

Table 1. ASEAN+3, EU, and US: Climate-Related Pledges, Roadmaps, and Financing

Economy	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)				Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)						
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-related Financial Disclosure Standards
Brunei Darussalam	• National Adaptation Plan (under development)	• USD 0.02 billion between 2020–59 under a very high GHG emissions scenario	• Reduce GHG emissions by 20 percent relative to BAU level in 2030 (Dec 2020)	• Net zero by 2050		• National Climate Change Policy (Jul 2020)	• Implement energy efficiency standards and labels (Jun 2022) • Phase out unabated coal power generation in the 2040s (or as soon as possible thereafter), by stopping issuance of new permits, new construction, and direct government support for new unabated coal-fired power generation projects			Financial institutions			
										Non-financial corporates			
Cambodia	• National Adaptation Plan (submitted to the UNFCCC in Oct 2021)	• USD 0.4 billion between 2020–59 under a very high GHG emissions scenario • USD 2 billion through 2030 based on the updated NDC (Dec 2020)	• Reduce GHG emissions by 41.7 percent relative to BAU level in 2030 (target mostly conditional on international support) (Dec 2020)	• Carbon neutrality by 2050	• Over USD 5.8 billion through 2030 based on the updated NDC (Dec 2020)	• Long-Term Strategy for Carbon Neutrality (Dec 2021) • NDC Roadmap (2019) • Circular Economy Strategy and Action Plan (2021) • National Cooling Action Plan (Mar 2023)	• Ban development of new coal generation capacity beyond the already committed projects as of 2019		• Cambodian Sustainable Finance Principles Implementation Guidelines (Feb 2019)	Financial institutions			
										Non-financial corporates			
China	• National Climate Change Adaptation Strategy 2035 (Jun 2022)	• USD 188.8 billion between 2020–59 under a very high GHG emissions scenario	• Reduce carbon intensity (carbon dioxide emissions per unit of GDP) by over 65 percent relative to 2005 level in 2030, and achieve peak carbon dioxide emissions before 2030 (Oct 2021)	• Carbon neutrality before 2060	• USD 8.7 trillion in investments between 2020–50 • USD 14.4–19.9 trillion of energy system investments between 2020–50	• Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy (Oct 2021) • 1+N Framework (Nov 2021) • 14th Five-Year Plan—Workplan for Energy saving and Emission reduction 2021–2025 (Jan 2022) Sector roadmaps: • National Hydrogen Development Plan (Mar 2022) • 14th Five-Year Plan—Modern Energy System Planning	• Accelerate the pace of coal reduction during the 14th Five-Year Plan period (2021–25) • Stop building new coal-fired power projects abroad • Offer financial incentives for renewable energy adoption by firms • Encourage adoption of electric vehicles via subsidies and infrastructure development • Establish national ETS (Jan 2021)	• Electric Power Law (Dec 2018)	• Green Bond Endorsed Projects Catalogue (Apr 2021)	Financial institutions	• Guidelines for Green Finance in the Banking and Insurance Industry (Jun 2022)		
										Non-financial corporates	• Common Ground Taxonomy: Climate Change Mitigation (Nov 2021) • New Green Catalogue (Jun 2020)		• Administrative Measures for Legal Disclosure of Enterprise Environmental Information (Dec 2021)
Hong Kong, China	• Hong Kong's Climate Action Plan 2050 (Oct 2021)		• Reduce carbon intensity by 65–70 percent relative to 2005 level in 2030 (equivalent to an absolute carbon emission reduction of 26–36 percent) (Oct 2021)	• Carbon neutrality before 2050		• Long-Term Decarbonisation Strategy (under development) • Climate Action Plan 2050 (Oct 2021) Sector roadmaps: • Clean Air Plan for Hong Kong 2035 (Jun 2021) • Roadmap on Popularisation of Electric Vehicles (Mar 2021)	• Phase out coal as a power generation source by 2035 • Develop renewable energy projects • Encourage adoption of electric vehicles via tax incentives and charging deployment		• Strategic Framework for Green Finance (Sep 2018) • Green Bond Framework (Feb 2022) • White Paper on Green and Sustainable Banking (Jun 2020)	Financial institutions			
										Non-financial corporates			
Indonesia	• Indonesia's Adaptation Communication (Oct 2022) • National Action Plan on Climate Change Adaptation (Dec 2019)	• USD 8.8 billion between 2020–59 under a very high GHG emissions scenario	• Reduce GHG emissions by 31.89 percent relative to BAU level in 2030, and by an additional 11.31 percent conditional on international financial and technical support (Sep 2022)	• Net zero by 2060	• USD 600 billion in investments between 2020–50 • USD 1.0–1.4 trillion of energy system investments between 2020–50	• Long-Term Strategy for Low Carbon and Climate Resilience 2050 (Jul 2021) • NDC Roadmap (Sep 2022) • Green Recovery Roadmap (Sep 2021)	• Phase out unabated coal power generation in the 2040s (or as soon as possible thereafter) • Reduce share of coal in the power generation mix to 38 percent by 2050 (from 59 percent in 2019)		• Green Bond and Green Sukuk Framework (2018) • SDG Indonesia One (2018) • Indonesia Climate Change Trust Fund (2009) • Indonesia Environment Fund (2019)	Financial institutions	• Indonesia Green Taxonomy (Jan 2022)		

Table 1. ASEAN+3, EU, and US: Climate-Related Pledges, Roadmaps, and Financing (Cont'd)

Economy	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)				Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)						
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-related Financial Disclosure Standards
							<ul style="list-style-type: none"> Encourage adoption of electric vehicles via subsidies Launch first phase of mandatory carbon trading for state-owned coal power plants (Feb 2023) To launch a carbon exchange under a cap-and-trade system in H2 2023 			Non-financial corporates			
Japan	<ul style="list-style-type: none"> Climate Change Adaptation Plan (Oct 2021) 	<ul style="list-style-type: none"> USD 26.5 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions by 46 percent in FY2030 relative to FY2013 level (FY ends on March 31 of the following year) (Oct 2021) 	<ul style="list-style-type: none"> Net zero by 2050 	<ul style="list-style-type: none"> USD 10 trillion in investments between 2020–50 USD 2.0–2.7 trillion of energy system investments between 2020–50 	<ul style="list-style-type: none"> Long-Term Strategy under the Paris Agreement (Oct 2021) GX Basic Plan (Feb 2023) 6th Strategic Energy Plan (Oct 2021) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> Updated Green Growth Strategy (Jun 2021) Basic Hydrogen Strategy (Jun 2023) Roadmap for Carbon Recycling Technologies (Jul 2021) 	<ul style="list-style-type: none"> Reduce the share of coal in the power supply to 19 percent by 2030 Encourage adoption of electric vehicles via subsidies Introduce financial incentives (tax breaks, feed-in-tariffs) to encourage renewable energy deployment Restart nuclear power fleet (Dec 2022) Considering national ETS, after implementing regional ETSs in 2010–11 Considering new surcharge on industries that are major GHG-emitters Issue new fuel economy standards for passenger vehicles starting in model year 2030 (Jun 2019) 		<ul style="list-style-type: none"> Green Bond and Sustainability-Linked Bond Guidelines (Jul 2022) Basic Guidelines on Climate Transition Finance (May 2021) 	Financial institutions			<ul style="list-style-type: none"> Basic Guidelines for Disclosure and Evaluation of Climate-Related Opportunities (Mar 2023)
										Non-financial corporates			
Korea	<ul style="list-style-type: none"> Third National Climate Change Adaptation Plan (Dec 2020) 	<ul style="list-style-type: none"> USD 8.6 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions by 40 percent relative to 2018 level in 2030 (Dec 2021) 	<ul style="list-style-type: none"> Carbon neutrality by 2050 	<ul style="list-style-type: none"> USD 1.3–1.8 trillion of energy system investments between 2020–50 	<ul style="list-style-type: none"> 2050 Carbon Neutral Strategy (Dec 2020) 2050 Carbon Neutral Scenario (Oct 2021) 2030 NDC (under development) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> Third Energy Master Plan (2021) Hydrogen Economy Roadmap (Jan 2019) 	<ul style="list-style-type: none"> Phase out unabated coal power generation by 2050 Stop issuing permits for new unabated coal-fired power generation projects. Lower reliance on fossil fuel imports to under 70 percent by 2030 Introduce energy efficiency standards and financial incentives for energy saving technologies Encourage adoption of electric vehicles via subsidies Introduce Emissions Trading Scheme (K-ETS) (Jan 2015) 	<ul style="list-style-type: none"> Carbon Neutrality Act (Sep 2021) Promotion of Development and Distribution of Environment-Friendly Motor Vehicles Act (Jul 2021) 	<ul style="list-style-type: none"> Korean Green Bond Guideline (Dec 2020) 	Financial institutions	<ul style="list-style-type: none"> K-Taxonomy Guideline (Dec 2021) 		
										Non-financial corporates			
Lao PDR	<ul style="list-style-type: none"> National Adaptation Plan (under development) 	<ul style="list-style-type: none"> USD 0.3 billion between 2020 and 2059 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions by 60 percent relative to baseline level in 2030 (or by around 62.0 MtCO₂e), and by an additional 45.7 MtCO₂e conditional on increased financial support from advanced economies (May 2021) 	<ul style="list-style-type: none"> Net zero by 2050 		<ul style="list-style-type: none"> Long-Term Low Emission Development Strategy (under development) National Strategy on Climate Change (Apr 2021) 		<ul style="list-style-type: none"> Decree on Climate Change (Sep 2019) 		Financial institutions			
										Non-financial corporates			

Table 1. ASEAN+3, EU, and US: Climate-Related Pledges, Roadmaps, and Financing (Cont'd)

Economy	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)				Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)						
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-related Financial Disclosure Standards
Malaysia	<ul style="list-style-type: none"> National Adaptation Plan (under development) Specific initiatives: <ul style="list-style-type: none"> MYR 15 billion Flood Mitigation Plan until 2030 Increased annual transfers to state governments for biodiversity conservation to MYR 150 million in 2023 from MYR 70 million in 2022. 	<ul style="list-style-type: none"> USD 2.2 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG intensity (emissions per unit of GDP) by 45 percent relative to 2005 level in 2030 (Jul 2021) 	<ul style="list-style-type: none"> Net zero by 2050 at the earliest 	<ul style="list-style-type: none"> USD 90 billion in investments between 2020–50 Investments to increase to USD 375–415 billion from the current USD 159 billion to expand renewable energy capacity USD 500–700 billion of energy system investments between 2020–50 	<ul style="list-style-type: none"> Long-term Low Emission Development Strategies (LT-LEDS) (under development) NDC Roadmap (under development) Sector roadmaps: <ul style="list-style-type: none"> National Energy Policy 2022–2040 (Sep 2022) Low Carbon Mobility Blueprint (2020) National Low Carbon Cities Masterplan (2021) 	<ul style="list-style-type: none"> Halt construction of new coal-fired power plants from 2040, increase share of renewable energy in power generation Encourage adoption of electric vehicles via tax breaks/exemptions Introduce sustainable technology financing schemes for SMEs and other businesses Launch Bursa Carbon Exchange voluntary carbon market (Dec 2022) 	<ul style="list-style-type: none"> Climate Change Act (to be finalized in 2–3 years) 	<ul style="list-style-type: none"> Sustainable and Responsible Investment Sukuk Framework (Aug 2014) Sustainable and Responsible Investment linked (SRI-linked) Sukuk Framework (Jun 2022) 	Financial institutions	<ul style="list-style-type: none"> Climate Change and Principle-Based Taxonomy (April 2021) 	<ul style="list-style-type: none"> Climate Risk Management and Scenario Analysis (Nov 2022) 2024 Climate Risk Stress Testing Exercise: Discussion Paper (Jun 2022) 	<ul style="list-style-type: none"> TCFD Application Guide for Malaysian Financial Institutions (Jun 2022)
										Non-financial corporates	<ul style="list-style-type: none"> Principles-Based Sustainable and Responsible Investment Taxonomy for the Malaysian Capital Market (Dec 2022) 		
Myanmar	<ul style="list-style-type: none"> National Adaptation Plan (under development) Myanmar Climate Change Master Plan (2018–2033) Myanmar Climate Change Policy (2019) 	<ul style="list-style-type: none"> USD 1.1 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce carbon dioxide emissions by 244.5 MtCO₂e in 2030, and by an additional 170.3 MtCO₂e conditional on international financial and technical support (Jul 2021) 	<ul style="list-style-type: none"> Net zero emissions from forestry and other land use by 2040 		<ul style="list-style-type: none"> National Environmental Policy (2019) Myanmar Climate Change Strategy (2018–2030) Myanmar Climate Change Master Plan (2018–2033) Myanmar Climate Change Policy (2019) 	<ul style="list-style-type: none"> Decrease the share of coal in the electricity generation mix by 73.5 percent (from 7940MW to 2120MW) by 2030 Increase total share of renewable energy (solar and wind) to 53.5 percent (from 2000MW to 3070MW) by 2030 	<ul style="list-style-type: none"> Environmental Conservation Law (2012) Environmental Conservation Rules (2014) 		Financial institutions			
									Non-financial corporates				
Philippines	<ul style="list-style-type: none"> National Climate Change Action Plan 2011–28 (Nov 2011) Philippine Development Plan 2023–2028 (Dec 2022) 	<ul style="list-style-type: none"> USD 5.5 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce cumulative GHG emissions by 2.71 percent between 2020–30 compared to the projected cumulative BAU level, and by an additional 72.29 percent conditional on international financial and technical support (Apr 2021) 	<ul style="list-style-type: none"> No net zero target 	<ul style="list-style-type: none"> USD 200–300 billion of energy system investments between 2020–50 	<ul style="list-style-type: none"> National Framework Strategy on Climate Change 2010–2022 (2010) National Climate Change Action Plan 2011–2028 (2011) Philippine Energy Plan 2020–2040 (2020) 	<ul style="list-style-type: none"> Ban new coal-fired power plants starting in October 2020 Phase out unabated coal power generation in the 2040s (or as soon as possible thereafter) Promote energy efficiency and conservation via campaigns and implementation of energy usage standards 	<ul style="list-style-type: none"> People's Survival Fund (2012) Energy Efficiency and Conservation Act (Apr 2019) Renewable Energy Act (amended in Nov 2022) 	<ul style="list-style-type: none"> Sustainable Finance Framework for Banks (Apr 2020) National Government Sustainable Finance Framework (Nov 2021) Philippine Sustainable Finance Roadmap and Guiding Principles (Feb 2022) 	Financial institutions	<ul style="list-style-type: none"> Sustainable Finance Guiding Principles (Oct 2021) SEC Guidelines for Broad Categories of Eligible Projects for Green Bonds (Aug 2018) SEC Guidelines for Broad Categories of Eligible Projects for Social Bonds (Apr 2019) SEC Guidelines for Broad Categories of Eligible Projects for Sustainability Bonds (Apr 2019) 	<ul style="list-style-type: none"> Environmental and Social Risk Management Framework (Oct 2021) Guidelines on the Integration of Sustainability Principles in Investment Activities of Banks (Aug 2022) Guidance on the Implementation of the Environmental and Social Risk Management System (Sep 2022) 	<ul style="list-style-type: none"> Sustainability Reporting Guidelines for the Philippine Publicly-Listed Companies (Oct 2019) Sustainable Finance Framework for Banks (Apr 2020)
										Non-financial corporates	<ul style="list-style-type: none"> SEC Guidelines for Broad Categories of Eligible Projects for Green Bonds (Aug 2018) SEC Guidelines for Broad Categories of Eligible Projects for Social Bonds (Apr 2019) SEC Guidelines for Broad Categories of Eligible Projects for Sustainability Bonds (Apr 2019) 		<ul style="list-style-type: none"> Sustainability Reporting Guidelines for the Philippine Publicly-Listed Companies (Oct 2019)

Table 1. ASEAN+3, EU, and US: Climate-Related Pledges, Roadmaps, and Financing (Cont'd)

Economy	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)				Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)						
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-related Financial Disclosure Standards
Singapore	<ul style="list-style-type: none"> First Adaptation Communication Pursuant to the Paris Agreement (Nov 2022) Second National Climate Change Study (2015) 	<ul style="list-style-type: none"> USD 0.1 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions to around 60 MtCO₂e in 2030, after peaking emissions earlier (Nov 2022) 	<ul style="list-style-type: none"> Net zero by 2050 		<ul style="list-style-type: none"> Addendum to Singapore's Long-Term Low-Emissions Development Strategy (Nov 2022) Charting Singapore's Low Carbon and Climate Resilient Future (Mar 2020) Singapore Green Plan 2030 (Feb 2021) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> National Hydrogen Strategy (Oct 2022) Land Transport Master Plan 2040 (Sep 2018) 	<ul style="list-style-type: none"> Phase out unabated coal power generation; stop issuing permits for new unabated coal power stations by 2040 Finance the deployment of renewable energy (solar energy systems etc) and other alternative energy sources Encourage adoption of electric vehicles via tax incentives and charging deployment Introduce carbon tax (Jan 2019) 	<ul style="list-style-type: none"> Carbon Pricing Act (Jan 2019) 	<ul style="list-style-type: none"> Singapore Green Bond Framework (Jun 2022) 	<ul style="list-style-type: none"> Financial institutions Non-financial corporates 		<ul style="list-style-type: none"> Handbook on Implementing Environmental Risk Management (Jan 2021) 	
Thailand	<ul style="list-style-type: none"> Climate Change Master Plan 2015–50 (Jul 2015) 13th National Economic and Social Development Plan 2023–27 (Jun 2023) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> 20-Year Agriculture and Cooperatives Strategy (2017–2036) 	<ul style="list-style-type: none"> USD 3.6 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions by 30 percent relative to BAU level in 2030, and by an additional 10 percent conditional on international financial and technical support (Nov 2022) 	<ul style="list-style-type: none"> Carbon neutrality by 2050, net zero by 2065 	<ul style="list-style-type: none"> USD 600–900 billion in energy system investment between 2020–50 	<ul style="list-style-type: none"> Long-Term Low Greenhouse Gas Emission Development Strategy (Nov 2022) National Energy Plan Framework (2022) Climate Change Master Plan 2015–2050 (Jul 2015) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> Thailand Integrated Energy Blueprint (Jun 2015) Smart Grid Development Master Plan 2015–36 Master Plan for Sustainable Transport System and Mitigation of Climate Change Impacts (2013–30) 	<ul style="list-style-type: none"> Introduce carbon tax (under consideration) Scale up activity in the existing carbon market Offer financial incentives for renewable energy deployment and energy-saving technologies Target 100 percent zero-emission EVs in car sales by 2035; 50 percent of total auto production by 2030 Implement energy efficiency labels and standards Enhance and maintain existing carbon sinks 	<ul style="list-style-type: none"> Climate Change Act (draft currently with Parliament) 	<ul style="list-style-type: none"> Kingdom of Thailand Sustainable Financing Framework (Jul 2020) Policy Statement of the Bank of Thailand Re: Internalizing Environmental and Climate Change Aspects into Financial Institution Business (Feb 2023) 	<ul style="list-style-type: none"> Financial institutions Non-financial corporates 	<ul style="list-style-type: none"> Green Taxonomy (under development) 	<ul style="list-style-type: none"> Sustainable Banking Guidelines (2019) 	<ul style="list-style-type: none"> Guidelines on Management and Disclosure of Climate-Related Risk by Asset Managers (Jan 2023) The Stock Exchange of Thailand Guidelines for Sustainability Reporting (including One Report) (2021)
Vietnam	<ul style="list-style-type: none"> National Adaptation Plan (July 2020) 	<ul style="list-style-type: none"> USD 3.4 billion between 2020–59 under a very high GHG emissions scenario 	<ul style="list-style-type: none"> Reduce GHG emissions by 15.8 percent relative to BAU level in 2030, and by an additional 27.7 percent conditional on international financial and technical support (Nov 2022) 	<ul style="list-style-type: none"> Net zero by 2050 	<ul style="list-style-type: none"> USD 400–600 billion of energy system investments between 2020–50 	<ul style="list-style-type: none"> National Climate Change Strategy to 2050 (Jul 2022) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> Power Development Plan 8 (PDP8) (May 2023) 	<ul style="list-style-type: none"> Phase out unabated coal power generation in the 2040s (or as soon as possible thereafter). Stop issuance of new permits, construction, and direct government support for new unabated coal-fired power generation projects. Offer financial incentives for renewable energy deployment and energy-saving technologies Implement energy efficiency labels and standards Introduce carbon tax (under consideration) 	<ul style="list-style-type: none"> National Climate Change Strategy to 2050 (enacted in Jul 2022) Environmental Protection Law (enacted in Jan 2022) 		<ul style="list-style-type: none"> Financial institutions Non-financial corporates 			
ASEAN									<ul style="list-style-type: none"> ASEAN Green Bond Standards (Nov 2017) 	<ul style="list-style-type: none"> Financial institutions 	<ul style="list-style-type: none"> ASEAN Taxonomy for Sustainable Finance (Version 1 in Nov) 		<ul style="list-style-type: none"> ASEAN Sustainable and Responsible Fund Standards (Feb 2023) [Tentative]

Table 1. ASEAN+3, EU, and US: Climate-Related Pledges, Roadmaps, and Financing (Cont'd)

Economy	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)				Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)						
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-related Financial Disclosure Standards
									<ul style="list-style-type: none"> • ASEAN Sustainability Bond Standards (Oct 2018) • ASEAN Sustainability-Linked Bond Standards (Oct 2022) • ASEAN Social Bond Standards (Oct 2018) 	Non-financial corporates	2021 & Version 2 in Mar 2023		
European Union	<ul style="list-style-type: none"> • Biodiversity strategy for 2030 (May 2020) • EU Adaptation strategy (Feb 2021) • Farm to Fork Strategy (May 2020) 	<ul style="list-style-type: none"> • EUR 35–500 billion (USD 37–534 billion) per annum 	<ul style="list-style-type: none"> • Reduce net domestic GHG emissions by at least 55 percent relative to 1990 level in 2030 (Dec 2020) 	<ul style="list-style-type: none"> • Net zero by 2050 	<ul style="list-style-type: none"> • EUR 28 trillion (USD 30 trillion) in investments between 2020–50 	<ul style="list-style-type: none"> • Long-term low greenhouse gas emission development strategy of the European Union and its Member States (Mar 2020) • 2030 Climate Target Plan (Sep 2020) • European Green Deal (Dec 2019) • Fit for 55 packages (Jul 2021) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> • European industrial strategy (Mar 2020) • European Green Deal Investment Plan (Jan 2020) • Circular economy action plan (Mar 2020) • EU Chemicals Strategy for Sustainability (Mar 2021) • REPowerEU (May 2022) 	<ul style="list-style-type: none"> • Introduce the Just Transition Mechanism • Introduce EU renewable energy financing mechanism • Introduce EU Energy Platform (Apr 2022) • Encourage adoption of electric vehicles via subsidies • Introduce EU Emissions Trading System (Jan 2005) • Introduce Carbon Border Adjustment Mechanism (May 2023) 	<ul style="list-style-type: none"> • European Climate Law (Jul 2021) • Renewable Energy Directive (Dec 2018) • Directive on Energy Efficiency (revised in Nov 2018) • Effort Sharing Regulation (amended in 2023) • LULUCF Regulation (revised in 2023) • ETS Directive (revised in 2023) • Corporate Sustainability Reporting Directive (Dec 2022) • Climate Transition Benchmarks Regulation (Nov 2019) 	<ul style="list-style-type: none"> • New sustainable finance strategy (Jul 2021) • European Green Bond Standard (Feb 2023) 	Financial institutions	<ul style="list-style-type: none"> • EU Taxonomy Regulation (Jun 2020) 	<ul style="list-style-type: none"> • Development of tools and mechanisms for the integration of ESG factors into the EU banking prudential framework and into banks' business strategies and investment policies (Aug 2021) • Guide on climate-related and environmental risks (Nov 2020) 	<ul style="list-style-type: none"> • Sustainability-related disclosures in the financial services sector (Nov 2019) • Guidelines on Disclosure Requirements Applicable to Credit Ratings (Jul 2019) • ECB report on institutions' climate-related and environmental risk disclosures (Nov 2020)
										Non-financial corporates	<ul style="list-style-type: none"> • EU Taxonomy Regulation (Jun 2020) 	<ul style="list-style-type: none"> • Commission guidelines on non-financial reporting (Jun 2019) 	
United States	<ul style="list-style-type: none"> • Climate Adaptation Plan (Oct 2021) 	<ul style="list-style-type: none"> • USD 25–128 billion per annum 	<ul style="list-style-type: none"> • Reduce net GHG emissions by 50–52 percent relative to 2005 level in 2030 (Apr 2021) 	<ul style="list-style-type: none"> • Net zero by 2050 	<ul style="list-style-type: none"> • USD 27 trillion in investments between 2020–50 	<ul style="list-style-type: none"> • The Long-Term Strategy of the United States (Nov 2021) • US National Climate Strategy (under development) • Justice40 Initiative (Jan 2021) • Climate Action Plan (Jul 2021) <p>Sector roadmaps:</p> <ul style="list-style-type: none"> • Hydrogen Program Plan (2020) • Methane Emissions Reduction Action Plan (Nov 2021) • Industrial Decarbonization Roadmap (Sep 2022) 	<ul style="list-style-type: none"> • Offer financial incentives for investment and utilisation of clean and renewable energy • Encourage adoption of electric vehicles via tax credits and infrastructure • Implement energy efficiency and GHG standards for transportation and products • Phase down the production and consumption of hydrofluorocarbons to 15 percent of their baseline levels by 2036 by trading and allocation of allowances 	<ul style="list-style-type: none"> • American Innovation and Manufacturing Act (2020) • Energy Act (2020) • Bipartisan Infrastructure Law (Nov 2021) • Inflation Reduction Act (2022) • New Corporate Average Fuel Economy (CAFE) standards (Apr 2022) • Executive Order on Climate-Related Financial Risk (May 2021) 	<ul style="list-style-type: none"> • International Climate Finance Plan (Apr 2021) • Roadmap to Build a Climate-Resilient Economy (Oct 2021) 	Financial institutions		<ul style="list-style-type: none"> • Principles for Climate-Related Financial Risk Management for Large Financial Institutions (under development) 	
										Non-financial corporates		<ul style="list-style-type: none"> • SEC's enhancement and standardization of climate-related disclosures for investors (under development) 	

Sources: Media reports; national authorities; United Nations; and AMRO staff compilations.

Note: Net zero emissions refer to cutting GHG emissions to as close to zero as possible, with any remaining emissions reabsorbed from the atmosphere, for instance, by oceans and forests. Carbon neutrality refers to net zero emissions of carbon dioxide, the most common GHG. Targeted greenhouse gases (GHGs) in countries' Nationally Determined Contributions vary. They may include, in addition to carbon dioxide, hydrofluorocarbons, methane, nitrogen trifluoride, nitrous oxide, perfluorocarbons, and sulphur hexafluoride. ASEAN = Association of Southeast Asian Nations; BAU = business as usual; ECB = European Central Bank; ETS = Emission Trading System; EU = European Union; FY = fiscal year; GDP = Gross Domestic Product; LULUCF = Land Use, Land-Use Change and Forestry; MtCO₂e = million tons of carbon dioxide equivalent; NDC= nationally determined contributions; RE = renewable energy; SDG= sustainable development goals; SEC= Securities and Exchange Commission TCFD = Task Force on Climate-Related Financial Disclosures; US = United States. Amounts in euros (EUR) have been converted to US dollar (USD) using end-May 2023 USD/EUR rate of 1.068.

Prepared by Diana del Rosario and Yin Fai Ho (Macro-Financial Research Group), with contributions from Country Surveillance teams: Vanne Khut (Brunei), Chunyu Yang (Cambodia), Suan Yong Foo (China), Thi Kim Cuc Nguyen (Indonesia), Sota Nejime (Japan), Diana del Rosario (Malaysia), Aung Cho Nwe, Mar Han Zin Zin, and Naoaki Inayoshi (Myanmar), Andrew Heung Chun Tsang (Philippines), Marthe M. Hinojales (Thailand and Regional Surveillance).

Table 2. International Standard-Setting Bodies: Enabling Regulations for Climate Resilience

Economy / Organization	Adaptation Efforts (Response to physical risks)		Mitigation Efforts (Response to physical and transition risks)					Enabling Guidelines and Regulations for Climate Resilience (Specific to the financial system)					
	National Strategy or Roadmap	Estimated Financing Needs (USD billion)	Nationally Determined Contribution (NDC) per Paris Agreement	Long-Term Target	Estimated Financing Needs (USD billion)	Framework(s) and Policy Transition Roadmap(s)	Existing Strategy(ies)	Legislation(s)	Sustainable (Climate) Finance Framework	Sector	Taxonomy	Risk Management	Climate-Related Financial Disclosure Standards
Bank for International Settlements (BIS)	•	•	•	•	•	•	•	•	•	Financial institutions Non-financial corporates	• A taxonomy of sustainable finance taxonomies (Oct 2021)	• Principles for the effective management and supervision of climate-related financial risks (Jun 2022)	•
International Capital Market Association (ICMA)	•	•	•	•	•	•	•	•	• Green Bond Principles (Jun 2021) • Social Bond Principles (Jun 2021) • Sustainability Bond Principles (Jun 2021) • Sustainability Bond Principles (Jun 2023)	Financial institutions Non-financial corporates	•	•	•
International Organization for Standardization (ISO)	•	•	•	•	•	•	•	•	•	Financial institutions Non-financial corporates	• Net Zero Guidelines (2022)	•	•
International Sustainability Standards Board (ISSB)	•	•	•	•	•	•	•	•	•	Financial institutions Non-financial corporates	•	•	• IFRS S1 General Requirements for Disclosure of Sustainability-Related Financial Information (Jun 2023) • IFRS S2 Climate-related Disclosures (Jun 2023) <i>Both standards incorporate TCFD recommendations.</i>
Organisation for Economic Co-operation and Development (OECD)	•	•	•	•	•	•	•	•	• Framework for SDG Aligned Finance (Nov 2020)	Financial institutions Non-financial corporates	•	•	•
Task Force on Climate-Related Financial Disclosures (TCFD) - Financial Stability Board	•	•	•	•	•	•	•	•	•	Financial institutions Non-financial corporates	•	•	• Recommendations of the Task Force on Climate-Related Financial Disclosures (Jun 2017)
United Nations (UN)	•	•	•	•	•	•	•	•	•	Financial institutions Non-financial corporates	•	•	• Framework for Reporting Climate Change Risks & Opportunities in Corporate Reports (Oct 2012)

Sources: BIS; ICMA; ISO; ISSB; OECD; TCFD; UN.

Note: Net zero emissions refer to cutting GHG emissions to as close to zero as possible, with any remaining emissions reabsorbed from the atmosphere, for instance, by oceans and forests. IFRS= International Financial Reporting Standards; SDG= sustainable development goals.

Prepared by Diana del Rosario and Yin Fai Ho (both Macro-Financial Research Group).