



云南省科学技术情报研究院
YUNNAN ACADEMY OF SCIENTIFIC & TECHNICAL INFORMATION

面向南亚东南亚国家新能源与可再生能源技术 转移示范与机制

New Energy and Renewable Energy Technology Transfer Demonstration and Mechanism in South and Southeast Asian Countries

中国—东盟创新中心秘书长

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一、云南省科技情报研究院基本情况

Brief Introduction
to
Yunnan Academy of Scientific and Technical Information (YASTI)



一、云南省科技情报研究院基本情况

Brief Introduction to YASTI

- 云南省科学技术情报研究院（面向南亚东南亚科技创新中心）成立于1971年，公益一类事业单位
- 主要业务：
 - ✓ 信息资源建设、科技发展战略研究、科技评估、科技统计、科技查新、网络管理等研究与服务工作
- 特色业务：
 - ✓ 面向发展中国家的技术转移与国际科技合作，气候变化与CDM技术服务等研究工作
- 人力资源：
 - ✓ 130余名工作人员，其中90%为科研人员
 - ✓ 硕、博士学历占60%
 - ✓ 高级职称人员占专业技术人员的68.5%，研究员18人（二级研究员2人）
 - ✓ 云南省中青年学术带头人2名
 - ✓ 国务院、省政府特殊津贴获得者11人
 - ✓ 云南省先进工作者2名
 - ✓ 云南省国际技术转移创新团队带头人1名

Yunnan Academy of Scientific and Technical Information (YASTI) is a comprehensive public research institute established in 1971.

Main business:

Information resources construction, technology development strategies, science and technology assessment, science and technology statistics, Sci-Tech Novelty Retrieval, network management and other research and services.

Featured business:

Technology transfer in developing countries and international scientific and technological cooperation, climate change and CDM technical services.

Human resources:

We have more than 130 staff members, 90 per cent of whom are researchers;
Master's degree and doctor's degree account for 60%
Senior professional titles account for 68.5% of professional and technical personnel, and 18 researchers (2 secondary-level researchers);
2 young and middle-aged academic leaders;
11 recipients of special subsidies from the state council and provincial governments;
2 advanced workers in yunnan province;
and 1 leader of the international technology transfer.
innovation team of yunnan province.

一、云南省科技情报研究院基本情况

Brief Introduction to YASTI

➤ 能力建设

- ✓ 国家技术转移示范机构（2008年，科技部）
- ✓ 国家国际科技合作基地（2007年，科技部）
- ✓ 国家国际技术转移中心（2012年，科技部）
- ✓ 中国—东盟教育培训中心（2012年，外交部、教育部）
- ✓ 中国—东盟科技论坛（2009年，科技部、东盟秘书处）
- ✓ 中国—东盟创新中心（2013年10月李克强总理倡议成立；2014年，科技部）
- ✓ 中国—南亚技术转移中心（2014年，科技部）
- ✓ 中国—新西兰现代农业联合研发中心（2013年）
- ✓ 中国—南太平洋岛屿国家技术转移中心（2015年，科技部）
- ✓ 博士后科研工作站（2013年，人力资源社会保障部、全国博士后管理委员会）

Capacity Building

National technology transfer demonstration institution (2008, Ministry of Science and Technology)
National international scientific and technological cooperation base (2007, Ministry of Science and Technology)
National International Technology Transfer Center (2012, Ministry of Science and Technology)
China - Asean Education training center (2012, Ministry of Foreign Affairs, Ministry of Education)
China - Asean Science and Technology BBS (2009, Ministry of Science and Technology, Asean Secretariat)
China - Asean Innovation Center (initiated by premier Li Keqiang in October 2013, In 2014, granted by Ministry of Science and Technology)
China - South Asia Technology Transfer Center (2014, Ministry of Science and Technology)
China -- New Zealand Joint Research and Development Center for Modern Agriculture (2013)
China - south Pacific island country technology transfer center (2015, ministry of science and technology)
Postdoctoral research station (2013, ministry of human resources and social security, national postdoctoral management committee)

一、云南省科技情报研究院基本情况

Brief Introduction to YASTI

➤ 合作伙伴

- 云南省科学技术情报研究院自2005年以来，与南亚、东南亚、南太平洋岛屿国家和国际组织开展科技合作

- ✓ 联合国亚太技术转移中心
- ✓ 东盟秘书处
- ✓ 东盟科技委员会
- ✓ APEC秘书处
- ✓ 亚洲开发银行（ADB）
- ✓ 全球环境基金（GEF）
- ✓ 湄公河可再生能源委员会（CORE组织）
- ✓ 泰国、马来西亚、老挝、柬埔寨、印度尼西亚等国家相关机构
- ✓ 印度、尼泊尔、孟加拉国、斯里兰卡、巴基斯坦、阿富汗等国家相关机构
- ✓ 伊朗相关机构
- ✓ 巴布亚新几内亚、斐济、萨摩亚相关机构

Partners

Since 2005, YASTI has conducted scientific and technological cooperation with south Asian, southeast Asian, south Pacific island countries and international organizations.

United Nations Asia-Pacific Technology Transfer Center

ASEAN Secretariat

ASEAN Science and Technology Committee

APEC Secretariat

Asian Development Bank (ADB)

Global Environment Facility (GEF)

Mekong Renewable Energy Commission (CORE)

Relevant Institutions of Thailand, Malaysia, Laos, Cambodia and

Indonesia

Relevant Institutions of India, Nepal, Bangladesh, Sri Lanka, Pakistan

and Afghanistan



二、面向南亚东南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 云南省科学技术情报研究院自2005年以来，与东南亚国家和国际机构开展科技合作，先后与联合国亚太技术转移中心、东盟秘书处、东盟科技委员会、APEC秘书处、湄公河可再生资源委员会（CORE组织）、泰国科技部、泰国纳苏安大学可再生能源技术学院、泰国阿裕塔雅大学、马来西亚科技部、印度尼西亚科技部、越南科技部南方办事处、柬埔寨、老挝、缅甸等国家和国际组织机构开展合作。
- 云南省科学技术情报研究院是公益类综合性研究机构，是国家技术转移示范机构、国家国际科技合作基地、中国云南国际技术转移中心、中国—东盟教育培训中心和中国创新驿站云南区域站点。

YASTI has cooperated with South and Southeast Asian countries and international organizations since 2005. We've been working with the following organizations: United Nations Asia-Pacific Technology Transfer Center, ASEAN Secretariat, ASEAN Committee on Science and Technology, APEC Secretariat, relevant institutions in Thailand, Malaysia, Lao PDR, Cambodia and Indonesia as well as Relevant institutions in India, Nepal, Bangladesh, Sri Lanka, Pakistan and Afghanistan.

Yunnan Academy of Scientific and Technical Information (YASTI) is a comprehensive public research institute, Model Institute of National Technology Transfer, International Science & Technology Cooperation Base, China (Yunnan) International Technology Transfer Center, China-ASEAN Education and Training Center, and Yunnan Site of China Innovation Relay.

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 近年来，主要从事面向发展中国家的技术转移与国际科技合作、科技发展战略与规划、气候变化与CDM技术服务等研究工作
- 近五年来，在中国科技部、外交部、云南省政府以及“亚洲区域合作专项基金”、“中国APEC科技产业合作基金”、“中国—东盟合作基金”、“APEC基金”和“亚洲开发银行”的大力支持下，面向东南亚南亚国家开展了以下技术转移工作
- 与东盟秘书处合作，在昆明成立了“中国—东盟科技论坛”，为促进中国与东盟科技合作与技术转移工作搭建了交流与对接平台。

In recent years, we have done a lot of work on technology transfer, international science and technology cooperation, science and technology development strategy and research, climate change and CDM.

In the past five years, YASTI has implemented the following technology transfer projects with the support from Ministry of Science and Technology of China, Ministry of Foreign Affairs of China, People's Government of Yunnan Province, Asia Regional Cooperation Fund, China APEC Industrial Science and Technology Cooperation Fund, China-ASEAN Cooperation Fund and APEC Fund.

Collaborating with ASEAN Secretariat, YASTI has built up China-ASEAN Science and Technology Forum in Kunming.

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 近五年来，在中国科技部、外交部、云南省政府以及“亚洲区域合作专项基金”、“中国APEC科技产业合作基金”、“中国—东盟合作基金”、“APEC基金”和“亚洲开发银行”的大力支持下，面向东南亚南亚国家开展了以下技术转移工作。

In the past five years, YASTI has implemented the following technology transfer projects with the support from Ministry of Science and Technology of China, Ministry of Foreign Affairs of China, People's Government of Yunnan Province, Asia Regional Cooperation Fund, China APEC Industrial Science and Technology Cooperation Fund, China-ASEAN Cooperation Fund and APEC Fund.



二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

1、构建了科技合作与交流平台

1. Platforms of science and technology cooperation and communication

在中国—东盟科技论坛框架机制下，成功举办了10多次国际会议、论坛和培训班。

In the framework of China - ASEAN Science and Technology Forum, more than 20 international conferences and forums have been successfully organized.

2007年11月 Nov. 2007	中国—东盟生物质能源开发利用国际科技合作论坛 China-ASEAN S&T Cooperation Forum on Biogas Energy Development
2008年7月 Jul. 2008	应对气候变化：中泰可再生能源研讨会 Combating Climate Change: China-Thailand Renewable Energy Seminar
2009年7月 Jul. 2009	建筑太阳能系统技术与产品应用国际培训班 Building Integrated Solar Energy System Application Workshop
2009年11月 Nov. 2009	中国—东盟新能源与可再生能源开发利用国际科技合作论坛 China-ASEAN International Training Forum on New and Renewable Energy Application Technology
2010年4月 Apr. 2010	亚太太阳能建筑系统技术研究应用研讨会 Asia-Pacific Building Integrated Solar Energy System Technology and Application Seminar
2011年8月 Aug. 2011	APEC沼气资源开发利用国际科技合作论坛 International Training Workshop on New and Renewable Energy Application Technology
2011年11月 Nov. 2011	中国—东盟应对气候变化：促进可再生能源与新能源开发利用国际科技合作论坛 China-ASEAN Addressing Climate Change: International S&T Cooperation Forum on Promoting New and Renewable Energy



二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries

2012年11月 Nov. 2012	中国—东盟新能源与可再生能源新技术交流与对接活动 China-ASEAN Matchmaking Event on New and Renewable Energy
2013年4月 Apr. 2013	东亚峰会新能源论坛 East Asia Summit Renewable Energy Forum
2013年7月 Jul. 2013	APEC可再生能源与新能源技术开发与应用研讨会 APEC New and Renewable Energy Technology Development and Application Forum
2013年8月 Aug. 2013	新能源与可再生能源应用技术国际培训班 International Training Workshop on New and Renewable Energy Application Technology
2014年10月 Oct. 2014	新能源与再生能源（沼气）国际培训班 International Training Workshop on New and Renewable Energy (Biogas)
2014年6月 Jun. 2014	中国—东盟科技论坛：中国—东盟应对气候变化国际合作研讨会 The China-ASEAN Science and Technology Cooperation Forum on New and Renewable Energy Development and Promotion for Combating Climate Change

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 参会的国外代表包括政府部门、大学、研究机构、企业，共计500余人次，国内参会代表达800余人次。
- 通过会议、论坛的举办，搭建了技术转移平台和交流渠道，促成了20余项项目的合作与实施，有利的促进了太阳能和沼气为主的新能源和可再生能源在东南亚国家的推广应用。
- 科技部万刚部长指出：“中国—东盟科技论坛机制的建立为国家桥头堡建设政策的出台发挥了重要的关键性作用”。（2011年10月11日）



The foreign delegates attending the conference came from government departments, universities, research institutions, and enterprises, with a total number of more than 500 person-times, and more than 800 domestic delegates attended the conference.

It has promoted the cooperation and implementation of more than 20 projects, which has promoted the promotion and application of solar energy and biogas-based new energy and renewable energy in Southeast Asian countries. Through the conference and BBS, the technology transfer platform and communication channels were established, Contributed to more than 20 cooperation projects which powerfully push forward the application of new and renewable energy sources, especially solar and biogas, in southeast Asian countries.

Mr. Gang WAN, the minister of MOST, has pointed out that “ the establishment of China-ASEAN Science and Technology Forum has played key role in formulating National Bridgehead Construction Policy on October 11, 2011.

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

国别 Country	机构名称 Name	签署的合作协议 MOU Signed
泰国 Thailand	帝国太阳能电池有限公司 Empire Solar Co., Ltd.	2012年11月, 与云南晶能科技有限公司签署合作协议 Signed MOU with Yunnan Crystal Energy Tech. Co., Ltd in Nov. 2012 2013年7月, 与中国普天杭州鸿雁电器有限公司签署合作协议 Signed MOU with China Potevio Group in Jul. 2013
	纳苏安大学可再生能源技术学院 School of Renewable Energy, Naresuan University	2013年7月, 与中国科学技术交流中心签署合作协议 Signed MOU with S&T Communication Cener, P.R.China in Jul. 2013
越南 Vietnam	越南胡志明农业大学 Vietnam Ho Chi Minh Agriculture University 越南农联企业有限公司 Vietnam Joint Agriculture Co., Ltd. 越南胡志明市农林大学 Vietnam Ho Chi Minh Agriculture and Horticulture University	2012年10月, 在中国—东盟现代农业新技术交流与对接活动上, 通威股份有限公司与越南胡志明农业大学、云南红梨科技开发有限公司与越南农联企业有限公司, 通威股份有限公司、越南胡志明市农林大学和上海海洋大学签订了三方合作协议。 Signed three MOUs with Tongwei Group, Yunnan Red Pear Technology Co., Ltd, Shanghai Ocean University respectively in Oct. 2012

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

国别 Country	机构名称 Name	签署的合作协议 MOU Signed
缅甸 Myanmar	缅甸 SKK 公司 Myanmar SKK Co., Ltd.	2012年10月，与云南金瑞种业有限公司签署了合作协议 Signed MOU with Yunnan Jinrui Seed Co., Ltd in Oct. 2012
新加坡 Singapore	加东花卉有限公司 Jiadong Flower Co., Ltd.	2012年10月，在中国—东盟现代农业新技术交流与对接活动上， 与云南金瑞种子有限公司签署了合作协议。 Signed MOU with Yunnan Jinrui Seed Co., Ltd in Oct. 2012

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

国别 Country	机构名称 Name	签署的合作协议 MOU Signed
新西兰 New Zealand	新西兰皇家植物食品研究院 The New Zealand Institute for Plant and Food Research Limited	2013年3月中国—新西兰农业科技合作协议：联合在云南建立中国（云南）新西兰现代农业联合研发中心 Signed China-New Zealand Agricultural Science and Technology MOU in Mar. 2013
美国 United States	密歇根州立大学生物系统与农业工程学院 Department of Bio-systems & Agricultural Engineering, Michigan State University	2013年7月，国际学术合作框架协议 Signed MOU in International Academy Cooperation in Mar. 2013
巴布亚新几内亚 Papua New Guinea	巴布新几内亚理工大学适用技术与社会发展研究院 The Appropriate Technology Community Development Institute of PNG University of Technology	2013年12月，关于共建中国—太平洋岛屿国家技术转移中心合作备忘录 Signed China-Pacific Island Countries Joint Construction of Technology Transfer Center MOU in Mar. 2013



二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries



二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries





二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries







二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries

2. 举办专业的技术与产品应用培训班

2. Training workshops on technologies and products

- 先后举办多次培训班，参加国家20个，培训外方人数达200余人。
Several workshops have been conducted, which over 200 participants from 20 countries attended.





二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

3、构建国际技术转移平台

Platforms of International Technology Transfer

- 云南省科学技术情报研究院与东盟秘书处、联合国亚太技术转移中心合作，引进发达国家的技术和产品，在昆明建设亚太地区可再生能源与新能源国际技术转移基地，并由中国（云南）、泰国、尼泊尔、菲律宾、印度、蒙古、缅甸、越南代表共同倡议建立“亚太可再生能源促进组织”，围绕可再生能源技术与产品的信息和需求，构建了机构网络，推动相关技术转移工作。
- YASTI has collaborated with ASEAN Secretariat and United Nations Asia-Pacific Technology Transfer Center, introduced technologies and products from developed countries, and built up Asia-Pacific New and Renewable Energy Technology Transfer Base in Kunming.
- In addition, through the joint initiative of China (Yunnan), Thailand, Nepal, Philippines, India, Mongolia, Myanmar, Vietnam to establish Asia-Pacific Renewable Energy Promotion Organization, we have built a network of institutions on information and demand of renewable energy technologies and products, which has promoted the transfer of related technologies.

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 与联合国亚太技术转移中心合作，在昆明建立“亚太地区可再生能源与新能源国际技术转移平台”。
- By cooperating with United Nations Asia-Pacific Technology Transfer Center, we have set up Asia-Pacific New and Renewable Energy Technology Transfer Platform.





二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

- 由中国（云南）、泰国、尼泊尔、菲律宾、印度、蒙古、缅甸、越南代表共同倡议建立“亚太可再生能源促进组织”，围绕可再生能源技术与产品的信息和需求，构建了机构网络，推动相关技术转移工作。
- Through the joint initiative of China (Yunnan), Thailand, Nepal, Philippines, India, Mongolia, Myanmar, Vietnam to establish Asia-Pacific Renewable Energy Promotion Organization, we have built a network of institutions on information and demand of renewable energy technologies and products, which has promoted the transfer of related technologies.
- 与联合国亚太技术转移中心合作，在昆明建立“亚太地区可再生能源与新能源国际技术转移平台”。
- By cooperating with United Nations Asia-Pacific Technology Transfer Center, we have set up Asia-Pacific New and Renewable Energy Technology Transfer Platform.



二. 面向东南亚南亚国家技术转移实践 Technology Transfer Practices in Southeast Asian Countries

4、中泰可再生能源及节能技术与产品推广应用合作项目

- 与泰国纳苏安大学、泰国洛士利投资公司合作，以泰国依托，重点面向东南亚国家推广太阳能光伏发电技术和产品，以促进中国与东盟在本领域的技术转移。

We cooperated with the national Naresuan University and the ING Company company to promote solar photovoltaic technology and products to southeast Asian countries through Thailand, so as to facilitate the technology transfer between China and asean in this field.

二. 面向东南亚南亚国家技术转移实践

Technology Transfer Practices in Southeast Asian Countries

5、与东南亚国家合作开展技术转移政策的研究

- 为更有效的推进与东南亚国家的合作，探索技术转移的机制，云南省科技情报研究院先后与泰国、越南、老挝、缅甸、印度尼西亚等国家和东盟秘书处、大湄公河可再生能源委员会等组织开展了“云南与东盟科技合作研究”、“促进大湄公河次区域可再生能源推广应用研究”、“面向南亚东南亚国家技术转移模式与机制示范研究”等多项课题研究工作。
- 研究工作一方面有效地促进了云南与东南亚国家科研人员的交流与合作，另一方面研究成果对于指导开展与东南亚国家的技术转移发挥了积极的作用。

5. Developing cooperation research on technology transfer policy with southeast Asian countries

In order to promote the cooperation with southeast Asian countries and explore the mechanism of technology transfer more effectively, YASTI has conducted a number of joint research projects with Thailand, Vietnam, Laos, Myanmar, Indonesia, the Asean Secretariat and other organizations, such as "Yunnan-Asean scientific and technological cooperation research", "Promoting the applied studies on the renewable energy technology application in the greater Mekong sub-region" and "Demonstration study on technology transfer mode and mechanism for South Asian Southeast Asian countries" etc.

On the one hand, the research work has effectively promoted the communication and cooperation between Yunnan and Southeast Asian countries, on the other hand, the research results have played a positive role in guiding the development of technology transfer with Southeast Asian countries.



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三、技术转移机制示范

Technology Transfer Mechanism and Demonstration



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三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

1、在泰国建立了技术转移示范基地

- 依托国际会议搭建科技合作平台，实施示范基地建设项目，开展面向东南亚国家的技术转移。
- 开展了“中泰太阳能技术与产品应用示范基地建设项目”，通过项目的实施，推动我国太阳能利用技术和产品在东南亚国家的应用，开拓新的太阳能产品消费市场。
- 采用“技术转移机构+国内企业+国际技术转移网络+国外机构”的方式，利用国际科技合作网络，发挥国家技术转移示范机构的作用，组织中国太阳能企业在泰国曼谷阿裕塔雅技术学院（Ayothaya Technology institute）和泰国纳苏安大学建立示范基地。
- 基地的建设有力地促进了泰国等东南亚国家对我国太阳能技术和产品的认识和了解，对我国太阳能利用技术和产品的输出，拓展市场发挥了积极的示范作用。

1.Technology transfer demonstration bases in Thailand

Through international platform of science and technology cooperation, we have implemented several demonstration projects, and carried out technology transfer in South and Southeast Asian countries.

We implemented the project “China-Thailand Solar Technology and Product Demonstration Base”, through which we promoted the application of China's solar energy technology and products in Southeast Asian countries, and explored new market for solar energy products.

By adopting the mode of “technology transfer institutions + domestic enterprises + international technology transfer network + foreign institutions”, we made use of the network built among Naresuan University, Chulalongkorn University, ING Company and Southeast Investment Company of Thailand, and organized solar energy enterprises in Yunnan to set up demonstration bases in Ayothaya Technology institute in Bangkok and in Naresuan University.

The construction of the demonstration Base has effectively promoted the understanding and knowledge of China's solar energy technology and products in southeast Asian countries such as Thailand, and It has played a positive role in demonstrating the export of solar energy utilization technology and related products as well as expanding the International market .



三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

采用“技术转移机构+国内企业+国际技术转移网络+国外机构”的方式，利用国际科技合作网络，发挥国家技术转移示范机构的作用，组织中国太阳能企业在泰国曼谷阿裕塔雅技术学院（Ayothaya Technology institute）和泰国纳苏安大学建立示范基地。

By adopting the mode of “technology transfer institutions + domestic enterprises + international technology transfer network + foreign institutions”, we made use of the network built among Naresuan University, Chulalongkorn University, ING Company and Southeast Investment Company of Thailand, and organized solar energy enterprises in Yunnan to set up demonstration bases in Ayothaya Technology institute in Bangkok and in Naresuan University.



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三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

- 通过上述项目的示范，太阳能的技术和产品得到了泰国有关机构的认可。
- Through the above demonstration projects, solar technology and products have won the recognition of relevant organizations in Thailand.
- 在泰国共同成立了帝国太阳能电池有限公司。
- The Empire Solar Co., Ltd. has been jointly established in Thailand between Chinese and Thai corporations.
- 目前在芭提雅海滨和泰国PTT石油工业园区安装太阳能路灯，首期工程已开始进行。
- An agreement with Thailand Marine Base and PTT Industrial Park of installing solar street lamps has been signed, and the first phase construction has been proceeded.
- 促成中国普天鸿雁集团LED灯在泰国的推广应用，签约项目2亿人民币。
- China Potevio Group has signed a 200-million agreement of promoting their LED lights in Thailand.



三、技术转移机制示范

Technology Transfer Mechanism and Demonstration





三、技术转移机制示范

Technology Transfer Mechanism and Demonstration





2、元谋县太阳能提水示范工程

The Solar PV Water
Pump Demonstration
Project in Jiang Yi
Village, Yuanmou
County





三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

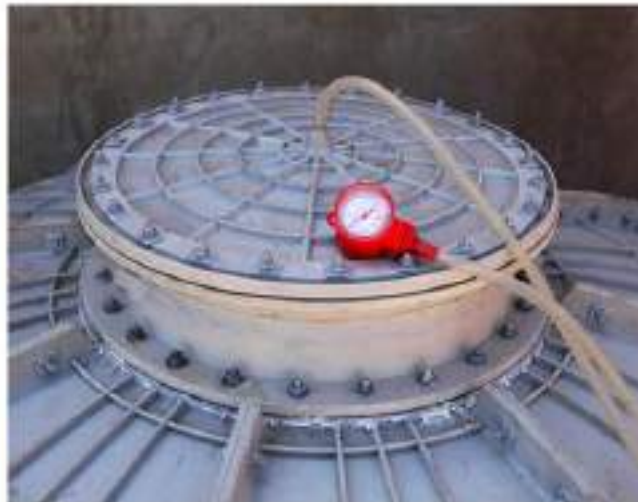
4、沼气示范工程

- 为推进云南省新能源、可再生能源面向东南亚国家推广等方面的技术转移，云南省科技情报院与泰国朱拉隆功大学签订了沼气推广应用合作协议。
- 与泰国SIMA-AREE工程有限公司、云南省沼气工程技术研究中心签订了在泰国建设沼气应用示范工程协议，推广了50套沼气池。



三、技术转移机制示范

Technology Transfer Mechanism and Demonstration





三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

5、与越南合作共同开展可再生能源技术开发与推广工作

5. Collaboration with Vietnam to develop and promote renewable energy technology





三、技术转移机制示范

Technology Transfer Mechanism and Demonstration

- 6、老挝太阳能发电系统
- 6.Solar power system in Lao PDR





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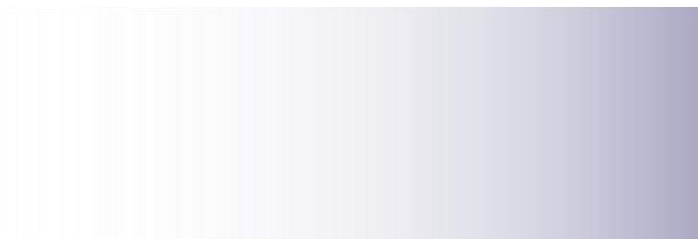
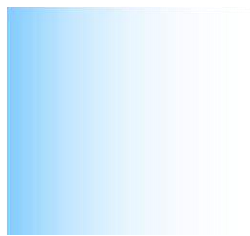
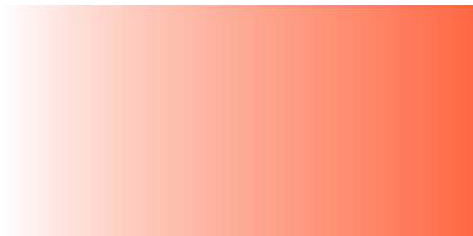
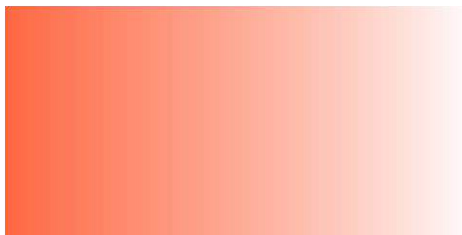
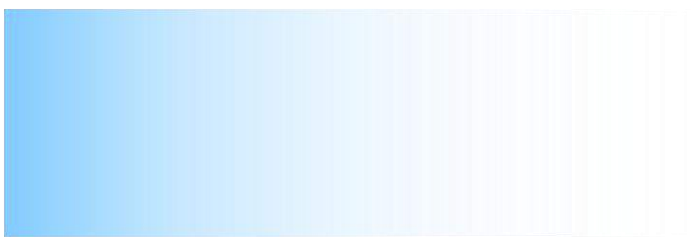




中国—南亚技术转移中心

China-South Asia Technology Transfer Centre (CSTTC)







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• 目标 Objectives

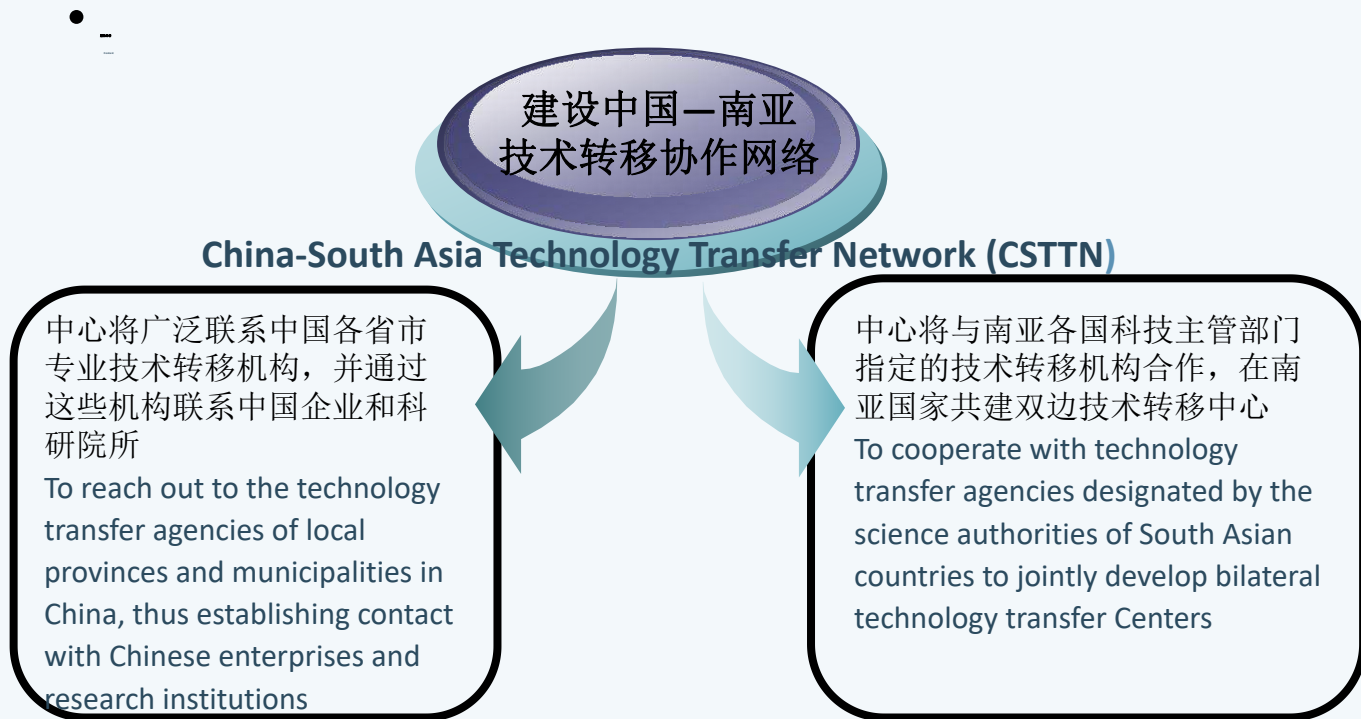
- 旨在凝聚和培养一批专业化的技术转移机构和人才，构建覆盖整个区域的中国—南亚技术转移协作网络，促进区域创新合作与发展。
- Bring together technology transfer agencies and professionals, build a technology transfer network covering both China and South Asian Countries, and promote innovative cooperation and development.
- 中心将通过挖掘中国及南亚各国企业的合作需求，组织企业对接交流洽谈、适用技术培训、先进技术示范，提供专业服务。
- CSTTC taps the full potential for collaboration, hold B2B meetings, organize technology trainings, demonstrate advanced technologies and provides other professional services.



中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



- 促进中国与南亚各国企业深入合作，推动中国与南亚各国之间先进适用技术的转移，推动中国与南亚各国创新区域一体化加快发展。
- Enhance cooperation among enterprises and the transfer of applicable technologies between China and South Asian Countries, thus further regional integration of innovation.





中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



建设中国—南亚技术转移中心官方网站。发布中国—南亚技术转移动态及活动信息，以及中国—南亚科技创新相关政策与服务等

To establish the official website of the CSTTC, mainly covering China-South Asia technology transfer progress, technology transfer activities, policies and services on technology innovation, etc.

建设中国—南亚技术转移对接平台。面向中国—南亚技术转移协作网络各核心成员和普通成员提供技术转移需求信息发布、供需对接智能检索与匹配、供需双方在线对接和辅助翻译等功能

To establish the China-South Asia Technology Transfer Matchmaking Platform. Principal members and registered users of CSTTC will have access to such services as supply and demand information release, retrieval and pre-matchmaking, language translation tools, etc.

建设中国—南亚技术转移
信息与对接平台
China-South Asia
Technology Transfer
Information Sharing and
Resources Matchmaking
Platform



✓ 组织系列中国—南亚技术转移活动

Matchmaking Activities for China-South Asia Technology Transfer

结合现有对南亚合作平台，定期举办中心标志性活动大会；围绕南亚国家企业发展需要，在中国和南亚国家举办以企业为主体的技术对接活动

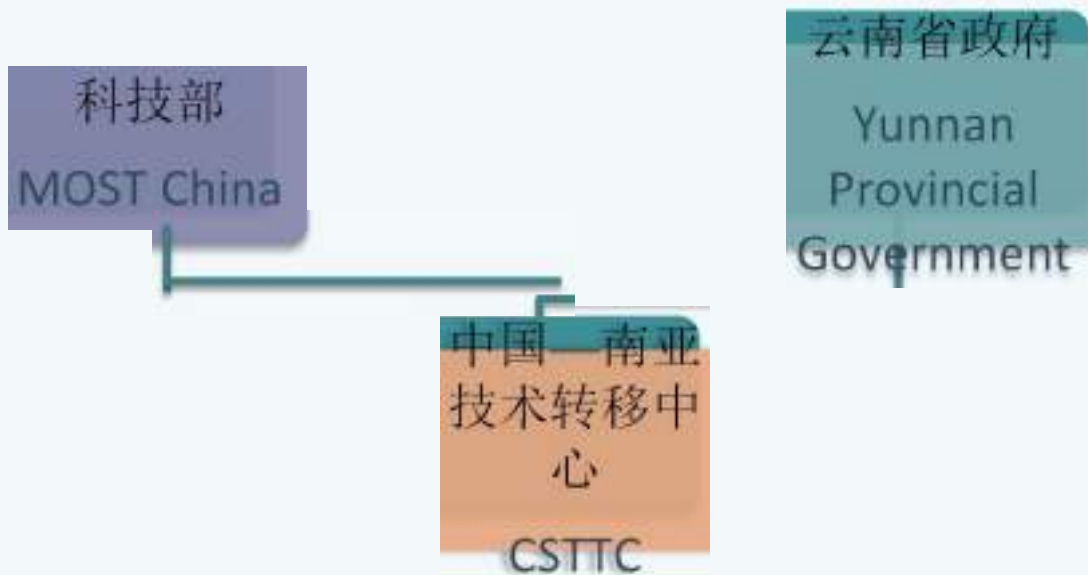
To hold the Forum on China-South Asia Technology Transfer and Collaborative Innovation on a regular basis. As a hallmark event of CSTTC, the forum is to consist of high-level dialogue, B2B meetings, field trips to science parks, etc.

围绕南亚国家技术发展需要，举办先进适用技术、技术经理人和科技创新管理培训班；根据南亚国家技术发展需要，支持中国企业及机构与南亚国家合作机构在南亚国家共建先进适用技术示范基地

To hold training courses on applicable technologies, science & technology & innovation management, as well as technology managers trainings as needed by South Asian countries.



- 组织架构
Hierarchy





中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



中国—南亚技术转移协作网

CSTTN

中国—南亚技术转移中
心

CSTTC





- **设立基金 CSTTC Fund**

为更好的推进中国—南亚技术转移中心相关工作的开展，务实推动中国与南亚国家开展科技合作，拟设立中国—南亚技术转移基金。基金由云南省财政专项安排，云南省科技厅和中国—南亚技术转移中心专门管理。

In order to facilitate the building of CSTTC and promote collaboration between China and South Asian Countries, we propose to set up CSTTC Fund, of which main source is allocated by Yunnan Provincial Finance. The Fund is jointly managed by Yunnan Department of Science and Technology and CSTTC.

“基金”主要用于支持以下四个方面的工作：

The Fund is primarily used in the following four aspects:



中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



1. 中国—南亚技术转移中心能力建设，包括南亚国家分中心和国内相关省区协作网络机构建设。

2. 帮助国内中小企业开拓南亚国家市场，推动“走出去”战略实施，实现我国技术和产品向南亚国家的转移。

3. 开展面向南亚国家相关人员的技术培训和技術转移对接活动。

4. 在南亚国家开展农业、新能源等科技合作示范园区的建设。



中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



1.Capacity building of CSTTC, including the building of CSTTN and South Asian sub-center

2.Assisting domestic small-medium enterprises to explore South Asian markets, and helping technology transfer

3.Orgazing technology transfer training and matchmaking events facing related personnel in South Asian Countries

4.Agricultural, new and renewable energy demonstration sites construction in South Asian Countries



- 南亚各国如何参与
How can South Asian countries participate in this project?

南亚国家科技主管部门指定联系人，并指定本国某机构与中国—南亚技术转移中心成立双边联合工作组。联合工作组共同研究提出两国技术转移合作机制，组织企业对接、组织培训班等合作，并在适当时机成立双边合作技术转移中心。

Science authorities of South Asian countries appoint a contact person and designate an agency to set up bilateral joint working groups with CSTTC. The joint working groups will be responsible for proposing the mechanism for bilateral technology transfer cooperation, organizing matchmaking events, training courses and other cooperation projects, and establishing bilateral technology transfer centers at an appropriate time.



中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



- 南亚各国如何受益

How can South Asian countries benefit from this project?

- 通过中国—南亚技术转移中心链接中国丰富的企业资源和先进适用技术信息，为本国企业提供更广泛创新资源。

South Asian partners can access China's business resources and information on applicable technologies through CSTTC, in a bid to provide a broader range of innovation resources for enterprises in South Asian countries.

- 与中国—南亚技术转移中心共同组织企业对接活动，为中国与南亚各国企业洽谈合作提供面对面机会。

CSTTC will work with South Asian partners to organize matchmaking events and facilitate face-to-face talks between Chinese and South Asian enterprises.



中国—南亚技术转移中心 China-South Asia Technology Transfer Centre (CSTTC)



- 获取中国—南亚技术转移中心为推动中国与南亚各国技术转移合作提供的技术咨询、技术评估、技术培训、技术产权交易、技术投融资、知识产权、法律事务、产业分析报告等配套服务。

South Asian partners will get access to a full range of matchmaking services provided by CSTTC, including technology consultation, technology evaluation, technology training, technology transactions, technology investment and financing, intellectual property, legal affairs and industrial analysis reports, etc.

- 可派人参加中国—南亚技术转移中心组织的技术经理人培训和专业技术培训。

South Asian partners may send personnel to attend training courses for technology managers as well as training courses on specialized technologies organized by CSTTC.



中国—南亚技术转移中心

China-South Asia Technology Transfer Centre (CSTTC)

- 一批签署重大项目正在实施
- 一批新的项目正在策划推进中
 - 中国—巴基斯坦现代农业科技示范园
 - 中国—斯里兰卡现代农业科技示范园
 - 尼泊尔科学院分支机构共建
 - 巴基斯坦太阳能光伏提水系统示范项目
 - 中国—印度技术转移与经贸合作平台建设

A number of major projects are being implemented.

A number of new projects are being planned and pushed forward.

China-Pakistan Modern Agricultural Science and Technology Demonstration

China - Sri Lanka Modern Agricultural science and technology Demonstration

Construction of Branch of Nepal Academy of Science and Technology

Demonstration Project of Solar Photovoltaic Water Pumping system in Pakistan

Construction of China-India Technology Transfer and Economic and trade Cooperation Platform



中国—东盟创新中心 China-ASEAN Innovation Centre



- 成立背景
- -2013年10月9日，中国总理李克强在第16次中国—东盟（10+1）领导人会议上倡议，中方将继续实施中国—东盟科技伙伴计划，建立中国—东盟创新中心。
- -落实国家科学技术部与云南省人民政府部省会商确定的共建中国—东盟创新中心决议的重要举措。



Background

To deepen cooperation on science and technology innovation and sustainable development between China and ASEAN countries and to promote common development in the region, Chinese Premier Li Keqiang said at the 16th ASEAN-China(10+1) Summit on October 9, 2013, that China would continue implementing China-ASEAN Science and Technology Partnership Program and would establish China-ASEAN Innovation Center(CAIC). The Center, within the framework of the Program, facilitates business incubation, innovation and development, and promotes science and technology innovation and cooperation.





中国—东盟创新中心

China-ASEAN Innovation Centre

中国—东盟创新中心由科技部和云南省政府共建，依托云南创新生物产业孵化器，建立中国-东盟创新中心总部区。

The China-ASEAN Innovation Center was jointly established by the Ministry of Science and Technology and the Yunnan Provincial Government, relying on the Yunnan innovative bio-industry incubator, to establish the China-ASEAN Innovation Center headquarters area.





中国—东盟创新中心

China-ASEAN Innovation Centre

- 宗旨
- 中国—东盟创新中心是促进和深化中国与东盟科技创新与交流合作的重要平台,旨在推动中国和东盟国家之间的科技交流和创新合作,促进与东盟的文化交流与科技人才教育培训,提升区域科技创新能力。
- **Vision**
- As a platform for innovation and cooperation, CAIC aims to enhance scientific, technological and cultural exchange, innovative collaboration and capacity building, in a bid to improve innovation capacity in the region.
- 目标
- 中国—东盟创新中心依托昆明国家经济技术开发区、昆明国家高新技术产业开发区等现有平台,按照“资源共享、协同创新、互利互惠、合作共赢”的原则汇集各类创新资源和要素,开展技术对接、人才对接、项目对接和企业对接促进中国和东盟国家的科技与创新合作,为研发、企业孵化、成果产业化、推广应用、科技文化交流等提供综合性的服务。
- **Objectives**
- Based on existing platforms of National Economic Development Zone and High-tech Development Zone in Kunming and driven by values of resource sharing, collaborative innovation, mutual benefit and win-win, CAIC pools innovation resources and elements to foster collaborations on technology, expertise, projects and businesses, and to provide comprehensive service for R&D, technology incubation, research commercialization and scientific and cultural exchange.



中国—东盟创新中心

China-ASEAN Innovation Centre

- 产业创新方向
- 生物产业:天然植物提取物、生物医药、生物制品、生物技术服务。现代农业:农业新品种培育与新技术研发应用。新能源与可再生能源领域:太阳能、生物质能、风能开发和利用。环境保护领域:生态保护、环境治理、清洁发展、循环利用技术的研发与应用。电子信息:智能电网、智能化物流系统、新型显示系统、自动化控制系统等。
- **Key areas**
 - i Bioindustry: natural product, biomedicine, bioproducts, biotechnology and service
 - ii. Modern agriculture: development and application of new technology and varieties
 - iii New and renewable energy: development and application of solar, biomass and wind energy technology and products.
 - iv Environmental protection: development and application of technology for ecology remediation, pollution control, clean development and sustainable production. Electronic information: development and application of technology for smart grid, intelligent logistics, new display and automatic control systems.



中国—东盟创新中心

China-ASEAN Innovation Centre

- 公共科技创新服务平台
- 提供研究和产品开发实验、检测、分析、中试公共技术服务平台, 设置专业化实验室和分析检测中心, 建立信息网络系统, 构建技术转移、成果转化服务体系, 为参与科技创新活动的企业、大学、科研院所提供公共服务。
- **Service**
- Public service platforms for science and technology innovation
- CAIC Provides online information platform, technical facilities like laboratories and testing centers for research and product development, and service on technology transfer and research commercialization.



中国—东盟创新中心

China-ASEAN Innovation Centre

- 中国—东盟创新活动
- 中国—东盟创新论坛
- 论坛作为中国—东盟创新中心的标志性活动,开展中国与东盟国家科技需求、各国相关领域的科技政策和发展方向等方面的信息交流,促进中国与东盟国家企业、科研机构的科技合作,主要由开幕式、高峰对话、新技术、新品种推荐洽谈对接、国际孵化器实地对接等环节构成。
- 面向东盟国家的教育与科技培训





中国—东盟创新中心

China-ASEAN Innovation Centre

- 东盟国家如何受益
 - (一) 通过中国—东盟创新中心服务平台,可以实时了解和掌握丰富的创新信息资讯,包括企业资源、专家团队、先进技术,为本国企业提供更丰富广泛的创新资源。
 - (二) 与中国企业直接面对面开展创新交流、项目对接、业务洽谈、市场开拓等活动。
 - (三) 可获得良好的创新服务环境、增值的创新服务和诸多优惠政策。
 - (四) 可派人员参加中国—东盟创新中心的技术教育培训和创新活。
-
- **How can ASEAN countries benefit?**
 - i. ASEAN partners can access China's innovation information on business, expertise and technology through CAIC, in a bid to provide a broader range of innovation resources for enterprises in ASEAN countries.
 - ii. ASEAN partners may have face-to-face talks with Chinese enterprises for innovation, projects, business and market expanding, etc
 - i. ASEAN partners may enjoy an enabling environment for innovation, comprehensive service and supporting policies.
 - iv. SEAN Partners may send personnel to attend technical training courses and innovation activities organized by CAIC.



中国—东盟创新中心

China-ASEAN Innovation Centre

- 东盟国家如何参与
- 东盟国家科技主管部门指定联系人,并指定本国相关机构与中国—东盟创新中心建立双边联系工作组。联合工作组共同负责遴选、推荐入驻中心企业和机构,组织企业对接、项目对接、技术对接、人才对接工作,共同为中心的发展营造良好环境。
- **How can ASEAN countries participate?**
- Science and technology authorities in ASEAN countries appoint a contact person and designate an agency to set up bilateral working groups with C AIC. The working groups are responsible for recommending companies and organizations to join CAIC, facilitating match making activities and creating favorable conditions for CAIC's development.

• 四、存在的问题、难点

Existing Problems and Difficulties



四、存在的问题、难点

Existing Problems and difficulties

- 1、绝大多数从事新能源技术开发和产品的企业缺乏对外开展技术转移的途径和渠道，虽然有很广阔的市场需求，但是一些先进实用的技术难以得到转移。
- 2、技术转移和产品推广的机制还未完全建立，而发展中国家市场机制不健全，获得的技术不能有效地进行扩散。



四、存在的问题、难点

Existing Problems and difficulties



- 3、缺乏专业性的技术转移机构开展面向发展中国家的技术转移工作，使得一些好的、实用的成熟技术难以得到广泛推广。
- 4、技术和产品的针对性不强，在技术转移过程中的服务意识薄弱、服务能力不高，在很大程度上制约了技术的推广和应用。
- 3. Lacking of professional technology transfer agency to deal with the TT to developing countries, some very good practical mutual technologies are quite hard to be popularized.
- 4. The technology and products are lack of focus. During the TT process, lacking of service awareness and sufficient service are greatly limited the technology promotion and application.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



1、开展技术转移工作，市场需求调查很重要

1. Market demand survey is essential for technology transfer carrier

- 我们在开展东南亚国家的技术转移工作时，开展了大量的市场调研工作，结合不同国家的需求再来做针对性的技术转移工作。
- When we carried out the technology transfer work facing to South and Southeast Asian Countries, we did huge market surveys, which made us to take different method to deal with technology transfer according to different country's demand.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



2、要加强国际组织参与和政府引导

2. International participant and government guidance should be enhanced

- 国际组织要充分利用区域合作平台，在资金和能力建设方面给予支持和重视。
- International organization should take its own regional cooperation platform as advantages, to give priority and support in capital and capacity building area.
- 根据发达国家可再生能源推广经验以及南亚东南亚国家的实际情况，政府要在政策引导、科技投入、促进技术和产品“走出去”等方面给予支持。
- Based on the renewable energy promotion experiences from developed countries with South and Southeast Asian country present situation, the government should provide enough support on the policy guidance, research investment, technology and product out-door promotion.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



3、技术转移的工作思路和方法

3. Technology transfer working style and method

- 搭建平台、沟通渠道、建立关系、促进合作
- Build up platform, set up communication channel, build relationship, enhance cooperation
- 有了相互间的认识，必须要跟进，要坚持，要有耐心
- Star from the acquaintance with each other, keep on follow up, insist on, be patient



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



4、加大政府援外力度

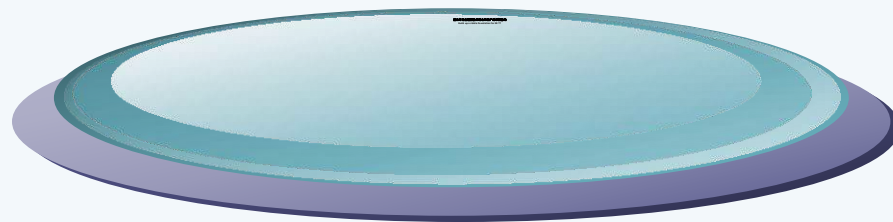
4. Increase the government support for supporting oversea

- 政府和国际组织要进一步加大政府援外资金的投入力度，确立长远明确的目标，持续给予援外项目的支持，建立可再生能源技术转让和推广的牢固基础。
- Both government and international organization should increase more financial support on overseas investment at a new stage, to set up a long term specific goal, to provide foreign investment project sustainably , to build up a stable foundation for renewable energy technology transfer and promotion.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



要进一步加大政府援外资金的投入力度。

increase more financial support on overseas investment at a new stage

确立长远明确的目标，持续给予援外项目的支持

set up a long term specific goal, to provide foreign investment project sustainably



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



5、加强与国际组织间的合作

5. To strengthen the collaboration with international organization

- 在推动区域技术转让的过程中，要加强与区域国际组织的政府间的合作。
比如：
- During the regional TT promotion, the collaboration among regional international organization and governments should be strengthened.
- 面向东南亚南亚国家的技术转让工作，应加强与东盟秘书处、联合国亚太技术转移中心、亚洲开发银行的合作，并建立区域推广平台和机制。
- Facing South and Southeast Asian country to develop technology transfer, it should strengthen the collaboration among ASEAN Secretariat, UNAPCTT and ADB, while to set up a regional promotion platform and mechanism.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism

6、构建交流合作平台

6. Build up communication and cooperation platform

- 从近年来我们开展的与东盟国家的国际会议、论坛、研讨会、培训班等活动来看，我们感受到建立与东盟秘书处和东盟国家的合作平台是一个非常重要且有效的合作方式。
- From our experiences on the cooperation with ASEAN countries as international conference, forum, seminar, training and other activities, we figured out that to set up a cooperation platform with ASEAN Secretariat and ASEAN countries was a very important and effective way to cooperate.
- 因此，在中国科技部的大力支持下，我们将进一步依托中国—东盟创新中心和中国—南亚技术转移中心这两个重要平台，以论坛、研讨会、人员技术培训、产品展示和海外示范基地建设等模式，开展技术转让等面向东南亚国家的科技活动，同时积极探索合作的机制、模式和效果。
- So, under the strong support from MOST of China, we will utilize the two important platform: CHINA-ASEAN INNOVATION CENTER and CHINA-SOUTH ASIAN TECHNOLOGY TRANSFER, to carry out scientific activities as forum, seminar, staff training, product exhibition, overseas demonstration project and transfer technology to South and Southeast countries, while to actively explore the cooperation mechanism, modes and evaluate the outcomes.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



7、加强政策、机制、合作方式和合作重点的研究

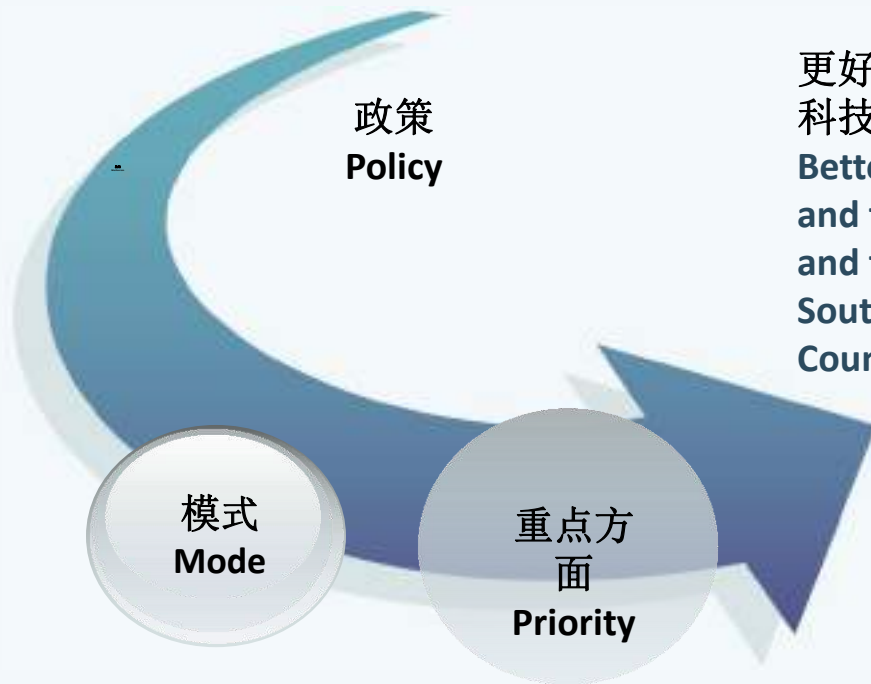
7. Focus on the research for policy, mechanism, cooperation method and priority

- 随着我国加大对东南亚南亚的开放力度，针对不同的国家和地区开展政策研究，对于有效开展与东南亚国家的科技合作具有重要指导作用。
- With China's increasing efforts to open up Southeast Asia and South Asia, policy research aimed at different countries and regions will play an important guiding role in effectively carrying out scientific and technological cooperation with Southeast Asian countries.



五、对技术转移机制的几点认识

Acknowledgment of Technology Transfer Mechanism



更好的指导与东南亚国家的
科技合作与技术转移。

Better guidance for science
and technology cooperation
and technology transfer with
South and Southeast Asian
Countries



五、对技术转移机制的几点认识

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8、重视市场配置资源的作用

8. Highlight the effect of market resource allocation

- 大力发展可再生能源产业。要通过市场机制，把技术转让与工程项目密切结合起来，选择在次区域国家市场前景的较好技术予以重点扶持。
- To develop renewable energy industry. Through market mechanism, technology transfer should be closely combined with engineering projects, to choose better technologies those have good market prospects in sub-regional countries to be supported in priority.



云南省科学技术情报研究院
YUNNAN ACADEMY OF SCIENTIFIC & TECHNICAL INFORMATION

谢谢！
Thank you!



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