A. Introduction

1. Climate change is a global issue that demands policies addressing both mitigation and resilient infrastructure. While carbon emissions from power generation and transportation are major contributors worldwide, the transition from fossil fuel dependency to clean energy also presents complex social challenges. The energy transition must be accompanied by a thorough assessment of their impacts, particularly for low-income, vulnerable, and marginalized populations, to ensure that they do not exacerbate energy poverty or create other negative social impacts. A well-managed and inclusive energy transition presents significant opportunities for improving access to and affordability of energy services, as well as increasing employment and livelihoods.

2. An inclusive energy transition refers to the process of transitioning from fossil fuel-based energy systems to low and zero-carbon, sustainable and renewable energy sources, in a manner that prioritizes social equity, inclusivity, and environmental sustainability, to ensure that all segments of society, particularly vulnerable and marginalized communities, are actively involved in and benefit from the transition.

Energy Transitions in the Subregion

3. Bangladesh plans to achieve Net Zero by 2070[1], Sri Lanka plans Carbon Neutrality by 2050 in electricity generation[2], and the Maldives aims to achieve net-zero emissions by 2030[3], contingent on receiving adequate international support and assistance.

4. Bangladesh has a power generating capacity of 27,535 megawatts (MW), comprising primarily gas, coal and oil, with a renewable energy capacity of 762 MW (2.77%), as per the Bangladesh Power Development Board (BPDB). This also includes imports of 2656 MW (9.65%)[4]. This is against a generating capacity of 5,024 MW, in Sri Lanka, which consists of 58% renewable energy sources[5]. and an installed electricity capacity of 600 MW in the Maldives, mostly diesel generating capacity, with 68.5 MW from solar PV, producing about 6% of all electric power consumed by the country[6].

5. Besides the steps of reducing emissions in the power sector, all these countries have taken steps to abate emissions in other sectors, such as decarbonizing transport. Whereas Bangladesh plans to reduce road traffic congestion through widening of roads (2 to 4 lanes) and improving road quality, constructing NMT (non-motorized transport) and bicycle lanes, Electronic Road Pricing (ERP) or congestion charging, Sri Lanka plans to promote public passenger transport and non-motorized transport, introduce inland water transport modes, and electrify railway lines,

Green Jobs and Skilling

6. Bangladesh, Sri Lanka, and the Maldives share challenges in employment, but have some differences in workforce composition and green job development. Bangladesh's workforce is dominated by agriculture (45%), with informal

[1] Power Division, Government of the People's Republic of Bangladesh. Power Division, Government of the People's Republic of Bangladesh. https://powerdivision.portal.gov.bd/sites/default/files/files/powerdivision.portal.gov.bd/page/4f81bf4d_1180_4c53_b27c_8fa0eb11e2c1/IEPMP%202023.pdf
[2] Secretary, Ministry of Environment, Sri Lanka letter to the UNFCCC https://unfccc.int/sites/default/files/NDC/2022-06/Amendmend%20to%20the%20Updated%20Nationally%20Determined%20Contributions%20of%20Sri%20Lanka.pdf
[3] Ministry of Foreign Affairs, Republic of Maldives, Priorities and Issues. https://www.foreign.gov.mv/index.php/en/multilateral/priorities-and-issues/climate-change#:~:text=In%20the%20updated%20NDC%20Maldives,adequate%20international%20support%20and%20assistance
[4] Bangladesh Power Development Board. *Key Statistics*. 16 Mar 2025. https://bpdb.gov.bd/site/page/e7f4aaea-7605-4588-a705-e615c574cb88/-
[5] Ministry of Power and Energy, Government of Sri Lanka, Annual Performance Report 2023 http://powermin.gov.lk/power/wp-content/uploads/2024/07/Annual-Report-2023-E.pdf
[6] Ministry of Climate Change, Environment & Energy and ADB. *Paving the way for a just energy transition in Maldives.* 15 Nov 2024. https://www.scribd.com/document/818244379/20241115-pub-energy-roadmap-maldives-2024-2033

employment at 85% and youth unemployment at 14%.[7] The renewable energy sector employs 127,600 people, mostly in solar PV (86.2%).[8] Sri Lanka's workforce is service-focused (48.4%), with a youth unemployment rate of 21.6%, and a renewable energy sector employing 8,000 workers.[9] The Maldives has a tourism-driven economy (72.6% services) and faces high youth unemployment (17.7%).[10]

7. In Bangladesh, the RE sector is expected to expand significantly by 2035, driven by the solar industry, which is forecasted to employ 242,800 people. Despite this, 60% of current solar jobs require minimal formal training, indicating a current skills gap that may restrict future growth.[11] In Sri Lanka, the transition towards 70% renewable energy by 2030 is expected to drive significant job growth, requiring an annual sector expansion of over 30% to meet energy targets.[12] The growth of the country's renewable energy sector has created an increasing demand for skilled workers, however, a skills gap remains. In the Maldives, the transition to a green economy presents significant opportunities for job creation, particularly for the renewable energy sector. A strong case study for green economy opportunities is the POISED project, which specifically targets female employment and participation in the energy transition.[13]

8. Social protection is fragmented across all three countries, with Bangladesh having 114 different programs[14], Sri Lanka relying on Employees' Provident Fund (EPF) and Employees' Trust Fund (ETF) as long-term safety nets[15], and the Maldives investing 15% of GDP in health, education, and social assistance[16].

B. Objectives and Participants

9. The Subregional Workshop is part of an ADB technical assistance project aimed at promoting inclusive strategies for a low-carbon energy transition in Bhutan and Nepal and other South Asian Member Countries. The workshop will facilitate knowledge sharing and collaboration among government agencies, ADB project implementers, and other key energy stakeholders. The Subregional Workshop follows and builds on the main themes, topics and insights from the South Asia regional conference in Galle, Sri Lanka and the India national conference in Chennai in 2024. Specifically, it will examine in greater depth the energy transitions in the respective countries, as well as the similarities and differences, focusing on inclusive clean energy solutions.

C. Key Conference Sessions

10. The main themes of the conference sessions are outlined below.

Session 1: The Energy and Socio-Economic Policy Environment; will provide an overview of the key energy and socio-economic policies designed to address the interconnected challenges for an inclusive energy transition in the subregion.

Session 2: Cultivating the Workforce for the Green Economy Transition and Catalyzing Local Economies; will provide strategies to address the challenges of cultivating a workforce equipped for the green economy transition and highlight the opportunities for community development through employment creation and MSME development.

Session 3: Frontier Technologies: Techno-Economic Challenges and Socio-Technical Approaches; will examine the multifaceted challenges faced when implementing new renewable energy technologies, making significant capital investments in related infrastructure and the interconnected nature of economic, technical, and social factors in this context.

International experts will examine and share experiences on Gender Equality Disability and Social Inclusion (GEDSI) considerations for an inclusive and equitable transition.

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[7] Danish Trade Union Development Agency (DTDA), *Bangladesh Labour Market Profile 2024/2025*, DTDA, Copenhagen, 2024. https://www.ulandssekretariatet.dk/https://www.ulandssekretariatet.dk/

[8] Khondker, B. and Raihan, S., *Study Report on Labor Market and Skills Gap Analysis of Bangladesh*, Skills for Employment Investment Program (SEIP), Finance Division, Ministry of Finance, Government of Bangladesh, 2024. https://www.seip-fd.gov.bd

[9] Department of Census and Statistics, Sri Lanka, *Sri Lanka Labour Force Survey: Annual Report 2023*, Department of Census and Statistics, Colombo, 2024.

[10] Employment and environmental sustainability (2022) *Maldives The Employment - Environment - Climate Nexus Employment and environmental sustainability factsheet*. https://www.adb.org/sites/default/files/publication/728611/emp-environment-climate-nexus-maldives.pdf

[11] Khondker, B. and Raihan, S., *Study Report on Labor Market and Skills Gap Analysis of Bangladesh*, Skills for Employment Investment Program (SEIP), Finance Division, Ministry of Finance, Government of Bangladesh, 2024. https://www.seip-fd.gov.bd

[12] Tertiary and Vocational Education Commission (TVEC), *Job Survey and Skills Analysis for the Renewable Energy Sector*, Government of Sri Lanka, 2024.https://www.tvec.gov.lk

[13] Mohideen, R. and Kolantharaj, J. (2024) 'Managing gender-inclusive, just energy transitions in South Asia', *Oxford Open Energy*, 3(1). https://academic.oup.com/ooenergy/article/doi/10.1093/ooenergy/oiae006/7642725

[14] Bangladesh ILO Social Protection Platform. https://www.social-protection.org/gini/gess/ShowCountryProfile.action?iso=BD Accessed 12 April 2025

[15] Tertiary and Vocational Education Commission (TVEC), *Job Survey and Skills Analysis for the Renewable Energy Sector*, Government of Sri Lanka, 2024. https://www.tvec.gov.lk

[16] Joosep Alvarenga, K., Franciscon, I., and Lazzarini, L., 'Social Protection Profile: Maldives', International Policy Centre for Inclusive Growth (IPC-IG), 2020

D. Program at a Glance

DAY 1		
08:00–08:30	**ARRIVAL & NETWORKING**	
08:30-09:00	**WELCOME, OPENING REMARKS & SPECIAL ADDRESS**	
09:00-10:00	**SESSION 1**	**THE ENERGY AND SOCIO-ECONOMIC POLICY ENVIRONMENT**
	PANEL PRESENTATION 1 Topics include: *Change Management in South Asia; Policy Innovation for Access and Affordability in Bangladesh; Human Resource Preparation in Sri Lanka; The Maldives Energy Sector Road Map Enabling Gender Equality and Social Inclusion (GESI)*	
	OPEN FORUM & LIVE POLLING OF SESSION 1	
10:00-10:30	**NETWORKING BREAK**	
10:30-11:20	**SESSION 2**	**CULTIVATING THE WORKFORCE FOR THE GREEN ECONOMY TRANSITION AND CATALYZING LOCAL ECONOMIES.**
	PANEL PRESENTATION 2 Topics include: *Empowering Young People through TVET in Bangladesh; Sri Lanka, A Utility Perspective on Skills Expansion and Upskilling; The UoM Lateral Learning Program; Enabling Local Governance in the Maldives*	
11:20-11:35	**CASE STUDY 1** Next Generation Green Engineering: Sri Lanka University of Moratuwa Microgrid System and Research Lab	
11:35-11:45	**OPEN FORUM & LIVE POLLING OF SESSION 2**	
11:45-12:30	**BREAKOUT SESSION: WORKING GROUPS**	
12:30-13:30	**LUNCH NETWORKING BREAK**	
13:30-14:00	**WORKING GROUP REPORT BACK AND SUMMARY**	
14:00-14:40	**SESSION 3**	**FRONTIER TECHNOLOGIES: TECHNO-ECONOMIC CHALLENGES AND SOCIO-TECHNICAL APPROACHES**
	PANEL PRESENTATION 3 Topics include: *A South Asia Grid? Prospects, Benefits and Challenges; AI-Powered Microgrids to Improve System Reliability and Consumer Supply; Rural Electrification Fostering Livelihoods Development: Building on Lessons Going Forward; IEEE: Preparing Next Generation Engineers*	
14:40-14:55	**CASE STUDY 2** Maldives ASSURE Project: Solarized Agriculture for Local Economic Development	
14:55-15:00	**OPEN FORUM & LIVE POLLING OF SESSION 2**	
15:00-15:30	**NETWORKING BREAK**	
15:30-17:00	**BREAKOUT SESSION: WORKING GROUPS**	
18:00-20:00	**DINNER RECEPTION AND NETWORKING**	

DAY 2	
08:30-09:00	**ARRIVAL & NETWORKING**
09:00-09:50	**INTERACTIVE LECTURE: INTERNATIONAL EXPERIENCES**
	OPEN FORUM & LIVE POLLING OF SESSION
09:50-10:00	**SUMMARY AND NEXT STEPS**
10:00-10:30	**NETWORKING BREAK**
10:30-17:00	**FIELD VISIT TO: THE GRAMEEN SHAKTI HEAD OFFICE; AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH**

E. Detailed Agenda

DAY 1		
08:00–08:30	**ARRIVAL & NETWORKING**	
08:30-09:00	**WELCOME, OPENING REMARKS & SPECIAL ADDRESS**	
	• Conference Chair: Reihana Mohideen, Principal Advisor, Inclusive Energy Transitions, Nossal Institute for Global Health, The University of Melbourne (UoM)	
	• Opening Remarks: Hoe Yun Jeong, Country Director, Bangladesh Resident Mission (BRM), ADB	
	• Priyantha Wijayatunga, Senior Director, Energy Sector Group (SG-ENE), ADB	
	• Francesco Tornieri, Principal Social Development Specialist (Social Inclusion) Human and Social Development Sector Group (SG-HSD), ADB	
	• Special Address: S M Jakaria Huq, Additional Secretary, Economic Relations Division, Ministry of Finance, Government of Bangladesh	
09:00-09:45	**CONFERENCE SESSIONS**	
	Program overview by Reihana Mohideen, UoM	
	SESSION 1	**THE ENERGY AND SOCIO-ECONOMIC POLICY ENVIRONMENT**
	***Objective**: To provide an overview of the key energy and socio-economic policies designed to address the interconnected challenges for an inclusive energy transition in the subregion.*	
	***Topics**: Change Management in South Asia; Policy Innovation for Access and Affordability in Bangladesh; Human Resource Preparation in Sri Lanka; The Maldives Energy Sector Road Map Enabling Gender Equality and Social Inclusion (GESI)*	
	PANEL PRESENTATION 1	
	Moderator: Nazmun Nahar, Energy Specialist, ADB	
	a. Managing the Change: Insights from South Asia Region	• Priyantha Wijayatunga, ADB
	b. Bangladesh: Innovative Governance Solutions to Increase Access and Improve Affordability	• A N M Obaidullah, Member (Company Affairs), Bangladesh Power Development Board, Government of Bangladesh
	c. Sri Lanka: Emerging Green Industries: Policies for Human Resource Preparation	• Gothami Gannoruwa, Director General, Ministry of Energy, Government of Sri Lanka
	d. Maldives: The Energy Sector Roadmap Enabling GESI for an Inclusive Transition	• Hawwa Shareef, Assistant Director, Ministry of Tourism and Environment, Government of the Maldives
09:45-09:50	**OPEN FORUM**	
	LIVE POLLING OF SESSION 1	
09:50-10:00	**GROUP PHOTO**	
10:00-10:30	**NETWORKING BREAK**	
10:30-11:20	**SESSION 2**	**CULTIVATING THE WORKFORCE FOR THE GREEN ECONOMY TRANSITION AND CATALYZING LOCAL ECONOMIES**
	***Objective**: To provide strategies to address the challenges of cultivating a workforce equipped for the green economy transition and highlight the opportunities for community development through employment generation and MSME development.*	
	***Topics**: Empowering Young People through TVET in Bangladesh; Sri Lanka, A Utility Perspective on Skills Expansion and Upskilling; The UoM Lateral Learning Program; Enabling Local Governance in the Maldives; Sri Lanka, Next Generation Green Engineering*	
	PANEL PRESENTATION 2	
	Moderator: Francesco Tornieri, ADB	
	a. Empowering Young Women and Men through Energy Sector TVET Programs	• Nasheeba Selim, Gender and Social Inclusion Specialist, BRM, ADB
	b. Skills Expansion and Upskilling: A Utility Perspective	• V.V. Janeth, Deputy General Manager (Commercial and Corporate, DD4), Ceylon Electricity Board, Sri Lanka
	c. The UoM Lateral Learning Program	• Reihana Mohideen, UoM
	d. Maldives: Local Governance Enabling Inclusive Transitions	• Athifa Ibrahim, GESI Expert, Consultant ADB Operations, Maldives

11:20-11:35	**CASE STUDY 1**	
	Next Generation Green Engineering: Sri Lanka University of Moratuwa Microgrid System and Research Lab	• Anura Wijayapala, Head, Department of Electrical Engineering, University of Moratuwa
	The Lanka Electricity Company (LECO) - University of Moratuwa renewable energy microgrid pilot project is the first of its kind in Sri Lanka. It involved the training of staff in the design and operation of the microgrid system and the development of a new curriculum for undergraduate and post-graduate students. The Smart Grid Research Lab was also established under the project. The lab facility is for the use of four universities, thus enabling technology and skills transfer. This case study will discuss the role of the lab in pioneering next-generation engineering as a part of Sri Lanka's energy transition. The project was funded by the ADB.	
11:35-11:45	**OPEN FORUM**	
	LIVE POLLING OF SESSION 2	
11:45-12:30	**BREAKOUT SESSION: WORKING GROUPS**	
	Working Group Coordinators, Prathaj Haputhanthri, Energy Specialist, Sri Lanka Resident Mission (SLRM)	
	Participants will break into working groups to discuss key themes of the sessions, with a focus on developing actionable recommendations.	
12:30-13:30	**LUNCH NETWORKING BREAK**	
13:30-14:00	**WORKING GROUP REPORT BACK AND SUMMARY**	
14:00-14:40	**SESSION 3**	**FRONTIER TECHNOLOGIES: TECHNO-ECONOMIC CHALLENGES AND SOCIO-TECHNICAL APPROACHES**
	Objective: *To examine the multifaceted challenges faced when implementing new renewable energy technology systems, making significant capital investments in related infrastructure and the interconnected nature of economic, technical, and social factors in this context.*	
	Topics: *A South Asia Grid? Prospects, Benefits and Challenges; AI-Powered Microgrids to Improve System Reliability and Consumer Supply; Rural Electrification Fostering Livelihoods Development: Building on Lessons Going Forward; IEEE -- Preparing Next Generation Engineers; Solarization of Agriculture for Local Economic Development*	
	PANEL PRESENTATION 3	
	Moderator: Prathaj Haputhanthri, Energy Specialist, Sri Lanka Resident Mission (SLRM), ADB	
	a. A South Asia Grid? Prospects, Benefits and Challenges	• Pankaj Batra, Energy Transition and Reform Expert (online)
	b. AI-Powered Microgrids to Improve System Reliability and Consumer Supply	• Sajana Jayasooriya, LECO, Government of Sri Lanka
	c. Rural Electrification Fostering Livelihoods Development: Building on Lessons Going Forward	• Nazmun Nahar, Energy Specialist, ADB
	d. IEEE: Preparing Next Generation Engineers	• Sri Chandrasekaran, Country Head, IEEE India and Lead Standards Association (online)
14:40-14:55	**CASE STUDY 2**	
	The Maldives ASSURE Project: Solarization of Agriculture for Local Economic Development	• Pushkar Manandhar, Energy Specialist, ADB • Athifa Ibrahim, GESI Expert, Consultant ADB Operations, Maldives
	The ADB's Accelerating Sustainable System Development Using Renewable Energy (ASSURE) Project demonstrates the cross-sectoral co-benefits of the clean energy transition. The project includes the installation and pilot testing of climate and disaster risk resilient innovative farming technologies to improve agricultural production, such as RE sources to power desalination plants, as a part of an efficient and sustainable water management system. The project includes the participation and training of Women's Development Committees. This project builds on the previous ADB project, the Preparing Outer Islands for Sustainable Energy Development (POISED).	
14:55-15:00	**OPEN FORUM**	
	LIVE POLLING OF SESSION 3	
15:00-15:30	**NETWORKING BREAK**	
15:30-17:00	**BREAKOUT SESSION: WORKING GROUPS**	
	Working Group Coordinator; Mashiur Rahman, Associate Project Officer Energy, BRM, ADB	
	WORKING GROUP REPORT BACK AND SUMMARY	
18:00-20:00	**DINNER RECEPTION AND NETWORKING**	

DAY 2	
08:30-09:00	**ARRIVAL & NETWORKING**
09:00-09:45	**INTERACTIVE LECTURE: INTERNATIONAL EXPERIENCES** From GESI to GEDSI: Risks and Opportunities for an Inclusive and Equitable Transition *The effectiveness of a just transition is determined by equity as its outcome. Global commitments, such as the 2030 Agenda, urge us to move beyond climate justice for at-risk jurisdictions and populations to considering equity at the individual level. Gender equality, disability and social inclusion (GEDSI) is promoted as an approach to do this. This presentation will discuss some of the opportunities and challenges a GEDSI approach presents for achieving equity for climate affected communities and individuals.* Lecturer: Alex Robinson, Disability Inclusion and Rehabilitation Expert, Nossal Institute, UoM Introduced by Francesco Tornieri, ADB
09:45-09:50	**OPEN FORUM** **LIVE POLLING OF SESSION**
09:50-10:00	**SUMMARY AND NEXT STEPS** **Conference Summary** by Reihana Mohideen, UoM **Ways Forward** by Francesco Tornieri, ADB
10:00-10:30	**NETWORKING BREAK**
10:30-17:00	**FIELD VISIT TO THE GRAMEEN SHAKTI HEAD OFFICE AND AIUB** Hosted by Sohel Ahmed, Managing Director, Grameen Shakti *The field visit aims to provide an overview and a more in-depth understanding of the pioneering accomplishments of the rural electrification programs in Bangladesh, which also necessitated training, and enabled MSME development, and to understand the lessons drawn for current and future programs. The visit to the American International University-Bangladesh (AIUB) will then provide a perspective on the challenges faced in tertiary education to develop a STEM workforce for the energy transition.* ***a. Grameen Shakti (GS) Head Office:*** *Presentations on the programs of GS, the organization's legacy, work, contribution and culture.* ***b. American International University-Bangladesh (AIUB)*** - *Tour of the solar application facilities.* - *Presentations by the academic leadership of the university's STEM curriculum and research program to meet the teaching and educational challenges presented by the low-carbon energy transition in Bangladesh.*