UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific
Asian and Pacific Centre for Transfer of Technology (APCTT)

IRENA
International Renewable Energy Agency

Department of Science and Technology, Philippines

Southeast Asia Regional Training Programme on Renewable Energy Resource Assessment and Mapping

28-30 September, 2015, Davao City, Philippines

Concept Note

For most countries in the Asia Pacific region, exploiting renewable sources of energy is a key priority. Driven by increasing demand for electricity and other forms of energy, concern over climate change and better and more cost effective renewable energy technologies, many countries are seeking to greatly expand the amount of energy generated from renewable sources. For many rural populations in the developing countries of the region, renewable energy may be the only viable means of accessing modern forms of energy. Access to modern energy is key to achieve sustainable development goals which will form the new development agenda of the United Nations. Globally, over two billion people have no access to modern energy services.

Renewable energy plays a pivotal role in addressing climate change, energy security, reducing reliance on imported fossil energy and rural electrification. The growth in renewable energy use in Asia Pacific in recent years is encouraging but it needs to be accelerated further to respond to the scale of these challenges. Countries in the Asia-Pacific region have a huge untapped renewable energy potential in areas such as wind, solar, biomass and hydro. Yet, these countries have very limited technical expertise available for identifying potential renewable energy resources, developing effective policy instruments for supporting renewable energy as well as identifying potential market opportunities for renewable energy technologies. Hence, it is imperative that these countries collaborate with other developing countries in the Asia-Pacific region through South-South Cooperation to benefit from cross-border transfer of skills, knowledge and technologies that can directly contribute to the growth of renewable energy generation, in a manner that leads to sustainable and inclusive development.

There is a significant scope for improvement in many countries in the region in the way they undertake renewable energy resource assessments and translate the results into national

policies and strategies to accelerate the transfer and adoption of renewable energy technologies.

As a Regional Institution of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), APCTT has strong linkages with the S&T and R&D community, technology transfer intermediaries, and SMEs in the countries of the region and can play an important role in promoting renewable energy technology transfer, capacity building, and knowledge networking. Through the establishment of Renewable Energy Cooperation-Network for the Asia Pacific (RECAP) with a membership of 15 countries including Thailand, APCTT has built a robust institutional mechanism for facilitating cross-border cooperation for promoting the adoption and use of renewable energy in the region.

At the global level, the International Renewable Energy Agency (IRENA) headquartered in Abu Dhabi, UAE is working towards promoting the widespread adoption and sustainable use of all forms of renewable energy. IRENA is an intergovernmental organization with a specific mandate to promote renewable energy and has a membership of there are currently 143 Members (142 countries and European Union).

One major line of activity of the agency is creating state-of-the-art knowledge on the renewable energy resource base globally. This is currently done using the **Global Atlas for Renewable energy (Global Atlas)**; a web and mobile based geographic information system that equips energy planners and policy makers prospecting for the best areas for solar, wind, bioenergy and geothermal energy development. The Global Atlas is backed by a repository of over 1000 datasets. IRENA is also cooperating with the World Bank's ESMAP initiative which is funding the assessment of renewable energy resources in selected developing countries.

The Southeast Asia Regional Training Programme would create more awareness and build the skillset of policymakers, scientists and SMEs in the Asia Pacific region which is a key objective for both APCTT and IRENA.

As an initial step, APCTT and IRENA jointly organized an Expert Group Meeting on Renewable Energy Resource Assessment for Countries in the Asia-Pacific Region from 25 to 26 September 2014 in Bangkok, Thailand. This meeting was hosted by APCTT's focal point in Thailand, the Ministry of Science and Technology. Twenty-six experts from 13 member states (Afghanistan, Australia, Cambodia, China, Japan, Kazakhstan, India, Indonesia, Islamic Republic of Iran, Pakistan, Singapore, Thailand and Viet Nam) participated in the meeting and shared global expertise, best practices and country perspectives for renewable energy resource assessment.

The meeting participants concluded that increased capacity to undertake and apply renewable energy resource assessments at the national level is key to leverage the huge untapped renewable energy resources available in countries in the region. There was also a consensus that APCTT and IRENA should work together and facilitate South-South Cooperation to strengthen the national capacities of countries in the Asia Pacific region, including the Pacific Island countries and LDCs to undertake and apply their own renewable energy resource

assessments. Following the meeting, APCTT and IRENA organized an Asia-Pacific Regional Workshop on Biomass Energy Resource Assessment in Bangkok, Thailand during 6-8 July, 2015. This workshop attracted the participation of biomass energy experts from over 15 countries from the Asia Pacific region. This regional workshop provided hands on training on biomass resource assessments. It also provided a platform for experts to brainstorm on the possibilities for enhancing regional cooperation on technology transfer and knowledge sharing related to biomass energy resource assessment among countries in the Asia Pacific region.

The current workshop which would take place on the **28-30 of September 2015,** would focus on **solar** and **wind** resource assessment.

APCTT and IRENA will be partnering with the Technology Application Promotion Institute (TAPI) and Department of Science and Technology Region XI (DOST-XI), Republic of Philippines for organizing this programme in Davao City, Philippines. The workshop will also feature experts from internationally renowned renewable energy related organizations, and the participation of key stakeholders from countries in Southeast Asia.

Key Objectives

A three day training programme will be co-organized by APCTT and IRENA, with the support of the Department of Science and Technology, Republic of Philippines. The objectives for the training programme will be:

- To provide training on various methodologies, tools and techniques for solar and wind energy resource assessments that are developed by IRENA and other international organizations that are readily available for estimating the national renewable energy potential..
- To understand the inter-relationships between renewable energy resource availability with policy areas such as energy subsidies, skills development, infrastructure planning and national climate change policy and learn from regional policy best practices.
- To enhance knowledge of key regional stakeholders on regional and global initiatives on renewable energy resource assessments from regional/international organizations such as IRENA.
- To share regional experiences, successes, challenges and best practices on renewable energy resource assessments and preparing resource assessment maps.
- To create a pool of trainers in solar and wind resource assessments who could further disseminate the trainings in their respective countries.

Target Audience

Participants will include renewable energy researchers, private sector representatives, policymakers and government officials in the renewable energy sector, especially in the solar and wind energy sectors from the Philippines and other countries in Southeast Asia.

Expected Outputs/Outcomes

- Enhanced knowledge on methodologies, tools and techniques for solar and wind energy resource assessments that are available for estimating the renewable energy potential.
- Increased awareness on best practices from the regional and global perspectives on solar and wind energy resource assessments.
- Increased capacity to translate renewable energy resource information into effective polices and strategies.
- Enhanced level of networking among key stakeholders in South Asia and creation of a knowledge community on solar and wind energy resource assessments.
- Development of a trained pool of experts from the participating countries who could further disseminate the training in their respective countries.