## Sustainability Report 2024

TEMASEK

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## **About This Report**

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Highlights



This report presents the inaugural standalone sustainability report of Temasek Holdings (Private) Limited ("Temasek"). It sets out our sustainability approach, targets, milestones, and strategies, in addition to the key challenges we seek to address on our journey towards net zero, nature positive, and inclusive growth. It builds on the sustainability-related disclosures made as part of *Temasek Review* and our Task Force on Climate-related Financial Disclosures (TCFD)-aligned disclosures to date.

#### Reporting Approach and Coverage

In the preparation of this report, we have considered, where possible, the disclosure requirements of the IFRS Sustainability Disclosure Standards S1 and S2 (ISSB Standards) issued by the International Sustainability Standards Board (ISSB). We will look to progressively expand our sustainability disclosures to achieve further alignment to the ISSB Standards and other relevant standards in the coming years. Information disclosed in this report covers Temasek and its sustainability activities as an asset owner for the year ended 31 March 2024, unless otherwise stated. Our holdings in the portfolio companies are treated as investments, where the business decisions and operations of the portfolio companies are independently guided and managed by their respective boards and management.

As far as possible and practically feasible, selected sustainability

information disclosed in this report has been externally verified by an independent third party to enhance the quality and reliability of our disclosures and performance data as presented in the Annex.

This report should be read in conjunction with the <u>*Temasek Review* 2024</u> in addition to other sustainability-related disclosures on our website.

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## Message from the CEO

### Building a Sustainable Future: Our Commitment to Long-Term Portfolio Resilience

#### Dear Stakeholders,

I am delighted to present our inaugural standalone sustainability report. As we celebrate our 50<sup>th</sup> anniversary, we are proud to share the progress we have made on our journey.

In an era of unprecedented global challenges, and against the backdrop of a volatile, uncertain, complex, and ambiguous – or VUCA – world, sustainability, alongside good governance, has emerged as a driver of long-term portfolio resilience, value creation, and growth.

As an asset owner, our long-term success hinges upon a thriving and resilient portfolio. Therefore, we view our efforts on sustainability not only as the right thing to do, but also as an essential enabler for our mandate to deliver sustainable returns over the long term, in line with our Charter.

The transition to a sustainable economy presents us with new opportunities to invest for returns and impact. We make use of our flexibility to deploy capital across different opportunities – be it in sustainable solutions, in the transition of sectors from brown to green, or in the enablement of new markets such as carbon markets.

At the same time, climate change, nature loss, social inequalities, and regulatory shifts also present us with new risks. By integrating Environmental, Social, and Governance (ESG) factors into our investment decisions, we proactively identify and manage risks that could impact the value of our portfolio.

As we navigate the transition, we remain open to adapt our strategies as our knowledge on the issues and their interdependencies evolves. We seek to position ourselves as a forward-looking organisation by adopting and advocating for best practices, so as to capitalise on value creation opportunities.

The publication of our sustainability report is a testament to our commitment to transparency and accountability. By sharing our sustainability goals, practices, and performance, we aim to foster trust and engage in meaningful dialogue with our stakeholders.



We are committed to deploying our capital with impact, integrating sustainability into our investment decisions, and seeking collaborative partnerships to address global challenges.

We do so by taking into consideration the disclosure requirements issued by the International Sustainability Standards Board, reinforcing our support to globally harmonised and comparable disclosures.

As we embark on the next chapter of our sustainability journey, we remain steadfast in our commitment to long-term portfolio resilience. We are committed to deploying our capital with impact, integrating sustainability into our investment decisions, and seeking collaborative partnerships to address global challenges. Together, we can build a sustainable future – *So Every Generation Prospers*. Thank you for your continued support and partnership as we work towards a more sustainable and prosperous world.

DILHAN PILLAY SANDRASEGARA Executive Director & Chief Executive Officer, Temasek Holdings & Temasek International July 2024

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## **Key Highlights**

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### Sustainability in Our Investments



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### Sustainability in Our Operations



### ▲ 58%

YoY increase in Carbon Intensity per employee due to progressive resumption in business travel

#### ▼34%

Reduction in Carbon Intensity per employee from 2020 pre-COVID levels

Awarded Building and **Construction Authority** Green Mark (Healthier Workplaces) Certificate (Platinum) for Singapore Atrium office



#### 34

Nationalities represented among Temasek employees

#### 54% 46% Male Female

Gender mix among Temasek employees

#### >90%

Employee participation in sustainability-focused initiatives



S\$150m Set aside as a gift to the community on our 50<sup>th</sup> anniversary

Launched initiative to support impact enterprises through recoverable grants

Developed a bespoke Impact Measurement and **Management** Framework for comr

### **Broader Ecosystem Engagement**



#### Knowledge partner to **Transition Credits Coalition** (TRACTION) launched by MAS, an initiative to develop transition credits as a complementary financing instrument to accelerate early retirement of coal-fired power plants in Asia

Collaboration with Allied Climate Partners, International Finance Corporation, and MAS to bridge gaps in Asia's marginally bankable sustainable infrastructure financing through the Financing Asia's Transition Partnership (FAST-P)

#### **Our Participation and Convening Role**

imunity outcomes	Over 3,000 participants at <i>Ecosperity Week</i> and 600 participants in <i>Ecosperity Conversations</i> at <i>Climate Week NYC</i> 2023	Committed to advancing the International Sustainability Standards Board's global baseline standards on climate
w <b>Investment</b> action to manage the d implementation of cies and positions on governance-related investment portfolio	Completed <b>Sustainable</b> <b>Aviation Fuel pilot</b> in collaboration with the Civil Aviation Authority of Singapore, GenZero, and Singapore Airlines	Strategic partner for <i>The</i> <i>Earthshot Prize Awards</i> <i>Ceremony</i> 2023 and the inaugural <i>Earthshot Week</i> in Singapore

## 100%

Attained full marks for the 2023 Governance, Sustainability, and Resilience (GSR) Scoreboard by Global SWF

Established a new Stewardship fund development and institutional polici stewardship and c matters for our in

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## Who We Are

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#### (as at 31 March)

We are a generational investor, seeking to make a difference always with tomorrow in mind.

1974

Temasek's year

of inception

Offices across 9 countries

S\$389b Net portfolio value as at 31 March 2024

Temasek is an investment company with a portfolio of investments covering a wide range of countries and industry sectors.

Temasek is rated Aaa/AAA by Moody's Investors Service and S&P Global Ratings respectively.

Temasek has about 1,000 employees across 13 offices in 9 countries.

Temasek was incorporated in 1974 under the Singapore Companies Act and is wholly-owned by the Singapore Government through the Minister for Finance, a body corporate constituted under the Minister for Finance (Incorporation) Act 1959 of Singapore.

Temasek's Net Portfolio Value amounted to S\$389 billion as at 31 March 2024. Marking our unlisted portfolio to market would provide S\$31 billion of value uplift and brings our net portfolio value to S\$420 billion.

Our portfolio comprises both listed and unlisted assets, including our investments in funds. The unlisted portfolio has grown steadily over the years as we invested in attractive opportunities in the private markets and benefitted from the increase in the value of our unlisted assets. As at 31 March 2024, 48% of our portfolio was in liquid and listed assets, and 52% was in unlisted assets and funds.

			· · · · · · · · · · · · · · · · · · ·
	2024	2023	2022
Singapore	53	54	54
China	13	15	15
• India	5	3	3
• Asia Pacific (ex Singapore, China & India)	2	2	2
Americas	17	16	17
Europe, Middle East & Africa	10	10	9
	2024	2023	2022
Singapore	27	28	27
China	19	22	22
• India	7	6	6
Asia Pacific (ex Singapore, China & India)	12	11	12
Americas	22	21	21
Europe, Middle East & Africa	13	12	12
	2024	2023	2022
Transportation & Industrials <sup>2</sup>	22	23	22
Financial Services	21	21	23
Telecommunications, Media & Technology	18	17	18
Consumer & Real Estate	15	16	15
Life Sciences & Agri-Food	9	9	9
Multi-sector Funds	9	8	8
Others (including Credit)	6	6	5
	2024	2023	2022
<ul> <li>Liquid &amp; sub-20% listed assets<sup>3</sup></li> </ul>	2024 29	2023 27	2022 28
<ul> <li>Liquid &amp; sub-20% listed assets<sup>3</sup></li> </ul>	29	27	28
	<ul> <li>China</li> <li>India</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Americas</li> <li>Europe, Middle East &amp; Africa</li> <li>Singapore</li> <li>China</li> <li>India</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Americas</li> <li>Europe, Middle East &amp; Africa</li> <li>Transportation &amp; Industrials<sup>2</sup></li> <li>Financial Services</li> <li>Telecommunications, Media &amp; Technology</li> <li>Consumer &amp; Real Estate</li> <li>Life Sciences &amp; Agri-Food</li> <li>Multi-sector Funds</li> </ul>	<ul> <li>Singapore</li> <li>Singapore</li> <li>China</li> <li>India</li> <li>India</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Americas</li> <li>Americas</li> <li>Europe, Middle East &amp; Africa</li> <li>Europe, Middle East &amp; Africa</li> <li>China</li> <li>Singapore</li> <li>China</li> <li>India</li> <li>China</li> <li>India</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Asia Pacific (ex Singapore, China &amp; India)</li> <li>Americas</li> <li>Europe, Middle East &amp; Africa</li> <li>Transportation &amp; Industrials<sup>2</sup></li> <li>Financial Services</li> <li>Telecommunications, Media &amp; Technology</li> <li>Consumer &amp; Real Estate</li> <li>Life Sciences &amp; Agri-Food</li> <li>Multi-sector Funds</li> <li>Singapore</li> </ul>	Singapore       53       54         China       13       15         India       5       3         Asia Pacific (ex Singapore, China & India)       2       2         Americas       17       16         Europe, Middle East & Africa       10       10         Europe, Middle East & Africa       10       10         China       19       22         Singapore       27       28         China       19       22         India       7       6         Asia Pacific (ex Singapore, China & India)       12       11         Americas       22       21         Europe, Middle East & Africa       13       12         Mericas       22       21         Europe, Middle East & Africa       13       12         Transportation & Industrials <sup>2</sup> 22       23         Financial Services       21       21         Telecommunications, Media & Technology       18       17         Consumer & Real Estate       15       16         Life Sciences & Agri-Food       9       9         Multi-sector Funds       9       8

Distribution based on underlying assets.

The Transportation & Industrials sector includes investments in Energy & Resources. 2

<sup>3</sup> Mainly cash and cash equivalents, and sub-20% listed assets.

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## 1.2 Our Purpose

Key

Highlights

With our Purpose as our North Star and our Charter as our core identity, we will advance our T2030 strategy always rooted in our MERITT values.

## Our Purpose

So every *Teneroltion* prospers



Invest in Human Potential | Catalyse Solutions | Build with Courage | Grow for Generations

Our Purpose, *So Every Generation Prospers*, guides us to make a difference for today's and future generations. We aspire to help every generation thrive by empowering the well-being of our people, portfolio companies, partners, communities, and the planet we share as a common home.

Our Purpose Principles guide our commitment to sustainability. Investing in human potential includes empowering our people and investing for social impact. Catalysing solutions to transform challenges into opportunities means finding innovative solutions towards net zero, nature positive, and inclusive growth. In building with courage, we chart the course for those who come next, fostering the conditions for a more sustainable world. Finally, we uphold our principle of growing for generations by enhancing the resilience of our portfolio.

Our core identity is set out in our Charter. As a global investment company rooted in Singapore, we operate on commercial principles to deliver sustainable returns over the long term. We fulfil our Purpose and our Charter through our <u>T2030 strategy</u>.

As with everything we do, our sustainability journey is rooted in our MERITT values. We are committed to always operating with meritocracy, excellence, respect, integrity, teamwork, and trust. Key

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#### Towards T2030 1.3

Our T2030 strategy serves as our compass in a complex world and guides us to our North Star, our Purpose.



**Our Four Key Pillars** 

Sustainability at the Core is one of the four key pillars of our T2030 strategy. It anchors our commitment to embed sustainability into everything we do – from our mandate to deliver sustainable returns over the long term, to our strategy of how we operate as an institution, shape our portfolio, and engage our portfolio companies to build sustainable businesses.

We believe that our long-term success as investor and institution is contingent on the presence of thriving businesses and economies, cohesive societies and communities, and resilient people and planet.

Our ability to play our part by aligning our investment activities and institutional practices towards protecting our planet, uplifting our communities, and fostering an inclusive environment for our employees and partners is rooted in the strength and resilience of our own organisation and portfolio.

Therefore, we focus on building a sustainable institution with a resilient business model to deliver long-term sustainable returns and value to our shareholder.

As an asset owner, we also seek to add value to our portfolio companies in their journeys to build sustainable businesses, thereby strengthening portfolio resilience over time.

Financial, organisational, and portfolio resilience enables us to adopt a longterm horizon in capital deployment and contribute to protecting our planet, uplifting communities, and building inclusive societies across generations.

To do so, we embed principles of sustainability, inclusivity, and good governance in our processes, and anchor ourselves with a strong set of values.

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## 1.4 Our Sustainability Journey

Our commitment to sustainability has evolved over the years, and continues to deepen as a strategic pillar under our T2030 strategy.



• Advancing Sustainability Strategy and Building Functional Capabilities

• Accelerating Sustainability Through Collaborations with Broader Ecosystem

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## **Our Sustainability** Strategy

2.1 Sustainability Strategy

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#### Sustainability Strategy 2.1

Sustainability is an ongoing journey and a steadfast commitment for us. We are taking active steps to progressively expand and enhance our sustainability strategy to support our ambition towards net zero, nature positive, and inclusive growth.

The COP28 global stocktake report<sup>1</sup> highlights that current global efforts to reach net zero by 2050 are significantly off track. Against this backdrop, climate change will likely generate long-tail effects on the resilience and commercial viability of our portfolio.

Key

Urgent global action is required to further drive mitigation, secure an orderly transition, and to accelerate adaptation and resilience.

Alongside climate, nature and biodiversity are increasingly emerging as environmental priorities. More than half of global GDP is moderately or highly dependent on nature<sup>2</sup>. The Post-2020 Global Biodiversity Framework<sup>3</sup>, agreed in 2022, highlights the role of business in halting and reversing nature loss to ensure a nature positive future. With Asia at the heart of the biodiversity crisis, this issue carries greater significance for Temasek. The interconnectedness of climate and nature has also been made clear: we cannot achieve net zero by

2050 if we do not take decisive action to conserve and restore nature. We cannot halt and reverse nature loss if we are not successful in limiting global warming. This has considerable impact on the communities who are most vulnerable to the effects of climate change and depend on nature for their livelihoods.

There is also growing pressure on companies to address the needs of their stakeholders. The United Nations Sustainable Development Goals (SDGs) call for concerted efforts from governments, businesses, civil society, and individuals worldwide to tackle pertinent social issues such as poverty, gender inequality, access to education and healthcare, and disparities in income and wealth distribution. Through our institutional efforts and investments which are undertaken on a commercial basis, we strive to help create the conditions for a more equitable, inclusive, and sustainable world.



United Nations Climate Change, Global Stocktake; Synthesis Report (2023)

PricewaterhouseCoopers, Managing nature risks: From understanding to action (2023)

UN environment programme, Convention on Biological Diversity, Post-2020 Global Biodiversity Framework (2022)

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## Sustainability Strategy continued

We recognise the need to take urgent and sustained action to address the climate crisis, reverse nature loss, and build a more inclusive and equitable society. Therefore, we have developed a sustainability strategy which supports our mandate to build a resilient and forward-looking portfolio that delivers sustainable returns over the long term.

Key

Highlights

We prioritise five key levers for change as part of our sustainability strategy:

- 1. We deploy capital to catalyse solutions that can enable companies to transition to a more sustainable future, and continuously increase our investments that are aligned to the Sustainable Living trend.
- 2. We embed an Environmental, Social, and Governance (ESG) framework throughout the investment lifecycle. This allows us to systematically evaluate sustainability-related risks and opportunities.
- 3. We engage our portfolio companies to drive ESG value creation and support their transition towards a more sustainable future.
- 4. We "walk the talk" by implementing sustainable practices and develop a company culture that embraces sustainability.

5. We seek out opportunities for collaboration with like-minded partners to contribute to the systemic changes required to solve sustainability challenges.

With increasing recognition of the interconnectedness between climate change, the natural environment, and social impact, we are looking to take an integrated approach and systematically strengthen our contributions to nature positive and inclusive growth, through our Nature and Social Roadmaps. These are multi-year initiatives to drive phased progress on elevating nature positive and social inclusive practices within our portfolio.

We are cognisant of the collective challenges faced by businesses and society at large when it comes to advancing sustainability, and recognise that there will be obstacles and complexities for Temasek to navigate along its journey.

Despite these challenges, we remain determined in finding innovative solutions to drive progress within our own company and across our portfolio, in addition to working in partnership with others to enact real-world change.



Inclusive Growth

Advancing Institutional

Sustainability

Reducing Negative Impact

### Temasek's Sustainability Approach

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#### **Sustainability Perspectives and Insights** 2.2

#### **Sustainability Perspectives**

Temasek regularly engages distinguished industry, policy, and thought leaders through our advisory panels and our network of corporate advisors to obtain broader insights and perspectives on business, financial markets, and global affairs. We also exchange ideas and share knowledge on a variety of topics with our partners and portfolio companies.

#### **Temasek Sustainability Advisory** Panel (TSAP)

The TSAP brings together eminent leaders with relevant sustainability policy, academic, and industry experience to further augment Temasek's knowledge and provide relevant inputs in support of our sustainability strategy and development. The advisors provide market insights, engage with the Temasek ecosystem, and foster strong linkages to tackle sustainability-related challenges,

such as climate change, nature conservation, and social inclusion.

In June 2023, our TSAP conversation focused on the themes of carbon markets and just transition in Asia. It provided valuable insights to shape our thinking and efforts around leveraging carbon markets as a complementary financing lever to channel capital towards hard-to-monetise opportunities. We also tapped on our TSAP advisors to gain a better understanding of the key levers to ensure a just and equitable transition in Asia.

In April 2024, we progressed the TSAP conversation to climate and ecosystem resilience, taking a deeper look into water and food resilience. This is particularly relevant against the backdrop of our ambition to build a resilient and forward-looking portfolio that delivers sustainable returns over the long term. The insights from the TSAP conversation will support our endeavour to systematically strengthen our contributions to net zero, nature positive, and inclusive growth.



Members (as at 31 March 2024)



### **STANLEY LOH** Permanent Secretary,

Ministry of Sustainability and the Environment of Singapore

Second Permanent Secretary (Special Duties), Prime Minister's Office of Singapore



SHARAN BURROW Former General Secretary, International Trade Union Confederation (ITUC)

Member, Global Board of Directors, World **Resources Institute** 



MINDY LUBBER CEO & President, Ceres Board Member, We Mean **Business Coalition** 







#### DR. MA JUN

Chairman, Green Finance Committee, China Society for Finance and Banking

Stockholm University

**PROF. CARL FOLKE** 

Director, Beijer Institute

President, Beijing Institute of Finance and Sustainability



#### **DR. ARUNABHA** GHOSH

Founder-CEO, Council on Energy, Environment and Water

Co-Convenor, Our Common Air Commission



Chair, UN High-Level Expert Group on Net-Zero Commitments of

Non-State Entities

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## Sustainability Governance Approach to Sustainability Governance

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## 3.1 Approach to Sustainability Governance

Our internal governance approach ensures oversight, ownership, and accountability over our sustainability initiatives.



#### **Board Oversight**

Our Board provides overall guidance and policy directions to management.

As at 31 March 2024, our Board comprised 11 members from across the world, each with diverse skills, experiences, and knowledge. The majority (82%) are non-executive independent private sector business leaders.

Our Board operates on a commercial basis, with the added constitutional responsibility, together with our Chairman and CEO, of protecting the Company's past reserves, given Temasek's status as a Fifth Schedule entity under the Singapore Constitution. There are no nominees of the Government on our Board.

The annual Board schedule includes quarterly two-day meetings, and additional meetings as needed, such as for significant large investments. Six Board meetings were held during the year. The Board has reserved the following matters for its decision:

- overall long-term strategic objectives;
- annual budget;
- · annual audited statutory accounts;
- major investment and divestment proposals;
- major funding proposals;
- CEO appointment and succession planning;
- Board changes;
- portfolio risk appetite and profile.

The Board has separate and independent access to information to assist it with its deliberations, including the opportunity to request supplementary or explanatory information from management. Management provides information to the Board on an ongoing basis, including minutes of key management committee meetings, to allow the Board to effectively discharge its responsibilities.

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### Approach to Sustainability Governance continued

The following Board committees, each chaired by a non-executive Director who is independent of management, have been set up with specific delegated authorities:

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- Executive Committee
- Audit Committee
- Leadership Development & Compensation Committee
- Risk & Sustainability Committee

#### Executive Committee (ExCo)

The ExCo has been delegated the authority to approve new investment and divestment decisions up to a defined threshold, beyond which, transactions will be considered by the Board. The minutes of ExCo meetings are circulated to the Board. ExCo takes into account sustainability-related risks and opportunities, where relevant, as they decide on investments and divestments and make other decisions to manage and shape our portfolio. The ExCo met seven times during the year.

#### Audit Committee (AC)

Comprising only independent directors, the AC supports the Board in its oversight responsibilities by reviewing, among other things, our system of internal controls, and processes used for financial

reporting, audit, and monitoring compliance with laws and regulations. The AC also reviews the scope and results of the external audit, and the independence of the external auditors. The AC is supported by Internal Audit (IA). To ensure its independence, IA reports functionally to the AC and administratively to the office of the CEO of Temasek Holdings. The minutes of AC meetings are circulated to the Board. The AC met four times during the year. The AC also has separate sessions, without management, with the external auditors and with IA.

#### Leadership Development & **Compensation Committee (LDCC)**

The LDCC is responsible for recommending Board and management leadership plans to the Temasek Board. These include Board and CEO succession, as well as guidelines and policies on performance measurement and compensation plans. The LDCC ensures the Board exhibits a broad skill set, including the competencies necessary to oversee the organisation's response to sustainability-related risks and opportunities, including climate-related risks and opportunities. The LDCC met three times during the year.



#### **Risk & Sustainability Committee (RSC)** The RSC was established to enhance

focus on opportunities and risks arising from sustainability trends, including climate change, and other financial, reputational, operational, and cyber risks. The RSC supports the Board in its oversight responsibilities by reviewing, among other things, our portfolio risk appetite and profile, material Environmental, Social, and Governance (ESG) matters,

risk management and sustainability frameworks and policies, as well as key public statements relating to risk, sustainability, and ESG.

The RSC coordinates with other standing Committees of the Board, such as the AC and the LDCC, in its oversight of risk and sustainability matters, where relevant. The RSC met three times during the year.

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## Approach to Sustainability Governance continued

#### Senior Management Oversight

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Senior management sets the tone and culture of our institution, leading the delivery of Temasek's vision and mission.

Operating as OneTemasek, our senior management team implements the strategy and policy directions set by the Temasek Board to fulfil our mandate to deliver sustainable returns over the long term. Levels of authority for investment, divestment, and other operational matters are defined according to our Board's delegation.

Our senior management oversees Temasek's key business strategies and organisational initiatives with the support of the following committees, which are chaired by our CEO and comprising members of senior management:

#### Strategy, Portfolio and Risk Committee (SPRC)

The SPRC reviews macroeconomic, political, industry, technological, and social trends that provide the context in which new opportunities and risks may arise, in both existing and new

markets. It reviews our overall portfolio construction efforts and investment strategies. The SPRC also oversees our ESG policy and the integration of ESG considerations, including climate change, in the firm's strategy, investment, risk, and operational management processes.

#### Senior Divestment and Investment Committee (SDIC)

The SDIC manages and shapes our portfolio on an ongoing basis and decides on investments and divestments up to the authority limits as delegated by our Board. The SDIC also takes into account sustainability-related risks and opportunities, and make other decisions to manage and shape our portfolio. Investment proposals bevond these authorisation limits are escalated to the ExCo and/or the Board as warranted. Meeting minutes are circulated to the Board.

#### Senior Management Committee (SMC)

The SMC reviews and sets overall management and organisational policies. These include internal controls, the implementation of our Derivatives Framework, and the Valuation Policy approved by the Board Audit Committee. The SMC has developed the Temasek Code of Ethics and Conduct (T-Code) and constituted the Ethics Committee to assist in its implementation. All employees are required to observe and comply with the T-Code. The SMC also oversees the operationalisation of corporate initiatives and processes, within the frameworks and overarching principles approved by the Board. Examples include our sustainability-related initiatives and institutional sustainability strategy.

Temasek achieved full marks and was ranked first in the 2023 GSR Scoreboard by Global SWF. The GSR Scoreboard is a comprehensive analysis of the Governance, Sustainability, and Resilience (GSR) practices of major State-Owned Investors including sovereign wealth funds and public pension funds. The assessment tool was first introduced by Global SWF in 2020 to jointly address important aspects such as transparency and accountability, impact and responsible investing, and long-term survival. It has become a widely recognised metric among sovereign and pension funds globally and one barometer of the industry's best practices. Temasek is among the world's Top 200 sovereign wealth funds and public pension funds being assessed.

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## Approach to Sustainability Governance continued

#### **Functional Capabilities**

Senior management works with a dedicated team of functional experts supporting the delivery and evolution of our sustainability strategies, frameworks, and programmes.

Key

Reporting to the CEO, our Sustainability Group initiates, develops, and implements our overarching strategy and initiatives on sustainability. As part of its remit, the Sustainability Group partners internal and external stakeholders to catalyse and invest for long-term positive impact, to support the transition to a net zero, nature positive, and socially inclusive world, to build a sustainable organisation, and collaborate for global progress.

The integration of sustainability considerations across our investment lifecycle is supported by a dedicated ESG Investment Management (ESG IM) function that reports to the Chief Investment Officer. ESG IM oversees ESG integration efforts pre- and post-investment and climate transition readiness. It serves as a centre of knowledge and expertise on ESG issues, partners investment teams to analyse material ESG issues, and engages with portfolio companies with the goal of building portfolio resilience and uplifting ESG practices. This includes identifying

and assessing the emission profiles of our portfolio companies.

#### **Compensation Linked to** Sustainability Goals

Our ownership ethos places the institution above the individual, emphasises long term over short term, and aligns employee and shareholder interests over economic cycles. Our compensation framework aims to foster a high-performing and responsible culture, where our employees think and act as owners with a strong sense of intergenerational duty, sharing gains and pains alongside our shareholder.

It balances rewards for short-term performance and long-term value creation. It also aligns our staff towards achieving both our financial performance and carbon emissions reduction targets.

To reinforce the commitment to our carbon emission goals, we apply a carbon charge against our portfolio performance. This carbon charge is taken from our Wealth Added incentive pool to be awarded as another type of co-investment grant tied to our carbon emission reduction targets. This drives us to collectively work towards our institutional commitment to halve the net carbon emissions of our portfolio over 2010 levels by 2030, and to achieve net zero carbon emissions by 2050.

#### **Network of Sustainability Capabilities**



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### **Investing with Tomorrow in Mind** 4.1

### We aim to build a resilient and forward-looking portfolio that delivers sustainable returns over the long term.

#### Sustainable Living Trend

Our investment activities are aligned to four structural trends that shape our long-term portfolio construction. We expect to increase our investments that are aligned with the Sustainable Living trend, investing into companies whose products and services seek to fulfil environmental and social objectives, as well as those that will benefit from sustainability tailwinds.

Referencing global taxonomies and industry practices, we have refined our proprietary classification framework for investments that align with the

Sustainable Living trend. This framework identifies sustainability-focused investments in businesses with products and services that contribute positively towards our long-term vision of net zero, nature positive, and inclusive growth. These investments include companies in real estate (e.g. Mapletree and CapitaLand), agri-food (e.g. DeHaat), and industrials (e.g. Ascend Elements). The framework also identifies climate transition investments in high-emitting sectors that are looking to transition to products and services that contribute positively to climate objectives. Climate transition

investments include Sembcorp Industries and Topsoe.

We have engaged an independent third party to review the reasonableness of the classification framework, and to help benchmark against global taxonomies and industry practices.

As at 31 March 2024, our portfolio value of investments aligned with the Sustainable Living trend was S\$44 billion, of which S\$38 billion was sustainability-focused investments and S\$6 billion was climate transition investments. During the year, we invested S\$3 billion in Sustainable Living trend-aligned investments.

We deploy capital to catalyse solutions that can enable companies to transition to a more sustainable future. We tap on opportunities to invest in future growth sectors and business models, in key focus areas such as food, water, waste, energy, materials, clean transportation, and the built environment, and encourage enterprises to transform through efforts in innovation. We also innovate and scale through partnerships which enable us to achieve outcomes unattainable by an organisation acting in isolation.



**Structural Trends** 



#### Digitisation

Cross-sectoral digital technologies



**Future of Consumption** New shifts in consumption types and patterns



#### **Longer Lifespans** Growing needs driven by longevity

Sustainable Living

for sustainability

Products and services

Built Environment • Fifth Wall Late-Stage Climate Technology Fund Fortera

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### Investing with Tomorrow in Mind continued



#### Investing for Both Sustainability and Return Objectives at Temasek

Sustainable investing and return generation are two key objectives of virtually all asset owners today – and are central pillars in our T2030 strategy. While these two objectives' importance is clear, how they interact with each other is potentially more complex. For some investors, strategies around sustainable investing and return generation can be quite siloed, with little clarity whether sustainable investing is return-additive, subtractive, or neutral.

At Temasek, we firmly believe that sustainability and returns over the long term can go hand in hand. To see how we can build a portfolio embodying both desirable Environmental, Social, and Governance (ESG) criteria and expected outperformance, and identify empirical evidence to support this, our Quantitative Strategy (QS) team analysed ESG metrics that investors would expect to be return-additive and found many to be consistent with outperformance. For example, within a given industry, lower greenhouse gas intensity (emissions relative to company revenue) was associated with future outperformance. Similarly, companies with lower water and waste intensity were found to deliver superior future returns versus their peers.

The QS team also found that certain social factors – such as measures of employee satisfaction, including lower turnover – were associated with future outperformance. Finally, in the governance area, the QS team identified that companies with more controversies subsequently underperformed versus peers with fewer controversies.

In summary, selected key ESG metrics from recognised data sources were empirically linked to future outperformance. The QS team's research suggests that ESG metrics can help quantify intangible attributes of companies, such as employee satisfaction, management quality, and production efficiency, that may influence future returns but not be captured by traditional financial analysis.

One caveat here is that these historical relationships were observed in a controlled back-testing environment and need to be further evaluated via live portfolio performance. To this end, in 2024, Temasek deployed capital into an equity portfolio benchmarked to global equities, with the dual objective of superior sustainability metrics and outperformance versus the benchmark. This portfolio, rebalanced monthly, is sector- and country-neutral compared to the benchmark. It is overweight in stocks that are strong on ESG metrics that have been shown to identify outperformance.

The team continues to explore new ESG datasets to identify which sustainability characteristics are consistent with higher future returns, reinforcing Temasek's conviction of the complementarity of our dual objectives of sustainability and return generation.

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### Investing with Tomorrow in Mind continued

#### **Deploying Capital Across Growth Stages**

Key

Companies with innovative solutions or business models that have the potential to deliver positive climate or sustainability outcomes have different funding requirements depending on their maturity stage. While early-stage companies may require capital to bring a prototype solution to commercial scale, growth stage companies may seek to drive market expansion or augment production capacity, and mature companies may plan to deepen market leadership or prepare to raise funds through public markets.

We invest across the stages through our global investment teams as a bottom-up direct equity investor, in line with our Sustainable Living trend. Recognising the criticality of capital availability across all these different stages, we look to complement what we are doing through strategic partnerships with like-minded investors and the establishment of dedicated investment platforms. This allows us to accelerate and scale the deployment of financial capital while joining up capabilities, critical knowledge, and support networks. Enabling successful climate and sustainability transitions across sectors requires new forms of collaboration and partnerships. This is especially true in Asia, where the need to decouple economic and social development from ever-increasing resource use is particularly pressing and barriers to access financial capital need to be overcome. Our various collaborations and partnerships enable us to activate the deployment of capital across various growth stages:

#### Venture stage

Temasek took part in a new fund, dubbed Select, under Breakthrough Energy Ventures to help late-stage clean-tech

startups scale and build new facilities in key markets including Asia.

#### Growth stage

We partnered with BlackRock to establish Decarbonization Partners, which invests in late-stage venture capital and early-stage growth equity companies targeting de-risked technologies across clean energy, electrification, green materials, and a circular, digital economy. This platform has completed eight investments to date.

#### Late Growth and Mature/ Established stage

Our investments in the Brookfield Global Transition Funds (BGTF I and BGTF II) allow us to support efforts to accelerate the global transition to a net zero carbon economy. BGTF I and II's investment strategy is to expand clean energy production, provide decarbonisation solutions to transform carbon-intensive businesses, and scale proven decarbonisation solutions.



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## Investing with Tomorrow in Mind continued

#### Catalysing the Clean Energy Transition

The rapid development and deployment of low-carbon hydrogen, in particular green hydrogen (derived from water electrolysis using renewable energy), can support the decarbonisation of industrial processes and mobility, among other uses. It is a clean alternative for chemical production and refining processes, and can be used as fuel in fuel cells for commercial trucking, as well as a reduction agent in the iron and steel industry.

However, challenges remain. Besides being difficult to safely store and transport, producing green hydrogen is expensive, with today's cost estimates ranging between approximately US\$2.40 to US\$12/kg to produce<sup>1</sup>. Significant efforts to drive cost down are required.

Temasek has taken an ecosystem and value chain approach in catalysing this space. We are deploying capital and creating partnerships to enable the scale-up of key technologies, accelerate commercial applications, and support research & development (R&D) efforts to bridge gaps in the value chain.

#### Enabling Scale-Up of Key Technologies Across the Hydrogen Value Chain

Electricity – particularly from renewable sources – is a key cost driver for green hydrogen. We invested in technologies to drive deployment of low-cost, stable renewable power. Examples include Caelux, a US-based perovskite solar technology company developing low-cost solar power, and Form Energy, an iron-air battery technology developer building cost-effective multi-day storage solutions to address intermittency of renewable energy.

We also invested in different electrolysers to suit a variety of operating requirements. For example, we invested in Topsoe, a global provider of catalysts and advanced technologies, that is currently developing the Solid Oxide Electrolyzer Cells technology. These electrolysers operate at high temperatures and are well-suited for integration with a variety of downstream processes. With such integration, green hydrogen can be utilised more efficiently, helping displace grey hydrogen in refinery uses and in steel manufacturing, in the production of green ammonia and methanol, as well as other applications.

Furthermore, we are invested in Electric Hydrogen, a US-based company specialising in the production of Proton Exchange Membrane (PEM) electrolysers. PEM electrolysers respond better to fluctuations in renewable energy than incumbent alkaline electrolysers and are more compact, thereby enabling a more rapid scale up with lower land requirements.

We also look to catalyse solutions for transport & storage, and power. For example, we invested in Amogy, a US-based technology company that offers miniaturised ammonia cracking systems and integrated ammonia-to-power solutions for maritime and distributed clean power applications.

#### Accelerating Commercial Application of Hydrogen

Beyond enabling solutions on the supply side, it is equally important to catalyse a clear demand signal for such hydrogen solutions. As an example, we invested in H2 Green Steel, a vertically integrated manufacturer of green steel that decarbonises the steel production process using green hydrogen. They are constructing their flagship green steel plant in Sweden which will produce steel with up to 95% less CO<sub>2</sub> emissions as compared to conventional steel production.

## Seeding Research & Development, and Innovations

Temasek partnered with the National University of Singapore to launch the Centre for Hydrogen Innovations (CHI), to accelerate R&D efforts and develop research talent in hydrogen. As the first of its kind in Southeast Asia, CHI aims to create technology solutions to make hydrogen commercially viable and position Singapore as a leader in the hydrogen economy.

<sup>1</sup> Source: Bloomberg New Energy Finance (BNEF): Hydrogen Levelized Cost Update (2023)

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## Investing with Tomorrow in Mind continued

#### **Catalysing Climate Action**

Key

In recent years, we have accelerated efforts to achieve our climate targets through three key pathways:



#### Investing for a Low-Carbon Economy

We continue to step up investments that support the transition towards a low-carbon economy. These include solutions that seek to accelerate energy transition and decarbonisation across key sectors, be it through the advancement of hydrogen technologies, energy-efficient solutions, or alternative production processes in hard-to-abate sectors.



#### Encouraging Decarbonisation Efforts in **Our Portfolio Companies**

Our long-term investment horizon, which can span decades, puts us in a unique position to engage our portfolio companies on their business transformation and adoption of climate mitigation actions.

With our Climate Transition Readiness Framework, we regularly engage our major portfolio companies, especially those where we see the highest potential for impact, on their climate transition plans and decarbonisation journeys.



#### **Enabling Carbon Markets Solutions**

We continue to explore approaches that support decarbonisation while conserving or restoring natural systems. We view voluntary carbon markets as an important lever in enabling nature-based and technology-based solutions.

GenZero, an investment platform we established in 2022 to accelerate decarbonisation globally, has built up a diversified portfolio by actively deploying capital across nature-based solutions, technology-based solutions, and carbon ecosystem enablers. In particular, nature-based solutions form a critical lever to protect, sustainably manage, and restore natural ecosystems to address climate change and other challenges such as biodiversity loss.

Examples of GenZero's investments include a land restoration project in Ghana, sustainable aviation fuel-related technology companies such as Velocys, carbon removal technology companies like CarboCulture, and a carbon marketplace and exchange, Climate Impact X (CIX). GenZero has also seen further validation of its investment in CIX with Mizuho Financial Group coming on board as an additional lead investor to scale the voluntary carbon credits market in Asia.

#### **Investing for Nature Impact**

We take an integrated approach to seize investment opportunities that deliver positive climate and nature impacts, alongside sustainable financial returns.

We have invested in water conservation and the circular economy which help address some of the key underlying drivers of the nature crisis, namely direct extraction of natural resources and pollution. For example, our investment in the Emerald Global Water Impact Fund underscores our commitment to support the development of technologies that address water conservation, strengthen solutions for sustainable and resilient cities, improve resource efficiency, enable adaptions for climate change, reduce health risks, and stimulate innovation and economic growth.

To support the transition to a circular economy, we invested, for example, in Fairmat, which aims to build a closed-loop ecosystem that keeps valuable materials out of landfills and in the heart of product design.

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### Investing with Tomorrow in Mind continued

#### Investing for Inclusive Growth

Guided by our commitment towards sustainable and inclusive growth, we established a dedicated Impact Investing team in 2021 with a mandate to generate positive impact for underserved communities in emerging markets in Africa, Asia, and Latin America, whilst also achieving sustainable returns over the long term.

Our investments in impact funds and businesses aim to address basic needs, improve livelihoods, and build resilience of underserved communities. Our strategy comprises three core pillars:



Over the year, we committed to the LeapFrog Climate Fund and ABC Impact's Fund II. We have also invested in other impact funds managed by Elevar Equity, Quona Capital, and AXA IM Alternatives. For direct and co-investments, we invested in SarvaGram, a company providing financial and productivity enhancing solutions to rural households in India.

We also collaborate with portfolio companies to drive impact and create value. Our efforts include collaborating on strategy, enhancing impact practices, and introducing portfolio companies to partners in our network for further synergies.

Our proprietary Impact Measurement and Management framework is used to assess all potential impact investments. The framework guides our decisionmaking process and enables us to measure impact in a systematic way. Post-investment, we work with our impact investees to establish a set of metrics tied to the specific impact outcomes they aim to achieve.

We contribute to efforts which catalyse the impact investing ecosystem through thought leadership and capability building initiatives in Asia and beyond. The world is facing pressing social and environmental challenges and impact investing has the potential to unlock capital to address such challenges. We will invest in leading impact fund managers with a strong sense of purpose and proven track record to support businesses that positively contribute to people and planet.

 Benoit Valentin, Head, Impact Investing, Temasek

In 2022, Temasek supported the Global Impact Investing Network's Impact Lab, an industry initiative to create analytic tools including impact performance benchmarks. Temasek Trust also established the Centre for Impact Investing and Practices (CIIP) that year, a non-profit entity that aims to advance impact investing knowledge and practices in Asia and beyond. In 2023, Temasek and CIIP organised the inaugural *Impact Investing Roundtable*, which convened leading impact investing professionals for further collaboration and knowledge sharing.



Loans from SarvaGram has helped a Kirana store owner, in Pune, India, to expand her business.

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## 4.2 Embedding ESG as Part of Our Investment Process

Generating sustainable returns over the long term depends on stable, well-functioning, and well-governed social, environmental, and economic systems. The decisions we take today, as an asset owner, will impact future generations.

Sustainability in

**Our Investments** 

We have integrated an Environmental, Social, and Governance (ESG) framework across our investment process from pre-investment due diligence to post-investment engagement. This enables us to better manage material risks and engage our portfolio companies to advance ESG practices to strengthen portfolio resilience and alignment with our sustainability objectives.

Key

Highlights

We believe companies that recognise the importance of ESG factors and manage them effectively are better positioned to navigate risks and generate sustainable value over the long term. Thus, we evaluate sustainability-related risks and opportunities across our investments through our ESG framework, which also integrates climate change and supports our net portfolio carbon emissions target.

Our ESG framework centers around the idea of continuous improvement. ESG integration helps us identify material issues that can affect the companies' performance and impact the environment, the workforce and societies at large – be it through the products and services they offer or through the practices they apply in their operations. It is designed to help:

- expand opportunity sets in businesses that generate positive environmental or social impacts through their products or services;
- advance ESG practices through pre-investment diligence and post-investment engagement with portfolio companies;
- manage exposure to companies that have the potential to cause negative environmental or social externalities;
- avoid investing into companies in restricted industries.

Our approach is rooted in our broader governance model, according to which we hold the boards and management of our portfolio companies accountable for the activities of their companies, but do not direct their day-to-day business decisions or operations. We protect our interest by exercising our shareholder rights, including voting at shareholder's meetings.

This broader framework is supported by various tools that help us in the day-to-day investment decision-making. One example is a restricted industries list that defines which business activities fall beyond the scope of our investment focus based on considerations around obligations under Singapore laws and regulations, including those arising from international treaties and UN sanctions or our assessment of the broader implications of the products or services on society. Another example is a set of internal guidelines that specify the conditions and necessary safeguards for investments in sectors and business. activities with more inherent risks of negative impacts on the environment, workforce, or society.

Similarly, we leverage tools such as our Climate Transition Readiness Framework and ESG Value Creation Playbook to support our post-investment engagement efforts. Through this process, we encourage portfolio companies to understand and manage climate- and sustainability-related risks, focus on continuously improving operational practices, and where possible, seize opportunities to build competitive advantage, for example, by expanding business involvement in sustainability-focused products or services.

At Temasek, we integrate ESG into the core of our investments, from pre-investment due diligence to post-investment engagement. As a long-term investor, this goes hand in hand with ensuring the long-term resiliency and future-proofing of our portfolio.

Kyung-Ah Park,
 Head, ESG Investment Management,
 Managing Director, Sustainability,
 Temasek

Key

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## Embedding ESG as Part of Our Investment Process continued

#### Navigating the ESG Complexities in an Investment Decision: A Case Study



Video gaming has experienced significant growth in recent years with hundreds of millions of players globally engaging in various digital platforms and games on a daily basis. Gaming can have positive and negative effects in the areas of social interactions, cognition, and mental agility. Gaming can be an effective way to improve critical thinking, problem solving skills, and peer engagement. At the same time, there are social and health risks associated with prolonged exposure to gaming, including

repetitive stress or overuse injuries as well as gaming addiction.

We gained a more nuanced understanding of the various ESG topics material to the industry as we evaluated an investment in an online videogame platform, which allows users to create games and to play games created by users. The business model of the company enables developers to earn a share of the platform's revenue based on the number of visits and engagement their games receive.

Beyond traditional issues associated with online video gaming, such as the potential for gaming addiction, data privacy and protection, energy consumption, and fair and ethical business practices, the communitydriven approach of the platform posed additional risks to online safety (and child safety in particular

given the audience of the platform), including offensive or harmful content, cyberbullying, and scams being generated or propagated by users.

We conducted extensive diligence to understand the potential risks as well as the maturity and robustness of the company's policies, practices, and safeguards against them. This included interviews with senior executives across key functions, discussions with experts, and research and insights leveraging data science approaches. In our dialogue with the company's management, we discussed the findings of our diligence and established a shared understanding of the critical mitigants to foster a safe and secure environment for all players, including: content moderation, parental controls, platform restrictions, IP protection, and data privacy and practices. The maturity of the

company's practices as well as the level of resources the company devotes to stay ahead on these issues, the proactive innovation approach they deploy to continuously improve their practices, as well as their constructive partnerships with law enforcement agencies and child safety advocacy groups, provided us with comfort to proceed with the investment.

Working through these various aspects allowed us to acquire substantial knowledge on best industry practices and critical safeguards. We continue to leverage these insights in our post-investment monitoring and engagement. Furthermore, we have harnessed and translated these insights into an internal guideline on online safety which will further inform our ongoing diligence efforts as we evaluate digital businesses.

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## Embedding ESG as Part of Our Investment Process continued

#### Pre-Investment ESG Due Diligence

Key

The ESG analysis forms an integral part of the overall investment analysis for all investment proposals.

During deal evaluation, our investment teams employ a broad-based research approach to assess material companylevel ESG considerations, performance against peers in the respective industry, as well as forward-looking sustainability trends that are likely to affect the business and its competitive positioning.

To support the diligence process for investments in industries and business activities with known negative environmental and/or social externalities, such as businesses involved in fossil fuels, transportation, and agriculture, we have developed internal guidelines that specify the safeguards and necessary mitigants that need to be in place. Enhanced diligence on such investments is required and these investment opportunities can only be pursued

#### **Broad ESG Considerations**

when there are clear plans in place to mitigate and address the identified negative externalities.

The analysis prepared by our investment teams is supported by a suite of ESG tools, a team of dedicated ESG professionals, and, where appropriate, external advisors. Key insights and findings are incorporated into the overall investment assessment for review and approval by the relevant investment committees.

#### In-depth Focus on Climate

Given the severity and potential short- and long-term impacts of climate change across industries, climate change is a material consideration in all our investments. Therefore, our ESG framework mandates climate analysis for all new investments that are evaluated by the relevant investment committees, examining the following issues:

- Potential portfolio company's contribution to climate change through its carbon footprint;
- Effects of climate change on the company's operations or commercial prospects, arising from physical and transition risks;
- Any potential new opportunities arising from technology innovations, government regulations, as well as evolving customer needs.



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## Embedding ESG as Part of Our Investment Process continued

As part of our transition risk analysis, we consider how the prospective portfolio company might be impacted by policy, legal, technology, and market changes associated with the transition to a low-carbon economy, considering the product portfolio and the company's strategic positioning. An internal carbon price (ICP) is applied to each investment to better assess the potential climate transition impact.

In addition, we utilise a range of point-in-time and forward-looking metrics and approaches, including:

#### **Carbon Metrics**

#### Total Carbon Emissions

Absolute greenhouse gas (GHG) emissions (Scope 1 and Scope 2), expressed in tCO<sub>2</sub>e.

#### Carbon Intensity

Absolute GHG emissions (Scope 1 and Scope 2) per million dollars of market value, expressed in tCO<sub>2</sub>e/S\$M market value.

#### Carbon Efficiency

Absolute GHG emissions (Scope 1 and Scope 2) per million dollars of revenue, expressed in tCO<sub>2</sub>e/S\$M revenue.

#### Carbon Spread

Proprietary metric which reflects our ICP modelled as a spread on top of our risk-adjusted cost of capital, thereby acting as a trigger for deeper analysis into the investee's climate transition and decarbonisation plans.

#### **Climate Value Impact Assessments**

We estimate the potential impact on equity value of individual assets under specific climate scenarios using a third-party climate modelling tool. We take into consideration factors such as price elasticity, cost pass-through, and Scope 3 emissions.

We also review potential exposure to physical climate risks, including acute and chronic climate hazards. We assess potential impacts of these risks on the company's physical assets, operations, and where relevant, critical supply chains. We do so taking into account existing or planned mitigation efforts.

#### Spotlight on Temasek's Internal Carbon Price (ICP)

Temasek set an initial ICP of US\$42 per tCO<sub>2</sub>e in 2021 to embed the cost of carbon in our investment and operating decisions, and to further align our portfolio and business to our net zero target. This was subsequently increased to US\$50 per tCO<sub>2</sub>e in 2022 and again to US\$65 per tCO<sub>2</sub>e in 2024, with a view that the carbon price may reach US\$100 per tCO<sub>2</sub>e by 2030. Review of the ICP is performed every two years and takes into account the carbon price projections by international bodies.

Our ICP serves various purposes. It not only informs our transition risk analysis, thereby strengthening portfolio resilience but also helps us build a forward-looking portfolio in alignment with the global ambitions for net zero. Furthermore, our ICP has been incorporated into various internal management tools in an effort to align our institutional practices, and encourage climatealigned decisions and behaviour among our employees.

Objectives		Related use cases
Portfolio Resilience	Appropriately identify and account for transition risk in investment decisions to ensure acceptable exposure at asset and portfolio level	Evaluation of new investments     where our return requirements
Portfolio Alignment	Increasingly align our portfolio to help meet our net carbon emissions target of half the 2010 levels by 2030 and net zero carbon emissions by 2050	take into account an additional carbon spread
Institutional/ Ecosystem Alignment	Encourage behaviours and outcomes across the organisation that lead to progressive emissions reductions	<ul> <li>Carbon charge taken against Wealth Added incentive pool</li> <li>Carbon charge taken against business travel operating budget</li> </ul>

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## Embedding ESG as Part of Our Investment Process continued

As part of our efforts to build long-term resilience across the portfolio and also drive opportunities for value creation, we assess potential climate-related opportunities, such as the development of new products and services, expanding access to new markets, enhancing supply chain efficiencies and resilience, and driving resource efficiencies and cost savings.

#### Social Baseline Expectations

To further strengthen our core process of diligence for industry relevant social factors, we developed and piloted a set of cross-cutting Social Baseline Expectations in 2023. This consists of a set of core business practices related to social issues that we expect investment targets and portfolio companies to adopt in their own operations, supply chains, and stakeholder interactions. Topics include human rights and labour practices, diversity, equity, and inclusion, talent management, product quality and safety, data privacy and security, and supply chain responsibility.

As part of the due diligence pilot, we evaluated potential investments against these expectations. This enabled the identification of material potential social risks. Where a company did not meet all baseline expectations, we conducted more in-depth assessment where applicable to determine the nature and severity of the gaps. We remain responsive to emerging social risks hotspots such as responsible Artificial Intelligence, enhancing our institutional knowledge, and strengthening our investment teams' capability through the development of in-depth guidelines and toolkits.

#### **Material Nature Considerations**

The evaluation of nature-related dependencies and impacts already forms part of our diligence for sectors with relevant exposure. We are advancing our efforts to enhance our pre-investment diligence process, deepening our ability to more systematically identify, and, where possible, quantify material nature-related risks. In particular, we are exploring several potential avenues, including:

• Establishing a nature risk assessment tool to help identify potential investment assets that are located within proximity to key biodiversity areas or protected areas. This will allow us to focus specific diligence efforts on investments with high exposure to nature-related risks. Our exposure to the Sustainable Living Trend is steadily growing as we see more innovation and significant opportunities in this space. There is no doubt that if we don't invest in businesses that are aligned with sustainability principles, it is going to be very difficult to sustain returns because there are no long-term trade-offs between the two.

Rohit Sipahimalani,
 Chief Investment Officer,
 Temasek

• Expanding our specific diligence guidance toolkits to cover sectors with material dependency and impact on nature.

#### **Governance Considerations**

Good corporate governance is fundamental to a well-managed company and demonstrates trustworthiness and resilience. It is also an indicator of a company's commitment to conduct business with integrity in a sustainable manner. As part of our due diligence process, we consider the policies and procedures companies have established and implemented to govern their organisation, and to ensure transparency and accountability regarding corporate activities. Where material, we seek to understand a company's oversight of ESG and climate policies, procedures, and practices, stakeholder engagement, reporting on human rights and environmental due diligence, as well as their efforts to remain up-to-date and compliant with changing regulations.

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## Embedding ESG as Part of Our Investment Process continued

#### **Portfolio Monitoring**

We track and monitor sustainability-related risks and performance at both the portfolio and investment level, through the following activities:

Key

#### **ESG Risk Monitoring**

We provide annual updates to the Board and senior management on key ESG risk areas including our involvement in industries with heightened ESG exposures, external ESG ratings across our listed portfolio as a data point from an outside-in perspective, ESG incidents and controversies, key performance indicators (including portfolio carbon emissions and carbon metrics), and material ESG issues.

In addition, we utilise a third-party climate modelling tool to monitor climate-related risk at the asset level for our listed portfolio and significant unlisted holdings. We evaluate exposure under certain scenarios and pathways which are consistent with those used in our portfolio-level scenario analysis. Where critical risks are identified, they are escalated on a case-by-case basis as required.

#### Carbon Budget

We have set GHG emissions budgets for each sector and market investment team to ensure that teams are managing their respective investment's contribution towards the overall portfolio emissions target.

#### Portfolio Carbon Analytics and **Reporting Tool**

We created and utilise an in-house measurement, reporting, and analytics tool with sector and market dashboards to help relevant teams track and monitor the carbon emissions of their investment portfolio.



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### **Engaging Our Portfolio Companies** 4.3

As an asset owner, the success of our portfolio companies underpins our own success. We view sustainability as a key lever to drive long-term portfolio resilience and value creation.

#### **Our Engagement Philosophy**

Key

As part of our post-investment monitoring, we work to understand the environmental and social positioning, as well as progress of our portfolio companies, both in terms of the products or services they provide and their operational practices.

While we do not manage their day-to-day business decisions,

as an owner and shareholder, we engage and encourage our portfolio companies to adopt policies and practices that safeguard and enhance long-term performance, including Environmental, Social, and Governance (ESG)-related areas critical to their businesses.

We engage our portfolio companies through their boards and management teams when we have perspectives

to share. Temasek values these engagements and conducts them thoughtfully on the basis of factual evidence. Ultimately, a company's board is accountable to its shareholders for its total performance: business growth and other economic factors, as well as ESG issues.

As an engaged shareholder, we communicate our expectations on

sustainability to our portfolio companies. We exercise our shareholder rights through voting at shareholder meetings, including on sustainability-related agenda items. We view voting and engagement as key levers that are essential to long-term value creation and we have formed a dedicated Investment Stewardship function to augment our efforts in this respect.



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### Engaging Our Portfolio Companies continued

#### **Engaging on ESG Matters**

Our engagement with portfolio companies follows an internal prioritisation process. Taking into account the diverse range of companies within Temasek's portfolio, we identify where we can drive the most significant impact. We consider company ESG maturity, ESG relevance, and Temasek's potential influence. Based on the results, we prioritise companies which are long-term holds and are earlier in their ESG journey, in addition to companies where we identify strong opportunities for value creation or foresee a clear pathway for ESG transformation.

We have formulated an ESG Value Creation Playbook, which guides our investment teams in identifying opportunities and driving ESG value creation. We seek to identify opportunities to engage and support our portfolio companies to uplift their ESG practices, for example, accelerating their decarbonisation and driving growth in sustainable products and services. Where relevant, we work with the portfolio companies to establish sustainability-related key performance indicators that can form the basis for outcomes-focused approaches to compensation and financing.

Ultimately, the aim of the ESG Value Creation Playbook is to strengthen their resilience, improve competitiveness, enhance their ability to access capital, and position them for new growth opportunities.

An example of a portfolio company that we have been working closely with on ESG matters is Rivulis, a global micro-irrigation company that can help address water, climate, and biodiversity challenges. The company has made strides in their ESG journey, including implementing measures to reduce the environmental impact of their operations, and the launch of their first ESG report showcasing performance highlights such as energy and water savings, as well as emissions reductions.

We are also encouraged to see the efforts of other portfolio companies in their transition journey. One such example is Topsoe, a global provider of technology and solutions for the energy transition, transitioning itself from a catalysts and technology supplier to a leader in carbon reduction technologies.

## 94%

Engaged 19 major portfolio companies representing 94% of Total Portfolio Emissions

#### **Engaging on Climate**

Against the backdrop of the global transition to a net zero economy and the expected physical effects of climate change, it is in our interest to encourage effective climate change mitigation and adaptation measures by our major portfolio companies. Our engagement on climate transition with portfolio companies is informed by our Climate Transition Readiness Framework. It provides a structured methodology on the basis of which we can assess the maturity of our portfolio companies in addressing climate-related risks and opportunities. It serves as a starting point for in-depth dialogue, to convey our climate expectations, which include setting a 2050 net zero ambition and interim decarbonisation targets. In addition, it serves as a source of insight

## 11

Out of 19 major portfolio companies engaged have net zero targets by 2050

on challenges and opportunities for further collaboration.

Utilising publicly available sources and information shared through ongoing engagements, we assess our portfolio companies across several dimensions. These are:

- governance and organisational competencies on climate change;
- climate transition strategy;
- capital allocation;
- scenario planning;
- risk management;
- GHG reduction targets and progress;
- advocacy and engagement;
- external verification and disclosures.

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## Engaging Our Portfolio Companies continued

Over the past year, we have engaged with sixteen portfolio companies based in Singapore and three portfolio companies based overseas, which combined, constitute 94% of Total Portfolio Emissions<sup>1</sup> for the year ended 31 March 2024. 11 of the engaged portfolio companies, who represent 85% of Total Portfolio Emissions, have set targets to achieve net zero by 2050.

We engaged relevant members of the portfolio companies' senior management teams, including the Chief Sustainability Officer and Chief Financial Officer, where appropriate. Having been initiated at the Board and CEO level, these engagements provided an opportunity for us to relay our expectations for climate action and establish foundations for regular dialogue and partnership.

Looking forward, we will continue to deepen our engagement on the basis of the Climate Transition Readiness Framework, tailoring our approach to portfolio companies' respective levels of maturity. As a matter of priority, we will focus on engaging our portfolio companies on developing 2030 or equivalent near-term targets and clear climate transition plans.

We also help build capacity for companies to better understand their exposure to climate-related risks. For example, portfolio companies can gain insights into their physical risks through an ongoing partnership with a leading re-insurance provider. This also enables us to have a better grasp of these risks at the portfolio level.

#### Top Five Contributors to Total Portfolio Emissions

In line with our internal portfolio prioritisation approach, we engage our top five contributors to the total emissions attributable to our portfolio. Combined, Singapore Airlines, Sembcorp Industries, Olam Group, PSA International, and ST Telemedia contributed to approximately 80% of Total Portfolio Emissions as of 31 March 2024. Despite being businesses within industries facing inherent decarbonisation challenges, each has made strides in recent years to overcome obstacles, such as lack of commercially viable low-carbon options and opportunities. Their efforts have been largely focused on transformation strategies, climate action plans, net zero ambitions, and the clean energy transition.

#### Portfolio Value and Total Portfolio Emissions of Top Five Contributors



<sup>1</sup> Total Portfolio Emissions reflect the absolute emissions (Scope 1 and Scope 2) associated with our investment portfolio, expressed in tCO<sub>2</sub>e. Our investment positions in private equity funds, credit, and other assets are excluded.
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## Engaging Our Portfolio Companies continued

## Decarbonisation Efforts of the Top Five Contributors to Total Portfolio Emissions

#### **Singapore Airlines**

Singapore Airlines (SIA) is a global company providing passenger and cargo air transportation services. As part of the hard-to-abate aviation sector, SIA faces decarbonisation challenges arising primarily from a heavy reliance on fossil fuels for its flight operations.

SIA Group is committed to achieving net zero carbon emissions by 2050 as part of its ongoing journey towards environmental sustainability across its operations and collaborates with likeminded partners in the aviation ecosystem. SIA continues to improve operational efficiencies, adopt new technologies, and source for high quality carbon offsets. SIA Group operates a young fleet, with an average age of seven years and three months as at 31 March 2024. It continues to invest in more fuel-efficient aircraft such as the Airbus A350s and Boeing 787s, which are approximately 25% more fuel efficient than older generation aircraft on similar missions. Upcoming deliveries include the new Boeing 777-9s as well as the A350F freighters, which burn up to 40% less fuel than its current freighters.

SIA also participates in the first global market-based measure for any sector in

the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) under the International Civil Aviation Organization (ICAO). As part of CORSIA, SIA is committed to achieving 85% of 2019 emissions as per CORSIA's baseline from 2024 until 2035.

Sustainable Aviation Fuel (SAF) is a key decarbonisation lever for the airline industry, given its potential to reduce carbon emissions by up to 80% on a life-cycle basis compared to conventional jet fuel. In September 2023, the Civil Aviation Authority of Singapore (CAAS), Temasek, GenZero, and SIA completed a 20-month SAF pilot. Under the pilot, SIA purchased 1,000 tonnes of neat SAF which generated 1,000 SAF credits, corresponding to approximately 2,500 tonnes of carbon dioxide reductions. These SAF credits were generated through a trusted industry standard – the Roundtable on Sustainable Biomaterials (RSB) Book & Claim System. The pilot found that Singapore is operationally ready to supply SAF but requires additional efforts in areas such as carbon financing to support adoption. The Singapore Sustainable Air Hub Blueprint, subsequently unveiled by CAAS, has bolstered confidence in plans to further operationalise SAF deployment and accelerate uptake in Singapore. As a reflection of SIA Group's decarbonisation commitment, SIA and Scoot set a target to replace 5% of their total fuel consumption with SAF by 2030.

More details on SIA's decarbonisation journey can be found <u>here</u>.



New generation aircraft such as the Airbus A350 (pictured) are around 25% more fuel efficient than older generation aircraft that they replace.

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## Engaging Our Portfolio Companies continued



Solar PV system on Tengeh Reservoir, one of the world's largest inland floating solar farms.

## **Sembcorp Industries**

Sembcorp Industries (SCI) is an energy and urban solutions provider, led by its purpose to drive energy transition. With the energy sector accounting for almost 40% of global GHG emissions, SCI has an important role to play in supporting Asia's clean energy future. Committed to a brown to green portfolio transformation, SCI delivers sustainable solutions to support energy transition and urban development by leveraging its sector expertise and global track record. The journey from brown to green holds its own set of operational challenges, particularly in emerging markets that

are deeply entrenched in fossil fuel infrastructure and long-term supply agreements. SCI aims to lead the energy transition responsibly with a clearly articulated climate action roadmap and targets.

SCI was the first Singaporean energy company to launch a Climate Strategy in 2018, communicating its emissions intensity target. SCI followed up with a refreshed, more ambitious Climate Action Plan in 2021, focused on growing renewables and reducing emissions.

Having made significant progress against its initial targets, SCI announced an enhanced set of targets in November 2023:

- By 2028, to grow gross installed renewables capacity to 25 GW.
- By 2028, to halve emissions intensity to 0.15 tCO<sub>2</sub>e/MWh from 2023 level of 0.29 tCO<sub>2</sub>e/MWh.
- By 2030, to reduce absolute emissions by 90% (from 2020 levels) to 2.7 million tCO<sub>2</sub>e.
- By 2050, to deliver net zero emissions.

SCI is expanding its renewable energy portfolio to support the transition to net zero. Additionally, they are actively exploring and investing in

energy storage and battery technology for the continued growth of renewable deployments. In line with their strategic targets, a significant share of capital will be deployed to support their renewables growth. Capital will also be deployed into hydrogen-ready assets and other decarbonisation solutions including renewables imports and low-carbon feedstock.

In 2023, SCI completed its divestment of Sembcorp Energy India Limited (SEIL) as part of its strategy to transform its portfolio from brown to green. To support the new owners of SEIL in maintaining the highest standards of reliability, operational efficiency of the plants, and best practices in the provision of essential energy to 2.5 million households. SCI offered to render certain technical advisory services to SEIL through a technical services agreement. To underscore SCI's commitment to sustainability, it will provide ongoing support for SEIL's initiatives to reduce its GHG emissions intensity through a financial incentive, where the interest rate under the deferred payment note will reduce with improvements in SEIL's GHG emissions intensity.

More details on SCI's decarbonisation journey can be found here.

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## Engaging Our Portfolio Companies continued

#### **Olam Group**

As a food and agri-business, Olam Group (Olam) operates across land use sectors which contribute significantly to global warming. Companies within the agri-food sector face several obstacles to decarbonisation, including mapping emissions throughout the value chain, aligning actions among stakeholders, reaching smallholders, and implementing fit-for-purpose finance mechanisms.

Driven by their purpose to re-imagine global agriculture and food systems, Olam is committed to reach net zero by 2050 and to reduce emissions across their supply chains through their ability to make a material impact to improve farmer livelihoods, increase community well-being, and regenerate our living world. Their decarbonisation approach comprises four key elements:

 Reducing emissions by sequestering carbon in soils and trees, reducing post-harvest loss, and reducing methane emissions from rice farming and coffee washing stations.

- Encouraging regenerative practices through improved crop rotation, composting, mulching, soil erosion control, integrated soil fertility management, and integrated pest management.
- Helping farmers adapt to the impacts of climate change.
- Building resilience by enabling farmers to increase household income through crop diversification and other income opportunities.

Olam launched Terrascope in 2022, an end-to-end decarbonisation platform which enables companies to measure their emissions comprehensively and accurately. Combining proprietary data assets and Artificial Intelligence models with deep sector and sustainability expertise, the platform guides companies to make impactful emission reductions across their operations and supply chains.

More details on Olam's decarbonisation journey can be found <u>here</u>.



Olam reduces methane emissions through sustainable rice farming projects in Vietnam (above), Thailand, and India.

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## Engaging Our Portfolio Companies continued



Tuas Port in Singapore to enable greener supply chains through an integrated ecosystem with cross industry collaboration.

#### **PSA International**

PSA International (PSA) is a global port operator and trusted partner to cargo stakeholders, with a portfolio comprising over 60 deep-sea, rail, and inland terminals, across more than 170 locations in 45 countries.

This sector has a heavy reliance on fossil fuels and faces challenges in electrifying terminals equipment and large vehicles as well as decarbonising supply chains. This makes innovative solutions and technologies crucial in advancing decarbonisation efforts.

PSA has committed to achieving net zero carbon emissions by 2050 and has developed a comprehensive strategic approach towards decarbonisation through PSA's Carbon Abatement Pathways.

The four key levers within these pathways are optimisation and energy efficiency, lower carbon fuel and electrification, investing in renewable energy, and electrical grid optimisation. Several frameworks have been developed to aid the company's decarbonisation efforts, including PSA's Renewable **Energy Procurement & Generation** Framework and Green Financing Framework. The company is also supporting the establishment of green corridors to provide carbon neutral maritime routes which connect PSA terminals globally. In addition to green fuel bunkering, the corridors will offer a suite of value-add green services ranging from berths and equipment to green energy solutions.

More details on PSA's decarbonisation journey can be found  $\underline{here}.$ 

#### ST Telemedia

ST Telemedia (STT) is a strategic investor specialising in Communications and Media, Data Centres, and Infrastructure Technology businesses globally. STT is committed to maintain zero market-based Scope 2 emissions for its own operations since 2022 while supporting its portfolio companies in halving their carbon emissions by 2030, compared to 2020. With a sizeable portion of its emissions originating from its Data Centres portfolio, a naturally energy-intensive sector, STT's overall decarbonisation efforts are expected to be complex.

To drive action and innovation, STT regularly hosts ESG forums with its major portfolio companies to facilitate sharing of insights, best practices, and collaboration around sustainability initiatives including decarbonisation. Its Data Centres group, ST Telemedia Global Data Centres (STT GDC), has partnered with ABB to conduct research and development in using artificial intelligence to optimise data centre cooling efficiency.

STT recognises that green financing has the potential to positively impact the environment by directly financing projects that promote sustainability, reduce carbon emissions, and protect ecosystems. It strongly supported the establishment of STT GDC's Sustainability-Linked Financing Framework for capital raising, thus, helping to boost renewable energy contribution within STT's energy mix and reducing the carbon intensity of key assets, especially data centres.

More details on STT's decarbonisation journey can be found <u>here</u>.



Bi-annual STT Group ESG Forum to encourage collaboration and knowledge sharing.

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## Engaging Our Portfolio Companies continued

## Dedicated Platforms with Programmatic Engagements

Temasek convenes two key platforms to bring together the CEOs and Sustainability Leads of our major portfolio companies on specific sustainability topics where we see the opportunity to build capacity or the opportunity to foster collaboration between the companies.

The annual Temasek Portfolio Companies (TPC) Sustainability Council brings together CEOs to share successful sustainability strategies and forge potential collaborations on sustainability initiatives. The bi-annual TPC Sustainability Leaders Network focuses on knowledge sharing and capacity building on top-of-mind sustainability topics which are common across our major portfolio companies. It also seeks to build a strong community of sustainability leaders to advance our shared sustainability agenda together. Across the two platforms, we have covered the topics of climate transition, carbon markets, nature, and the net zero value chain through roundtable or workshop formats. Through these platforms, we hope to accelerate sustainability leadership in our portfolio companies and deliver on investor and other stakeholder expectations.

In a similar vein, we provide the relevant functional leads in our major portfolio companies with training and guidance on climate and sustainability disclosures.

Through our Workforce 4.0 Taskforce, we engage our Temasek Portfolio Companies together with the labour movement and government agencies, to facilitate the development of a futureready workforce, which is an integral part of business transformation.

We organise the annual Temasek Tripartite Conversations, a thought leadership platform to facilitate dialogue and catalyse solutions to key workforce transformation challenges to support sustainable business growth. Last year, we focused on the topic of Artificial Intelligence (AI), driving discussions on its human-centric and human-led development, as well as the collective responsibility of tripartite partners to ensure a successful and just transition to an AI-enabled workforce.

Such engagements foster mutual learning with the portfolio companies and allow us to extend our capabilities in response to market needs.

We have set up various forums to facilitate dialogue and ideation on key trends with the leadership and functional experts of our portfolio companies. By operating as a networked organisation, we augment our collective ability to catalyse solutions for complex challenges of the future, and advance our shared sustainability agenda together.

Chan Wai Ching,
 Chief Corporate Officer,
 Temasek



Panel discussion at Temasek Tripartite Conversations 2023 on Artificial Intelligence's Impact on the Future of Work.

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## 4.4 Engaging Our Fund Managers

As a sustainability-focused long-term investor, we engage our asset management businesses and external fund managers we invest with to advance responsible investment practices.



Our asset management businesses represent 14% of our unlisted portfolio and include Seviora Holdings, Pavilion Capital, and Vertex Holdings. Our asset management businesses manage around S\$83 billion in assets, which include third-party capital as well as our own capital.

Investments in private equity and credit funds represent 20% of our unlisted portfolio. They have enabled us to gain deeper insights into new markets and sub-sectors of specialisation while providing co-investment opportunities.

While the investment exposure through our asset management businesses and private equity and credit funds is relatively small in contrast to our direct investments, we also extend our ESG philosophy to these investments.

In assessing external fund managers, we evaluate their ESG approach from an investment lifecycle perspective to understand their ESG commitment, due diligence, stewardship practices, and reporting to investors on ESG. In line with our own climate commitment, we seek to understand how they manage climate-related risks and opportunities, referencing leading international frameworks.

On an ongoing basis, we engage in conversations with these managers to foster mutual learning and best practice sharing. We expect the external managers to adopt a similar mindset of continuous improvement and to strive to apply best industry practices in managing material ESG issues for their portfolios. We monitor the ESG practices of our key external managers through an annual ESG survey, where they share their latest ESG initiatives and plans going forward, for the core areas of our assessment. We also have deeper and more regular engagements with external managers for which we have active investment positions in the fund management company, beyond just fund investments.

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5.1 Climate Resilience and Scenario Analysis

5.2 Portfolio Metrics and Targets

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## **Climate Resilience and Scenario Analysis** 5.1

With increasing temperatures, more frequent extreme weather events, and a shifting regulatory and technological landscape, climate change presents an urgent sustainability-related risk.

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#### **Overview of Scenario Analysis**

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Against this challenging backdrop, scenario analysis is a key tool for generational investors like Temasek to manage and assess climate-related risks and opportunities under various policies, social and technology pathways, and associated temperature outcomes. This information enables us to evaluate the implications on our portfolio in different climate scenarios and make informed investment decisions.

From a top-down perspective, the climate scenario analysis is applied as an overlay on our macroeconomic forecasts alongside other geopolitical events within our Temasek Geometric Expected Return Model (T-GEM), which uses a scenario-based approach to simulate our 20-year long-term expected returns.

From a bottom-up perspective, we apply our Climate Value Impact tool, utilising a scenario-based

approach, to estimate potential climate-related impacts. In addition, our internal carbon price takes into account various climate scenarios' carbon price assumptions.

Combining both a top-down and bottom-up approach towards climate risk assessment, anchored by a consistent set of scenarios, facilitates a deeper understanding of the climate risks and opportunities our portfolio may face. As a generational investor, Temasek closely monitors climate-related risks and opportunities across different time horizons by incorporating climate scenario analysis in our investment process and expected returns simulations. Our financial discipline in maintaining a strong balance sheet enables investment flexibility to reshape and rebalance our investment holdings as we build a resilient portfolio and deliver sustainable returns over the long term.





Source: Figure SPM 1 in IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

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## Climate Resilience and Scenario Analysis continued

### **Climate Scenarios**

We use three climate scenarios to assess the potential climate-related physical and transition risks and impacts on our portfolio:

Name	Scenario	Assumptions	Temperature Increase (by 2100)
Low Ambition	Network for Greening the Financial System (NGFS) Hot House World	<ul> <li>Low Transition Costs, High Physical Costs</li> <li>No further climate mitigation efforts from 2022, such that regulatory policies, energy use, and energy mix remain largely consistent with the actual state of the world in 2022.</li> <li>Slow and insignificant progress on green transition technology changes, given lack of policy impetus and demand, with low uptake of carbon dioxide removal.</li> <li>Significantly larger physical costs given the lack of policy traction, with greater climate sensitivities than initially assumed in climate models, which result in a worse temperature outcome.</li> </ul>	>4.0°C
Medium Ambition	Inevitable Policy Response Forecast Policy Scenario (IPR FPS)	<ul> <li>Medium Transition Costs and Physical Costs</li> <li>Significant acceleration in policy by 2025, with the speed and intensity of regulatory change, in addition to the forecasted policy levers, varying across economies depending on assessed readiness.</li> <li>Higher transition costs upfront, resulting in lower physical costs compared to the Low Ambition Scenario.</li> <li>Consistent total energy consumption, with an energy mix shift resultant from decreased fossil fuel demand and fast growth in renewables generation.</li> <li>For ease of modelling, assumes governments across all economies recycle carbon tax revenues equally between personal tax cuts, investments, and debt reduction. Also assumes central banks react to inflation changes.</li> <li>Post 2050, no new breakthroughs in technology and land-use constraints limit negative emission technologies.</li> </ul>	~1.8°C
High Ambition	NGFS Net Zero	<ul> <li>High Transition Costs, Low Physical Costs</li> <li>Immediate enactment of stringent climate policies and green innovation, in line with more ambitious global efforts to mitigate climate change, supporting the transition to net zero carbon emissions around 2050, with some jurisdictions reaching net zero for all greenhouse gases by this point.</li> <li>Rapid adoption of technology, including carbon capture and storage, to accelerate decarbonisation.</li> <li>Physical costs are relatively lower than the Medium and Low Ambition scenarios.</li> <li>Initial interest rate spikes caused by immediate transition policies, with stabilisation over time. Also assumes negative short-term impact on GDP, with initial losses offset by future cost savings.</li> <li>Transition away from fossil fuels with renewables and biomass delivering above 80% of global primary energy needs by 2050.</li> </ul>	1.5°C

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## Climate Resilience and Scenario Analysis continued

The Medium Ambition scenario, which references the IPR FPS, constitutes our baseline. The IPR FPS was commissioned by the UN-supported Principles for Responsible Investment (PRI) and the climate scenarios were jointly developed by a consortium of technical partners. It receives strong endorsement from the financial sector, which it has been designed for.

Key

Highlights

The IPR FPS represents a high conviction policy forecast scenario and is not a normative scenario. It possesses transparency and granularity with detailed policy and technological assumptions which allows for signposting.

Given that the forecasts and climate sensitivities are subject to considerable uncertainty, we also model two alternative scenarios to simulate the range of plausible outcomes. First, the High Ambition Scenario simulates a net zero outcome, where the more ambitious goal set out in the Paris Agreement, to limit temperature increase to 1.5°C, is achieved. At the other end of the spectrum, the Low Ambition scenario simulates an outcome where climate policy traction is very weak such that global temperature increase rises above 4.0°C.

In our climate scenario analysis, the two climate risk impact channels assessed are physical risk and transition risk. For physical risk, we apply a top-down approach to assess impact on GDP growth and inflation. This includes assessing acute risks such as extreme weather events and chronic risks such as the consequences of long-term shifts in climate patterns on productivity. For transition risk, we apply top-down and bottom-up approaches. At the country level, we assess the impact of carbon taxes on government revenues and take into account second order impacts. This includes three-channel fiscal recycling of carbon tax revenues (personal tax cuts, investments, and debt reduction) and monetary policy response to changes in growth and inflation. Similarly, from a bottom-up perspective, on top of the demand creation and destruction effects that carbon taxes elicit, we consider second order impacts via company responses. This includes abatement, cost pass-through, and competition effects. The incorporation of second order impacts enhances the realism of the simulations.

We recognise the trade-off between transition risks in the shorter term and physical risks in the longer term. Whilst greater policy action may increase



transition risks in the shorter term, this will reduce the magnitude of physical risks in the longer term. As a result, we adopt differing time horizons for the two categories of risk. For physical risks, we consider up to 2050 as short term and 2050–2100 as long term. For transition risks, we consider a five-year time horizon as short term, a 10-year time horizon as medium term, and a 20-year time horizon as long term. However, as implied by the differing time frames adopted for physical and transition risks, we generally expect the effects of the climate-related transition risks to occur across a shorter time horizon, over the next 20 years, and the effects of the climate-related physical risks to occur across a comparatively longer time horizon, up until 2100.

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## Climate Resilience and Scenario Analysis continued

Using the risk inputs we assess as part of our scenario analysis, we mapped out the climate risk impact channels in further detail.



Our most recent climate scenario analysis was carried out in 2023. Broadly, our Central Scenario incorporates the Medium Ambition Climate Change Scenario and offers higher 20-year expected returns for the Temasek Portfolio compared to the Low Ambition Climate Change Scenario, but lower 20-year expected returns compared to the High Ambition Climate Change Scenario, where there is concerted effort and strong actions to mitigate climate change and carbon emissions, for a more liveable world. These results reaffirm our belief in the importance of looking beyond portfolio decarbonisation and working to drive real economy carbon reduction through collaboration on climate action with our portfolio companies and our wider ecosystem.

Message from

the CEO

Key

**Impact on Expected Returns** 

Highlights

It is important to recognise that whilst T-GEM simulates a range of possible returns for our portfolio over the next 20 years, they should not be viewed as predictions of actual outcomes. Rather, the climate assumptions incorporated into T-GEM assists us in understanding the potential implications of different climate scenarios and importance of building a resilient portfolio. There are several significant areas of uncertainty that we consider in assessing the overall resilience of our strategy to

--- High Ambition Climate Change

the climate-related risks identified and the potential impact on expected returns. This includes the complex nature of climate scenario analysis, which requires assumptions to be made on the inputs used, as well as continuous updates as data becomes more robust. In addition, the extended time horizon of scenario analysis increases uncertainty

Geometric Returns (Compounded Annualised) at the End of 20-year Period (%)

- Central

regarding the assumptions relied upon. Our assessment also depends on and makes assumptions around the response of companies to conditions or circumstances of the climate scenarios considered. Combined, these significant uncertainties increase the degree of judgement necessary to assess our climate resilience.

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## Climate Resilience and Scenario Analysis continued

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Climate Resilience and Scenario Analysis continued

If you think about this challenge – this is the race of our lives to decarbonise. The climate and nature emergency is real. And it is the race of our lives to tackle it. Fortunately, it is a solvable problem. But it's on our watch. It's our generation. It's our best efforts. And with radical collaboration we can do it.

- Steve Howard, Vice Chairman, Sustainability, Temasek

#### Nature-Related Risk

We evaluate the impact of nature-related risks for sectors with material exposure as part of our pre-investment ESG due diligence. Since 2022, we have further advanced our efforts towards understanding the materiality of nature risks to our overall portfolio. In early 2022, we leveraged ENCORE<sup>1</sup>, to map how our portfolio depends on and impacts natural resources. In 2023, we participated in a Taskforce on Nature-related Financial Disclosures (TNFD) Asset Owner pilot. The objective of the pilot was to further advance TNFD's quidance on risk assessment and quantification by testing different risk assessment approaches on real-life financial portfolios. The aggregated results and insights from the pilot fed into TNFD's fourth beta framework.

As part of the pilot, we trialled the use of a qualitative heatmap to identify risk hotspots in our portfolio, asset tagging to quantify our exposure to nature-related risks across the value chain, and a scenario-based approach to quantify the financial implication of nature-related risks. We also gained valuable insights on the practical limitations of existing approaches to determine dependencies and impacts on nature, such as the lack of location-specific data for our portfolio companies' key assets. As we continue to refine and enhance our risk mitigation strategies and our thinking around impact, we will draw on these insights to prioritise our engagement and advocacy efforts.

We recognise that the systemic risk posed by nature loss makes scenario analysis a relevant tool for understanding the financial impact of nature-related risks on our portfolio. We are thus closely monitoring developments around nature scenario analysis, in an effort to explore practical ways to incorporate nature with our climate scenario analysis.

### **Percentage of Species Exposed** to Potentially Dangerous **Climate Conditions<sup>2</sup>**

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0.1% 0.5% 10% 20% 40% 60% >80%

ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) is a tool that helps organisations explore their exposure to nature-related risk and take the first steps to understand their dependencies and impacts on nature. Source: Adapted from Figure TS.5 Panel (b) in ECOSYSTEMS in Portner, H.-O., D.C. Roberts, H. Adams, I. Adelekan, C. Adler, R. Adrian, P. Aldunce, E. Ali, R. Ara Begum, B. Bednar-Friedl, R. Bezner Kerr, R. Biesbroek, J. Birkmann, K. Bowen, M.A. Caretta, J. Carnicer, E. Castellanos, T.S. Cheong, W. Chow, G. Cissé, S. Clayton, A. Constable, S. Cooley, M.J. Costello, M. Craig, W. Cramer, R. Dawson, D. Dodman, J. Efitre, M. Garschagen, E.A. Gilmore, B. Glavovic, D. Gutzler, M. Haasnoot, S. Harper, T. Hasegawa, B. Hayward, J.A. Hicke, Y. Hirabayashi, C. Huang, K. Kalaba, W. Kiessling, A. Kitoh, R. Lasco, J. Lawrence, M.F. Lemos, R. Lempert, C. Lennard, D. Ley, T. Lissner, Q. Liu, E. Liwenga, S. Lluch-Cota, S. Löschke, S. Lucatello, Y. Luo, B. Mackey, K. Mintenbeck, A. Mirzabaev, V. Möller, M. Moncassim Vale, M.D. Morecroft, L. Mortsch, A. Mukherij, T. Mustonen, M. Mycoo, J. Nalau, M. New, A. Okem (South Africa), J.P. Ometto, B. O'Neill, R. Pandey, C. Parmesan, M. Pelling, P.F. Pinho, J. Pinnegar, E.S. Poloczanska, A. Prakash, B. Preston, M.-F. Racault, D. Reckien, A. Revi, S.K. Rose, E.L.F. Schipper, D.N. Schmidt, D. Schoeman, R. Shaw, N.P. Simpson, C. Singh, W. Solecki, L. Stringer, E. Totin, C.H. Trisos, Y. Trisurat, M. van Aalst, D. Viner, M. Wairu, R. Warren, P. Wester, D. Wrathall, and Z. Zaiton Ibrahim, 2022: Technical Summary. [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 37-118, doi: 10.1017/9781009325844.002.

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## 5.2 **Portfolio Metrics and Targets**

We target to reduce the net carbon emissions attributable to our portfolio to half the 2010 levels by 2030, as we aim for net zero portfolio emissions by 2050.

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## Portfolio GHG Emissions Target

We established our target in 2020 with reference to the Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5), which detailed the science-based pathways to limit global warming to 1.5°C, in alignment with The Paris Agreement. Whilst our target has not been independently verified, we keep abreast of and regularly evaluate methodologies and best practices in target setting to ensure that the target underpinning our net zero commitment remains ambitious and current.

Our net zero target, announced in 2020, was set through an internal process which ultimately culminated in Board sign off. Tasked with supporting the Board in oversight of our sustainability goals and targets, the Board Risk & Sustainability Committee (RSC)

is responsible for reviewing the appropriateness of our emissions target and providing guidance where needed.

Due to the nature of our business as an asset owner and the diversified makeup of our portfolio, our emissions target does not disaggregate between the different greenhouse gases (GHGs). Instead, we quantify all emissions using tonnes of carbon dioxide equivalent  $(tCO_2e)^1$ .

The target is based on Total Carbon Emissions (tCO<sub>2</sub>e) as defined within the Task Force on Climate-related Financial Disclosures (TCFD) Supplemental Guidance for the Financial Sector. It reflects the absolute GHG emissions (Scope 1 and Scope 2) associated with our investment portfolio.

tCO<sub>n</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

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## Portfolio Metrics and Targets continued

### Portfolio GHG Emissions Performance

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We measure and disclose the carbon emissions attributable to our investment portfolio as part of our annual reporting<sup>1</sup> and track progress towards our climate targets.

We report portfolio emissions metrics with reference to the Greenhouse Gas (GHG) Protocol, as well as recommendations of the TCFD for Asset Owners:

- Total Portfolio Emissions<sup>2</sup> Absolute GHG emissions (Scope 1 and Scope 2) associated with our portfolio, expressed in tCO<sub>2</sub>e.
- Portfolio Carbon Intensity<sup>3</sup> GHG emissions associated with our portfolio normalised by the market value of the portfolio, expressed in tCO<sub>2</sub>e/S\$M portfolio value.

#### **Portfolio Weighted Average** Carbon Intensitv<sup>4</sup>

Sum of each asset's carbon intensity (tCO<sub>2</sub>e/S\$M revenue) multiplied by the weight of that asset in the portfolio (the market value of that asset relative to the market value of the portfolio).

To date, we have not used carbon credits to offset Total Portfolio Emissions. We focus our attention on engaging with companies to support reduction efforts. However, the achievement of our net zero target will be dependent on the decarbonisation progress of our portfolio companies. We continue to monitor the ongoing global discussion around the use of carbon credits, particularly where asset owners are concerned.

Total Portfolio Emissions encompass Temasek's direct investments in public and private equities which account for 77% of our investment portfolio. Our investment positions in private equity funds, credit, and other assets are excluded, given the current limitations in the availability of data. The portfolio emissions reported include Scope 1 and Scope 2 emissions of the underlying companies based on the latest available data sets.

We use a combination of companyreported emissions data and modelling approaches to establish Total Portfolio Emissions based on our proportionate shares (i.e. ownership interests) in the assets.

We adopt the following hierarchy in data sources, taking into account availability and timeliness of reported data:

- Company-Reported Data GHG emissions data reported by the company, either directly to Temasek or made available through S&P Global Sustainable1.
- Company-Specific Estimates GHG emissions for each company modelled or estimated by Temasek or S&P Global Sustainable1 using relevant industry level carbon intensity or carbon efficiency averages as proxies (GHG emissions normalised by revenue/market capitalisation/ other relevant operational unit of measurement). In case industry averages do not provide a meaningful proxy for the company, carbon intensity or efficiency data of comparable peers may be used instead.

This measurement approach has remained unchanged since the last reporting period.

PricewaterhouseCoopers LLP, an independent third party, has undertaken a limited assurance engagement on the selected portfolio emission metrics for the year ended 31 March 2024. Their assurance report can be found here.

This metric is also known as Carbon Footprint (tCO<sub>2</sub>e/\$M invested) within the TCFD Supplemental Guidance for the Financial Sector.

<sup>4</sup> This metric is also known as Weighted Average Carbon Intensity (tCO<sub>2</sub>e/\$M revenue) within the TCFD Supplemental Guidance for the Financial Sector.

<sup>&</sup>lt;sup>2</sup> This metric is also known as Total Carbon Emissions (tCO,e) within the TCFD Supplemental Guidance for the Financial Sector.

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(for year ending 31 March)

## Portfolio Metrics and Targets continued

The reported Total Portfolio Emissions account for 77% of our investment portfolio as of 31 March 2024. Total Portfolio Emissions have decreased from 27 million tCO<sub>2</sub>e for the year ended 31 March 2023 to 21 million tCO<sub>2</sub>e for the year ended 31 March 2024. Carbon Intensity of our portfolio has decreased from 93 tCO<sub>2</sub>e/S\$M portfolio value for the year ended 31 March 2023 to 73 tCO<sub>2</sub>e/S\$M portfolio value for the year ended 31 March 2024. Similarly, the Weighted Average Carbon Intensity of our portfolio has decreased from 116 tCO<sub>2</sub>e/S\$M revenue for the year ended 31 March 2023 to 92 tCO<sub>2</sub>e/S\$M revenue for the year ended 31 March 2024.

The overall decrease in carbon emissions during the year is mainly attributable to our portfolio company, Sembcorp Industries, which completed the sale of Sembcorp Energy India Limited (SEIL). Post-transaction, the proportional emissions of SEIL are accounted for under Sembcorp Industries' Scope 3 (Category 15 - Investments). In addition, we are also seeing emissions reductions due to decarbonisation efforts of



portfolio companies, as well as changes in portfolio composition. These decreases have been moderated by an increase in emissions attributable to Singapore Airlines as global air travel continued to resume post-pandemic, as well as expansion of the emissions reporting boundaries of some portfolio companies.

As we continue stepping up efforts to encourage decarbonisation across our portfolio and to invest in less

carbon-intensive businesses, we expect a non-linear decline in portfolio emissions over time.

As an asset owner, the achievement of our net zero target depends on the decarbonisation outcomes of our portfolio companies. Each sector, especially the hard-to-abate sectors, comes with its inherent decarbonisation challenges. Systems-level changes are required to enable us to reach net zero.

**·**22%

**Reduction in Total Portfolio Emissions from 2023** 

Total Portfolio Emissions reflect the absolute emissions (Scope 1 and Scope 2) associated with our investment portfolio, expressed in tCO<sub>2</sub>e. Our investment positions in private equity funds, credit, and other assets are excluded.

Negative emissions acquired through investments and high quality carbon offsets.

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## Portfolio Metrics and Targets continued

### High Trust, High Liquidity Carbon Markets: Key Lever to Address Twin Crises of Climate and Nature

More than 140 countries have set a net zero target, covering about 88% of global emissions. However, a large emissions gap of 15–23 GtCO<sub>2</sub>e still needs to be urgently addressed by 2030<sup>1</sup>. Concurrently, we also face a significant financing gap to address the climate<sup>2</sup> and nature<sup>3</sup> crises, amounting to over a trillion US dollars a year.

To avert the worst impacts of climate change, carbon pricing is a critical

lever to internalise the negative externalities of climate change. The global average carbon price today remains too low compared to the estimated price needed for us to stay on track to reach the goals of the Paris Agreement by 2030, namely US\$90–140 per tCO<sub>2</sub>e<sup>4</sup>. Carbon finance plays a complementary role in accelerating the scale up of natureand technology-based solutions, and supporting a just transition, particularly in the Global South. For instance, in May



2024, Breakthrough Energy Ventures, GenZero, Temasek, and Wavemaker Impact co-led the funding round for Rize to boost the technology-enabled platform for sustainable rice farming. This platform reduces methane emissions in rice cultivation in Southeast Asia and the rest of Asia. These sustainable rice farming practices create other benefits such as water savings and soil health improvements. Revenues generated from the carbon credits can also help to improve the livelihoods of the smallholder farmers.

Carbon markets can play a constructive role in channelling needed carbon finance towards the most deserving and impactful decarbonisation projects globally. However, carbon markets have been the subject of heightened scrutiny over the past year with questions around their integrity, especially in terms of the quality of carbon credits and their legitimate use as part of corporate decarbonisation efforts. To realise the full potential of

carbon markets and develop a robust high-quality ecosystem, we will need collective efforts across governments, policymakers, industry bodies, corporates, and consumers. GenZero released a whitepaper, 'Carbon Markets 2.0 – Addressing Pain Points, Scaling Impact', at COP28 to address common misconceptions around carbon markets and highlight key levers to unlock their potential and drive climate mitigation at scale.

Carbon markets, in the form of high-integrity transition credits, can also be a viable complementary financing solution to accelerate the early phaseout of coal-fired power plants (CFPPs), which requires significant financing due to lost revenues and the cost of replacing the CFPPs with renewal energy capacity. Temasek is a knowledge partner to the Transition Credits Coalition (TRACTION) to explore the use of transition credits to support the early retirement of CFPPs across Asia Pacific.

UN Environment Programme, Emissions GAP Report (2023)

International Monetary Fund, Unlocking Climate Finance in Asia-Pacific: Transitioning to a Sustainable Future (2024)

A partnership among The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability, Financing Nature: Closing the Global Biodiversity Financing Gap (2020)

International Energy Agency, World Energy Outlook (2023)

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## **Environment** 6.1

## We are committed to reducing the overall environmental impact arising from our operations.

## **Enabling a Sustainable Company**

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Highlights

To maintain our carbon neutrality goal as a company, we take into account the carbon mitigation hierarchy. We prioritise avoidance, reduction, and substitution efforts before purchasing high-integrity carbon credits to compensate for our residual emissions.

Annually, we measure emissions as well as carbon intensity (emissions per employee) from our operations, and we aim to reduce emissions both in absolute and relative terms. Electricity consumption across our

offices and business travel constitute a significant part of our emissions profile.

The reported emissions arising from our operations were 19,078 tCO<sub>2</sub> $e^1$  for the year ended 31 March 2024, comprising 23 tCO<sub>2</sub>e in Scope 1 emissions, 501 tCO<sub>2</sub>e in Scope 2 emissions, and 18,554 tCO<sub>2</sub>e in Scope 3 emissions.

During the year, we saw a reduction in Scope 2 emissions from electricity use, largely due to our UK and India offices procuring electricity from renewable sources, and our Singapore office obtaining Renewable Energy Certificates. Scope 3 emissions represent the majority of our total emissions, with business travel contributing 85% of that. We witnessed an increase in business travel emissions from 8,473 tCO<sub>2</sub>e for the year ended 31 March 2023 to 15,850 tCO<sub>2</sub>e for the year ended 31 March 2024. This increase was driven by the resumption of business travel in line with our business activities post-pandemic.

Despite the inherent challenges associated with Scope 3 emissions reporting, we remain committed to progressively expand our scope of coverage as we gain deeper understanding on the underlying datasets and estimation approaches.

(for year ended 31 March)

Our emissions per employee decreased from 28.8 tCO<sub>2</sub>e per employee for the year ended 31 March 2020 to 19.0 tCO<sub>2</sub>e per employee for the year ended 31 March 2024 and thus remained below pre-pandemic levels. Notwithstanding this fact, we continue to drive various initiatives and programmes to further reduce operational emissions.

**Beyond** advancing sustainability through our investments and engagement with our portfolio companies, we recognise sustainability starts within Temasek as an institution. While our emission footprint is largely driven by our portfolio, as an investor, we recognise the important role we have in setting an example for our portfolio companies.

- Lim Ming Pey, Deputy Chief Corporate Officer, Temasek

28.8 23.6 19.0 19.1 12.0 11.5 7.4 7.7 4.2 6.5 6.3 5.5 28 3.7 3.4 1.0 0.9 1.3 1.3 2020 2021 2022 2023 2024 Scope 2 indirect emissions from electricity use ('000 tCO<sub>2</sub>e) Water use ('000 m<sup>3</sup>) Scope 3 indirect emissions from business travel, corporate events, data centres, Paper use (million pieces)

Carbon intensity (tCO<sub>2</sub>e per employee)

tCO<sub>2</sub>e refers to tonnes of carbon dioxide equivalent, a standard unit of measurement used in greenhouse gas emissions accounting and reporting.

## **Five-year Environmental Footprint**

employee commute, and waste generated ('000 tCO<sub>2</sub>e)

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## **Fnvironment** continued

#### **Office Improvement Plan**

To enhance and promote sustainability and efficiency in resource use, we have developed a five-year improvement plan for our corporate headquarters in Singapore, focusing on three areas: Energy, Water, and Waste Recycling.

As part of our five-year improvement plan, we will routinely monitor and evaluate energy and water consumption levels, as well as waste generation amounts to regulate surges or abnormalities in trend. If any anomalies are identified, the underlying cause will be determined

and solutions that can increase energy, water, and waste recycling efficiency will be considered to address these issues. Examples include replacing existing non-LED lights with LED lights, implementing new highly water efficient systems, and adding E-waste recycling bins at strategic locations in the office.

Furthermore, we have committed to the Green Nation Pledge, an environmental sustainability initiative by the Ministry of Sustainability and the Environment of Singapore. To demonstrate our dedication and efforts in minimising



LED lights improve lighting experience and energy efficiency in the office.

our operational footprint, we adopt environmental best practices in our day-to-day operations, such as ceasing usage of single-use disposables and fixing air-con temperature to 25°C. Raising our air-con temperature to 25°C is expected to yield potential energy savings of 236,985 kWh/annum (equivalent to approximately 5% of energy consumption from our Singapore office for the year ended 31 March 2024).

In 2023, our Singapore office received the BCA Green Mark (Healthier Workplaces) Certificate (Platinum) from the Building and Construction Authority of Singapore. The award recognises companies that place their occupants' health, well-being, and comfort at the forefront of office design and daily operations, in addition to ensuring environmental sustainability in the office. As part of our Green Mark commitment, we are adopting eco-friendly renovation works and improving air quality in the office.

#### **Managing Business Travel**

As part of our annual budget process, we have introduced a carbon charge for business travel, using our prevailing internal carbon price. This is one of our key levers to promote disciplined travel practices across teams. Staff are encouraged to plan their

upcoming business trips in advance, optimise travel efficiency, as well as explore alternatives such as teleconferencing where possible. To further complement this, we have also developed an in-house flight emissions calculator to help staff gain a better understanding of how their flight paths and selections might impact emissions from business travel. The intent is to empower staff to make more conscious and sustainable decisions for their upcoming business travel.

## Leveraging Carbon Credits to Address Unavoidable Residual Emissions

To address our residual institutional emissions, we purchase carbon credits through Climate Impact X (CIX), a global marketplace and exchange for high-quality carbon credits. Carbon credits acquired through CIX are verified against global standards such as Verra and Gold Standard. We prioritise carbon credits with higher ratings such as AA-rated by Sylvera, and more recent vintage.

In line with our global portfolio and sustainability strategy which covers climate, nature, and social, we support a range of carbon avoidance and removal projects which accrue varied nature and social co-benefits to a diverse range of geographical regions.

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## 6.2 People

Key

## Our focus on sustainability as an institution extends from planet to people.



Panel discussion at Temasek Women's Network 2023 keynote event, Women Rising.

## Developing a Diverse, Equitable, and **Inclusive Institution**

We value diversity, equity, and inclusion. We foster an inclusive environment for our employees, one that respects and embraces differences across a wide range of dimensions, regardless of gender, age, religion, sexual orientation, nationality, ethnicity, physical ability, or neurodiversity. Guided by our MERITT values, we forge a culture where everyone feels respected, empowered, and is treated fairly.

Our Inclusivity@Temasek initiatives continue to strengthen our diversity practices and reinforce our culture of belonging. One such initiative, Temasek Women's Network (TWN), supports and inspires our female staff in their career journeys. Highlights included Women Rising, an annual event that marks International Women's Day which featured inspiring women entrepreneurs; a workshop hosted in partnership with the Human Library Organisation to foster a better understanding of the groups in our society that are often subject to prejudice, stigmatisation, or discrimination; TWN roundtables

## 34

Nationalities represented among Temasek employees

54%:46% Male Female

Gender mix among Temasek employees

with senior management to discuss topics impacting women in the workplace; as well as a maternity buddy programme.

Today, our staff encompass 34 nationalities with a gender mix of 54% male and 46% female. Our senior management is 73% male and 27% female. We continue to embrace and work towards diversity while ensuring a fair, meritocratic, and inclusive workplace.

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## People continued

#### **Developing a Culture of Sustainability**

Key

Highlights

We design various sustainability-focused initiatives to raise awareness among our people and empower them to adopt sustainable mindsets and behaviours.

More than 90% of our staff took part in sustainability-focused initiatives for the year ended 31 March 2024. These included a self-paced learning programme on our sustainability efforts, and activities such as a shoe recycling drive, upcycling workshops, as well as mangrove monitoring to assess the carbon abatement potential of urban mangrove habitats, as part of a project supported by Temasek.

Project GO! (Green Office) is an internal staff awareness series designed to enhance sustainability knowledge and encourage employees to volunteer their time to contribute towards environmental issues.

As part of Project GO!, in July 2023, we rolled out 17 bite-sized chapters focused on the science behind climate change, biodiversity collapse, natural resource depletion, and the impact these have on all of us, enabling employees to gain inspiration to take action at work and in their personal lives. For the year ended 31 March 2024, 129 of our colleagues started on this learning module.



Singapore staff at Kingfisher Wetlands, Gardens by the Bay, conducting mangrove monitoring.

#### Supporting Our People

Our Make-A-Difference (MAD) programme has been an integral part of our life in Temasek since 2008. MAD promotes a culture of personal ownership and responsibility. Individual and company-wide MAD targets go beyond financial and performance targets to cover self-development, institution, community, and sustainability goals, and to foster lifelong skills and healthy habits. We curated a learning module to deepen the understanding of Temasek's sustainability journey, how we have embedded sustainability through our various investments, as well as institutional and community initiatives. To support the well-being of our employees, we have developed a suite of programmes that focuses on mindfulness, personal resilience, and crisis support.

#### **Capacity Building and Knowledge Sharing**

Our employees are critical to advancing a more sustainable organisation. We continuously upskill and equip them with diverse skill sets and competencies to navigate an increasingly complex world, and to remain relevant for the future.

All staff undergo mandatory training in anti-bribery and anti-corruption, sanctions compliance, anti-harassment

and discrimination, as well as the prevention of insider trading, underscoring our commitment to a zero tolerance approach in these areas. We have also expanded our mandatory learning programmes to include topics such as our approach to sustainability, as well as diversity and inclusivity.

For the year ended 31 March 2024, each employee underwent an average of 35 hours of training.

### Health & Safety

We introduced resources and programmes that focus on caring for the emotional, social, and physical well-being and health of our staff, such as the *Because You Matter* initiative. Under this initiative, we launched a Well-Being Resource Hub to help our colleagues improve and maintain their health and well-being, and we have also organised mindfulness events that focus on mental resilience.

We are committed to creating a safe and conducive physical workplace. We do so by ensuring compliance with local safety regulations as well as our workplace health and safety policies.

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## 7.1 **Driving Partnerships for Change**

Proactive and committed collaboration can drive systemic changes required to solve sustainability challenges. Governments, corporations, and investors must work together on transition roadmaps and promote adoption of new solutions, due to the urgency, scale, and cross-disciplinary nature of the necessary transitions.

## **Institutional Partnerships**

Key

To create the impact and speed of change needed for all people to live well within planetary boundaries by 2050, collaboration at unprecedented levels will be of essence. Temasek actively engages and participates in a wide range of local, regional, and global initiatives on sustainability-related topics to advance industry standards and best practices, catalyse solutions, or shape new markets.

For example, as a convening member of the Singapore Sustainable Finance Association, which was launched in January 2024, we contribute to advancing frameworks and industry best practices for carbon markets, transition finance, blended finance, natural capital and biodiversity, and taxonomy. To support the harmonisation and advancement of sustainability disclosure standards. we contribute to the Sustainability



Dilhan in conversation at the annual FCLT Summit 2024 which brought together FCLTGlobal members and friends.

**Reporting Advisory Committee** established by the Accounting and Corporate Regulatory Authority and Singapore Exchange Regulation, and the Investor Advisory Group of the International Sustainability Standards Board (ISSB). As a member of the Global Impact Investing Network (GIIN) and a founding strategic partner to the Impact Lab by GIIN, we work to drive a deeper understanding of impact performance, risk, and financial return.

Our participation in various topical platforms of the World Economic Forum and in the Focusing Capital on the Long Term (FCLT) Initiative allows us to contribute to multi-stakeholder dialogues on the solutions required to enable broader system changes. We also continue to engage various global industry groups that drive the transformation of the financial industry towards sustainability, including the Glasgow Financial Alliance for Net Zero, the UN-convened Net-Zero Asset Owner Alliance, Principles for Responsible Investment, and others.

The energy transition gives rise to new industries and markets, such as hydrogen and carbon markets. We participate in relevant platforms such as the Hydrogen Council and the Integrity Council for the Voluntary Carbon Market to stay abreast of the developments, contribute our perspective, and connect with stakeholders along the value chain to identify opportunities to accelerate and scale solutions required on our journey to decarbonise our economies.

Beyond Temasek's participation in these initiatives, our staff also advance sustainability leadership through participation in sustainability-related committees and working groups in various industry associations, professional bodies, and platforms, such as the Institute of Singapore Chartered Accountants, the International Institute for the Unification of Private Law, the International Swaps and Derivatives Association, the Singapore Institute of Directors, and the Singapore Venture and Private Capital Association.

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## Driving Partnerships for Change continued

### **Collaborating to Accelerate** Sustainable and Transition Finance

Key

Asia accounts for more than half of global carbon emissions. It is still heavily dependent on fossil fuels for its economic development and energy needs. In addition to the significant amount of upfront capital required to transition Asia towards a greener economy, socioeconomic goals must also be considered in the transition process. Mobilising capital to bridge financing gaps and drive

investments into sectors with infrastructure at varying maturity stages is key to accelerating decarbonisation, and enabling a just and inclusive transition.

Our ability to deploy capital flexibly has enabled us to look beyond traditional financing approaches. Alongside other partners, we strive to address climate financing gaps with varied and innovative solutions. These include blended and/or transition finance mechanisms that can better support

**Partnering for Climate Transition** 

the development and scaling of sustainable infrastructure.

Clifford Capital Holdings is one of our platform companies providing debt financing solutions for the infrastructure and maritime sectors. It is committed to sustainable growth and net zero financed emissions by 2050. It has structured and issued three project and infrastructure debt securitisation transactions for eligible green and social loans since its first issuance in 2018, with its most recent issuance in September 2023.

## To reach net zero, greening the economy is as important, if not more important than growing the green economy. Sustainable and transition finance are key levers to accelerate the green economy transition. But they will require more radical innovations and deeper collaborations amongst governments, corporations, and investors.

- Connie Chan, Head, Financial Services, Temasek



<sup>1</sup> FTSE, Investing in the green economy 2022, May 2022

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## Driving Partnerships for Change continued

Pentagreen Capital, our joint venture with HSBC, has started to catalyse financing for sustainable infrastructure projects in Asia. It signed its first transaction with Philippines-based solar development company Citicore Solar Energy Corporation, structuring a US\$100 million mezzanine construction green loan with an initial tranche of US\$30 million. The initial tranche supports a portfolio of six solar projects in the Philippines and is expected to enable more than US\$300 million in total project capital value. The transaction reflects Pentagreen's potential as a specialised lender to remove barriers to bankability.

Key

Highlights

Our collaboration with Allied Climate Partners, International Finance Corporation, and the Monetary Authority of Singapore (MAS) to establish the Green Investments Partnership is a reflection of our efforts to expand the financing toolbox. The partnership aims to increase the bankability of green and sustainable projects in Asia, with an initial focus on Southeast Asia. This is part of MAS' Financing Asia's Transition Partnership (FAST-P), a Singapore blended finance initiative in collaboration with key public, private, and philanthropic sector partners that aims to mobilise up to US\$5 billion to de-risk and finance transition and marginally bankable green projects in Asia.

Beyond partnerships to deploy capital, we continued to support whole-ofsystem efforts and approaches by contributing actively to various sustainability-related initiatives and engagements to advance sustainability leadership and drive progress.

We joined the Transition Credits Coalition (TRACTION) as a knowledge partner to further explore transition financing mechanisms that can improve the economic viability of financing the early retirement of coal-fired power plants. Launched by MAS, TRACTION seeks to identify system-wide barriers by studying the challenges and developing solutions for transition credits to be utilised as a complementary and credible financing instrument. We will contribute our expertise, insights, and network to support the deliberations and any related pilots. We also participated in the World Bank Private Sector Investment Lab, in a collaborative effort to address the barriers to private sector investment in emerging markets, with an initial focus on scaling transition financing in renewable energy and energy infrastructure. By contributing our investor perspectives, we support the growing momentum and increasing level of commitment for the public and private sectors to come together to address global challenges and contribute to ideas for improved financing structures, approaches to balancing and allocating risks across investors, and reimagine new partnerships.

There is an urgent imperative to bridge the capabilities gap in climate tech innovation in Southeast Asia. To address this, we partnered Breakthrough Energy and Enterprise Singapore to establish *Breakthrough Energy Fellows* - *Southeast Asia*. This Singapore-based programme is the first Breakthrough Energy Fellows hub outside of the US. It will provide climate tech innovators with the catalytic funding and support needed to develop, commercialise, and scale promising climate solutions.



Arayat Solar Farm in Philippines, developed by AC Energy and Citicore.

Key

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## **Our Participation and Convening Role** 7.2

Our annual *Ecosperity Conference*, first held in 2014, promotes the twinning of ecology and prosperity for sustainable growth. It brings together key decision makers to share insights and best practices on sustainable development.

Our annual Ecosperity Week in 2023, themed "Breakthroughs for Net Zero", drew over 3,000 participants. Joining in-person and online, attendees deep dived into solutions and levers to fast-track decarbonisation, enable net zero cities, and finance Asia's net zero transition. The event also saw the launch of the 2023 Southeast Asia's Green Economy Report, which was written in collaboration with Bain & Company, GenZero, and Amazon Web Services. The report provided a stocktake



Panel discussion to catalyse the transition to a net zero Southeast Asia at Ecosperity Week 2024.

of Southeast Asia's green economy, and included insights into challenges and mechanisms to accelerate climate progress in the region.

We organised the inaugural Impact Investing Roundtable with the Centre for Impact Investing and Practices in 2023. Held on the sidelines of *Ecosperity Week*, the roundtable centred on discussions on driving inclusive growth in emerging markets to enable collective action in impact.

*Ecosperity Week 2024* was a milestone edition, as we marked the platform's 10<sup>th</sup> anniversary. Themed "Renewing Our Vibrant Spring", the event saw more than 3,000 in-person and online participants, as well as over 20 partners, across diverse sectors convening to discuss ways to translate climate commitments into action. The need to protect and restore nature featured high on the agenda, alongside the role of philanthropic capital and blended finance in bridging the climate finance gap. We also launched the fifth edition of the Southeast Asia's Green Economy Report at the conference.

It highlights immediate and high-impact investment areas, and how key accelerators such as green policies, incentives, and regional collaboration can accelerate the region's green transition. We continued to host the *Impact Investing Roundtable*, with a thematic focus on climate investing in emerging markets in 2024.

As part of our ongoing *Ecosperity* Conversations series. Temasek hosted various panel discussions at *Climate Week NYC* and *COP28*. The sessions provided insights on accelerating energy transition and decarbonisation in emerging markets, innovative solutions for climate finance deployment, and pathways to decarbonise the agri-food system.

Moving forward, we seek to further leverage *Ecosperity* to partner like-minded organisations in advocating for systems-level change on areas aligned with our institutional sustainability priorities. Such initiatives range from accelerating decarbonisation in hard-to-abate sectors, to strengthening corporate adoption of carbon credits and

scaling transition financing in emerging markets and developing economies.

Together with Temasek Trust, GenZero, and Conservation International, we were a strategic partner for The Earthshot Prize Awards Ceremony and the inaugural Earthshot Week, held in Singapore in 2023. Established by Prince William in 2020, the Prize seeks to discover and scale innovative solutions to tackle the planet's biggest environmental challenges. The Singapore edition saw more than 1,500 participants, including global leaders and youths, coming together across various events and engagements that spotlighted sustainable solutions, including those fit for Asia.

Finally, we took part in ISSB's COP28 Declaration of Support. As part of the ISSB Investor Advisory Group, we committed to advance the ISSB's global baseline for consistent and comparable climate-related disclosures.

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## **Relating to Our Community** 7.3

We believe in seeding social capital to foster a more inclusive and resilient world, so every generation prospers.

Sustainability in

As a global investor, our social licence to operate depends on our ability to create value for all stakeholders. including our communities. We believe in seeding social capital to foster a more inclusive and resilient world. so every generation prospers.

Key

Highlights

Our journey in building social capital started over 20 years ago, when we adopted a deliberate and structured approach, anchored on the twin pillars of governance and sustainability, to give back to communities.

Since 2003, we have been setting aside a portion of our net positive returns above our risk-adjusted cost of capital for community gifts. These are approved by the Temasek Board and then donated to partners to achieve our community objectives.

### **Community Gifting to Temasek** Non-Profit Ecosystem

Temasek Trust (TT) has been the primary beneficiary of our gifts. TT disburses grants for programmes to be developed and delivered by our non-profit ecosystem, including Temasek Foundation, Temasek Life Sciences Laboratory, Stewardship Asia Centre,

## 3.7 million lives

To date, Temasek's gifts to TT have impacted about 3.7 million lives across Singapore and beyond

and Mandai Nature. Our non-profit ecosystem has evolved over the years to better handle multi-faceted and complex social challenges.

To date, Temasek's gifts to TT have impacted about 3.7 million lives across Singapore and beyond.

TT has made good strides towards its vision to become a responsible steward of philanthropic assets, a trusted advocate of sustainability, and a proactive catalyst of positive impact.

Underscoring its catalytic role, the TT-backed Philanthropy Asia Alliance (PAA), with over 80 members and partners, crossed S\$1 billion of collective pledges last year. These pledges will help address key issues in the region surrounding climate and nature, holistic and inclusive education, and global and public health.



On the climate action front. TT became a Founding Partner of The Earthshot Prize, which aims to showcase and scale innovative climate solutions for a more sustainable future. As a Founding Partner, TT hopes to spotlight Asia in the fight against climate change.

More cross-border collaborations will be forged through TT's Asia Centre for Changemakers (ACC). Hosted by the Wealth Management Institute, the ACC aims to develop a regional community of active and informed changemakers ready to deploy their resources, skills, and passion for a better tomorrow.

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## Relating to Our Community continued

### **Community Gifting Beyond Temasek** Non-Profit Ecosystem

Key

Beyond our non-profit ecosystem, Temasek works with partners from the Public, Private, and People sectors to advance our community objectives, where our philanthropic capital, network, and industry insights can make the most impact.

#### **Advancing Capabilities**

In June 2024, we announced T-Spring, a S\$150 million gift to the community to advance capabilities and contribute to preparing Singapore's workforce and organisations to embrace a different world. The gift — which supports skills development, scholarships, and fellowships — is Temasek's tribute to Singapore's past, present, and future generations on our 50<sup>th</sup> anniversary. It reflects our intergenerational focus, underscores our roots, and

# S\$150m

Set aside as a gift to the community on our 50<sup>th</sup> anniversary

acknowledges human capital as the driver of our journey and its role in Singapore's success.

### **Amplifying Impacts Through Philanthropic Capital**

This year, we launched a pilot funding scheme to support impact enterprises that seek to achieve social objectives while operating in a financially sustainable manner. This highlights our belief that social and financial outcomes need not be mutually exclusive. Impact enterprises that aspire towards achieving a double bottom line represent a more sustainable way of delivering long-term impact. Under this scheme, we will provide recoverable grants to help impact enterprises scale their impact and operations. Our staff will also provide mentorship with the aim of empowering these impact enterprises to achieve self-sufficiency.

#### **Strengthen Accountability Through Impact Measurement**

As our programme reach and partnerships widen, we must ensure that our gifts are truly making a difference to the communities. We have developed an Impact Measurement

and Management framework that links the desired outcomes with programme activities across all our gifts. We see impact measurement as an essential part of good governance on our philanthropic journey and are working with our partners to co-create the measurement metrics. This will pave the way for more clarity and accountability, and ultimately, better outcomes for our communities.

#### **Doing Good in Our Communities**

As a responsible corporate citizen, we support local charities with donations and staff volunteerism across all our offices. When staff decide to launch a fundraising effort for a charity or cause, Temasek will provide matching grants.



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# Annex: Sustainability Performance Data (for year ended 31 March)

### **Our Portfolio**

Metric	Unit	2020	2021	2022	2023	2024
Greenhouse Gas Emissions						
Total portfolio emissions (Scope 1 and Scope 2)	million tCO <sub>2</sub> e	30	30	26	27	21
Portfolio carbon intensity	tCO <sub>2</sub> e/S\$M portfolio value	130	103	81	93	73
Portfolio weighted average carbon intensity	tCO₂e/S\$M revenue	*	*	119	116	92

#### **Our Operations**

Metric	Unit	2020	2021	2022	2023	2024
Greenhouse Gas Emissions						
Scope 1 emissions from company vehicles	tCO₂e	*	*	9	5	23
Scope 2 emissions from electricity (location-based)	tCO₂e	2,467	2,286	2,348	2,373	2,409
Scope 2 emissions from electricity (market-based) <sup>1</sup>	tCO₂e	2,467	2,286	2,348	915	501
Scope 3 emissions	tCO₂e	21,090	1,222	4,125	10,560	18,554
Business travel	tCO <sub>2</sub> e	19,929	323	2,782	8,473	15,850
Corporate events	tCO <sub>2</sub> e	1,161	#	21	513	905
Data centres	tCO2e	*	725	1,139	1,338	1,554
Employee commute	tCO2e	*	174	183	236	245
Waste generated	tCO <sub>2</sub> e	*	#	#	#	#
Total absolute emissions <sup>1</sup>	tCO₂e	23,557	3,508	6,482	11,480	19,078
Purchased Renewable Energy Certificates (RECs) and carbon credi	ts					
Purchased RECs to reduce Scope 2 emissions from electricity	tCO <sub>2</sub> e	-	-	-	(1,458)	(1,908
Purchased carbon credits	tCO <sub>2</sub> e	(23,557)	(3,508)	(6,482)	(11,480)	(19,078
Total emission intensity	tCO₂e/employee	28.8	4.2	7.4	12.0	19.0
Scope 1 emission intensity	tCO₂e/employee	*	*	#	#	#
Scope 2 emission intensity (market-based)	tCO₂e/employee	3.0	2.7	2.7	1.0	0.5
Scope 3 emission intensity	tCO₂e/employee	25.8	1.5	4.7	11.0	18.5
Energy Consumption						
Total energy consumption	kWh	5,727,911	5,357,539	5,499,106	5,597,014	5,574,982
From non-renewable sources	kWh	*	*	*	1,879,141	864,293
From renewable sources	kWh	*	*	*	3,717,873	4,710,689
Energy consumption intensity	kWh/employee	7,011	6,370	6,249	5,848	5,569

\* Information not available/measured in previous years.

# Amount is less than 1 tCO<sub>2</sub>e.

<sup>1</sup> Included in the calculation of total absolute emissions.

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# Annex: Sustainability Performance Data continued (for year ended 31 March)

## **Our Operations**

Unit	2020	2021	2022	2023	2024
m <sup>3</sup>	7,734	2,782	3,373	5,547	6,289
m <sup>3</sup> /employee	9.5	3.3	3.8	5.8	6.3
tonnes	*	3.4	11.6	15.7	19.1
million pieces	3.7	1.0	0.9	1.3	1.3
-	m <sup>3</sup> m <sup>3</sup> /employee tonnes	m <sup>3</sup> 7,734 m <sup>3</sup> /employee 9.5 tonnes *	m³       7,734       2,782         m³/employee       9.5       3.3         tonnes       *       3.4	m³       7,734       2,782       3,373         m³/employee       9.5       3.3       3.8         tonnes       *       3.4       11.6	m³       7,734       2,782       3,373       5,547         m³/employee       9.5       3.3       3.8       5.8         tonnes       *       3.4       11.6       15.7

## **Our People**

Metric	Unit	2020	2021	2022	2023	2024
Employment						
Total number of employees	number	817	841	880	957	1,001
Diversity						
Current employees by gender						
Female	%	46	45	45	46	46
Male	%	54	55	55	54	54
Current employees by age group						
≤30 years old	%	24	27	22	24	21
31–40 years old	%	43	42	42	42	44
41–50 years old	%	20	20	23	22	23
>50 years old	%	13	11	13	12	12
Current employees by nationality						
Singaporeans	%	60	60	58	62	61
Singapore Permanent Residents (PRs)	%	10	10	11	9	9
Other nationalities	%	30	30	31	29	30

\* Information not available/measured in previous years.

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# Annex: Sustainability Performance Data continued (for year ended 31 March)

## **Our People**

Metric	Unit	2020	2021	2022	2023	2024
Current employees by category & gender						
Senior Management						
Female	%	*	*	22	25	27
Male	%	*	*	78	75	73
Management						
Female	%	*	*	41	42	42
Male	%	*	*	59	58	58
Support						
Female	%	*	*	86	86	88
Male	%	*	*	14	14	12
New hires by gender						
Female	%	*	*	37	49	47
Male	%	*	*	63	51	53
Turnover by gender						
Female	%	*	*	41	46	42
Male	%	*	*	59	54	58
Development & Training						
Average training hours	hours/employee	*	*	31.8	29.8	35.0
Average training hours by gender						
Female	hours/employee	*	*	32.4	30.4	36.2
Male	hours/employee	*	*	31.3	29.4	34.1
Average training hours by category						
Senior Management	hours/employee	*	*	31.6	30.2	42.8
Management	hours/employee	*	*	32.3	30.5	34.9
Support	hours/employee	*	*	29.1	24.9	30.1

\* Information not available/measured in previous years.

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## **Cautionary Statement**

The material in this report is provided for informational purposes only and is subject to various qualifications and disclaimers which should be read in conjunction with it, including the gualifications and disclaimers available on our website. We expect the practices and approaches discussed in this report and methodologies used to create information in this report to evolve over time, and we may not update historical information for changes in our practices, approaches, or methodology. Similarly, certain statements in this report are forward-looking, which involve subjective judgment and analysis and reflect Temasek's expectations. All statements in this report that do not relate exclusively to matters of historical fact should be considered forward-looking statements. Such statements are subject to significant uncertainties, risks, and contingencies, including but not limited to changes in economic, market, geopolitical, social, and environmental conditions, among other factors.

These risks include, but are not limited to, risks associated with the energy transition, including the availability or unavailability of energy, renewable energy options and technology to enable transition and the use of renewable energy, the availability of carbon removal technology and options, fuel prices, international trade policy considerations, technological innovations, climate-related conditions and weather events, legislative and regulatory changes, our ability to gather and verify data regarding environmental impacts, our ability to successfully implement various initiatives throughout the company under expected time frames, the compliance of various third parties (including our portfolio companies) with our policies and procedures and legal requirements, our dependency on certain third parties to perform and other unforeseen events or conditions. To the extent such risks occur, it may cause actual occurrences to differ adversely and materially from such forward-looking statements.

Relatedly, there is no guarantee that we or entities in our portfolio will achieve our sustainability targets or, whether or not such targets are met, ultimately have a positive impact, either on particular sustainability matters or as a whole. We also rely on third party information for certain of our disclosures; while we are not aware of any material flaws with the information we have used, we do not assume any responsibility for the accuracy or completeness of such third-party information and, unless expressly indicated, may not have undertaken to independently verify this information or the assumptions or other methodological aspects underlying such information.

## TEMASEK



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