

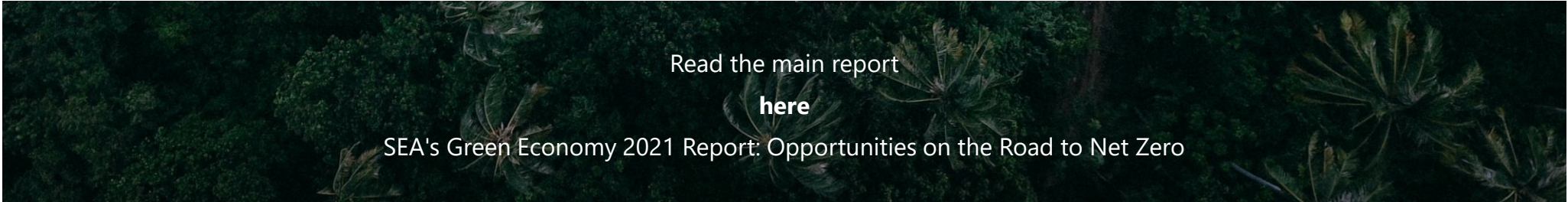


Singapore

Perspectives on the Green Economy

2021

Main report

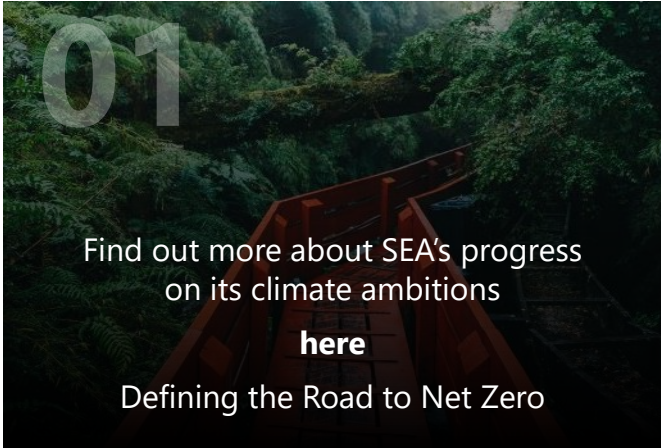


Read the main report

here

SEA's Green Economy 2021 Report: Opportunities on the Road to Net Zero

Deep-dive sections

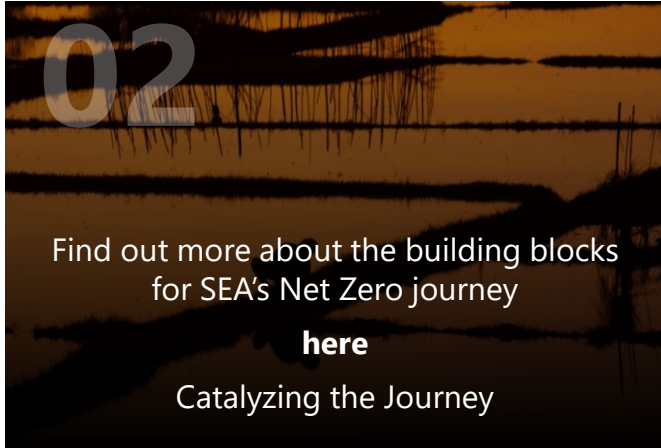


01

Find out more about SEA's progress on its climate ambitions

here

Defining the Road to Net Zero

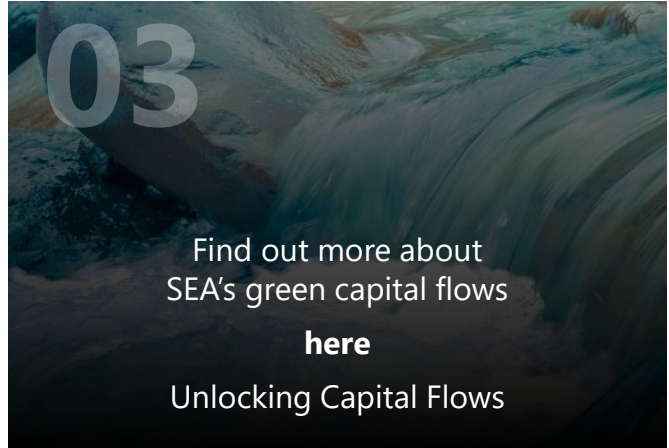


02

Find out more about the building blocks for SEA's Net Zero journey

here

Catalyzing the Journey



03

Find out more about SEA's green capital flows

here

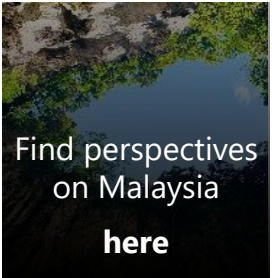
Unlocking Capital Flows

Country insights



Find perspectives on Indonesia

here

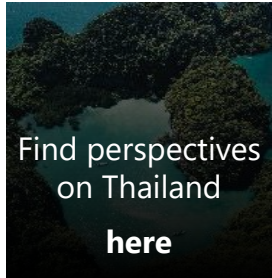


Find perspectives on Malaysia

here

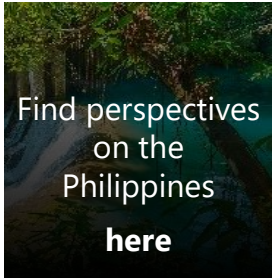


Singapore
This report



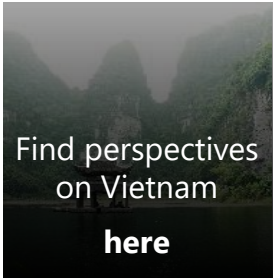
Find perspectives on Thailand

here



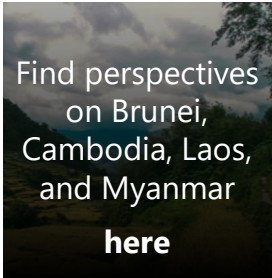
Find perspectives on the Philippines

here



Find perspectives on Vietnam

here



Find perspectives on Brunei, Cambodia, Laos, and Myanmar

here



SINGAPORE

Key takeaways

A

Singapore has the potential to become a regional sustainability innovation and financing hub for Southeast Asia (SEA)

Given its educated workforce and status as a financial hub, Singapore can spearhead many sustainability initiatives for the rest of the region. It can pilot infrastructural reforms, lead digitalization efforts, and become a trading hub for new financial instruments.

Key opportunities:



Solar energy infrastructure



Food transition through agri-tech



Availability of green financing



Carbon trading hub



Smart city innovations



Digital supply chains

B

Growing momentum to achieve 2030 emission targets, which would represent a decrease in absolute annual emissions from 2018 levels

Singapore is pushing to keep emissions below 65 million tons by 2030 through regulating carbon emissions and developing into a smart city. In line with government commitments, businesses are also answering the call with 7 Science Based Targets initiative (SBTi) signatories since 2020 (10 total) and multiple others with Net Zero targets as soon as 2022. Singapore's 2030 absolute annual emissions, emissions per capita, and emissions intensity for GDP are expected to decrease compared to 2018.

C

Green investment space maturing across asset categories, particularly private equity/venture capital (PE/VC)

Singapore's green investment space is relatively mature for the region. It leads the region in debt issuances, PE/VC fundraising and deals, and infrastructure investments, but initial public offerings (IPOs) and corporate investments have decreased in 2020.



SINGAPORE

Singapore has the potential to become SEA's regional sustainability innovation and financing hub

Key opportunities:

A



Solar energy infrastructure

Natural gas supplies 95% of Singapore's energy. Singapore is making efforts to tap into its limited renewables resources; in 2021, the world's largest floating solar farm was installed. Investments in grid technologies, storage, and fuel switching (e.g., advanced batteries, green hydrogen) will accelerate the island nation's clean energy transition.



Carbon trading hub

Climate Impact X is proof of Singapore's carbon trading hub ambitions. Its next steps are enhanced carbon pricing initiatives (to support a higher price) and incentives for nature-based offsets. Businesses that build up the holistic carbon markets value chain (MRV,¹ assurance, and project development) can participate most actively.



Food transition through agri-tech

Singapore aims to produce 30% of local nutritional needs by 2030 – an aim made more urgent by Covid-19. To address this, the \$60 million Agri-Food Cluster Transformation Fund was established. With further investments into urban farming technologies and alternative-proteins, Singapore can become a global R&D² and innovation hub for food tech.



Smart city innovations

Building and transport innovations can significantly cut emissions. District cooling systems, energy efficiency assets, and digitalization can help operators manage and optimize consumption. Electrification in transportation, through investing in electric vehicle fleets and charging infrastructure, is another step in becoming a smart city that businesses can invest in.



Availability of green financing

Singapore is already a leading financial hub and can extend its offerings to the region, where opportunities abound but green financing infrastructure is nascent. While ~\$5 billion in green debt was issued in 2020, greater focus is required on transition finance and increasing private sector buy-in using blended financing and take-out facilities.



Digital supply chains

Global businesses are starting to decarbonize their supply chains, which increasingly stem from SEA. Singapore's status as a regional trading hub and leader in technological innovations makes it ideal for piloting supply chain digitalization and traceability projects.

Notes: 1. Measure, report, and verify; 2. Research and development

Sources: Climate Action Tracker; Ecosperity; Industry interviews; Bain 2020 SEA Green Economy Report



SINGAPORE

Growing momentum to achieve 2030 emissions targets

Governmental policies for climate change

No Net Zero target

65 MtCO₂e absolute emissions target by 2030

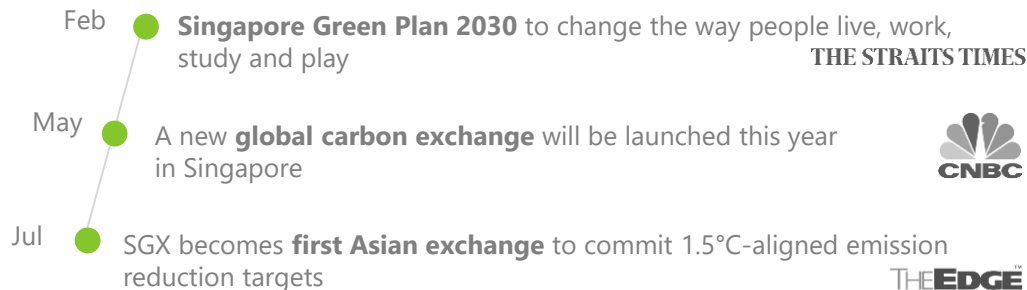
\$4 price/tCO₂e of **carbon tax** (operational since 2019)

15% to be **renewables** by 2030
of total installed capacity

130 ha of new parks by 2030

Landmark moves in the past year

In 2021



Sources: UNFCCC; NEA; Climate Action Tracker; EMA; Power Technology; Green Plan; The Straits Times; CNBC; The Edge; SBTi; CityWire Asia; Company websites; Lit search; Bain analysis

Business commitments to Net Zero

10 SBTi signatories

Joined in...



Multiple others with Net Zero targets

Non-exhaustive



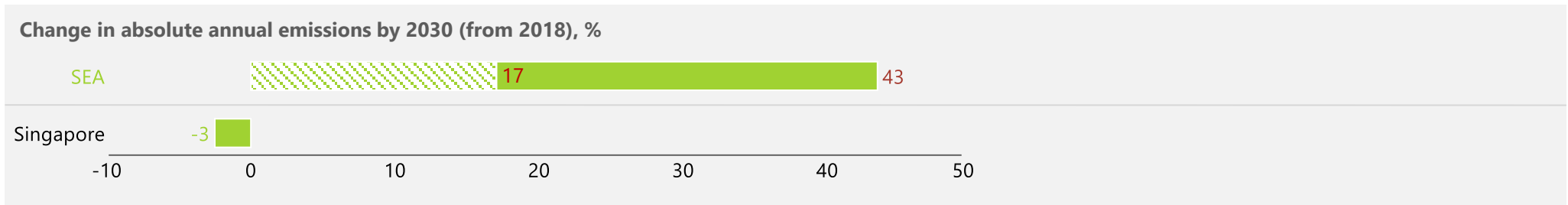


SINGAPORE

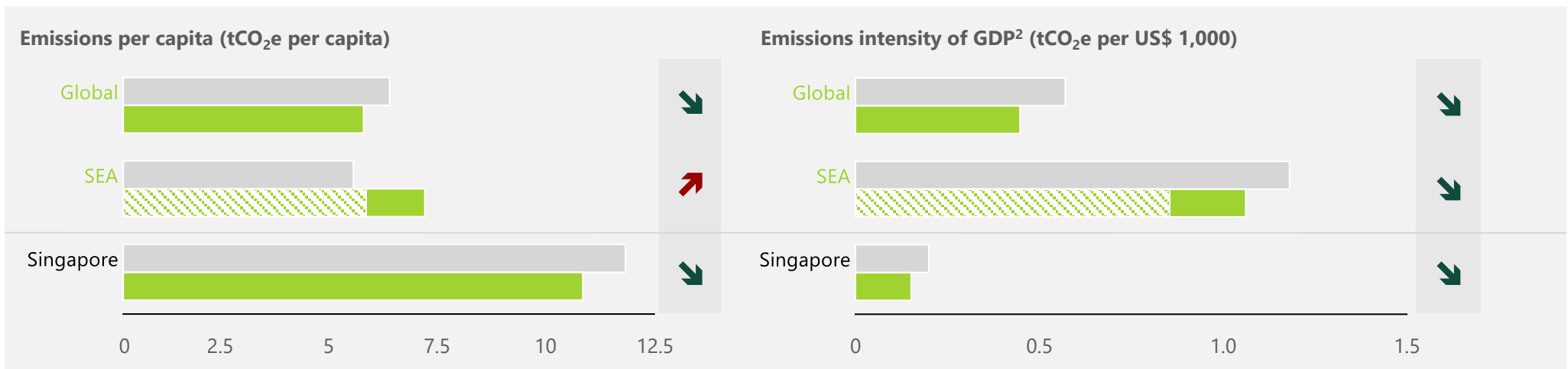
From 2018 to 2030, Singapore's absolute annual emissions expected to decrease amidst increase for SEA overall, and emissions intensities set to fall

Based on latest NDC targets

Singapore's absolute annual emissions set to decrease by 2030 from 2018, amidst increasing SEA¹ overall emissions



Singapore's emissions per capita and emissions intensity of GDP both set to decrease from 2018 to 2030, though the former remains higher than both global and SEA overall



■ 2018 (actual) ■ 2030 (conditional NDC)³ ■ 2030 (unconditional NDC)

Notes: 1. SEA benchmarks include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, the Philippines, and Vietnam. For countries with only one emission target, it is taken to be both conditional and unconditional; 2. GDP at constant prices (2010) used except for Brunei, Cambodia, Laos, and Myanmar (current prices used); 3. Nationally determined contributions

Sources: Bain analysis; EIU; Euromonitor; Climate Watch; Country NDCs

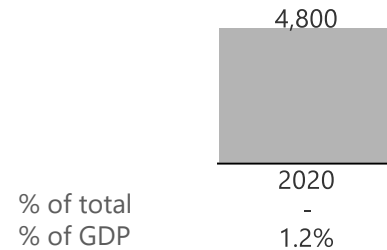


SINGAPORE

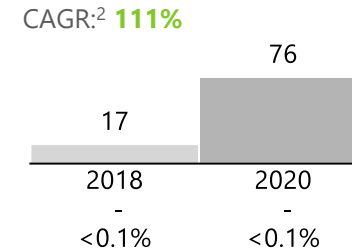
Green investment space maturing across asset categories, particularly PE/VC

Green capital raised (US\$ million)

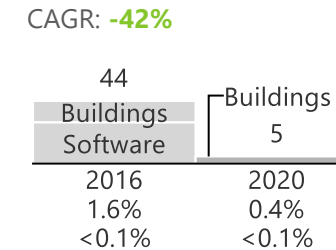
Debt issuances



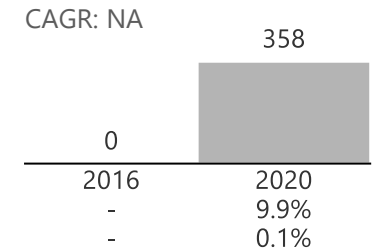
Public funds AUM¹



IPO



PE/VC fundraising



SEA benchmark³

% of total: -
% of GDP: 0.4%

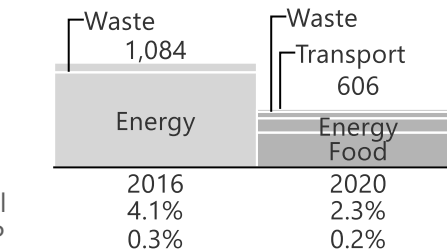
% of total: -
% of GDP: 0.01% (2018), 0.03% (2020)

% of total: 5% (2016), 20% (2020)
% of GDP: 0.01% (2016), 0.05% (2020)

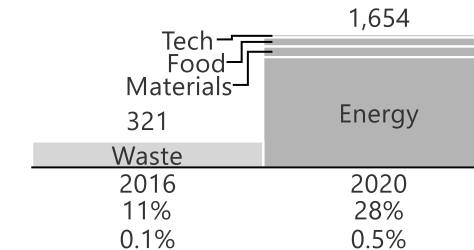
% of total: -
% of GDP: 9% (2016), 0.02% (2020)

Green capital deployed (US\$ million)

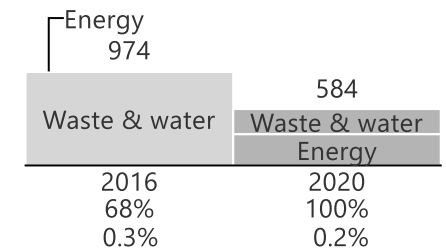
Corporate investments⁴



PE/VC deals⁵



Infrastructure



SEA benchmark⁴

% of total: 3% (2016), 11% (2020)
% of GDP: 0.09% (2016), 0.17% (2020)

% of total: 5% (2016), 19% (2020)
% of GDP: 0.01% (2016), 0.07% (2020)

% of total: 23% (2016), 36% (2020)
% of GDP: 0.17% (2016), 0.07% (2020)

Key insights:

Green capital as a share of GDP is higher than SEA benchmark across asset categories, indicating Singapore's green investment scene is relatively mature
PE/VC activity (fundraising and deals) increased significantly; Singapore is the regional leader in both categories
Large declines in green IPO, corporate investments, and infrastructure spending
In 2020, green investments were spread out across more industries, although **Energy** was the most attractive sector

Notes: 1. Includes funds raising capital for environmental and social sustainability objectives. Assets under management (AUM); 2. Compounded annual growth rates; 3. Total value of asset category and GDP only includes SEA countries with available data; 4. Excludes investments <\$15 million; 5. Excludes investments <\$10 million

Sources: Climate Bonds; Asia Assets Domicile; Dealogic; Pitchbook; Capital IQ; AVCJ; Preqin; World Bank



For queries on Singapore's Green Economy, please reach out to:

Dale Hardcastle, Co-Director of GSIC (Dale.Hardcastle@Bain.com)

Gerry Mattios, Co-Director of GSIC (Gerry.Mattios@Bain.com)

BAIN & COMPANY 

 **Microsoft**

TEMASEK