



## INTERNATIONAL TREND OF RENEWABLE ENERGY: FOCUSING ON THE CASES OF SOUTH ASIA AND BANGLADESH



**Venue:** NEC-1 Committee Room, Planning Commission Premises, Sher-e-Bangla Nagar, Dhaka-1207

**Date:** January 24, 2019



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LHE Title:	<b>International Trend of Renewable Energy: Focusing on the Cases of South Asia and Bangladesh</b>
Date & Time:	January 24, 2019
Organizers:	International Centre for Climate Change and Development (ICCCAD)
Funded by:	
Venue:	Planning Commission, Sher- E- Bangla Nagar, Dhaka, Bangladesh
Chair:	<b>Md. Khalilur Rahman Khan</b> , Chief, Programming Division, Planning Commission
Moderator:	<b>Dr. Saleemul Huq</b> Director, ICCCAD Senior Fellow, IIED
Special Guest:	<b>SK Md Abdul Ahad</b> , Chief, Industry and Energy Division, Planning Commission
Chief Guest:	<b>Md. Ziaul Islam</b> , Member (Senior Secretary), Programming Division, Planning Commission
Presentation:	<b>International Trend of Renewable Energy: Focusing on South Asian Cases-</b> Simon Nicholas Energy Finance Analyst, Institute for Energy Economics and Financial Analysis, Ohio, USA <b>Renewable Energy in Bangladesh: Issues and potentials-</b> Dr. Taibur Rahman, (Deputy Chief), National Project Manager, SREPGen SREDA
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### Participant List

SI No.	Name	Designation/Organization
1	Mr. Md. SK Farid	Deputy Director, Department of Agricultural Extension (DAE)
2	Mr. Md. Salahuddin Ahmed	Deputy Chief, Planning Commission
3	Ms. Anamika Nazrul	Assistant Chief, General Economics Division (GED)
4	Ms. Moslema Naznin	Deputy Secretary, Economic Relations Division (ERD)
5	Mr. Md. Nazmul Islam	Assistant Chief, Economic Relations Division (ERD)
6	Mr. Kazi Jahangir Alam	Division Chief, Planning Division
7	Mr. Md. Sarwar Hossain	P. D., Solar Project, BADC
8	Mr. Muhammad Anwar Uddin	Deputy Chief, Planning Commission
9	Ms. Kamrun Nahar	Joint Chief, Planning Commission
10	Mr. Abu Md. Mohiuddin Quederi	Joint Chief, SEID, Planning Commission
11	Mr. Muhammad Mamunur Rashid	Research Assistant
12	Mr. Md. Sayduzzaman	Joint Chief, Programming Division
13	Mr. Md. Abubakor Sarkar	Assistant Chief
14	Ms. Leuja-Ul-Zannah	Senior Assistant Chief, Programming Division
15	Mr. Dipal C. Barua	Bangladesh Solar and Renewable Energy Association (BSREA)
16	Ms. Tania Ahmed	ICCCAD
17	Dr. Md. Amzad Hossain	Programming Division
18	Mr. Mithun Paul Dip	Research Officer, Programming Division
19	Mr. Md. Mostaftzur Rahman	Senior Assistant Chief, Programming Division
20	Mr. Mohammad Abdul Salam	PS to Senior Secretary
21	Mr. Dinesh Sarkar	Senior Assistant Chief, Programming Division
22	Ms. Kajal Islam	NDC, Additional Secretary, Planning Division
23	Ms. Sabina Rawshon	Senior Assistant Chief, Programming Division
24	Ms. Umme Hasina	Senior Assistant Chief, Programming Division
25	Mr. Md. Fazlur Rahman	Deputy Chief, Planning Commission
26	Ms. Rumi Tanchangya	Senior Assistant Chief, Programming Division
27	Mst. Maryam Khatun	Assistant Chief, Programming Division
28	Ms. Samantha Mccraine	ICCCAD, Visiting Researcher
29	Mr. Shepard Zvigadza	ICCCAD, Visiting Researcher
30	Mr. Jahedul Huq	UNDP
31	Dr. Saleemul Huq	Director, ICCCAD
32	Mr. SM Morshed	NRP/ PM, UNDP
33	Mr. Saqib Huq	Programme Coordinator, ICCCAD
34	Mr. Tasfiq Mahmood	Programme Coordinator, ICCCAD
35	Mr. Noor-E- Elahi	Programme Assistant, ICCCAD
36	Mr. Md. Hafizur Rahman	Project Officer, ICCCAD
37	Mr. Nazmul Haque Faisal	Infrastructure Development Company Limited (IDCOL)
38	Dr. Nurun Nahar	Deputy Chief, Programming Division

**Learning Hub Event (LHE) Agenda**  
**Date: January 24 (Thursday), 2019**

<b>Event title</b>	<b>International Trend of Renewable Energy: Focusing on the Cases of South Asia and Bangladesh</b>	
<b>Organized By</b>	<b>Programming Division, Planning Commission, Ministry of Planning and International Centre for Climate Change and Development (ICCCAD)</b>	
<b>Venue</b>	<b>NEC-1 Committee Room, Planning Commission Premises, Sher-e-Bangla Nagar, Dhaka-1207</b>	
<b>Time</b>	<b>Activities</b>	<b>Responsible Person</b>
2:30 to 03:00 pm	Registration	ICCCAD Team
03:00 to 03:05 pm	Opening Remarks by Chair	<b>Md. Khalilur Rahman Khan</b> Chief, Programming Division, Planning Commission
03:05 to 03:15 pm	Introductory remarks and setting the tone	<b>Dr. Saleemul Huq</b> Director, ICCCAD Senior Fellow, IIED
03:15 to 03:20 pm	Remarks by Special Guest	<b>SK Md Abdul Ahad</b> Chief, Industry and Energy Division, Planning Commission
03:20 to 03:25 pm	Remarks by Chief Guest	<b>Md. Ziaul Islam</b> Member (Senior Secretary), Programming Division, Planning Commission
03:25 to 03:45 pm	Presentation 1: <b><i>International Trend of Renewable Energy: Focusing on South Asian Cases</i></b>	<b>Simon Nicholas</b> Energy Finance Analyst, Institute for Energy Economics and Financial Analysis, Ohio, USA
03:45 to 4pm	Presentation 2: <b><i>Renewable Energy in Bangladesh: Issues and potentials</i></b>	<b>Dr. Taibur Rahman</b> National Project Manager (Deputy Chief), SREPGen SREDA
04:00 to 04:20 pm	Question-Answer & Discussion	All Participants
04:20 to 04:30 pm	Closing Speech	<b>Dr. Saleemul Huq</b>
04:30 pm	<b>Networking and Snacks</b>	ICCCAD Team

## Introductory Session

The event was opened by the Chief of Programming Division Mr. Khalilur Rahman Khan. He talked about the climate change vulnerabilities of Bangladesh. Bangladesh has both challenges and opportunities while it is converting from an LDC to a middle income country. Bangladesh is developing the readiness support programme for the Green Climate Fund and the future outcome will determine how Bangladesh utilizes the current opportunities. Therefore, funding is essential in this regard and it should be done by both the private and the government sector.



Dr. Saleemul Huq talked about ICCCAD's engagement to the government sector through the Learning Hub Event (LHE) and how the organization has enriched learning for both the researchers and the government officials. Notably, ICCCAD helps build the government's capacity to generate projects, which will be helpful for accessing GCF funds and help in identifying key areas of work in terms of climate change resilience and action.

Mr. Abdul Ahad, Chief of the Industry and Energy Division talked about the power and energy sector of the Government of Bangladesh and how these LHEs will help increase the capacity of the government to achieve its targets on renewable energy and implementation of related policy. He noted that Bangladesh is not in a very good position in the hydro and wind power sector and there is a serious need for a policy roadmap. He talked briefly about a wind power study done by the government of Bangladesh and mentioned that a small wind farm has been installed in Kutubdia. He also mentioned that solar power is becoming more popular in the world. In Bangladesh, there has been some success installing roof-top solar panel installations and powering a number of street lights by solar panels. However, due to heavy amounts of dust in urban areas, they have not been very successful. BRDC is also slowly implementing a solar irrigation pumping system slowly the country is pursuing a new pathway of sustainable development.

Mr. Md. Ziaul Islam, Member (Senior Secretary), Programming Division, Bangladesh Planning Commission emphasized the need to identify the right renewable energy sources for Bangladesh. He asked, *what are the challenges?* and *where do we stand now in identifying the sources?* Understanding where other developing and developed nations are going in the pursuit for clean energy, along with the cost factor are important issues to understand. Power demand will increase in the future and proper planning is needed. The



Planning Commission of the Government of Bangladesh observes and gives feedback to all the power related projects and therefore can take proper action in terms of energy decisions.

## **Presentation Series**

### ***Presentation 1: International Trend of Renewable Energy: Focusing on South Asian Cases***

***Mr. Simon Nicholas***

***Energy Finance Analyst, Institute for Energy Economics and Financial Analysis, Ohio, USA***

Presented on Energy Landscape of South Asia – Renewable Energy Trends. He showed a graph on the global emerging markets of fossil fuel and renewable energy sources, especially wind and solar energy. He explained that the rise in renewable energy usage in the developing nations was mostly driven by investments from China and India. Pointing to 2017 as a landmark in renewable energy use in developing countries, the graph shows that coal usage has been halved since 2015 and the use of solar and wind power increased at a significant rate (reaching 94 GW).



Drawing on a few examples from the developing nations, the presenter added that the coal industry is distressed due to various reasons such as coal availability, demand for coal power declined over the years, outdated technology, tariffs which cannot compete with the renewable energy sources and distance between coal power plants and coal sources. The National Electricity Plan 2018 for India demonstrates that renewable energy is in great demand and is slowly overtaking other non-renewable energy sources. On the other hand, Pakistan heavily relies on imported non-renewable energy sources. Mr. Nicholas highlighted that the recent programme includes coal, hydro and nuclear power sources, which are mostly supported by Chinese investments. The build time for these projects is rather long and the process is expensive. This could be improved through strong policy implication and diversification of investment sources. On a positive note it was mentioned that Pakistan hopes to increase its renewable energy sources from 4% to 20% by year 2025, Chinese support also helps with expanding these energy inputs.

For Bangladesh, it was indicated that the Power Development Board commissioned 13 coal plants by 2021. However, by 2017-18, only 3 coal projects remained on the schedule. The problems identified included availability of funding, land use issues, lack of skilled labours, and public opposition. Big investors such as Japan are now interested to finance renewables more than fossil fuel plants. As of September 2018, Bangladesh has announced that coal-fired

capacity will be cut by 30% in 2030, along with adopting a general principle of no new coal powered plant establishment. To maintain energy generation capacity, more solar power plants are getting approved, including a new 50 MW floating solar plant in Kaptai has been approved for funding by the ADB in January 2019. In 2018, it has also been recognized by a US based research organization that Bangladesh may have more potential in the wind power sector than previous study findings.

More and more countries, especially those considered to developing, are moving towards renewable energy sources. The vast opportunity of foreign investment can speed this up. This making the developing world renewable will also contribute to declining costs, which can make the energies attractive amidst less reliability in expensive fuel imports.

One participant asked about renewable energy in the global context. The presenter commented that many countries are going away from coal, and that some countries are still using it or in the middle of a transition. The use of coal is largely persistent in the developing world and not the developed world. China and India are pushing the use of renewable energy and moving away from fossil fuel usage. Domestic issues with air pollution in both China and India contribute to this transition. China is providing finance to other developing nations, hence the cost is also dropping for the renewable energy sources.

Another comment on the first presentation was on prospect of wind power in Bangladesh. The commenter argued that (contrary to Mr. Nichols' presentation) a recent study has shown that wind power in Bangladesh is not favorable. Chinese turbines are catching up faster than the European technology with which there might be some changes in the wind power sector. The presenter mentioned it is more of a policy issue for Bangladesh and not technology. Japan and South Korea are also leading the way in renewable energy sector.

## ***Presentation 2: Renewable Energy in Bangladesh: Issues and potentials***

***Dr. Taibur Rahman***

***National Project Manager (Deputy Chief); SREPGen; SREDA***



In his presentation on Renewable Energy: Present Status and Roadmap of Bangladesh, Dr. Rahman gave a brief on how Bangladesh is gaining pace in the renewable energy sector slowly but steadily. He pointed out that hydro power 220 MW plant is the only one of its type in the country. In terms of renewable energy production, there is mostly solar, but e other renewable energy sources have not yet been initiated on a larger scale in Bangladesh.

The graph on peak demand projection from 2015 to 2041 was explained and it showed clear evidence of rise in power demand for the coming future. Dr. Rahman mentioned that so far, Bangladesh only gets less than 600 MW of energy from the renewable energy sources and to

satisfy the demand projected for 2041 there is a need to increase this amount to 6000 MW (i.e. magnify current supply by a factor of 10).

The roadmap to receive 10% of Bangladesh's energy from renewable energy between 2018 to 2020 listed different energy sources such as solar home systems (from 233 MW to 255 MW capacity), rooftop solar programme net planning (2.7 MW to 600 MW), and solar parks (23 MW to 700 MW). For the proposed solar park, there are some blockages, such as lack of suitable land and high costs. For the solar irrigation system, there is a need for strong policy support and guidelines. For wind energy, there are high data authentication needs. Although energy generation from waste has a high cost attached, this could be offset by reduced impacts on the environment.

The Prime Minister of Bangladesh declared during COP22 that we will achieve 100% RE by 2050. Whether achievable or not, Bangladesh will work towards that goal. Although Bangladesh has very low GHG emission rates, there are plans to reduce that by 5% (voluntarily). With some assistance, this reduction could go up to 15%. Bangladesh needs both technical and policy support for solar rooftop installations. Currently, both the power division and planning commission are working towards achieving this ambition.

## Open Discussion

One of the participants asked if we can achieve the energy plan of Bangladesh and whether we have the essential institutional and individual capacity to handle that. The second presenter mentioned that these issues of capacity have already been addressed in the 7th Five Year Plan and other national plans in Bangladesh.



Another comment brought up the lack of renewable energy power plants in Bangladesh. Dr. Rahman explained that the main reason behind this is due to the high price land. He noted that wind power also has huge potential in our country but needs more institutional support from all sides, i.e. government and private sector. When asked how the government will continue expanding renewable energy and how they would like to diversify the usage, the presenter pointed out that industries and public buildings will be converted with rooftop solar panels installation and afterwards, other building will be asked to do so as well.

One of the challenges the renewable energy sector deals with is land use management. The government thought about increasing the amount of energy production through the Kaptai dam but it would require a lot of people to relocate. This could create other problems and it would not help achieve the full potential of the renewable energy.



When comparing the rise of renewable energy use in Bangladesh with other countries, one of the participants commented that Bangladesh has only begun its journey, while other countries such as India has been working on this sector for a significantly longer period of time. India set up a power division almost 30 years ago and it has been active every since. Bangladesh established its power division in just 2012. Since then, 10% out of 92% of the energy access Bangladesh is solar. One of the most important aspects of solar energy is the

solar irrigation pump system. Although it is in use, it needs more attention as Bangladesh is quite vulnerable in terms of food security sector related to climate change. Solar home systems are also in the rise, however they are plagued by excess dust.

One participant mentioned that Nordic countries have had great success from improving coordination among all renewable energy sources and the waste management sector, and suggested that Bangladesh considering adopting this model. Another suggestion was that a financial gap analysis is needed when considering power demand projection and that there is also the need for policy support when it comes to foreign investment so the plans for the renewable energy plants run smoothly.

One participant made a suggestion on the use of solar energy saying that solar de-arsenization has huge potential. But it is neither used for energy production and not for any public use.

The presenter commented that Bangladesh needs good consultants in the renewable energy sector. There is a scarcity of good consultants in this sector.



Talk on the success on IDCOL and how it has become a name in the RE sector. IDCOL's success lies in working by itself and this proves that working in the private sector also can be beneficial.

In the concluding remarks, Chief (Programming Division) mentioned that a lot of work needs to be done in the renewable energy sector. More research, discussion and policy dialogue will enrich our understanding and to think ahead. He thanked ICCCAD for arranging such events and hoped to engage more in future.

## Event Analysis

ICCCAD conducts an evaluation immediately following the event to get feedback on how the event went. Overall, the participants found the event well-structured, comprehensive, rich in content and useful to enrich their knowledge on the given topic. This LHE provided an excellent opportunity to the relevant government officials involved in national planning and in implementing sector policies for discussing effective strategies with national and international experts as to promote sustainable and renewable energy solutions in Bangladesh.

According to the evaluation analysis, 65 % of the participants responded that they have attended the LHE for the first time. We found that 50% of the participants said that the LHE was excellent, and 50% ranked the event as good. Most interestingly, 77% of the participants reported that the content of the event was excellent and it was highly satisfactory overall.

Most participants mentioned that they found the LHE very informative and would recommend their colleagues to attend this event. They also recommended and showed their interest to organize more events like this. 75% mentioned the event will benefit in some way or the other especially in the field of knowledge enhancement on an important topic. The participants stressed that sharing information, i.e. the presentations, with everyone will be helpful as well. The participants shared a variety of topics to cover in the future LHEs. Some of them are: SDG (Sustainable Development Goal) focused areas, private sector involvement in the development process, women in development, waste management etc. Future climate change specific topics that participants requested included: sustainable renewable energy, energy production and its impact on climate, management of equipment used in production of solar energy at the end of its lifecycle, examples of adaptation technology, the cost benefit relationship and lifetime of solar panel and pumps, importance of renewable other than solar energy, water resource management, carbon trade and its impact on Bangladesh, climate risk in development planning tools needed for planners, climate refugees and GoB action to address this issue, climate-induced hazards and socioeconomic livelihood vulnerabilities, valuation of climate effects for CBA, Blue Economy: future prospects and climate change, coastal livelihoods, facilities of town in the village, climate finance challenges, and loss and damage. Participants recommended including additional topics, more discussion and interactive sessions in future events.