

NDCs and Renewable Energy Development in China and ASEAN

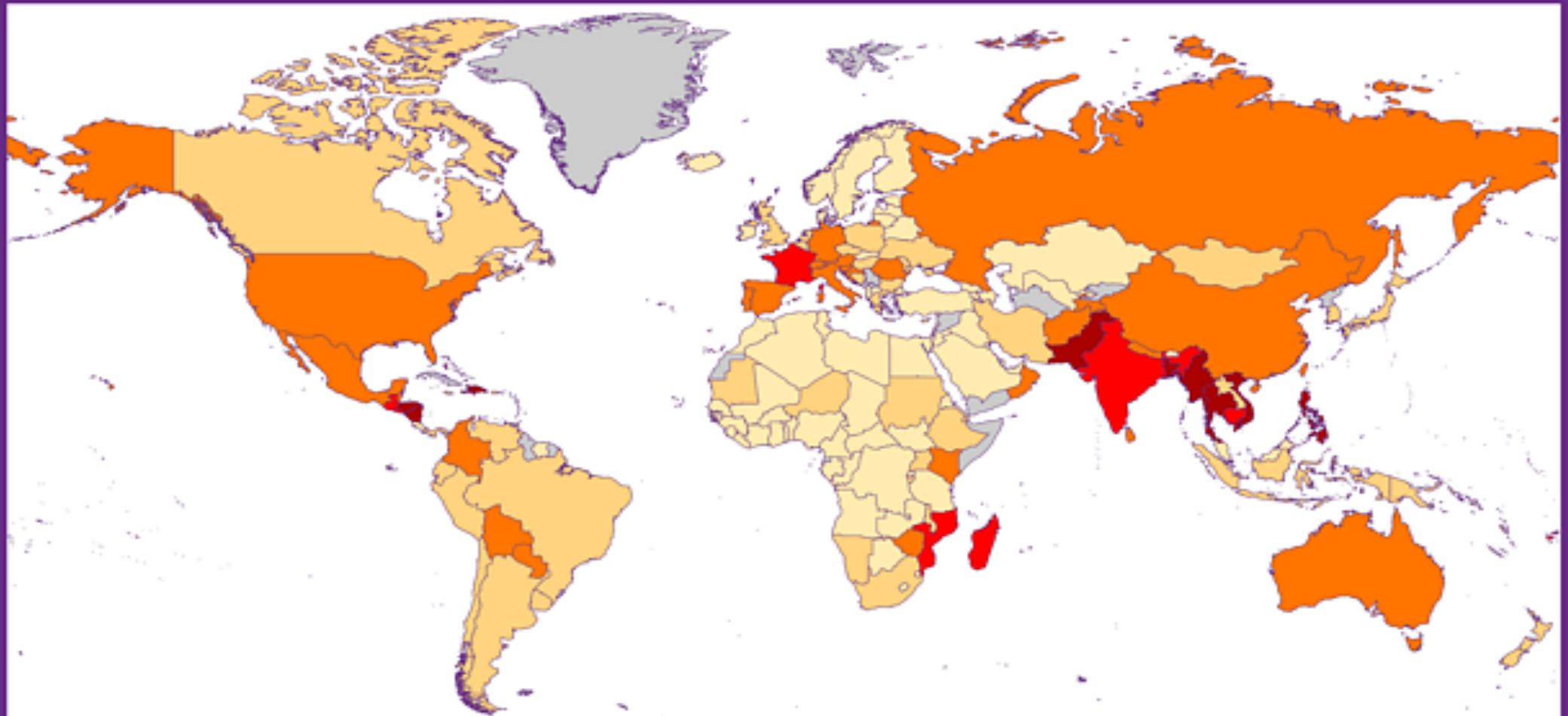
Grand Amara Hotel, Nay Pyi Taw, Myanmar

June 6-7, 2018

Dr. Pheakdey Heng

Policy Lead, GGGI Cambodia

Climate Risk Index 2018



Climate Risk Index: Ranking 1997–2016

1–10 11–20 21–50 51–100 >100 No data

Global Climate Risk components in ASEAN for the 1995-2014

Overall CRI Rank	Country	Death Toll	Deaths per 100 000 inhabitants	Losses in million USD PPP	Losses per GDP in %
2	Myanmar	7137.2	14.7464	1140.29	0.744
4	Philippines	927	1.1003	2757.3	0.675
7	Viet Nam	361.3	0.4418	2205.98	0.703
9	Thailand	164.2	0.2544	7480.77	1.046
13	Cambodia	57.45	0.4363	235.28	0.945
66	Indonesia	257.1	0.1163	1679.47	0.095
81	Lao DPR	5.6	0.0961	74.961	0.375
87	Malaysia	39.75	0.154	270.359	0.058
177	Brunei Darussalam	0.1	0.0283	0.387	0.001
179	Singapore	0.1	0	3.006	0.001

Key vulnerable sectors to climate change in the ASEAN

	Agriculture Food Security	Coastal Zones	Marine ecosystems	Terrestrial Ecosystems	Forestry	Disasters	Energy	Public Health	Waste Sector	Water Resources	Infrastructure
Brunei Darussalam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	
Cambodia	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Indonesia	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>	
Lao PDR	<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Malaysia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Myanmar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Philippines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>			
Singapore		<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Thailand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Viet Nam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Source: ALM Country Profiles, World Bank Climate Change Knowledge Portal, 2014; INDC's for each AMS (UNFCCC).

ASEAN Member States NDC energy targets

Brunei Darussalam	<ul style="list-style-type: none">• Reduce energy consumption → 63% by 2035 BAU• Reduce energy intensity → 45% by 2035• Increase the share of renewables → 10%
Cambodia	Reduce emissions → 16%
Indonesia	Renewable Energy → 23% of energy use by 2025
Lao PDR	<ul style="list-style-type: none">• Increase renewable energy → 30% of total energy consumption• Increase large hydro capacity to 5.5 GW by 2020 and 20 GW by 2030• Rural electrification → 90% of Households
Myanmar	<ul style="list-style-type: none">• Increase share of hydro → 9.4 W by 2030• Increase rural electrification → 30% renewable energy• Electricity saving potential → 20%
Thailand	<ul style="list-style-type: none">• 20% of power generation from renewable sources• 30% share of renewable energy in total final energy consumption• 30% reduction in energy intensity by 2036

RE Target and RE Installed on Power Sector in ASEAN

Country	Target Year	RE Targets	Most RE Technology Preference	RE Installed in 2014 (MW)	How far?
Brunei Darussalam	2025	954 GWh *	Solar Energy (954 GWh)	1.67 **	0.2%
Cambodia	2020	2,241 MW *	Hydropower (2,241 MW)	952	42%
Indonesia	2025	46,307 MW	Hydropower (21,300 MW)	6,680 *	16% *
Lao PDR	2025	951MW *	Small hydro (534 MW)	3,348	5% *
Malaysia	2050	21,370 MW	Solar Energy (18,700 MW)	6,286	29%
Myanmar	2016	472 MW *	Small hydro (472 MW)	3,204	N/A
Singapore	2020	350 MWp *	Solar Energy (350 MWp)	33.1 *	9% *
Philippines	2030	15,236 MW	Hydropower (8,937 MW)	5,898	38%
Thailand	2036	19,684 MW	Solar Energy (6,000 MW), Biomass (5,570 MW)	7,901	40%
Vietnam	2030	45,800 MW	Hydropower (27,800 MW)	17,140	37%