

Livelihoods Improvement in the Dry Zone of Myanmar

- In partnership with World Vegetable Centre (AVRDC), **transferred seeds of 59 elite mung bean (Green Gram) lines with pest and disease resistance** to Department of Agricultural Research (DAR), Myanmar.
- Increased knowledge on **seed quality control**
- Facilitated **farmer-led seed enterprise development**

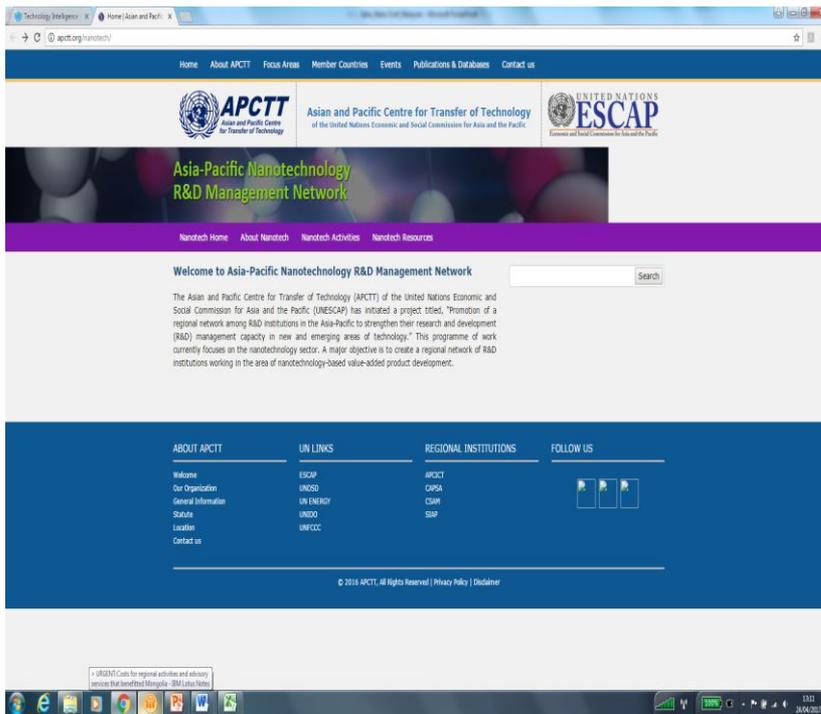


MUNGBEAN

Seed Production
Training Manual

Asia-Pacific Nanotechnology R&D Management Network

<http://apctt.org/nanotech/>



- **Nanotech-based value added products**
- Capacity building in **policy & strategy development, R&D management, Networking, Commercialization of R&D results, Nano-safety, IP protection and valuation**
- Sharing of **experience and best practices**
- Participating countries: **China, India, Indonesia, Iran, Pakistan, Philippines, Malaysia, Republic of Korea, Sri Lanka, Thailand, Vietnam**

Biotechnology

Biotechnology Information Network for Asia (BINASIA) established in 2004-2006

- Promoted R&D cooperation and sharing of biotechnological information
- Facilitated networking and sharing of experiences between stakeholders

National Consultative Workshop on Strengthening and Road Mapping of Emerging Technology Innovation Systems of Sri Lanka, Nov 2015

International Workshop on “Promoting Biotechnology Education, Research and Knowledge Transfer in Asia and the Pacific”, October 2017 (Cambodia, Indonesia, India, Japan, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam)

VATIS Update (Biotechnology) – Online periodical since 1994 for disseminating information on latest technological innovations

Technology4SME Database

The screenshot shows the website's header with navigation links: Home, About APCTT, Focus Areas, Member Countries, Events, Resource Centre, and Contact Us. Below the header, the APCTT and ESCAP logos are displayed. The main content area features a yellow banner for 'Technology Offers (855)'. On the left, a 'Sectors' list includes Aerospace (6), Textile (4), Energy (23), Environment (23), Food Processing (40), Garment (1), Information Technology (61), and Instrumentation (4). A red 'Submit Technology Offer' button is positioned above the list. On the right, a green box contains the text 'Technology4SME Database', followed by buttons for 'Login', 'Register', 'Technology Offers', 'Technology Requests', and 'Joint Venture & Partnership'.

Home About APCTT Focus Areas Member Countries Events Resource Centre Contact Us

 **APCTT**
Asian and Pacific Centre
for Transfer of Technology

Asian and Pacific Centre for Transfer of Technology
of the United Nations Economic and Social Commission for Asia and the Pacific

 UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

Technology Offers (855)

Submit Technology Offer

Sectors

- Aerospace (6)
- Textile (4)
- Energy (23)
- Environment (23)
- Food Processing (40)
- Garment (1)
- Information Technology (61)
- Instrumentation (4)

Technology4SME Database

Login

Register

Technology Offers

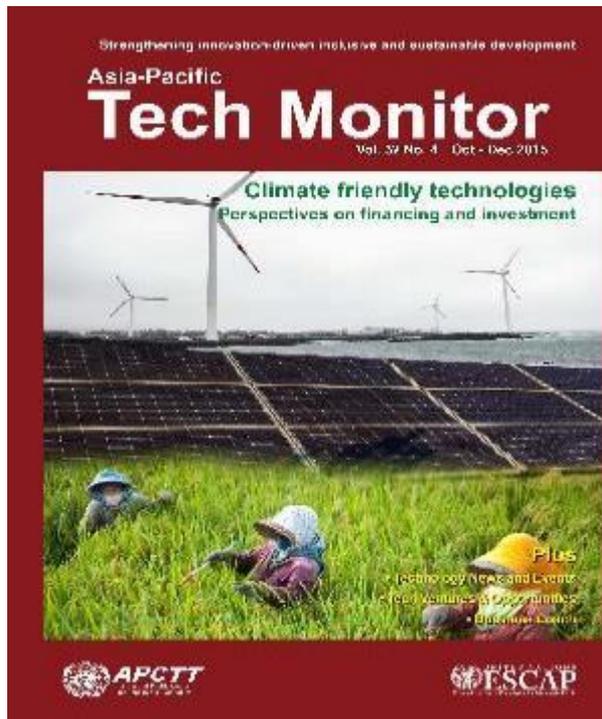
Technology Requests

Joint Venture & Partnership

Technology Intelligence

<http://www.techmonitor.net>

Asia-Pacific Tech Monitor



VATIS Updates



Recent Analytical / Knowledge Outputs

National Innovation System

- NIS Training Manual - “NIS Diagnosis and STI Strategy Development to Achieve National Sustainable Development Goals”

Sustainable Agricultural technologies

- Policies, Institutions and Processes (PIPs) to Support Value Chains for Seed Development for Pulses, Legumes and Oil crops in the Dry zone (*Case Study*)
- Supporting Value Chains for Seed Development of Pulses, Legumes and Oil crops in Myanmar’s Dry Zone (*Policy Brief*)

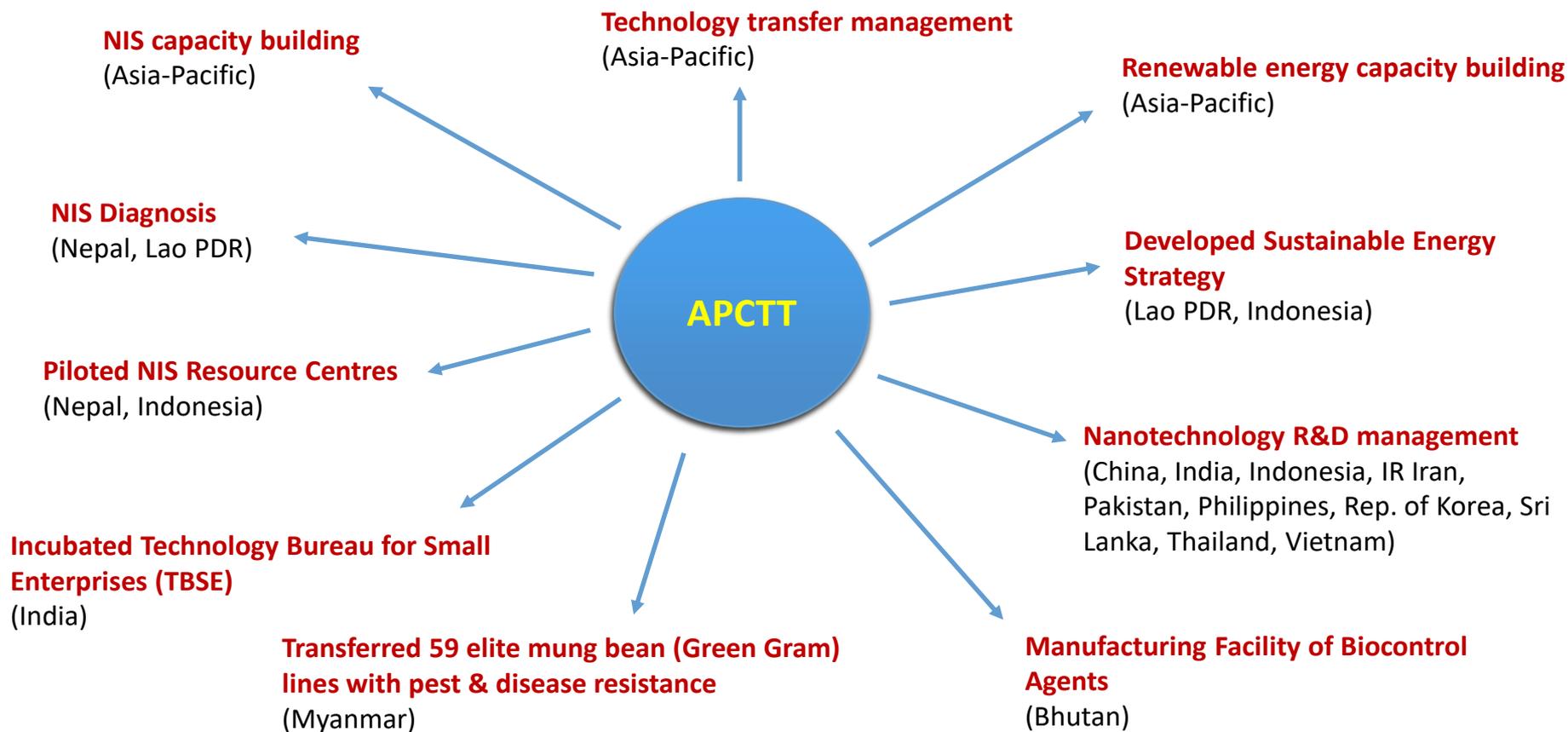
Nanotechnology

- Manual on Critical Issues in Nanotechnology R&D Management: An Asia-Pacific Perspective
- Innovative Development of Bottom-up Nanotechnology-based Value Added Products for Enhancing Competitiveness in the Asia-Pacific

Sustainable Energy

- National Assessment Framework on Sustainable Energy (Indonesia and Lao PDR)
- National Sustainable Energy Strategy Reports (Indonesia and Lao PDR)

Supporting Member Countries - Key highlights



Concluding Remarks

- **Challenges of innovation and technology transfer can be addressed** through wider networking with stakeholders.
- Knowledge networks, online platforms and tools are **key to access up-to-date information and establish linkages and partnerships.**
- The Centre focuses on specific new and emerging technology sectors to address the challenges as per the **expressed needs of member States**
- APCTT can assist in strengthening **technology transfer and utilization capacity** of member States through South-South, North-South and Triangular cooperation.

Thank you

For more information, contact

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