



Deloitte Center *for*
the Edge

Southeast Asia
Sustainability Ambitions 2022

Introduction

This report focuses on five key aspects of sustainability selected by US-ASEAN Business Council members. These are areas that are fundamental in supporting the growth potential of the region. These are also where the private sector, particularly multi-nationals with a presence in Southeast Asia, can make a significant impact. We provide country-by-country reports for ASEAN, excluding Myanmar.

With the governments of ASEAN signaling their ambitions, Southeast Asia presents a fertile ground to take advantage of its rich natural capital to develop a strong model of sustainable development. There are many exciting opportunities for international companies to come to the region, partner local governments and non-profits, and tap on not just the economic potential, but also the green potential, of the region.



Energy & Climate

Southeast Asia's energy demand will likely increase by 2.3 times by 2040, when compared to 2017 levels.¹ In meeting the region's energy needs sustainably, ASEAN targets 25 percent of its energy generation mix to come from renewable sources by 2025.² While coal dependent nations such as Indonesia, Philippines and Malaysia have announced that they will no longer build new coal-powered plants, the region is still likely to be dependent on fossil fuels to meet the rapidly growing energy demand. Nevertheless, this presents many opportunities for solar energy, which has been predicted to be a significant growth sector. The region is also rich in other renewable energy resources such as offshore wind, geothermal and hydropower. There is abundant potential for the region to accelerate large-scale adoption of renewable energy and invest in grid infrastructure upgrades to support renewable energy generation.



Biodiversity

As countries and organizations begin to embark on their net-zero journeys, the demand for high-quality carbon credits will increase in order to offset hard-to-abate emissions. This presents a significant opportunity for Southeast Asia as a region rich in natural capital including forests, peatlands, and mangroves. The establishment and deepening of carbon markets could be a win for Southeast Asian countries, particularly if they collaborate to establish policies and mechanisms to ensure that the region supplies high-quality carbon credits with a high level of transparency. This will be an even greater win for biodiversity, as 42 percent of all species in the region are at risk of being extinct by the end of the century.³



Water

Water security is a major concern of countries around the world. Southeast Asia is no different. Seasonal scarcity will be exacerbated by changing weather patterns due to climate change. There is also increasing pressure on freshwater resources due to increasing industrial activities, population growth and agricultural use. And yet, Singapore, a small island with limited land to collect and store rainwater, was able to overcome its constraints with innovative solutions that are now a model for the world. While different solutions may be needed for the other member states, Singapore shows that this is a challenge that can be surmounted with enough ingenuity and commitment.



Waste

From 2005 to 2015, the amount of solid waste generated in ASEAN has notably doubled, especially for countries such as Thailand, Singapore and the Philippines.⁴ Further, plastic is estimated to account for 90 percent of marine debris in the oceans, where six of the ten ASEAN member states generate over 31 million tons of plastic waste in a year alone.⁵ Rising income levels and urbanization rates of its member states will continue to place increasing pressure on waste generation volumes. While ASEAN has launched regional plans to address waste management issues and combat marine debris, the region will require significant research, investment and community mobilization to implement waste management and reduction strategies.



Gender Equality

Climate change affects the most vulnerable segments of society, particularly women, hardest. Unequal access to land, water, and other resources affects not only women's health and advancement, but also that of their children. Of concern, poverty rates have notably increased in several member states such as Cambodia and Indonesia over the past year, where women are found more likely than men to live below the poverty line. On the flip side, increasing labor force participation and reducing unpaid domestic work through better social provisions, such as childcare and aged care, represents yet another demographic dividend that has yet to be fully tapped. Hence, gender equality and women empowerment could have an outsized impact on climate action and the economy because of the role women play in their communities, in their homes and their families.

1 ASEAN Secretariat, "ASEAN Energy Cooperation: Overview," accessed July 20, 2022.

2 ASEAN Secretariat, "ASEAN Energy Cooperation: Priority Areas," accessed July 20, 2022.

3 Temese, World Economic Forum, and AlphaBeta, New Nature Economy: Asia's Next Wave - Risks, Opportunities, and Financing for a Nature-Positive Economy, 2021, p. 5.

4 Team Revolution, "Solving the Waste Management Problem in ASEAN," presented at Nanyang Technological University Singapore.

5 The World Bank, "ASEAN Member States Adopt Regional Action Plan to Tackle Plastic Pollution," accessed July 22, 2022.

Methodology

Effectively assessing ASEAN’s progress towards sustainability-centered goals is a formidable endeavor that calls for a systematic and holistic scoring approach. The following report aims to concurrently evaluate a country’s national level plans and the current progress towards these established goals. In line with the stated objectives for this report, we delineated clear criteria and standards to serve as the backbone for our analysis.

For each of the nine discussed countries, five main categories were rated – Energy & Climate, Biodiversity, Water, Waste and Gender Equality. Each of these categories was in turn divided into subcomponents to facilitate a comprehensive scoring approach. Our scoring consists of two numeric score values, *Current Progress* and *Targets and Commitments*, and one qualitative checklist, *Implementation Factors*.

First, the rating for the Current Progress of a nation was scored on a scale of one to five using a relevant indicator or proxy indicator that reflected the county’s performance in a given category. Two different methods were used to generate the score values from the indicator values.

As many of the indicators were found in the UN Sustainable Development Goals Report 2022, we adopted the report’s rating system for our scoring system. The UN rates each indicator in four bounds according to optimum values: Major challenges, Significant challenges, Remaining challenges, and SDG achieved. Accordingly, we awarded two, three, four, and five points respectively for the corresponding bound. One point was awarded to countries where no data was available.

Other indicators, which were not adopted from the SDG Report, were developed using public databases from organizations like the World Bank and the UN Statistics Division. For these indicators, the scoring value was developed according to the percentile value that a country is placed at on a global level. Countries falling within the bottom 25 percent in the world were awarded two points, the 25th to 50th percentile awarded three points, 50th to 75th percentile awarded four points, and the 75th to 100th percentile awarded five. Countries lacking data availability were awarded one point.

	1 point	2 points	3 points	4 points	5 points
Subcomponents using UN SDG Indicators	No data found	Major challenges	Significant challenges	Challenges remain	SDG achieved
Subcomponents using other databases	No data found	Country falls within 0-25 percentile globally	Country falls within 26-50 percentile globally	Country falls within 51-75 percentile globally	Country falls within 76-100 percentile globally

Secondly, the *Targets and Commitments* of countries were measured against globally recognized targets and/or region-specific ASEAN targets, including the UN SDG targets and the 2021 United Nations Climate Change Conference (COP 26) pledges. With minimal exceptions, these targets consist of both a numerical target figure and a target year to reach this figure. While many such targets exist, we selected the targets that corresponded with or related strongly to the indicators used for the *Current Progress* score.

Countries were awarded either zero, one, or two points based on whether their commitments met the appropriate global targets. This figure would be added on to the Current Progress score to determine the *Targets and Commitments* score, with a maximum of five points scored.



Absence of target or commitment








Target has a clearly stated numerical figure AND a target year to reach the target, but achieving either will not meet the globally



Target has a clearly stated numerical figure AND a target year to reach the target, both of which meet the globally recognized target

Thirdly, the presence of *Implementation Factors* was described for each subcomponent of every category. These factors indicate whether there are gaps in implementation of the targets and commitments. The following five factors were used in our checklist, with the results displayed visually on a Yes/No basis within each category's score charts.

 Monitoring and Enforcing Mechanisms	The plans describe how implemented initiatives will be monitored/enforced. They detail the development of systems/incentives to ensure its effective implementation.
 Vulnerable Groups (Women, Children, Minorities, Low-Income)	The plans recognize the need to cater for vulnerable groups in the nation, and in response, develop initiatives specifically targeting these individuals.
 Evidence- Based Plan Development	The plans have been developed/modified based on a data-driven analysis of the nation's situation OR the government has intent to perform data collection to further inform its policy-making.
 Investment	The plans showcase intent to invest in scientific and technological capacity, OR targeted financial investment or budget allocation towards a given target.
 Awareness	The plans include strategies to increase awareness, to ensure individuals across the nation have the relevant information and awareness about a given sustainable goal.

Data cited in this report are the latest available as of June 2022. As sustainability is a constantly evolving field, we may not have captured all of the most recent developments in each country.

Indicator List

Category	Indicator	Source
 Energy & Climate	Greenhouse gas intensity growth rate	Environmental Performance Index ¹
	Population with access to electricity, %.	UN SDG Report 2022 ²
	Share of renewable energy in total primary energy supply (%)	SDG Report
 Biodiversity	Energy intensity level of primary energy (megajoules per constant 2017 purchasing power parity GDP)	UN Statistics Division ³
	Red List Index of species survival (worst 0-1 best)	SDG Report
	Permanent deforestation (% of forest area, 5-year average)	SDG Report
	Mean area that is protected in marine sites important to biodiversity (%)	SDG Report
	Fish caught from overexploited or collapsed stocks (% of total catch)	SDG Report
	Fish caught by trawling or dredging (%)	SDG Report
 Water	Fish caught that are then discarded (%)	SDG Report
	Population using at least basic drinking water services (%)	SDG Report
	Population using at least basic sanitation services (%)	SDG Report
	Anthropogenic wastewater that receives treatment (%)	SDG Report
	Water-use efficiency (US\$/m ³)	SDG Report ⁷
 Waste	Freshwater withdrawal (% of available freshwater resources)	SDG Report
	Total annual Municipal Solid Waste Generated per capita/kg	World Bank What A Waste Global Database ⁴
	Household food waste estimate (kg/capita/year)	UNEP Food Waste Index ⁵
 Gender Equality	Hazardous waste generated per capita (kg)	World Bank What A Waste Global Database
	Health and Survival index	Global Gender Gap Index ⁶
	Educational Attainment index	Global Gender Gap Index
	Economic Participation and Opportunity index	Global Gender Gap Index
	Political Empowerment index	Global Gender Gap Index

1 Yale Center for Environmental Law & Policy, "Environmental Performance Index: Greenhouse gas intensity growth rate," July 2022.

2 UN, Sustainable Development Goals Report 2022, June 2022.

3 UNDESA Statistics Division, "SDG Indicators Database".

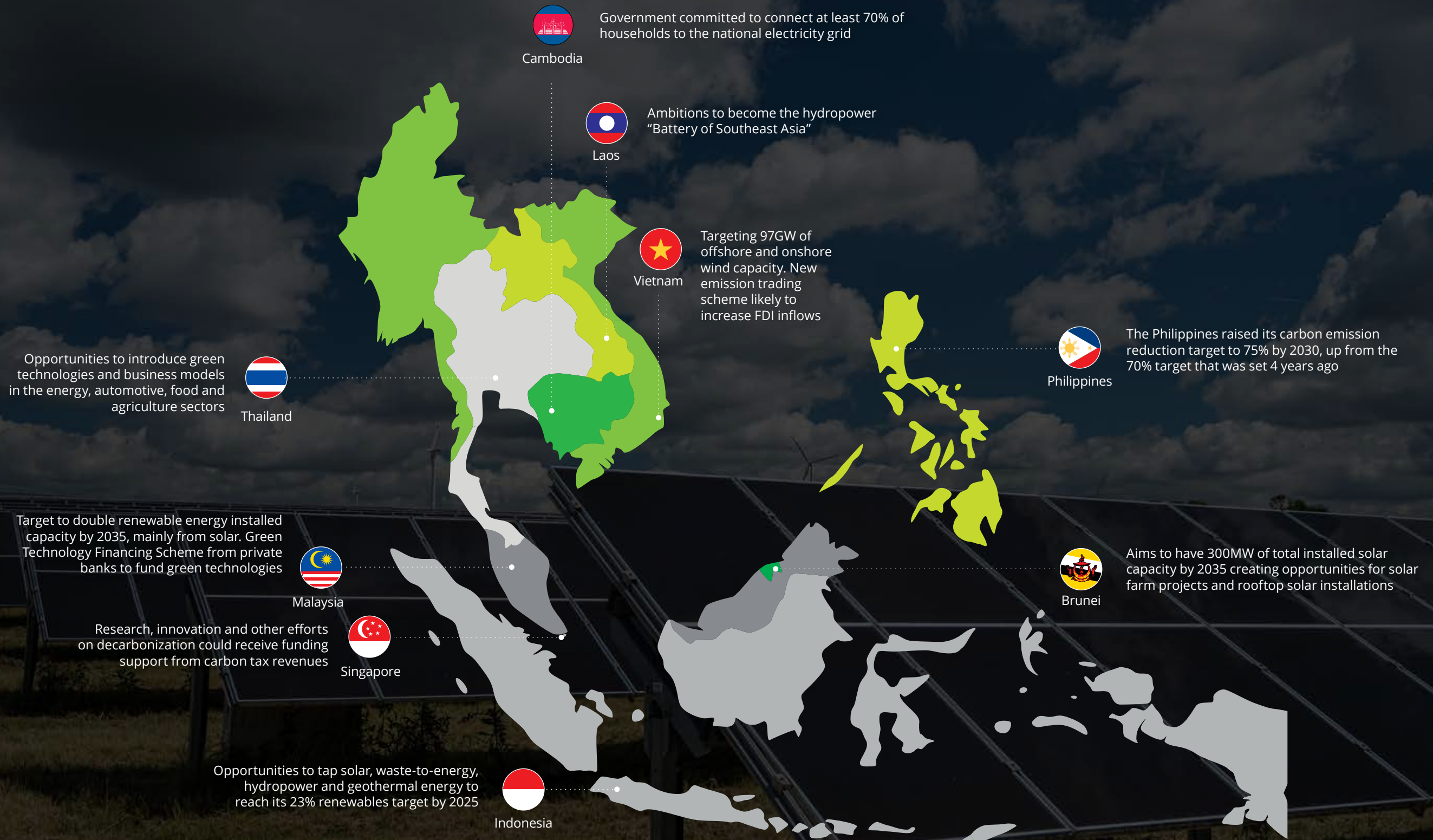
4 World Bank, "WHAT A WASTE 2.0: A Global Snapshot of Solid Waste Management to 2050," September 2018.

5 UNEP, Food Waste Index Report 2021, March 2021.

6 World Economic Forum, Global Gender Gap Report 2021, March 2021.

7 United Nations, "UN Water: Progress on Water-Use Efficiency (SDG target 6.4)," 2019.

Energy & Climate





Energy & Climate

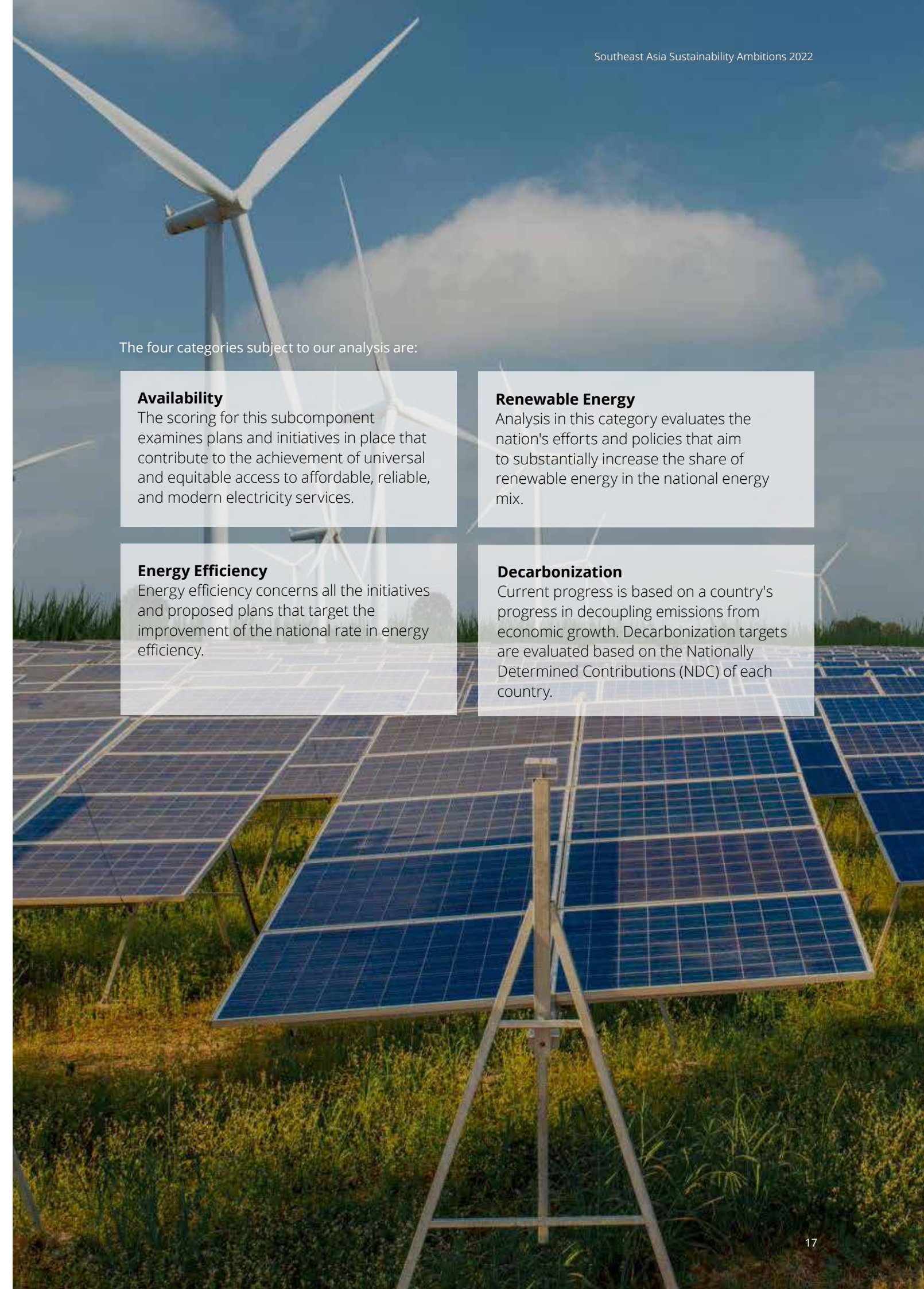
The ASEAN region has one of the fastest growing populations in the world, and this is reflected in the region's energy demand. Energy demand is projected to increase by 2.3 times by 2040 from 2017 levels. According to the sixth ASEAN Energy Outlook, this demand would most likely be met by fossil fuels.¹

The region has a target to achieve 23 percent renewable energy in its energy generation mix by 2025.² However, due to existing energy policies set by ASEAN countries, as well as the significant impact that COVID-19 has had on the region, it is unlikely that this target would be met. To add to this, two ASEAN countries namely, Vietnam and Indonesia, are part of the five Asian countries currently contributing to 80 percent of the world's planned new coal plants.³ Nevertheless, there is some cause for optimism with the Asian Development Bank (ADB) piloting an Energy Transition Mechanism (ETM) in Indonesia, the Philippines and Vietnam. The ETM is a collaborative initiative, crowding in both public and private investments from governments, multilateral banks, private sector investors, philanthropies and long-term investors, to finance the retirement of coal power assets on an earlier schedule than if they remained with their current owners.⁴

Beyond the energy mix, energy availability continues to be a concern in rural "last-mile" communities, with approximately 26.4 million people still lacking access to electricity in contrast to 2.7 million in urban areas.⁵ This highlights the dilemma facing the region, balancing between the need to ensure electricity is available for a rapidly growing population, but equally, to ensure that electricity sources are decarbonizing to mitigate the climate crisis.

Since COP26, the majority of member states have made commitments to address the climate crisis. Brunei, Cambodia, Laos, Malaysia, Singapore and Vietnam have announced their commitments to achieve net-zero emissions around 2050, Indonesia by 2060, and Thailand by 2065 to 2070. Only the Philippines has not set a net-zero target.

1 ASEAN Secretariat, "ASEAN Energy Cooperation: Overview," accessed July 20, 2022.
 2 ASEAN Secretariat, "ASEAN Energy Cooperation: Priority Areas," accessed July 20, 2022.
 3 S&P Global Market Intelligence, "5 Asian countries building 80% of new coal power – Carbon Tracker," accessed July 20, 2022.
 4 Asian Development Bank, "Energy Transition Mechanism," accessed July 20, 2022.
 5 UNESCAP, Regional Energy Trends Report 2020: Tracking SDG 7 in the ASEAN Region, 2020, p. 5.



The four categories subject to our analysis are:

Availability

The scoring for this subcomponent examines plans and initiatives in place that contribute to the achievement of universal and equitable access to affordable, reliable, and modern electricity services.

Renewable Energy

Analysis in this category evaluates the nation's efforts and policies that aim to substantially increase the share of renewable energy in the national energy mix.

Energy Efficiency

Energy efficiency concerns all the initiatives and proposed plans that target the improvement of the national rate in energy efficiency.

Decarbonization

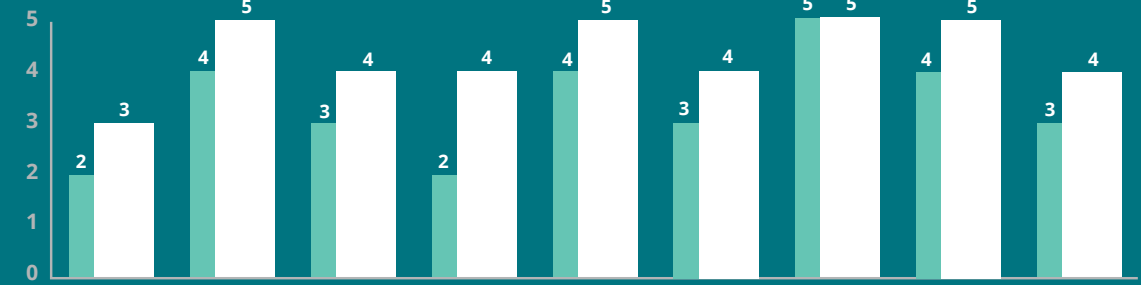
Current progress is based on a country's progress in decoupling emissions from economic growth. Decarbonization targets are evaluated based on the Nationally Determined Contributions (NDC) of each country.

Energy & Climate

Brunei Cambodia Indonesia Laos Malaysia Philippines Singapore Thailand Vietnam

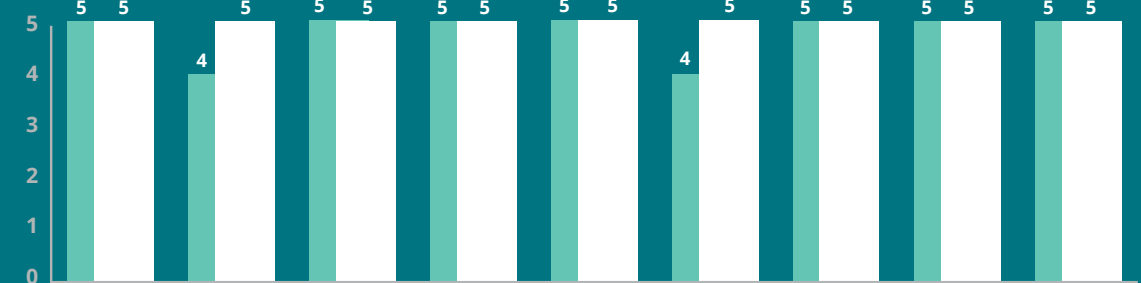
Decarbonization
 Current scores were determined by the indicator:
 • Greenhouse gas intensity growth rate based on the EPI

Target scores were measured against the Paris Agreement’s objective of limiting global warming to 1.5 °C, by reducing CO2 emissions by 45 percent by 2030 from 2010 levels, or the nation’s commitment to net-zero carbon emissions by 2050 in conjunction with the UN Net-zero Coalition.



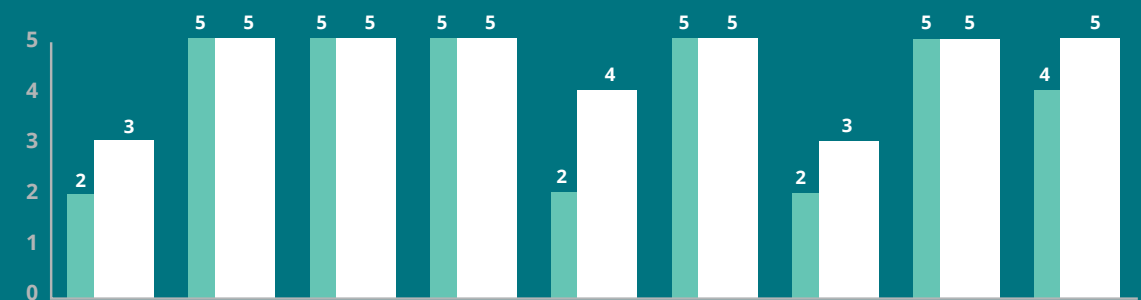
Availability
 Current scores were determined by the indicator:
 • Population with access to electricity (% of population) from the UN SDG Report 2022

Target scores were measured against the ASEAN target to achieve near-universal (>99%) electricity access by 2030.



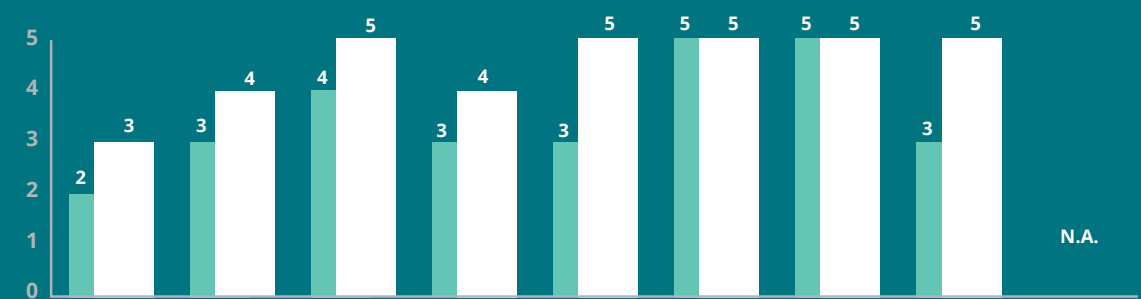
Renewable energy
 Current scores were determined by the indicator:
 • Share of renewable energy in total primary energy supply (%) from the UN SDG Report 2022

Target scores were measured against the ASEAN target of achieving a modern renewable primary energy share of 23% by 2025.



Energy efficiency
 Current scores were determined by the indicator:
 • Energy intensity level of primary energy (megajoules per constant 2017 purchasing power parity GDP) from the UN Statistical Division

Target scores were measured against the ASEAN target of reducing regional energy intensity by 20% by 2020 and 30% by 2025, based on 2005 levels.



Current progress Plans & commitments

Biodiversity





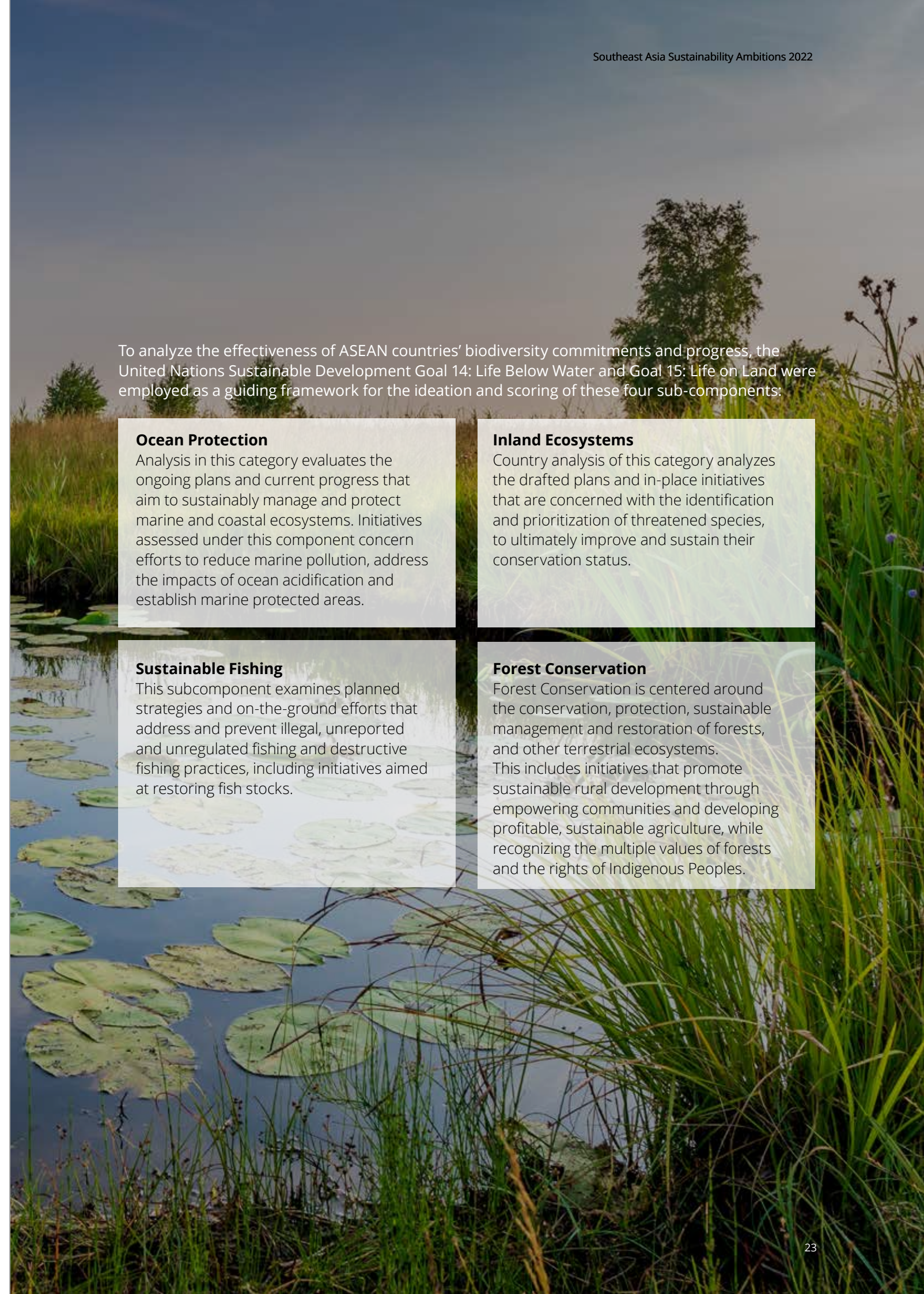
Biodiversity

While Southeast Asia only occupies about three percent of Earth’s land, the region is home to rich biodiversity comprising four biodiversity hotspots. The ASEAN region contains the largest proportion of endemic bird and mammal species and the second highest proportion of endemic vascular plant species. Three out of 17 of the world’s megadiverse nations – Indonesia, Philippines, and Malaysia are represented in the region.¹ Total regional forest area spans 2,065,600 sq km – where Indonesia’s forest areas occupy the largest area (921,332 sq km), followed by Malaysia (191,140 sq km).²

To ensure the conservation and sustainability of its rich biological diversity, its member states have pledged their commitments through the ASEAN Socio-Cultural Community (ASCC) Blueprint 2025.³ The ASEAN Centre for Biodiversity was established in 2005 to advise its member states on the development of policies to achieve socially responsible access, equitable sharing, utilization and conservation of natural ecosystems for present and future generations.⁴

Still, urgent steps need to be taken at the community, national and regional levels to ensure sustainable economic development that remains mindful of biodiversity conservation in the long-term. Importantly, the private sector must be actively involved in sustainable growth as businesses seek to pursue new opportunities in the region. Reporting frameworks like the Taskforce on Nature-related Financial Disclosures (TNFD) could help companies consider and disclose nature-related risks and opportunities within their operations and value chains, particularly in this biodiverse region. This is in line with a global shift in focus towards biodiversity, with CEO-led movements such as The World Business Council for Sustainable Development recently announcing biodiversity as part of the Vision 2050.⁵

1 Percy E. Sajise, “Empowering Communities and Countries to Conserve Biodiversity at the National and ASEAN Levels: Status, Challenges, and Ways Forward,” ERIA Discussion Paper Series, December, 2015, p. 6.
 2 Food and Agriculture Organization of the United Nations, “Global Forest Resources Assessment: ASEAN Forest Area,” accessed July 21, 2022.
 3 Association of Southeast Asian Nations, “ASEAN Socio Cultural Community (ASCC) Blueprint 2025,” November 22, 2015.
 4 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, “Protection of Biological Diversity in the ASEAN Member States in Cooperation with the ASEAN Centre for Biodiversity,” January 2016.
 5 World Business Council for Sustainable Development (WBCSD), “Vision 2050: Time to Transform,” March 25, 2021.



To analyze the effectiveness of ASEAN countries’ biodiversity commitments and progress, the United Nations Sustainable Development Goal 14: Life Below Water and Goal 15: Life on Land were employed as a guiding framework for the ideation and scoring of these four sub-components:

Ocean Protection
 Analysis in this category evaluates the ongoing plans and current progress that aim to sustainably manage and protect marine and coastal ecosystems. Initiatives assessed under this component concern efforts to reduce marine pollution, address the impacts of ocean acidification and establish marine protected areas.

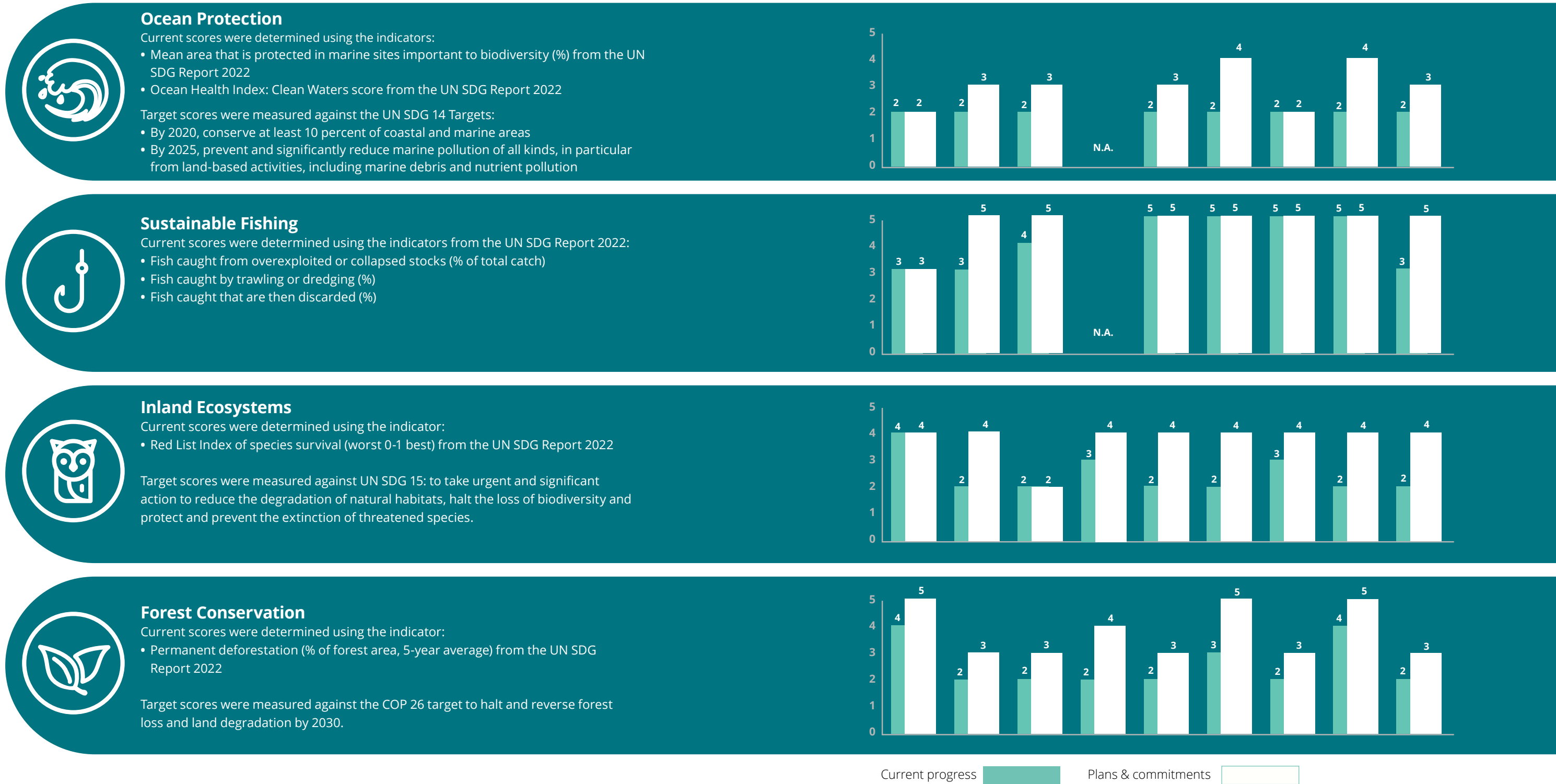
Inland Ecosystems
 Country analysis of this category analyzes the drafted plans and in-place initiatives that are concerned with the identification and prioritization of threatened species, to ultimately improve and sustain their conservation status.

Sustainable Fishing
 This subcomponent examines planned strategies and on-the-ground efforts that address and prevent illegal, unreported and unregulated fishing and destructive fishing practices, including initiatives aimed at restoring fish stocks.

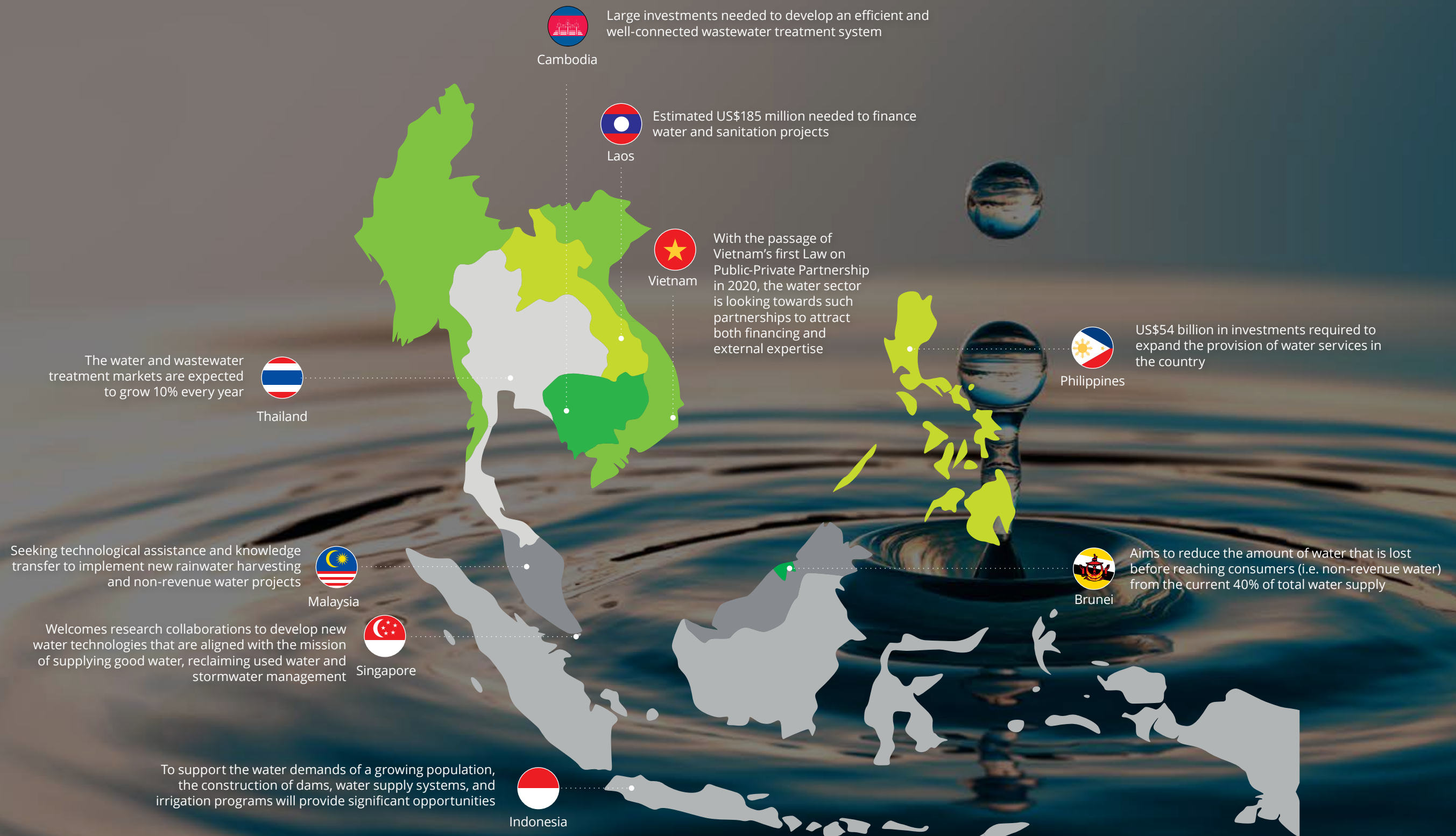
Forest Conservation
 Forest Conservation is centered around the conservation, protection, sustainable management and restoration of forests, and other terrestrial ecosystems. This includes initiatives that promote sustainable rural development through empowering communities and developing profitable, sustainable agriculture, while recognizing the multiple values of forests and the rights of Indigenous Peoples.

Biodiversity

Brunei Cambodia Indonesia Laos Malaysia Philippines Singapore Thailand Vietnam



Water





Water

While Asia is home to more than half of the world's population, it contains less freshwater – 3,920 cubic meters per person per year – than any other continent (apart from Antarctica).¹ A closer look at the region's water situation highlights seasonal scarcity and rising pressure on freshwater resources in its member states. Rapid rates of economic development place considerable pressure on countries when it comes to the sustainable development of water supply and sanitation schemes. Reduced access to freshwater will lead to a cascading series of consequences, some of which include disruption in food production, loss of livelihood security, large-scale migration, and rising geopolitical tension and instabilities.²

Conditions in these member states vary and have differing implications for water management and resource issues. Nevertheless, sharing of best practices and joint efforts to improve water resource sustainability in ASEAN could help improve outcomes. In recognition of the pressing need for preservation and better management

and use of water resources, ASEAN leaders pledged their commitment and support in ASEAN 2025: Forging Ahead Together. Guided by the ASCC Blueprint 2025, the ASEAN Working Group on Water Resource Management was incorporated as a consultative platform for member states to promote water resource sustainability and ensure equitable accessibility and acceptable quality of water to meet the needs of its people.³

Approximately 70 percent of individuals have access to safely managed sanitation across Southeast Asia. Despite the region's progress, countries with large rural populations, such as Cambodia and Laos, face challenges in providing universal access – in 2017, only 54 percent of people in rural areas in ASEAN have access to basic sanitation.⁴ Significant investments are required for improvements in sanitation, wastewater reuse infrastructure and sewerage systems, and in efforts to enable access to better water quality and sanitation.

To analyze the effectiveness of an ASEAN's country's water management commitments and progress, the United Nations Sustainable Development Goal 6: Clean Water and Sanitation was employed as a guiding framework for the ideation and scoring of these four sub-components:

Drinking Water

Analysis in this category evaluates the ongoing plans and current progress that aim to achieve universal and equitable access to safe and affordable drinking water for all. Whereas many Southeast Asian nations have an established a water network in cities and towns, the limited accessibility in rural regions remains a challenge for most.

Sanitation and Hygiene

This subcomponent examines planned strategies and on-the-ground efforts that aim to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation. This includes increasing the proportions of treated wastewater, and improving public sewerage systems. Similarly, in rural regions, sanitation tends to be at its lowest levels due to poor infrastructure and limited connectivity.

Water-use Efficiency and Scarcity

This subcomponent is centered around plans and efforts that aim to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity. Overall, these initiatives target the reduction of the number of people suffering from water scarcity in the nation.

¹ Asia Society, "Asia's Next Challenge: Securing the Region's Water Future," accessed July 22, 2022.

² Asia Society, "Asia's Next Challenge: Securing the Region's Water Future."

³ ASEAN Cooperation on Environment, "ASEAN Cooperation on Water Resources Management," accessed July 22, 2022.

⁴ UNESCAP, Complementarities between the ASEAN Community Vision 2025 and the United Nations 2030 Agenda for Sustainable Development: A Framework for Action, 2017, p. 38.

Water

Brunei Cambodia Indonesia Laos Malaysia Philippines Singapore Thailand Vietnam

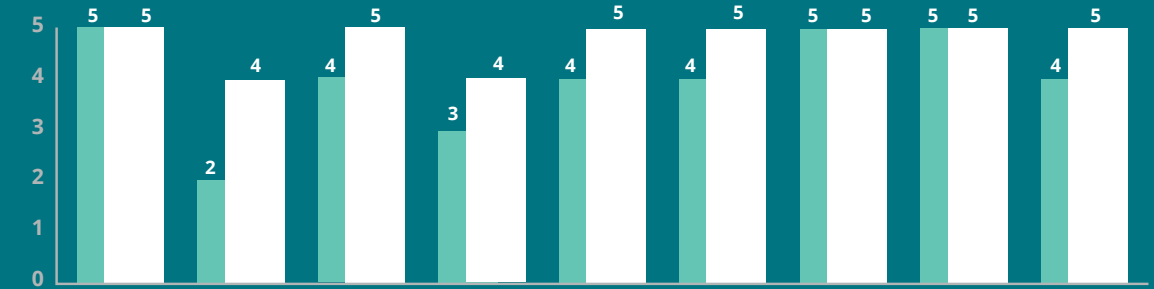


Drinking water

Current scores were determined using the indicator:

- Population using at least basic drinking water services (%) from the UN SDG Report 2022

Target scores were measured against the UN SDG 6 target of achieving 100% basic drinking water services by 2030.



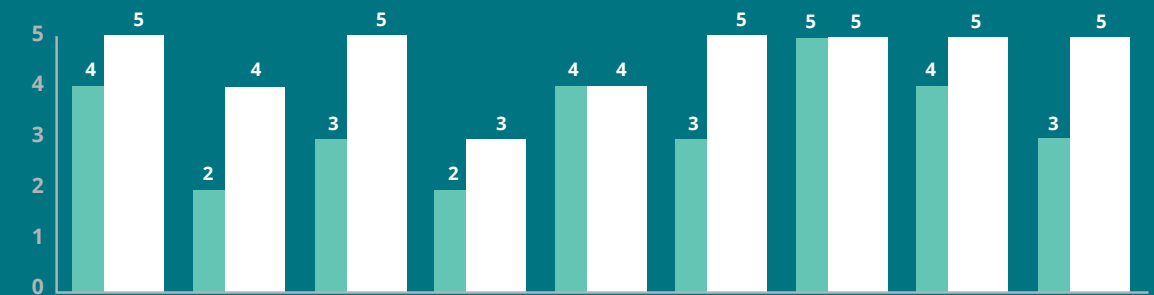
Sanitation and hygiene

Current scores were determined using the indicators:

- Population using at least basic sanitation services (%) from the UN SDG Report 2022
- Anthropogenic wastewater that receives treatment (%) from the UN SDG Report 2022

Target scores were measured against the UN SDG 6 targets:

- By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- By 2030, improve water quality by halving the proportion of untreated wastewater



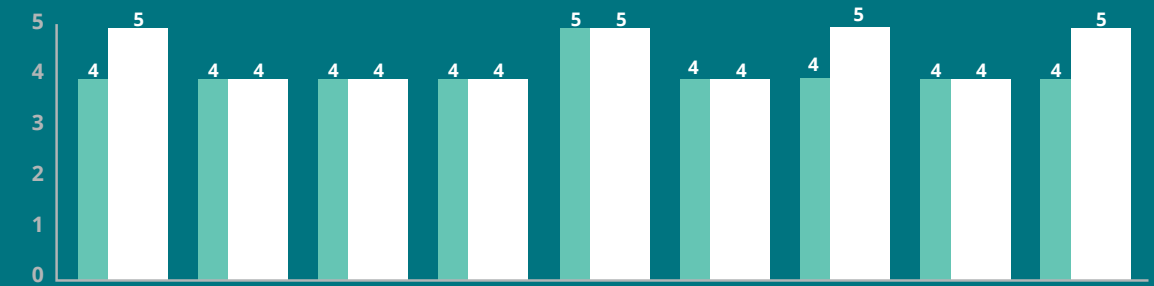
Water-use efficiency and scarcity

Current scores were determined using the indicators:

- Freshwater withdrawal (% of available freshwater resources) from the UN SDG Report 2022
- Water-use efficiency (US\$/m3)

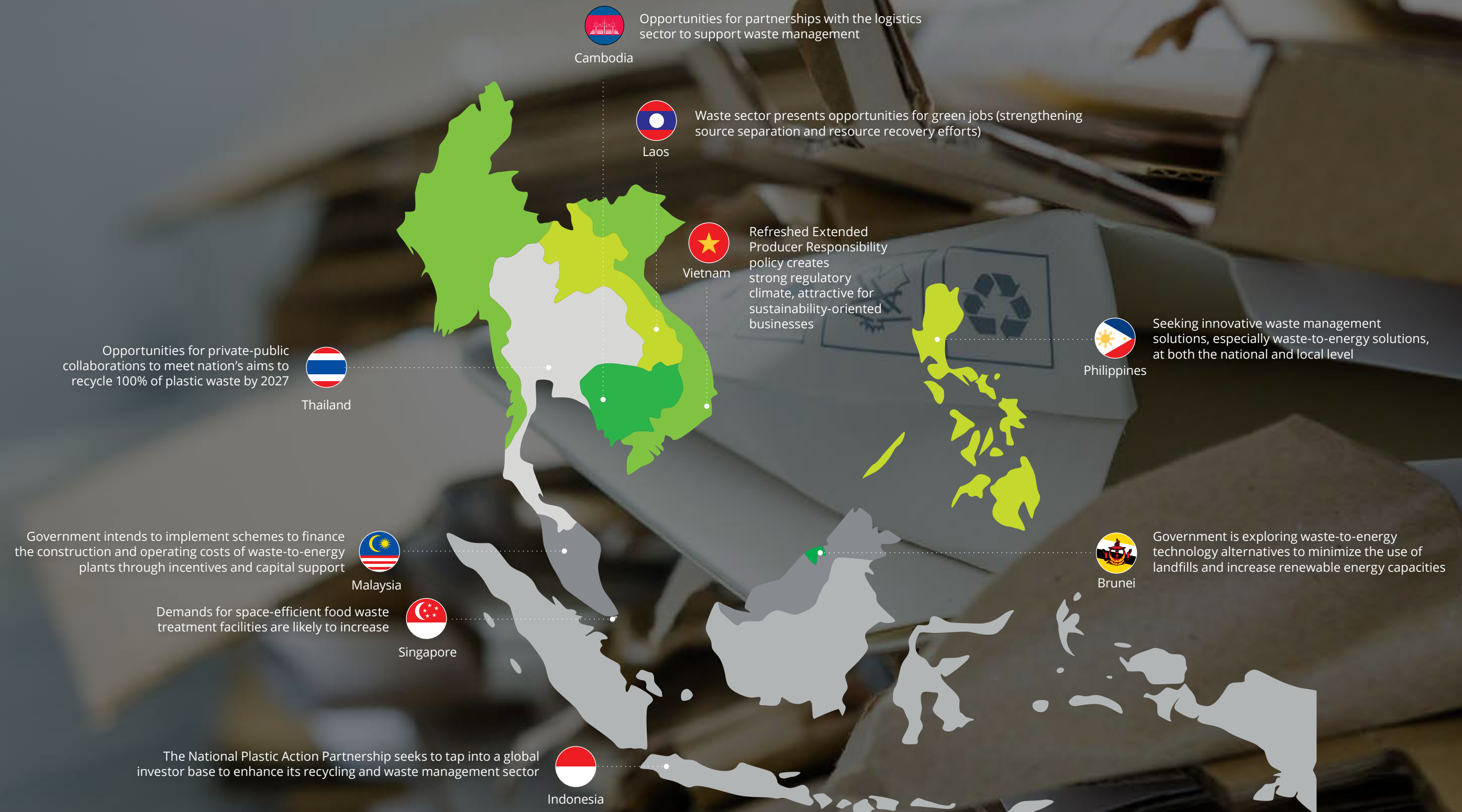
Target scores were measured against the UN SDG 6 target:

- By 2030, to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity



Current progress Plans & commitments

Waste





Waste

From 2005 to 2015, the amount of solid waste generated in ASEAN has notably doubled, especially for countries such as the Philippines, Singapore and Thailand. In fact, the World Bank found that daily waste generation in 2016 reflected 0.6kg of waste generated per capita per day on average.¹ Reduction in food waste across the supply chain is an important area as it represents about 60 percent of all solid waste in ASEAN.² Adoption of an integrated model to transform waste into resources could create sustainable incentives for waste management.

Plastic is estimated to account for 90 percent of marine debris in the oceans, where six out of ten ASEAN member states generate over 31 million tons of plastic waste in a year alone. While many of the member states do engage in national efforts for waste management, the sudden rise in single-use plastics and personal protective

equipment due to the COVID-19 pandemic has placed additional stress on the countries' attempts at tackling marine plastic debris as well.³

Population growth and rapid industrialization will continue to pose significant challenges for waste management. Improper management of waste leads to detrimental impacts on environment and human health, and thereby stress the need for regional cooperation to address the issue at hand. Apart from its commitment to addressing waste management problems highlighted in the ASEAN Socio-Cultural Community Blueprint, ASEAN has likewise launched its regional plan for combating marine debris in member states (2021 – 2025). The plan outlines a scalable, solution-focused joint strategy to address marine plastic debris across the region and underlies its commitment towards tackling waste management.⁴

1 Team Revolution, "Solving the Waste Management Problem in ASEAN," presented at Nanyang Technological University Singapore.
 2 Team Revolution, "Solving the Waste Management Problem in ASEAN."
 3 The World Bank, "ASEAN Member States Adopt Regional Action Plan to Tackle Plastic Pollution," accessed July 22, 2022.
 4 ASEAN Cooperation on Environment, "ASEAN Cooperation on Chemicals and Waste," accessed July 22, 2022; ASEAN, "ASEAN Socio-Cultural Community Blueprint 2025," accessed July 22, 2022.

To analyze the effectiveness of a country's waste management commitments, we examine three key criteria:

Solid Waste Management

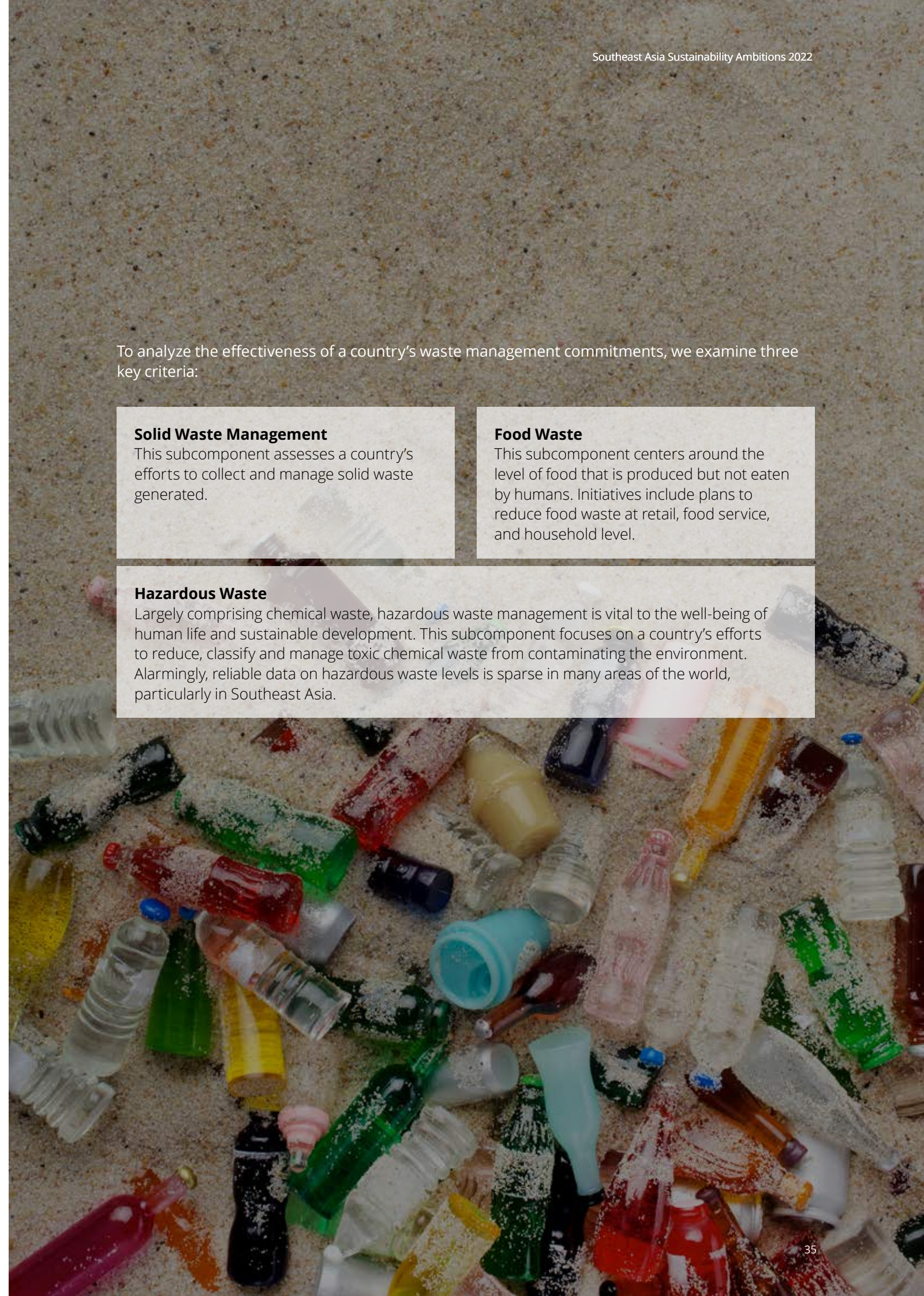
This subcomponent assesses a country's efforts to collect and manage solid waste generated.

Food Waste

This subcomponent centers around the level of food that is produced but not eaten by humans. Initiatives include plans to reduce food waste at retail, food service, and household level.

Hazardous Waste

Largely comprising chemical waste, hazardous waste management is vital to the well-being of human life and sustainable development. This subcomponent focuses on a country's efforts to reduce, classify and manage toxic chemical waste from contaminating the environment. Alarming, reliable data on hazardous waste levels is sparse in many areas of the world, particularly in Southeast Asia.



Waste

Brunei Cambodia Indonesia Laos Malaysia Philippines Singapore Thailand Vietnam

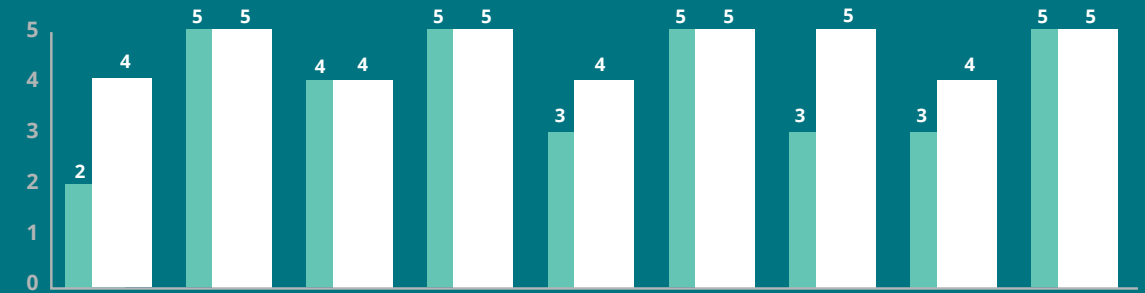


Solid waste management

Current scores were determined by the following indicator:

- Overall collection rates (in %) for urban municipal solid waste, from the UNEP Waste Management report.

Target scores were determined against the UN SDG target 12.5 to substantially reduce municipal solid waste through prevention, reduction, recycling and reuse by 2030 (at least 10%)

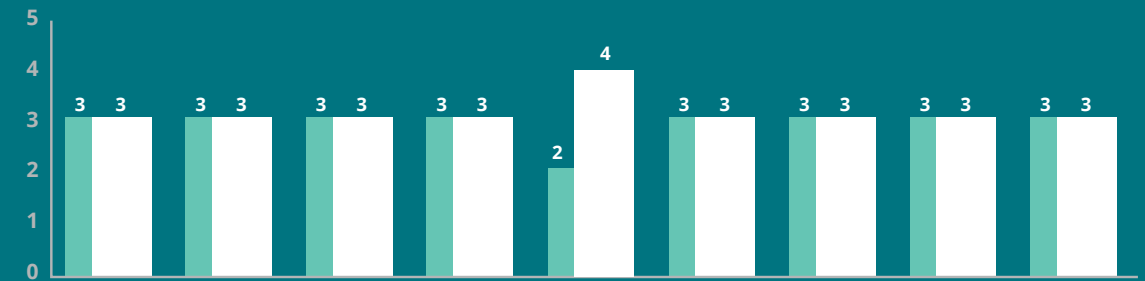


Food waste

Current scores were determined by the following indicator:

- Household food waste estimate (kg/capita/year) from the UN Environmental Programme (UNEP) Food Waste Index Report 2021

Target scores were determined against the UN SDG Target 12.3 to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses, by 2030.



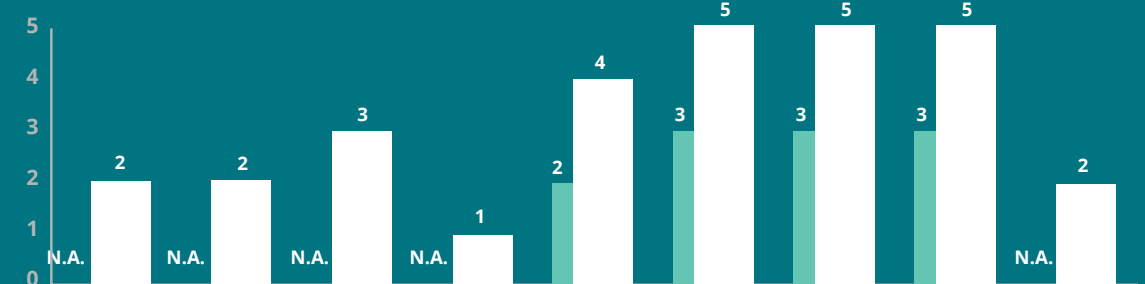
Hazardous waste

Current scores were determined by the following indicator:

- Hazardous waste generated per capita (kg) from the World Bank What A Waste Global Database

Target scores were generated using analysis from the UNEP's Waste Management in ASEAN report, against the United Nations Centre for Regional Development 3R Forum targets for hazardous waste management:


- Encourage resource efficiency and productivity in the private sector
- Promote the greening of the value chain by encouraging industries and associated suppliers and vendors in socially responsible and inclusive ways
- Promote industrial symbiosis (i.e., recycling of waste from one industry as a resource for another)
- Develop proper classification and inventory of hazardous waste as a prerequisite towards sound management of such waste





Current progress Plans & commitments


Gender Equality





 Committed to improving opportunities for women in adapting to the digital economy and the 4th Industrial Revolution
Cambodia


 Collaborations with international actors (e.g. with LuxDev, ADB, UNDP) have been proven to scale existing national/local effort
Laos


 Female representation in senior leadership roles could be increased through supportive and empowering work environments
Vietnam


 Expand benefits to incentivize the participation of all women, regardless of marital status, in paid work
Philippines

 Private sector encouraged to offer more flexible work arrangements, paid leaves, and support for caregivers
Brunei

There is significant potential to activate the labor supply of women through supportive education, caregiving and maternity policies and benefits
 Thailand

Partnerships between the government and corporations can play a role in increasing women's healthcare access and empowering the educational possibilities of young women
 Malaysia

Increased workplace support can incentivize uptake of paternity leave, and more equal sharing of family responsibilities – contributing to more equal gender outcomes
 Singapore

To widen women's and girls' access to training programs, potential partners can lead STEM outreach programs for education in schools and vocational training programs that link women with job opportunities in these sectors
 Indonesia



Gender Equality

While governments in the region have instituted significant reforms, and the private sector has made advancements to promote women's economic participation over the past decade, a significant gender gap remains. Over the past year, poverty rates have notably increased in several member states such as Cambodia and Indonesia; where women are found more likely than men to live below the poverty line.¹ The onset of the COVID-19 pandemic has since further exacerbated the domestic care responsibilities of such women in member states, where 30 percent of them have reported increases in intensity of work.²

In terms of employment, 56 percent of women participate in the labor force as compared to 79 percent of men. Of those employed, more than half of them are engaged in informal sectors.³ According to the World Bank's Women, Business and the Law 2021 Index, member states collectively score an average of 71.1 out of 100 (compared to a global average of 76.1), indicating there is room for growth in implementing protections or removing restrictive laws and regulations.⁴ Without the legal foundation to support women in the workforce, the private sector is left to its own policies and practices to ensure the hiring and participation of women.

It is widely accepted by the global community that better health outcomes for women lead to their greater economic participation. Yet, 30 percent of women in the region are unable to see a doctor when needed.⁵ Moreover, the poorest women living in remote provinces continue to stagger behind across various dimensions of equality – spanning from accessibility to basic education, health care, safe drinking water and clean energy.

Deeply entrenched attitudes of traditional gender roles have likewise impeded greater female involvement in politics. This is evident from how a greater number of women are participating in decision-making, but parity has yet to be achieved. Accordingly, 20 percent of parliament seats are currently occupied by women, and women only make up 24 percent of middle and senior manager roles in the private sector.⁶ Addressing these serious challenges, however, comes with tangible economic benefits.

To analyze a country's commitment towards ensuring gender equality and women's empowerment, we used the United Nations Sustainable Development Goal 5: Gender Equality as a guiding framework for the ideation and scoring of these four sub-components. We examine the following criteria and their respective indicators:

Ending all forms of discrimination/violence/harmful practices

Analysis in this category evaluates the current progress in establishing legal frameworks/initiatives to eliminate all forms of discrimination, violence and harmful practices against all women and girls.

Equal Opportunities and Empowerment

Country plans to implement policies/initiatives that ensure access to healthcare, sexual and reproductive health and rights, economic resources and control of various forms of property and gender equality in education. Initiatives to ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life, and overall promoting empowerment of women and girls at all levels.

* As most countries do not set quantitative targets for gender-based equality, target scores were not awarded.

1 UN Women Regional Office for Asia and the Pacific, "Online Roll-Out of the ASEAN Gender Outlook," accessed July 22, 2022.

2 ASEAN Secretariat, "Gender Equality: Bridge to Progress," The ASEAN, April-May, 2021, p. 38.

3 UN Women Regional Office for Asia and the Pacific, "Online Roll-Out of the ASEAN Gender Outlook."

4 The World Bank, "Women, Business and the Law 2021 Index," accessed July 22, 2022.

5 ASEAN Secretariat, "Gender Equality," p. 38.

6 ASEAN Secretariat, "Gender Equality," p. 38.

Gender Equality

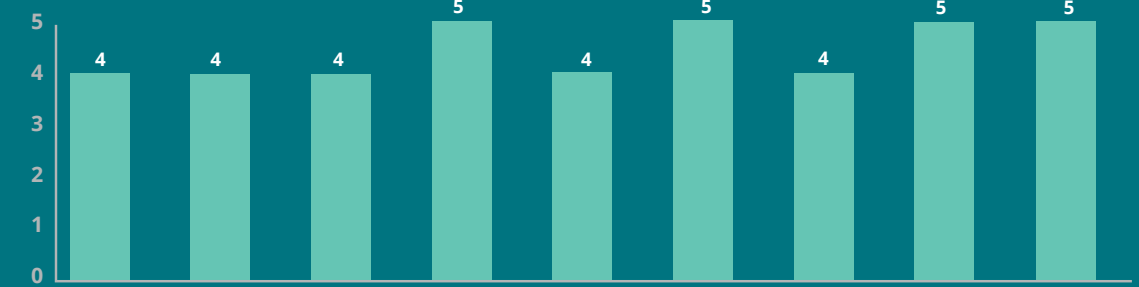
Brunei Cambodia Indonesia Laos Malaysia Philippines Singapore Thailand Vietnam



Ending all forms of discrimination, violence and harmful practices

Current scores were determined using the following indicators:

- Health and Survival score from the Global Gender Gap Index 2021
- Educational Attainment score from the Global Gender Gap Index 2021

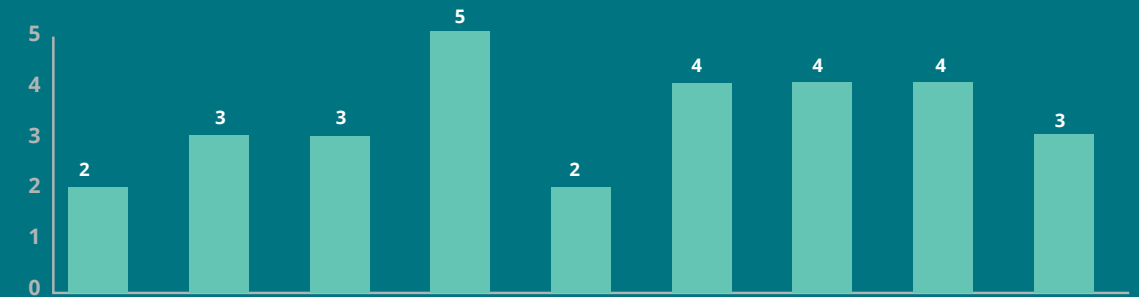


Equal opportunities and empowerment

Current scores were determined using the following indicators:

- Economic Participation and Opportunity score from the Global Gender Gap Index 2021
- Political Empowerment score from the Global Gender Gap Index 2021

As most countries do not set quantitative targets for gender-based equality, target scores were not awarded.



Current progress