Indonesia's Sustainable Transformation

December 2021

Empowered by

ESG in Indonesia: Executive Summary

1 ESG is a top business priority for Indonesia

There is a **growing incorporation** of ESG principles globally, although challenges persist. This was accelerated during the pandemic, with 79% of APAC investors significantly or moderately increasing ESG investments by Q3 2020, according to MSCI research. In Indonesia a leading cause of this shift has been **applied pressure from foreign investors**. The Indonesian government has been proactive in working to create the conditions and necessary enablers for a **smooth transition** towards ESG and the UN SDGs, aligned with the country's development agenda.

2 Harmonised standards will enable reporting

While a company's ESG strategy can offer a wide-ranging approach to **risk mitigation and value creation**, incumbent adoption **barriers** include balancing ESG with growth targets, a lack of reporting standards and limited support from senior corporate leadership. IFRS Foundation's COP26 commitment to form a new International Sustainability Standards Board should enable **more consistent and comparable reporting**. Companies must start to identify ESG risks and opportunities now, while this set of core metrics is under development.

3 Technology can accelerate ESG achievement

Indonesia's digital economy will remain a **key driver of inclusive growth** in the coming years: with almost three-quarters of the population connected, digital tools can widen access to health care, education and employment. Fintech offers a route to trustworthy access to credit, particularly for unbanked MSMEs – which also supports gender equality. The adoption of existing solutions will empower Indonesians across the archipelago, **boost productivity** and improve **socio-economic outcomes**. This forms a basis for further innovation to support ESG targets.

4 Dedicated financing key for ESG potential

Indonesia is among the **global pioneers** for thematic bonds, and banks are seeking to mobilise private funding under the OJK's Sustainable Finance Roadmap. **IDX** reporting requirements and **OJK** Regulation No. 51/POJK.03/2017, as well as Indonesia's confirmed **Carbon Tax price** and the EU's **Carbon Border Adjustment Mechanism**, will add further impetus to sustainable business practices and ESG-aligned products and services. Indonesia's sustainable finance environment should provide fertile ground for robust private equity demand and bank participation in the coming years.

5 Indonesia's presence on global stage is growing

The 2021 G20 summit and **COP26** underlined Indonesia's increasing engagement with the international development agenda: with climate sustainability among the most urgent concerns for the coming decade, Indonesia aims to reach **net-zero** emissions by 2060 and restated its commitment to halt and reverse **deforestation**. The country's inaugural **G20 Presidency in 2022** will provide a platform for Indonesia to showcase its international leadership – ahead of another opportunity as **ASEAN Chair for 2023** – while the emerging market works to address ESG-related challenges at home.

6 ESG is a journey and an opportunity

Despite incumbent challenges, ESG strategy – from the establishment of good governance to the incorporation of science-based targets – offers **opportunities as well as threats.** Changes in consumer preferences present the most salient opportunity. In Indonesia businesses will have an opportunity to **generate revenue from carbon credits** as the price of carbon increases. Digital transformation, sustainable investment and policy reform will catalyse progress towards **development goals**, strengthen the country's ESG ecosystem and ultimately create **shared value for all**.

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3 Investment Landscape

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The UN Sustainable Development Goals are aligned with Indonesia's priorities for long-term growth

In 2015 the UN launched 17 integrated Sustainable Development Goals (SDGs) for 2030, designed to end poverty, protect the planet, and enable peace and prosperity

15 years

17 goals

169 targets

247 indicators

UN SDGs

Indonesia became the 60th member of the UN in 1950, five years after the charter was founded and five years after Indonesia's Proclamation of Independence. In 2015 the organisation's 193 members adopted its 17 SDGs for 2030. With a number of medium-term targets to achieve along the way, these aim to end poverty, improve health and education, reduce inequality and spur economic growth, while simultaneously tackling climate change and working to preserve oceans and forests.

Indonesia's planning

All 17 of the UN's goals for 2030, as well as 105 of its targets and indicators, have been integrated into successive versions of Indonesia's National Medium - Term Development Plan (RPJMN), which currently spans 2020-24. In April 2020 the UN and Indonesia's government signed the UN Sustainable Development Cooperation Framework 2021-25, aligned with RPJMN 2020-24 and targeting progress towards the UN's 2030 goals.

Amid the pandemic

ASEAN's largest economy graduated to the status of an upper-middle-income economy in mid-2020, according to the World Bank, with the country pursuing high-income status by 2045. The protracted Covid-19 pandemic threatened this progress, however, complicating efforts to tackle poverty, increase educational attainment and expand access to utilities. Indonesia was downgraded to lower-middle-income status during an annual review in mid-2021: this underscores the relevance and urgency of the UN SDGs.

Sources: *UN; World Bank*

Incorporation of ESG principles is on the rise globally, although challenges persist

Growing emphasis on ESG

- Environmental, social and governance (ESG) principles are closely aligned with the UN SDGs

  There is a growing incorporation of ESG into investment analysis, corporate strategy and decision-making amid widespread socio-economic challenges and renewed environmental commitments
- ESG risk analysis and mitigation can provide a buffer against external headwinds, including market volatility, and protect long-term financial performance

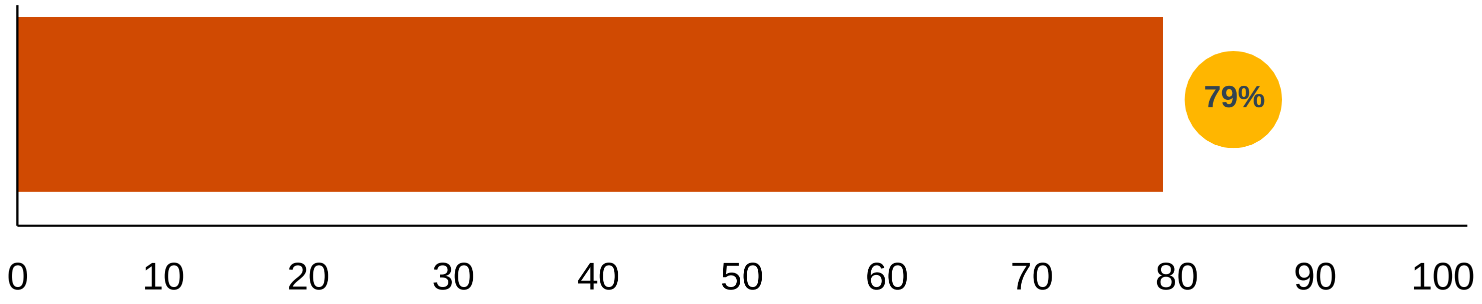
Challenges of ESG

- No one-size-fits-all approach
- Personalised trajectory: journey typically starts with development and integration of ESG strategy
- Organisations have varying risk exposure, priorities and opportunities to create shared ESG value
- Ratings, reporting and benchmarking: what to include and how to measure (see slides 24-25)
- Balancing E, S and G (see slide 26)

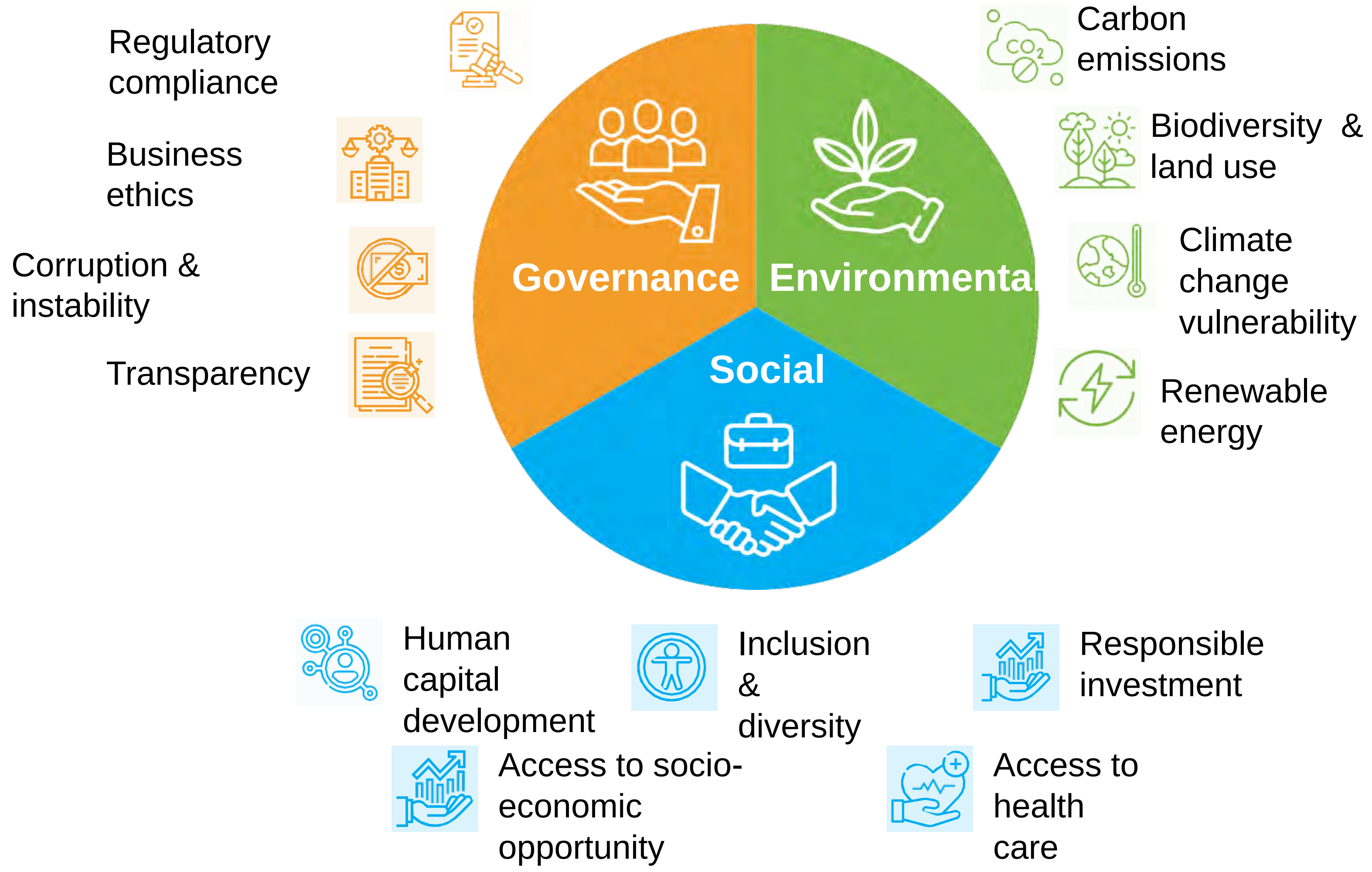
Digitalisation, investment and climate

Climate sustainability is among the most pressing concerns for the coming decade, with Indonesia – alongside many other emerging markets – particularly vulnerable to the negative impacts of climate change. Digital transformation and dedicated financing are key to unlocking the full potential of ESG.

APAC investors significantly or moderately increased ESG investments in response to Covid-19, September 2020*



*as per an MSCI 2021 global institutional investor survey



Incumbent challenges

ESG is increasingly recognised as a strategy for risk mitigation and value creation. This was accelerated during the Covid-19 period: 79% of APAC investors reported significantly or moderately increasing ESG investments in response to the pandemic by the third quarter of 2020, according to MSCI.

Nonetheless, a number of challenges remain. Key among these, there is no one-size-fits all approach: ESG risk exposure varies by organisation, as well as by market and industry. Within emerging markets in particular, it is paramount to balance environmental, social and governance concerns – adding another layer of complexity. Digital transformation and dedicated financing remain key for progress.

Sources: *MSCI*

A company's ESG strategy can offer a wide-ranging approach to risk mitigation and value creation

Less ambitious: **value preservation** if organisations...

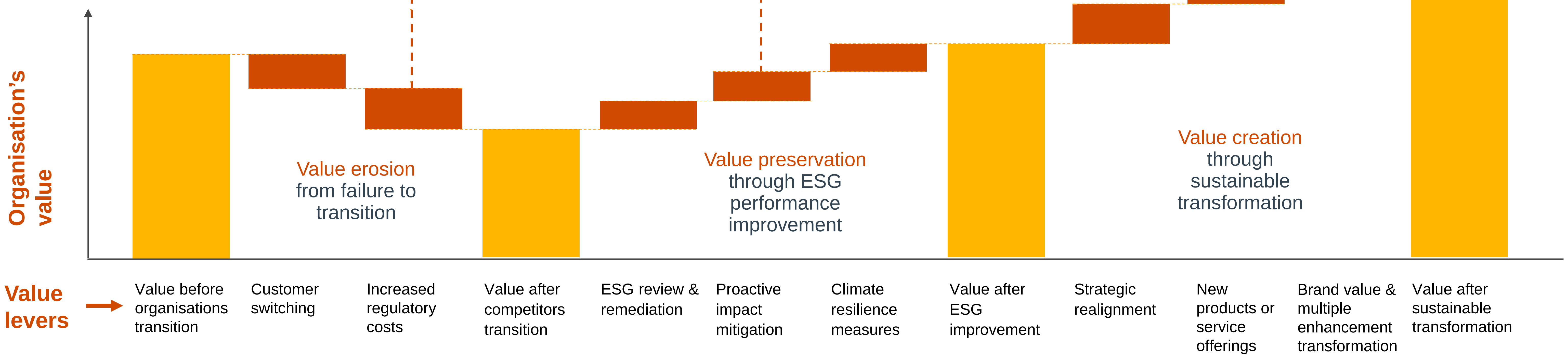
- Identify value-linked ESG factors and perform rapid remediation
- Review operations and value chain for exposure, and develop and implement risk-mitigation plans
- Define targets, key performance indicators and a roadmap to drive ESG performance
- Communicate relative ESG performance and resilience to key stakeholders

More ambitious: **value creation** if organisations...

- Align value proposition with ESG through review of vision and mission
- Re-evaluate business model and revenue streams, and identify possible transformation strategies that incorporate ESG risks and opportunities
- Develop a comprehensive public relations and communications strategy for consumer base and broader public
- Take steps to avoid so-called greenwashing by ensuring that reported ESG progress and targets are matched by actions

Business as usual: **value erosion** owing to...

- Progress on ESG issues by peers
- Changing consumer, employee and investor expectations
- Increasing regulation



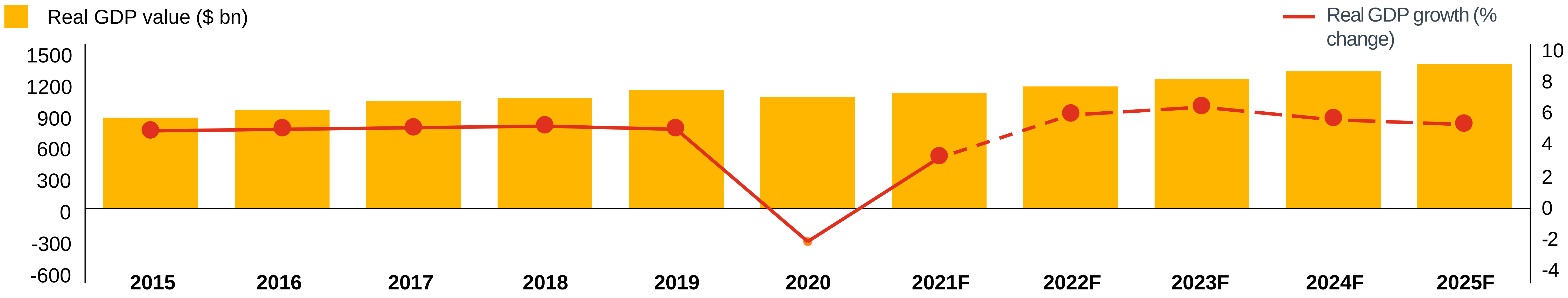
Value opportunities

ESG action is increasingly important for value preservation. Key drivers include ESG progress by peers; changing consumer, employee and investor expectations; and new regulations. Targeted ESG improvement can enable value preservation: early steps comprise the identification of value-linked ESG factors, the review of operations and value chains for exposure to climate change, social unrest and poor corporate governance, and subsequent risk mitigation. ESG-led investment and the sustainable transformation of business models and existing assets can unlock value creation. This encompasses an ESG-aligned vision and mission; transformation of business models and revenue streams; and an ESG strategy for consumers and the broader public.

Sources: *PwC*

Despite Covid-19 challenges, South-east Asia’s only G20 economy is expected to recover from 2021 onwards

Indonesia posted annual pre-pandemic growth of around 5%, with a rebound expected from 2021*

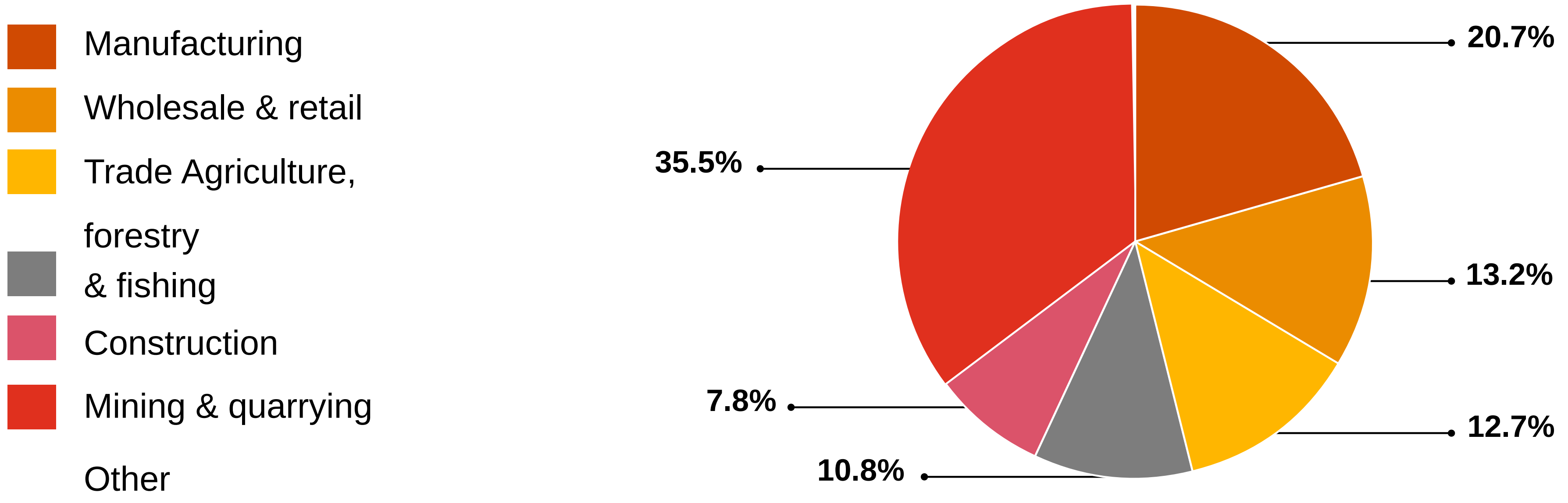


*October 2021 IMF forecast

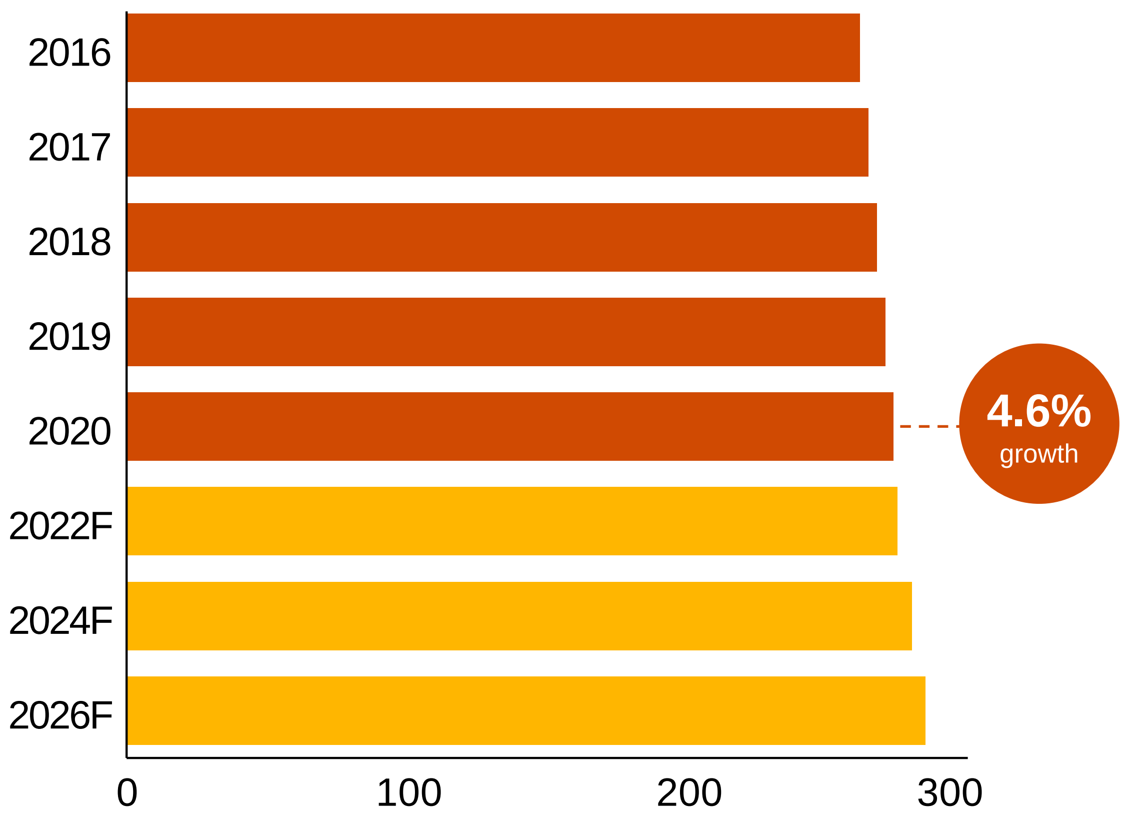
Indonesian government’s focus areas for 2022:

- Control Covid-19 transmission while prioritising health sector
- Maintain social protection programmes for the vulnerable
- Refine agenda to develop competitive human capital
- Continue infrastructure development and technological adaptation
- Strengthen fiscal decentralisation for inter-regional equality
- Implement zero-based budgeting to: encourage more efficient spending, strengthen synergies among central and regional governments, focus on priority and results-based programmes, and hedge against uncertainty

Contribution to GDP by sector, Q1 2019



Total population, 2015-26F (m)



Growth potential

Indonesia enjoyed annual GDP growth of around 5% over 2015-19, on the back of robust domestic consumption, and ongoing efforts to reform policy and simplify investment procedures under President Jokowi.

This trajectory was halted by Covid-19-related pressures during 2020, with a 2.1% contraction for the year. Nevertheless, the IMF’s latest forecast from October 2021 suggests 2021 GDP will exceed the 2018 figure, to be followed by 5.8% growth in 2022. President Jokowi has placed human capital development at the forefront of his second-term agenda for 2019-24. Alongside accelerated digital transformation from 2020, this should help the sizeable, expanding population unlock productivity-driven growth in key economic sectors.

Sources: : *BI; Bloomberg; IMF; World Bank*

Ahead of the G20 Presidency, Indonesia is increasingly aligned and engaged with international developments

APEC 2021

The three priorities of Asia-Pacific Economic Cooperation (APEC) 2021, hosted virtually by New Zealand, were: innovation and digitally enabled recovery; increasing inclusion and sustainability; and economic and trade policies to strengthen recovery. These align with Indonesia's long-term development aims: priority groups include SMEs, women, young people and rural areas.

G20, 2021-22

At end-October 2021 the G20 committed to net zero by mid-century and agreed to phase out coal power and fossil fuel subsidies – without a definitive timeline. Indonesia is G20 President for 2022. With the theme Recover Together, Recover Stronger, overarching priorities encompass inclusion and a sustainable, green economy. Focus areas: digital transformation; inclusive economic growth; health diplomacy, particularly with respect to Covid-19 vaccines; strengthening productivity; and sustainable finance. Indonesia will chair ASEAN in 2023.

During G20 and COP26 President Jokowi held bilateral meetings with a number of leaders, including US President Joe Biden, UK Prime Minister Boris Johnson, France's President Emmanuel Macron, India's Prime Minister Narendra Modi and Turkey's President Recep Tayyip Erdoğan.

President Jokowi on COP26 stage

Indonesia's president attended the 26th UN Climate Change Conference (COP26) in Glasgow in November 2021.

Takeaways from President Jokowi's speech:

- Indonesia's forestry sector on track to become net sink by 2030 amid slower deforestation and mangrove rehabilitation
- Energy sector progress includes: electric vehicle ecosystem development; construction of South-east Asia's largest solar power plant; and use of new and renewable energy, including biofuel
- Indonesia to continue mobilising climate finance and innovative financing, such as hybrid financing, green bonds and green *sukuk* (Islamic bonds)
- Climate finance and technology transfer from developed nations will be key to help Indonesia meet the UN SDGs, including climate goals

Commitments at COP26

- Glasgow Leaders' Declaration on Forest and Land Use: Indonesia among the 100+ pledges to halt and reverse deforestation and land degradation.
- Indonesia confirmed that its target to phase out coal has been brought forwards from 2055 to 2040, in partnership with the Asian Development Bank and the Philippines – and a separate partnership with Climate Investment Fund.
- The country also committed to the Global Coal to Clean Power Transition Statement, noting it will consider accelerating coal phase-out into the 2040s, conditional on additional international financial and technical assistance.

2021 progress

The year saw Indonesia strengthen its position on the global socio-economic stage, laying the foundation for its 2022 G20 Presidency and role as 2023 ASEAN Chair. President Jokowi received the G20 Presidency baton in October after the group committed to net zero by mid-century, and agreed to phase out coal power and fossil fuel subsidies. President Jokowi's speech at COP26 the following week spotlighted Indonesian efforts to slow deforestation and promote mangrove rehabilitation, plans to continue mobilising climate finance and innovative financing, and progress towards the transition. The country's G20 Presidency theme, Recover Together, Recover Stronger, seeks to accelerate international progress towards ESG-related goals.

Sources: *APEC; Setkab*

Research partner: Oxford Business Group

PwC's research partner for this publication, Oxford Business Group (OBG), is a global research and advisory company with presence in over 30 countries and is recognised internationally as a distinctive and respected provider of on-the-ground intelligence on world's fastest-growing markets.

Strategy & transformation — Climate — Operations — Disclosure — Finance

CASE STUDY: Food & beverages ESG strategy, roadmap, governance and reporting

- PwC developed a corporate sustainability framework to help drive implementation of sustainability across the organisation
- Created materiality matrix through workshops with board of directors, senior management and 11 group divisions
- Formed five-year sustainability roadmap for corporate and business divisions
- Helped develop first sustainability report in accordance with Global Reporting Initiative (GRI) G4 guidelines

CASE STUDY: Timber SDG impact measurement and reporting

- PwC developed materiality assessment, including online survey for stakeholder engagement
- Completed gap analysis and defined key performance indicators and targets using GRI Standards
- Prepared data templates and trained operational team
- Assisted with data collection, drafting of report and identification of GRI Standards indicators corresponding to material factors

CASE STUDY: Ministry of Finance Green *sukuk* sustainability assurance

- PwC provided limited assurance services to support the process and also selected information provided by the Ministry for the 2019 Green Sukuk – Allocation and Impact Report

Government's first Islamic green debt instrument, deployed to target five key areas: renewable energy, energy efficiency, disaster risk reduction, waste to energy and sustainable transport

In 2020 PwC made a science-based commitment to reach net-zero GHG emissions globally by 2030, including in Indonesia

Halve emissions

- Switch to 100% renewable electricity in all PwC firms worldwide
- Drive energy efficiency improvements in all offices
- Reshape client service model to balance remote and on-site work
- Engage with suppliers to tackle their climate impact
- Reduce air travel, which accounts for 85% of PwC emissions

Work with clients

- Advance non-financial reporting so stakeholders understand organisation's climate impact
- Embed implications of ESG factors into work for clients

Public policy discussions

- Advance thinking on structural reforms across economies

Sources: *PwC*

Eddy Rintis,
Territory Senior Partner,
PwC Indonesia

Why does Indonesia present an appealing responsible investment opportunity?

With the fourth-largest population globally and a 67% labour force participation rate, Indonesia is expected to continue to attract investment across industries.
Given its abundant forests and biodiversity, and large mineral and agriculture industries, Indonesia has an opportunity to play a leading role in the global carbon-trading market.
Renewable energy and low-carbon development have already begun to shape Indonesia's energy transition. Programmes focused on social development will be a key driver of improved livelihoods and economic growth.

In which ways can organisations leverage technology for ESG-related goals?

Technology can play a critical role in helping organisations achieve their ESG ambitions. Once a company determines its ESG goals, the identification of related data points will require new data-collection methods.
Companies can leverage various technologies – such as geospatial planning, satellite imagery and unmanned aerial vehicles – to generate reliable, verifiable and real-time data for analysis and monitoring. Data analytics can process a high volume of statistics to provide more reliable and useful information.
Moreover, as companies determine their emissions-reduction or net-zero targets, they will need tools that can calculate and monitor their emissions.

Melli Darsa,
Legal Senior Partner,
PwC Indonesia

How are corporate attitudes towards ESG evolving in Indonesia?

The shift towards ESG in Indonesia has been more abrupt than the shift witnessed in many developed economies. The transition in developed markets has been directly linked to investor sentiment, with ESG indices outperforming non-ESG indices. The primary catalyst in the country has been applied pressure from foreign investors.
The Indonesian government has been proactive in working to create the conditions and necessary enablers for a smooth transition to ESG adherence. However, there remains more to be done in terms of nurturing supportive policy at the national level, and aligning the country with ASEAN and G20 objectives.

What will be the impact of Indonesia's carbon tax?

Indonesia's carbon tax scheme, launched in October 2021, will initially impact energy suppliers before extending to other industries. As we head towards the end of 2021, there remain a number of uncertainties surrounding the provisions of the final scheme.
The government is discussing a cap-and-tax and cap-and-trade framework, wherein companies will have a cap on their emissions allowance and any emissions in excess of the cap will be taxed at Rp30,000 per tonne of CO_2, or they will have the option of trading excess emissions with another plant with a carbon allowance surplus. The government may cut the emissions allowance and increase the carbon price over time.

"Technology can play a critical role in helping organisations achieve their ESG ambitions"

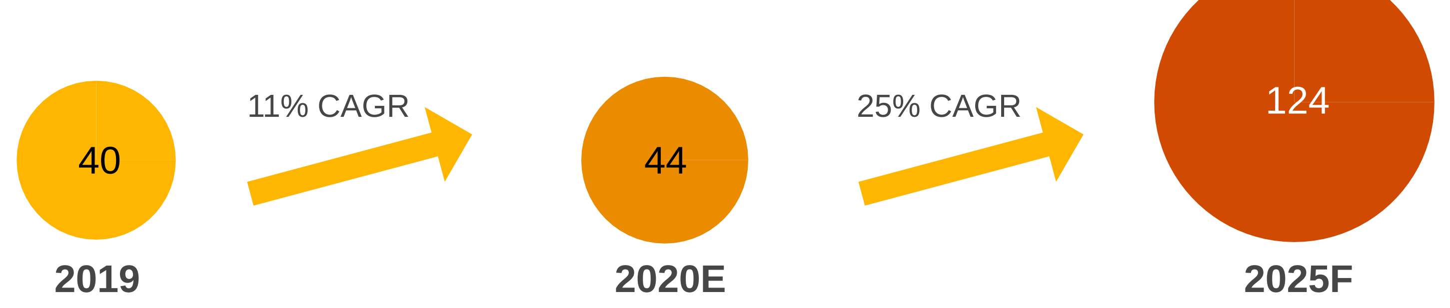
Digital Transformation

Indonesia's digital economy will remain a key driver of inclusive growth in the coming years

With a large, consumption-driven domestic market and accelerated digitalisation during 2020-21, Indonesia's burgeoning digital economy looks set to drive growth and enable inclusive development in the coming years. Fintech, telemedicine and education tools are among the standout opportunities. Widening internet access will be key to unlocking this potential.

Value of Indonesia's digital economy looks set to triple, 2020-25F*

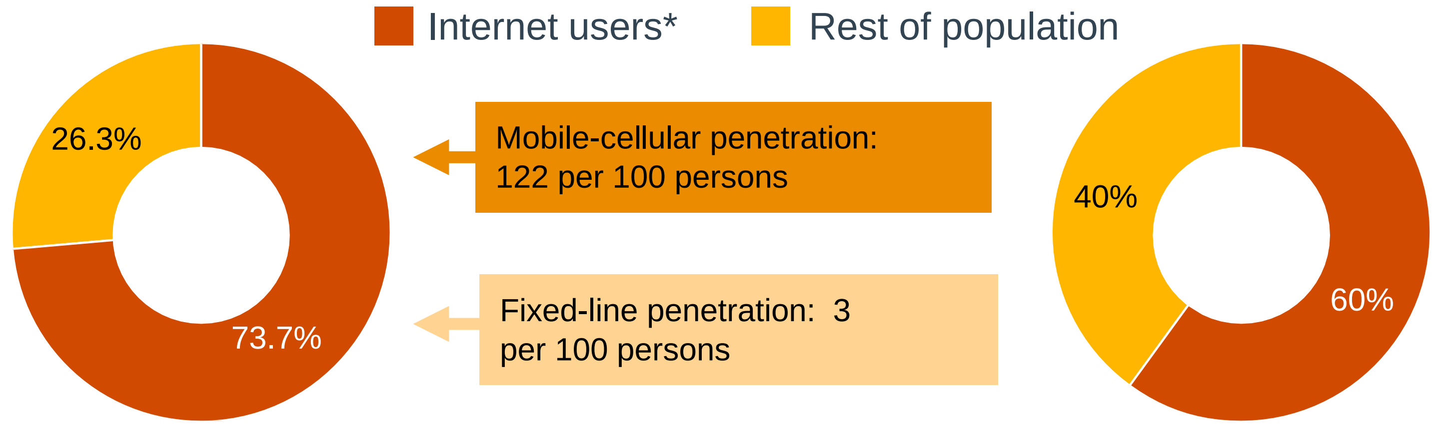
Gross merchandise value ($ bn)



**Nov 2020 report by Google, Temasek and Bain & Company*

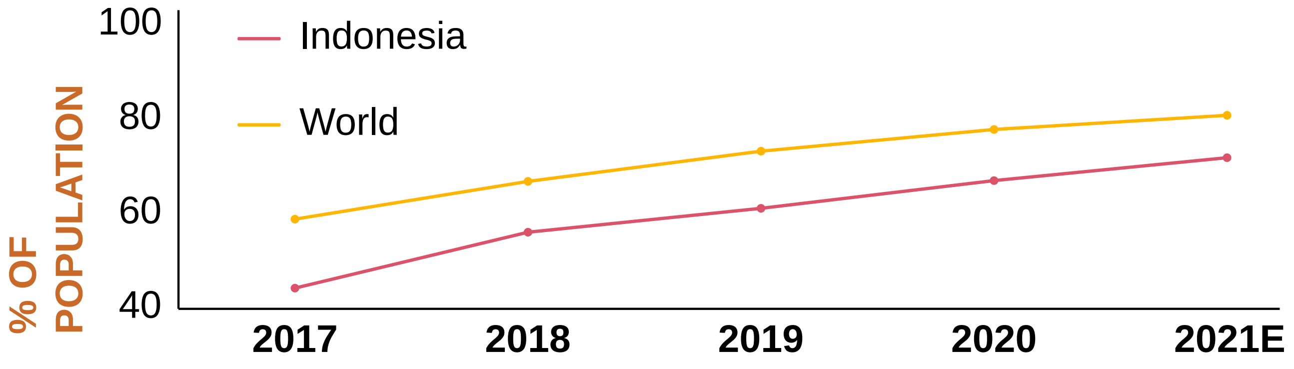
Internet penetration in Indonesia, 2020

Internet penetration globally, 2021

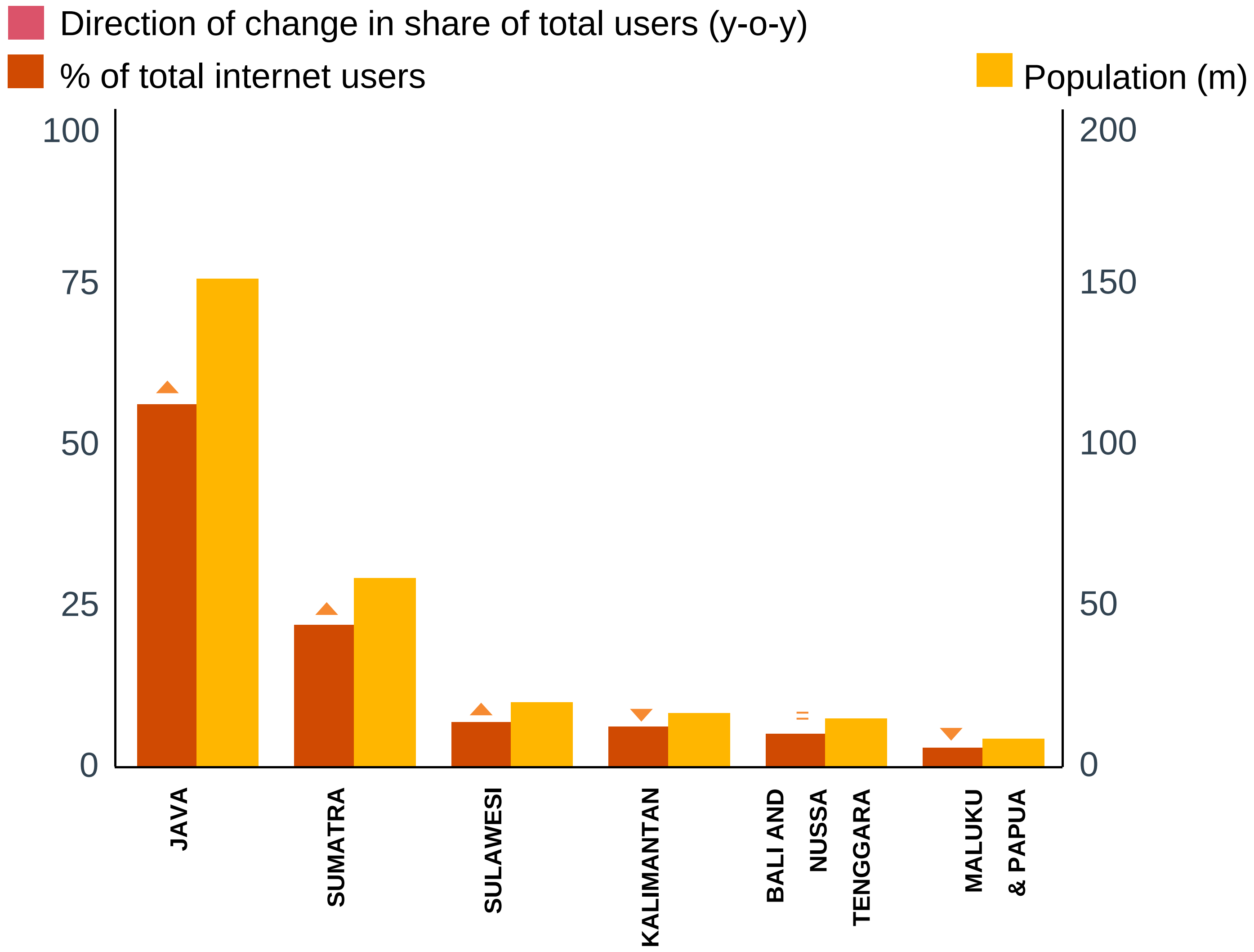


**all users, including fixed wireless & mobile broadband*

The country's smartphone penetration has outpaced the global average, 2017-21E



Indonesia's internet connectivity varies by region, Q2 2020



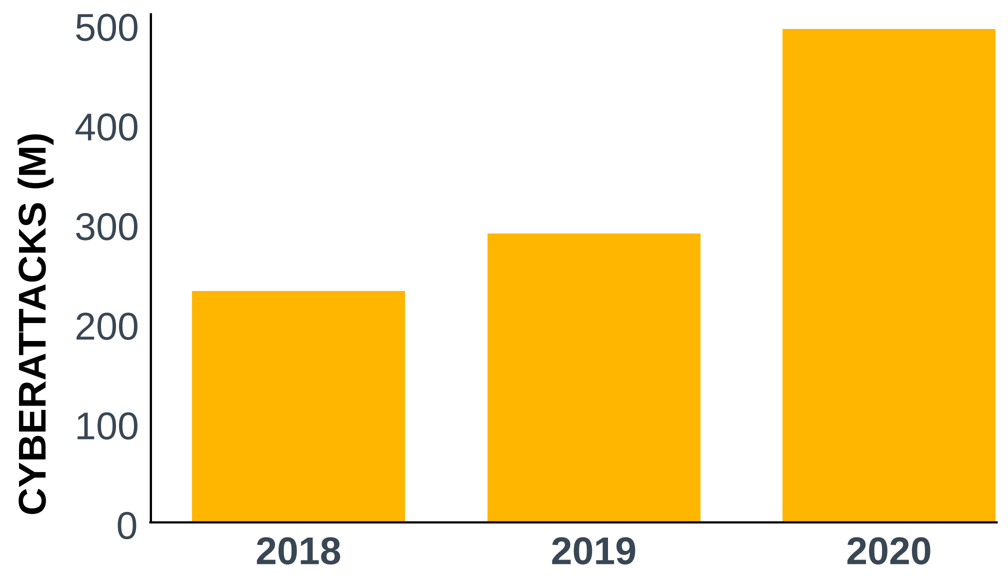
Digital expansion

Internet access in Indonesia has improved substantially over the last decade: almost three-quarters of Indonesians were connected in 2020, far above the global average of 60%. Internet connectivity in remote areas remains difficult, though there is optimism that increasing smartphone penetration can help leapfrog this challenge. The Covid-19 pandemic accelerated Indonesia's digitalisation as consumers, businesses and governments turned to digital solutions to accomplish everyday tasks. Forecast to almost triple in value between 2020 and 2025 and with sizeable opportunities yet to be unlocked in remote areas, Indonesia's burgeoning digital economy looks set to remain a key growth driver in 2022 and beyond.

Sources: *Brodynt; Google, Temasek and Bain & Company; Statista; UN; World Bank*

Widening digitalisation requires good governance to combat threats and instil trust

The number of cyberattacks in Indonesia almost doubled from 2019 to 2020



Most commonly detected threats in Indonesia, 2019


Mobile ransomware


Crypto-mining


Mobile banking trojans

→ Key opportunities to increase consumer trust

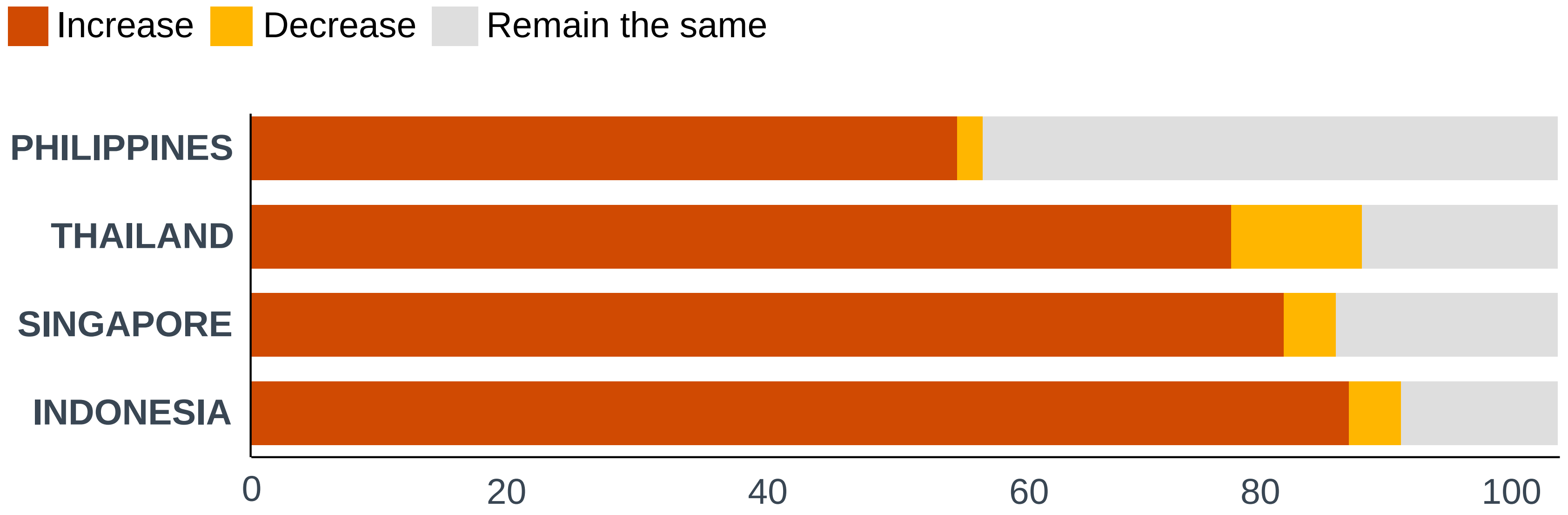
Draft Law on Cybersecurity and Resilience

Legislation first proposed in 2019 and still under parliamentary deliberation, alongside the Personal Data Protection Bill, as of the fourth quarter of 2021. Proposed provisions:

- It will be illegal to collect consumer data without permission
- Requires businesses to alert customers within days of knowledge of a security breach
- Includes fines of up to Rp210bn for non-compliant businesses, and up to seven years in prison for individuals

There is hope that the new legislation will improve consumer trust and therefore encourage adoption of digital technologies.

Indonesian companies were more likely to increase cybersecurity spending than regional peers in 2019-20*



RELATIVE CHANGE IN COMPANY CYBERSECURITY BUDGETS (% OF SURVEY RESPONDENTS)

*survey conducted by Palo Alto Networks in February 2020 across small, medium and large companies active in a variety of dijferent industry sectors (400 respondents, 17% C-suite and 83% ICT)

Mitigating threats

The rapid developments of digitalisation comes hand in hand with threats to digital security: this was clear in 2020, when the unprecedented pace of digital expansion saw the number of cyberattacks in Indonesia almost double. The theft of personal information, including banking details, from smartphones is among the most prevalent cybersecurity threats in the country. Even prior to the pandemic, Indonesia's public and private sectors had committed to improving cybersecurity to build trust in digital services: over 80% of Indonesian companies surveyed in February 2020 had increased cybersecurity spending over the previous year, while the public sector planned to issue cybersecurity legislation in 2021.

Sources: *Indonesia's National Cyber and Crypto Agency (BSSN); Palo Alto Networks*

Fintech offers a route to trustworthy access to credit, particularly for unbanked MSMEs

Financial services authority (OJK) regulations to boost the national fintech ecosystem, 2016-18

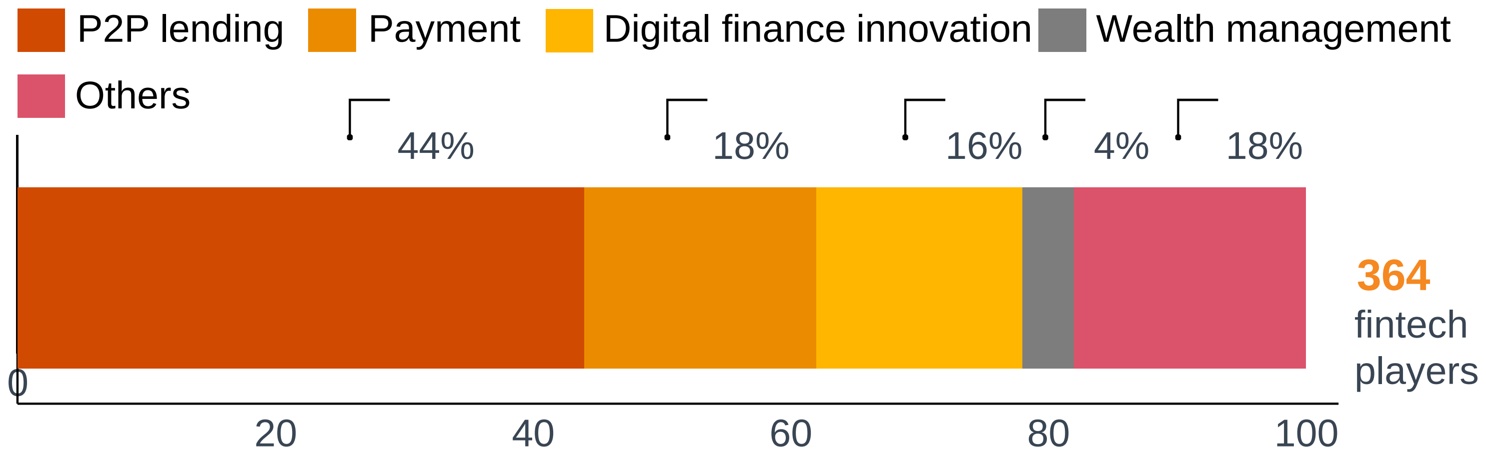
P2P lending
OJK Regulation No. 77/POJK.01/2016
MSMEs must be at least 15% Indonesian-owned, obtain a licence from the OJK and acquire credit guarantees from insurance firms

Regulatory sandbox
OJK Regulation No. 13/POJK.02/2018
Requires fintechs to undergo a one-year sandboxing period, extendible up to six months, under OJK supervision

ICT-based stock crowdfunding
OJK Regulation No. 37/POJK.04/2018
MSMEs can raise funds from retail investors through equity crowdfunding using online platforms

Updated by Bank Indonesia (BI) in April 2021 with regulatory sandbox 2.0, which comprises an innovation lab, engineered to test new payment innovations; an industrial sandbox, to promote existing innovation; and a regulatory sandbox for innovation in payment policies.

Peer-to-peer (P2P) lending and payment providers dominate Indonesia's fintech market, April 2020



Digital banking transactions in Indonesia accounted for around **83%** of total transactions by number as of end-December 2020: **16%** were performed at ATMs and **1%** at branches.

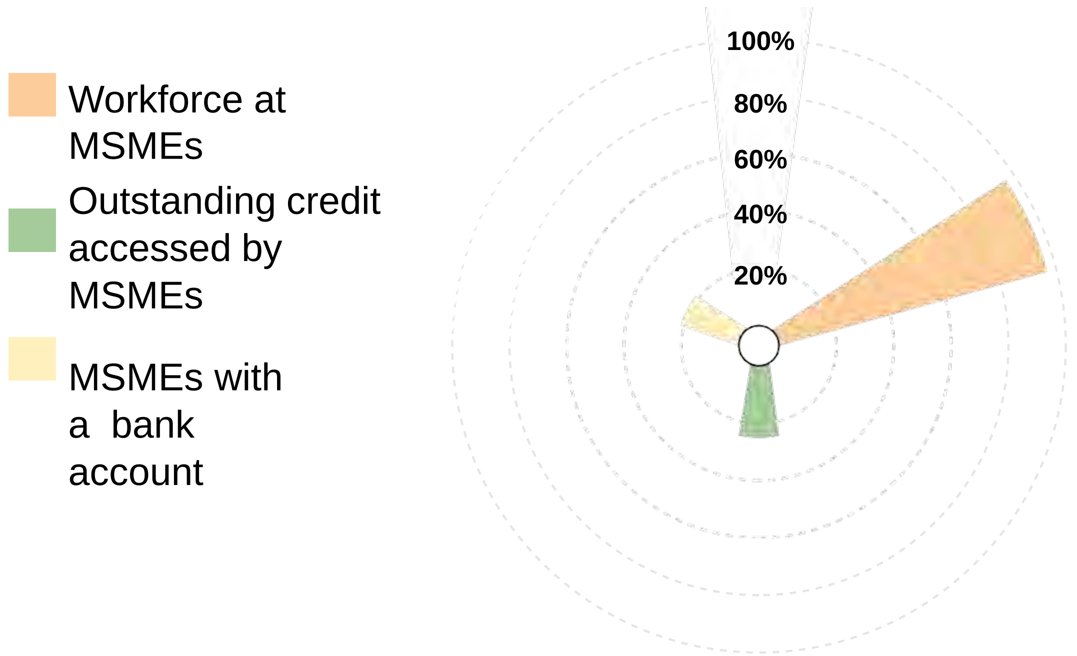
Access and trust

Bank Indonesia took steps to expand digital financial inclusion during the pandemic, including strengthened collaboration with fintech players. Indonesia's fintech ecosystem comprised 364 players as of April 2020. Primarily providing P2P lending and payment solutions, these could be key in facilitating access to credit for MSMEs. MSMEs account for the vast majority of employment – with around half of small enterprises owned by women – and yet they remain overwhelmingly unbanked.

The OJK aims to build trust in the fintech ecosystem: with respect to wider and safer access to finance for MSMEs, regulations include transparency in P2P lending and a sandbox to nurture innovation.

Indonesia's MSMEs offer considerable growth opportunities for financial services

Economic and financial relevance of MSMEs (% of total)



Indonesia's MSMEs in numbers

116.7m workers as of 2017

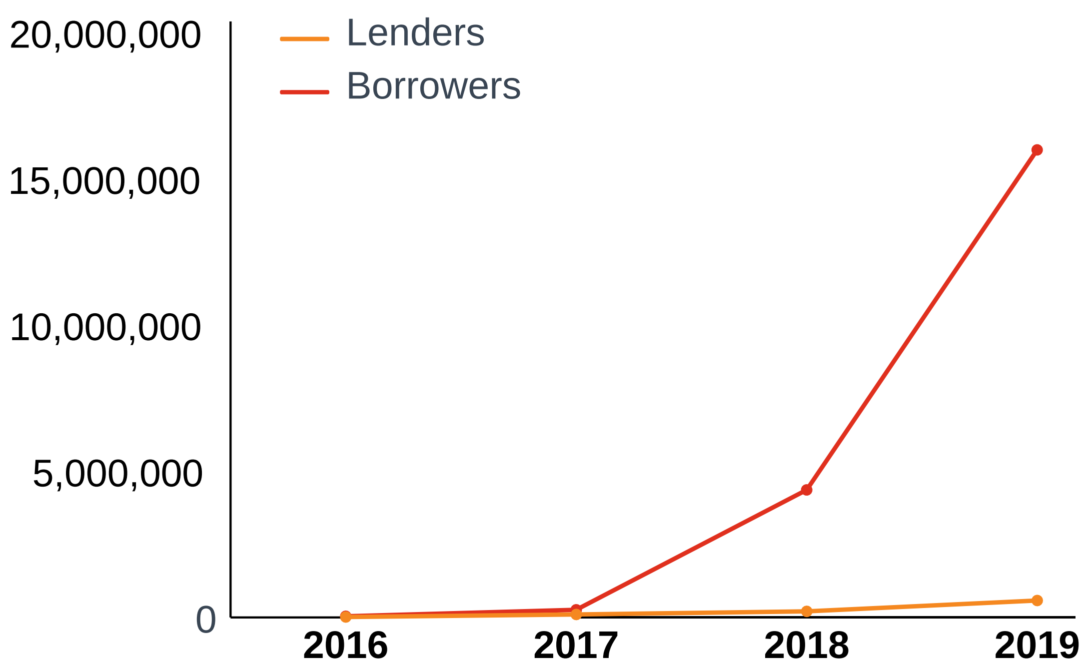
Rp1086.5trn in loans as of June 2018

14.3m bank accounts as of September 2017

51% of small enterprises and **34%** of medium-sized enterprises are owned by women

9.1% of GDP contributed by female-owned SMEs

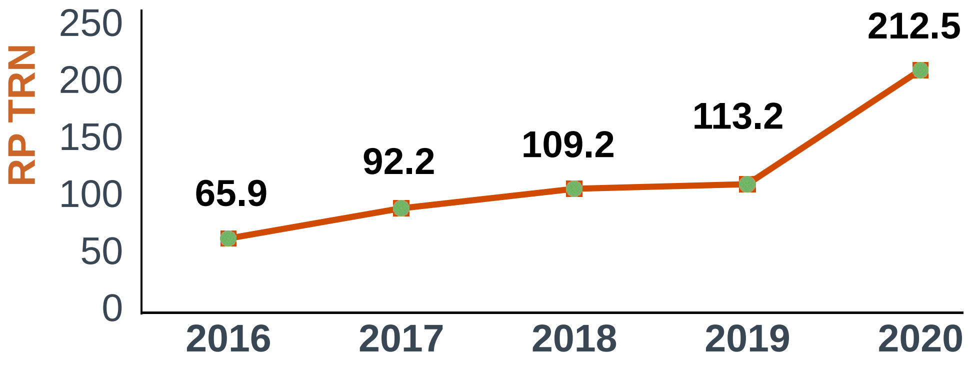
The number of P2P lending fintech and borrowers has soared since OJK issued Regulation (POJK) No. 77/POJK.01/2016



Sources: *BCA; BI; Google, Temasek and Bain & Company; ICLG; IFC; McKinsey; OJK; PwC*

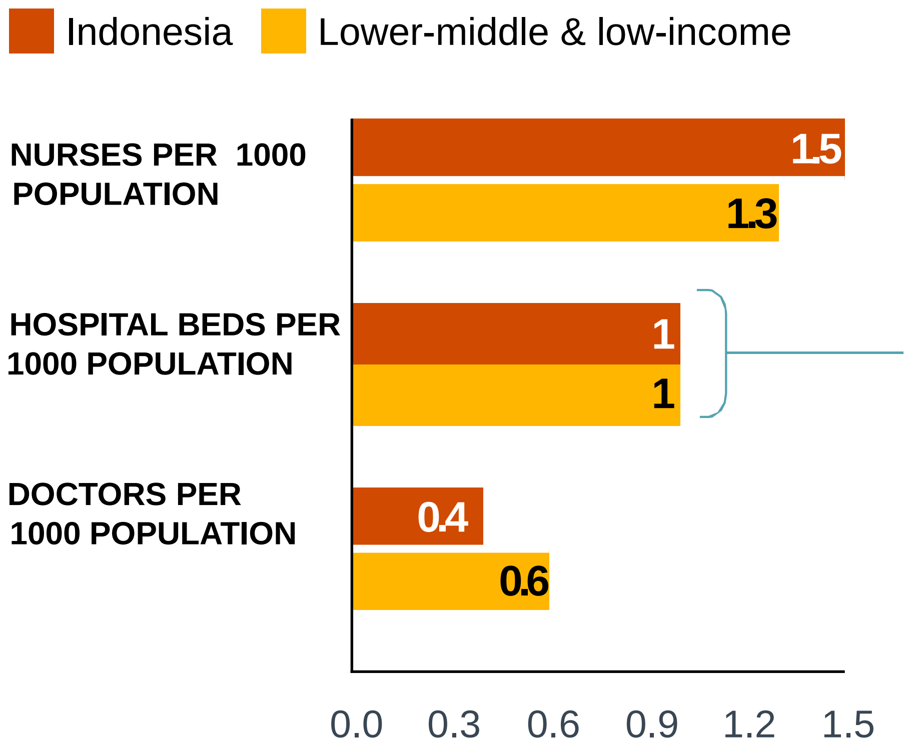
Rapid expansion of telemedicine is widening access to health care and could fuel growth

Indonesian government's health budget has more than tripled, 2016-20



Health budget rising amid efforts to expand the Universal Health Care initiative launched in 2014, targeting full coverage by 2019 – yet to be reached before pandemic-related disruption

Indonesia's health care resources were near the average for lower-middle and low-income countries, 2017



Inequalities in health access by locality pose a barrier to inclusive development, 2018

Hospital beds per 1000 population

Riau	0.98
West Java	0.85
West Nusa Tenggara	0.71

Digital tools can help address stunting, a notable health concern

- 27.7% of Indonesian children under the age of five were stunted – with impaired growth or development due to chronic malnutrition or repeated infections in early life – in 2019
- National Strategy to Accelerate Stunting Prevention Programme 2018-24 is a $3.9bn package to address the issue. Includes awareness, behaviour change, parenting and caring practices.

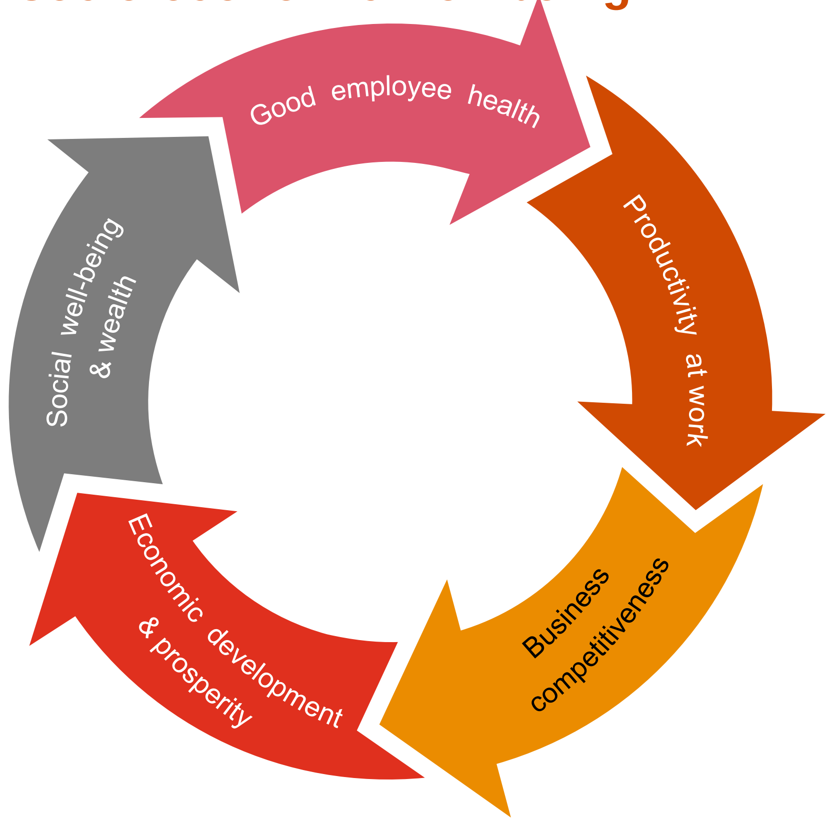
To strengthen frontline nutrition spending and collaboration, development workers are equipped with digital solutions to enhance workflow, support community empowerment and improve social accountability. App features includes village mapping for supply-side readiness; social mapping to register priority households; risk-based task management; and reporting.

Government implemented the PeduliLindungi application as part of its long-term pandemic strategy

- National digital Covid-19 contact-tracing system, using mobile location data
- Notification upon entry to a red zone with confirmed or suspected Covid-19 cases
- Access to health checks and consultations

Since October 2021 domestic air passengers are required to show proof of at least one administered Covid-19 vaccine on the app

Good employee health facilitates socio-economic well-being



Relationship between public health and productivity

Real world impact

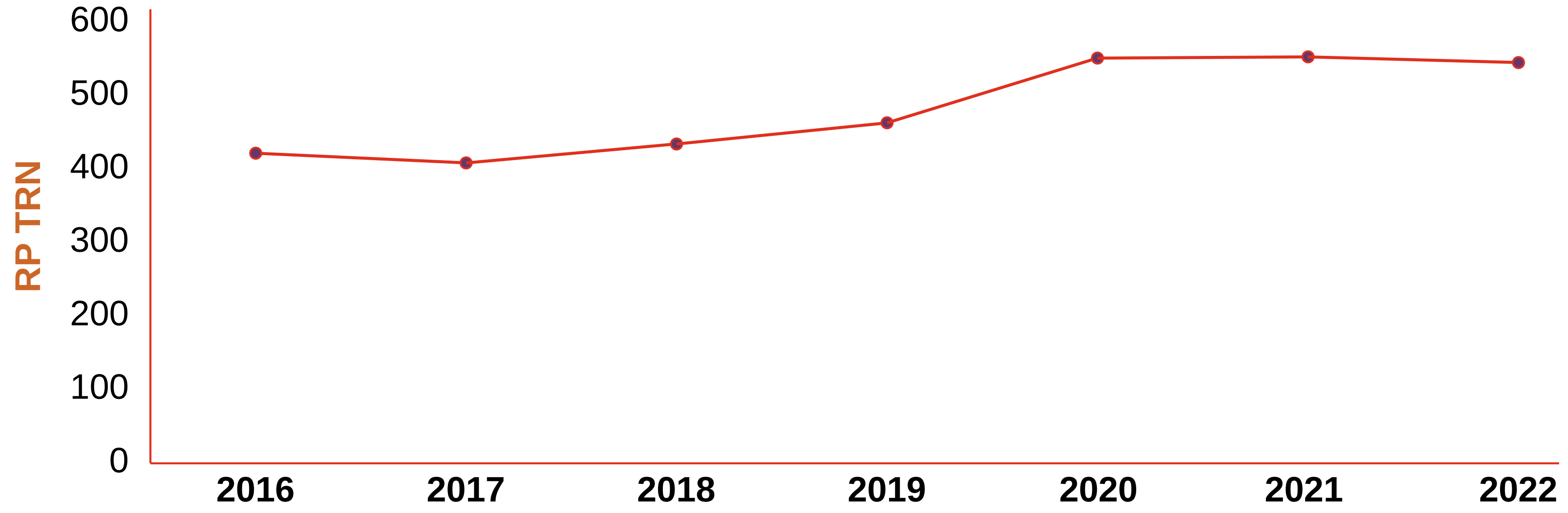
Digital tools offer substantial potential to widen health care access in Indonesia's rural areas. The number of active users of some of the country's most popular telemedicine services increased by around 70% during the pandemic.

As underlined by the World Health Organisation, improved health can enhance individual productivity, boost national competitiveness and ultimately raise socio-economic well-being. Mobile applications are not only used to curb the spread of Covid-19, but could also help prevent non-communicable diseases by streamlining the workflow of development workers. This may help address stunting, which affected more than one in four children the year before the pandemic.

Sources: *MoH; OECD; Statista; WHO; World Bank*

Digital tools can widen access to education, employment and skills development

Indonesia's budget for education íncreased by 29% in 2016-22



Access to education varies by locality

70% secondary enrolment in East Nussa Tenggara, Sulawesi and West Papua in 2019

85% secondary enrolment in Aceh and Bali in 2019

16% of Indonesians received tertiary education, compared to G20 average of 38%, in 2017

57% secondary enrolment in Papua

Labour evolution

Human capital development remains among President Jokowi's policy priorities. This will be essential for the country to meet future labour market demands and achieve high-income status.

Indonesia's Human Capital Index score rose marginally from 0.53 in 2018 to 0.54 in 2020, according to the World Bank. This means that a child born in Indonesia will be only 54% as productive as they could be with complete education and full health. Inequalities based on household income remain a serious challenge. Digital tools can help address this, expanding the reach of the labour market, offering skills development and supporting Indonesia's transition towards a knowledge-based economy.

Digital tools offer wide-ranging value for human capital development

- Finding, attracting and retaining talent is among the greatest challenges for global human resources leaders, according to PwC's 2020 Human Resources Technology Survey
- Developing people to reach their full potential is another widespread challenge for companies
- Digital tools can drive productivity, innovation and growth, but require upskilling at all levels
- Upskilling amid automation widens access to high-skilled, value-added socio-economic opportunities

Technological innovations help widen access to Indonesia's labour market

Labour market information system, Sistem Informasi Pasar Kerja, developed by the Ministry of Manpower

539,730 Registered jobseekers

485,212 job vacancies

Online registration of individual jobseekers and firms, 2018 data

Government aims to increase the number of vocational training centres

Pre-pandemic	2024
300	500

President Jokowi's Pre-Employment Card Programme leveraged technology to help laid-off workers, 2020

Rp20trn

5.6m participants

Certified **digital skills training** to widen socio-economic opportunities

The pandemic brought edtech investments to Indonesia but penetration remains a challenge

Edtech is concentrated in Jakarta, where **55%** of firms operate

57% of students are unaware of government-provided Rumah Belajar platform

Social media and conferencing apps are **more popular** than edtech for digital learning

Sources: *Cabinet Secretariat; OECD; PwC, Statista; UNESCO; UNICEF, World Bank*

Investment Landscape

Regulatory changes have been introduced to strengthen sustainable investment landscape

The OJK has raised ESG requirements for financial services players and listed companies

Indonesia's financial services providers have been required to submit either a sustainability report or a sustainable finance action plan (RAKB) since 2019, and all other issuers and public companies have been required to do so from 2020 – as per OJK Regulation (POJK) No. 51/POJK.03/2017.

IDX

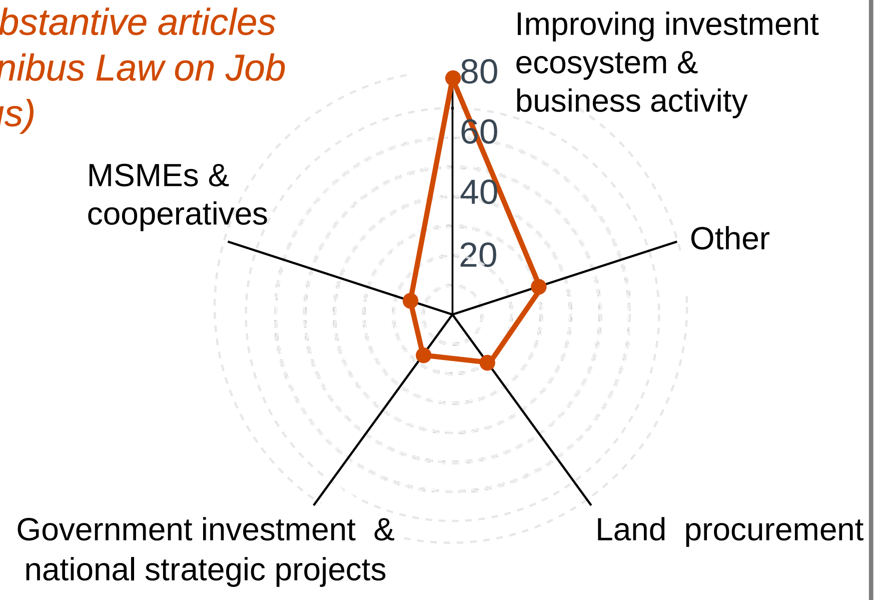
IDX's ESG leaders outperformed their peers, February 4, 2014 - January 29, 2021

37.3%	34.7%	25.5%
Indonesia Stock Exchange (IDX) ESG Leaders, index comprised 30 constituents (as of January 2021) from IDX80 with low ESG risk rating	IDX Composite (IHSG)	LQ45, index of 45 most heavily traded stocks

Omnibus Law on Job Creation aims to improve ease of doing business and attract investment

Enacted in November 2020. Aimed at reducing red tape in business and labour laws, which were viewed as unnecessarily complex. Amends some 78 laws and consists of 15 chapters.

Breakdown of substantive articles amended by Omnibus Law on Job Creation (by focus)



Generally welcomed by the business community: optimism that a more agile labour market and reduced red tape will attract investment and facilitate socio-economic growth. However, amid concerns the legislation undermines worker rights and weakens environmental protections, in end-December 2021 the Constitutional Court ordered the government to amend parts of the law within two years.

Technical Guidelines for Banks for the Implementation of OJK Regulation No. 51/POJK.03/2017 on sustainable finance

Released in 2018 by the OJK

Classify 12 sustainable business activities to help banks improve their sustainable portfolio financing

Elaborate on Sustainability Report/RAKB

Among them:

- Renewable energy
- Sustainable water and wastewater management
- Environmentally friendly transportation
- Environmentally sound buildings

Investment business list was designed to welcome increased foreign investment

- Presidential Regulation No. 10/2021, as amended by Presidential Regulation No. 49/2021, introduced an investment business list – sometimes referred to as a positive investment list. Effective March 2021, this replaced a so-called negative investment list of segments closed to foreign ownership.
- Listed business lines are open for 100% foreign investment; investors can enjoy tax facilities in the form of tax holidays, tax allowances or investment allowances. Includes additional provisions to favour MSMEs.

Sectors with notable foreign investment growth potential, according to the Ministry of Investment/Indonesia Investment Coordinating Board (BKPM)

- Manufacturing
- Infrastructure
- Digital economy
- FMCG
- Downstream natural resources

Infrastructure → Government aims to invest Rp430bn in infrastructure projects, in addition to the construction of the new capital (see slide 29), 2020-24

Downstream natural resources → Primarily nickel and other minerals used for batteries

Sustainable policies

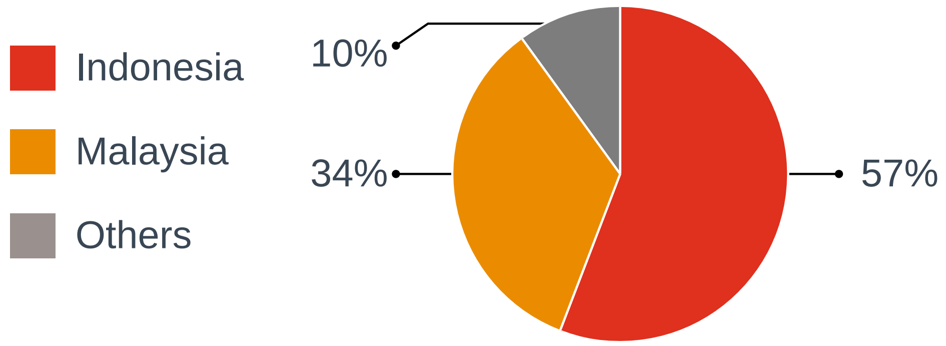
OJK Regulation (POJK) No. 51/POJK.03/2017 raised the ESG requirements for financial services providers and listed companies from 2019 and 2020, respectively. Meanwhile, the bourse's ESG leaders outperformed other indices from early 2017 to early 2021, underlining the potential for ESG to preserve and create value. Despite controversies over the possible loss of workers' rights, the Omnibus Law on Job Creation simplified labour laws. This aimed to create a more attractive investment environment and increase local opportunities.

To this end, the introduction of the positive investment list reframed the conversation around foreign investment and opened 245 business lines to wholly foreign investment.

Sources: *ASEAN Briefing; Cekindo; IFC; IDX; Ministry of Investment; OJK; PwC; SSE Initiative*

Indonesia's carbon bill should encourage low-carbon investment and standardise climate impact calculations

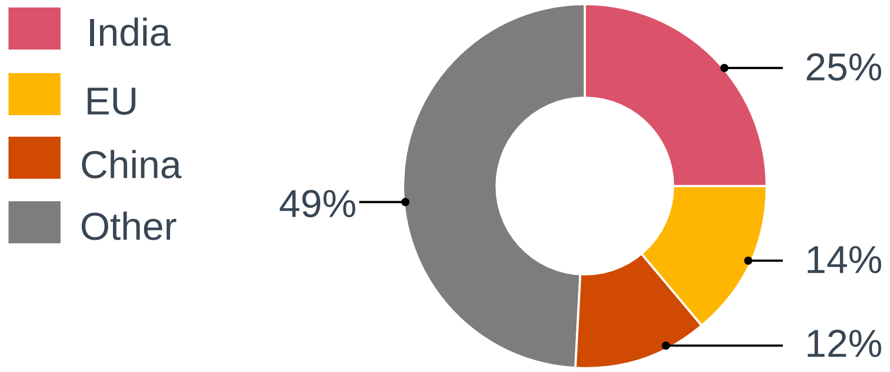
Indonesia is the world's largest exporter of palm oil, January 2020-21



Oil plantations are key
To reducing rural poverty

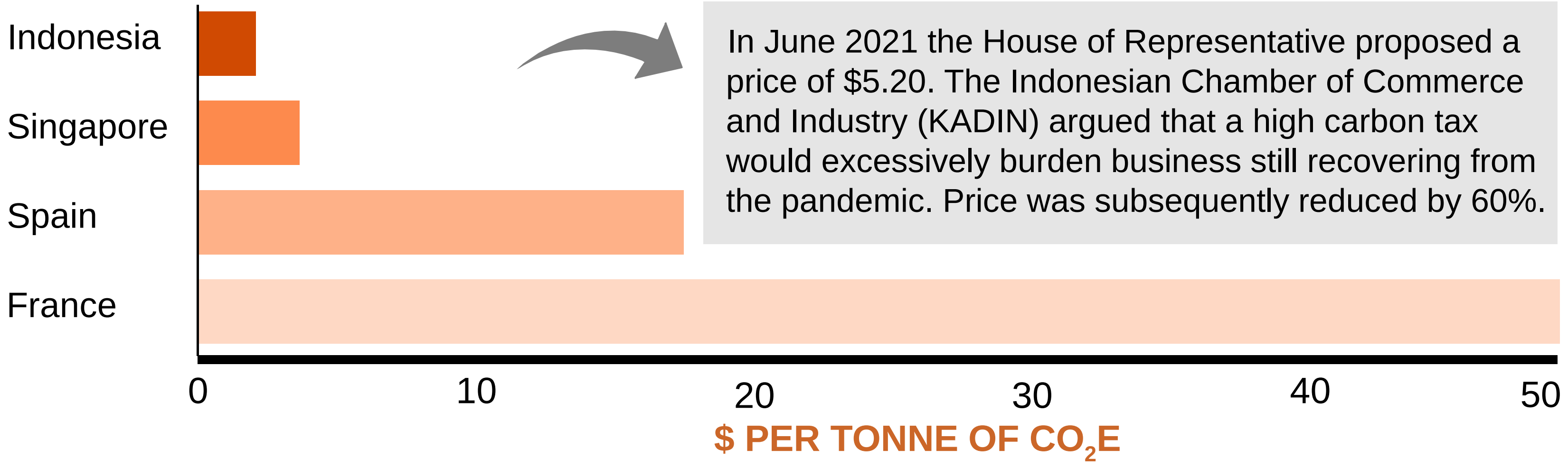
Indonesia exported **29m tonnes** of palm oil in 2017

The EU was the second-largest importer of Indonesian palm oil exports in 2018



In December 2018 the EU banned palm oil imports for biofuel, arguing that the industry contributes to ASEAN's extensive deforestation. Palm oil imports still permitted for other products, such as food and cosmetics.

Indonesia has among the lowest carbon taxes implemented to date



In June 2021 the House of Representative proposed a price of $5.20. The Indonesian Chamber of Commerce and Industry (KADIN) argued that a high carbon tax would excessively burden business still recovering from the pandemic. Price was subsequently reduced by 60%.

Harmonised Tax Law (HPP) introduced a carbon tax in Indonesia, October 7, 2021

WHEN

Starting from April 2022

GOALS

- Regulate the carbon trade, which will be limited to the domestic market until national greenhouse gas (GHG) reduction targets are met
- Provide performance-based payments for reduced GHG emissions
- Impose a levy on carbon emissions
- Attract investments for low-carbon enterprises, particularly in energy, transportation and manufacturing

OPPORTUNITY

Grant Indonesia first-mover advantage over neighbouring countries for sustainable development and exports, and possibly standardise methods to price carbon and account for its impact

AMOUNT

Rp30,000 per kg (approximated to $2.10 per tonne) of carbon dioxide equivalent (CO_2e)

Could potentially ease barriers to EU-Indonesia trade

Proposed Carbon Border Adjustment Mechanism could limit trade between Indonesia and the EU

Tari proposed in July 2021 for carbon-intensive products imported to the EU. Designed to encourage industry and trading partners to avoid:

- Carbon leakage from the EU*
- Emission-heavy imports to the EU

Given the EU's 2018 ban on palm oil imports for biofuel due to deforestation links, there is an expectation that this may include restrictions on palm oil trade

**redirection of emissions if industries move to non-EU markets with lower environmental standards*

Sustainable trade

Indonesia is the largest global exporter of palm oil. The EU historically represented the country's second-largest trade partner for the commodity, but EU imports of palm oil from Asia began to decrease after the bloc's end-2018 ban on biofuel. The July 2021 Carbon Border Adjustment Mechanism and COP26 focus on deforestation may further reduce palm oil imports. On the other side of the coin, the HPP confirmed in October 2021 will introduce one of the region's first carbon taxes from April 2022 to attract low-carbon foreign investment and could reverse this trend. Additionally, standardised carbon accounting will enable an objective financial analysis of business costs and efforts related to GHG emissions reductions.

Sources: *ASEAN Briefing; DW; European Commission; MoF; OECD; PwC; Reuters; SpringerOpen; Statista*

Indonesia's evolving sustainable finance ecosystem should provide fertile ground for ESG

Indonesia is among the global pioneers in thematic bonds issuance

1st	global	Sovereign green sukuk	$1.25bn	February 2018
1st	global	Green retail sukuk	$104.4m	November 2019
1st	Asia	SDG-linked bond	$584m	August 2021

OJK Regulation No. 60/POJK.04/2017 and related incentives defined issuance of green bonds and helped to raise interest in sustainable finance

$300m	Sustainability bond to finance green projects, such as renewable energy and small businesses	April 2021	Issuer Bank Mandiri
$500m	Sustainability bond to finance environmental and social projects	April 2019	Issuer Bank BRI
Rp3trn	First corporate green bond	July 2018	Issuer Sarana Multi Infrastruktur

OJK's Sustainable Finance Roadmap Phase II aims to accelerate ESG-related financing, 2021-25

Policy
Various policies to support sustainable finance

Products
Wide-ranging sustainable finance products and services

Market Infrastructure
Technologies and information infrastructure to support sustainable finance

Coordination
Improving coordination and exchange of information among ministries and other stakeholders

Non-governmental support
Supported by research and international institutions to develop sustainable finance initiatives

Human resources
Structured programmes to build internal and external capacity

Awareness
Communications strategy for sustainable finance

Strengthened portfolio resilience and growing ESG focus create a positive macroeconomic climate for private equity (PE) investments, 2021

- South-east Asian PE investors grappled with unprecedented uncertainty in 2020.
- In 2021 PE leaders took steps to bolster portfolio resilience and minimise the risk of future disruptions.
- A growing number of PE funds in the region are shifting to sustainable portfolios and focusing on ESG investing.

South-east Asia's PE funds invested more than 41% of deal value, equal to $6bn, in sustainability assets* in 2018, according to 2020 Bain & Co research. This compares to 1% in 2010, according to the same analysis.

** Investments in a company that meets Bain & Co's sustainability criteria for developing countries*

CASE STUDY: Star Energy Geothermal Group's green bond issuance underlines appetite for Indonesian sustainable finance

- With installed geothermal capacity of 875MW across three power stations, in October 2020 Star Energy Geothermal Group (SEGG) raised$1.1bn in **senior secured** green bond financing

Collateral-backed debt security with highest priority for repayment, therefore deemed to incur lowest risk

- Governed by a green bond framework aligned with International Capital Market Association Green Bond Principles as well as ASEAN Green Bond Standards
- Bonds 3.5x oversubscribed despite pandemic-related global headwinds; listed on Singapore Exchange

Structure of $1.1bn green bond issuance, October 2020

Co-issued by:	Star Energy Geothermal Salak and Star Energy Geothermal Darajat II
Tranche A:	$320m; 3.25%; 8.5 years
Tranche B:	$790m; 4.85%; 18 years
Ratings:	Moody's: Baa3; Fitch: "BBB-"

Financing growth

Indonesia has been a global and regional pioneer for ESG-related bonds issuance, including both sharia-compliant and SDG-related financing. National policies have helped to increase the focus on sustainable finance. Key among these, OJK's regulation No. 60/POJK.04/2017 defined green bonds issuance; the organisation's Sustainable Finance Roadmap Phase II, 2021-25, aims to boost ESG-related funding over the coming years. Regional investors have shown growing appetite for sustainability assets in PE funds, which rose from 1% of PE deal value in 2010 to 41% in 2018. Indonesia has demonstrable potential for ESG-related financing: SEGG's oversubscribed $1.11bn issuance in October 2020 is one example.

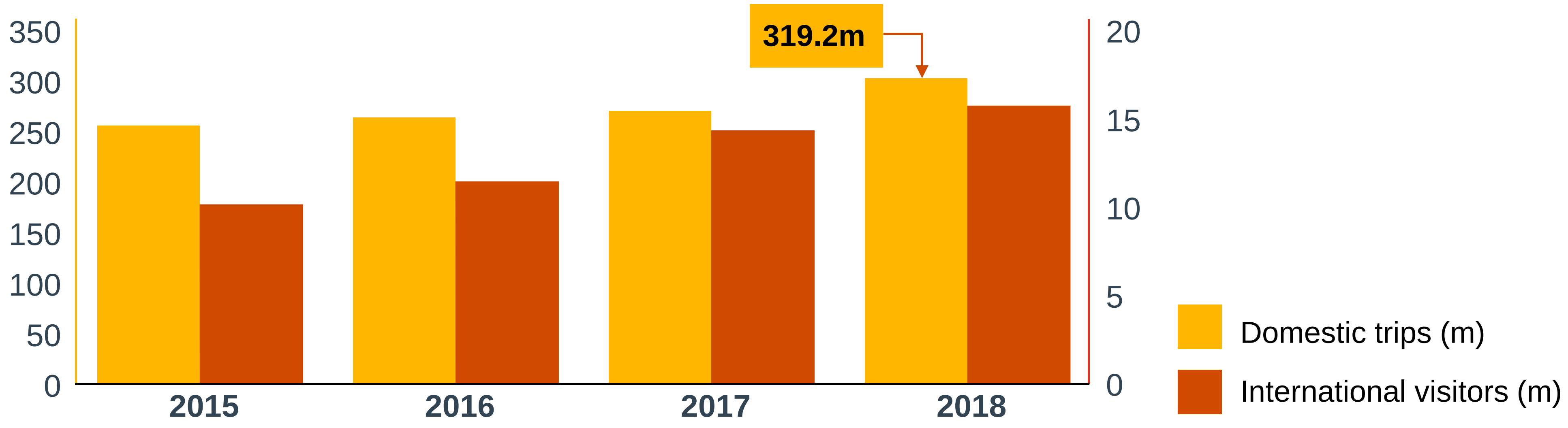
Sources: *Allen & Overy; Bain & Company; Credit Agricole; Euromoney; OJK; Reuters; SGX; Star Energy Geothermal; UNDP*

Sustainable tourism and infrastructure present long-term opportunities

- With a contribution of almost 6% to national GDP and around 320m annual visitors prior to the pandemic, Indonesia's tourism industry will remain an important target of investment
- An upward trend in sustainable tourism prior to the pandemic signalled long-term opportunity
- Sustainability-driven tourism expansion will translate into higher borrowing capacity and taxation inflows, which can be re-invested to support long-term development of the sector and local communities

Infrastructure will remain a key regional development priority: Master Plan on ASEAN Connectivity 2025 focuses on mobility of people, and efficient logistics and trade routes.
Related sectors are important for economic activity; with the Indonesian public sector historically providing half of transport infrastructure funding, transport and telecoms accounted for over one-third of infrastructure-related foreign direct investment (FDI) in 2020.

Domestic and international visits experienced robust growth in 2015-18



Sustainable tourism*	Income 2016	$13.6m	+59% Since 2011	Total investment, 2015	$11.7m	+354% Since 2005

**tourism related to sustainability standards as defined by the Ministry of Tourism*

Sustainable tourism considers current and future economic, social and environmental impacts

Aims

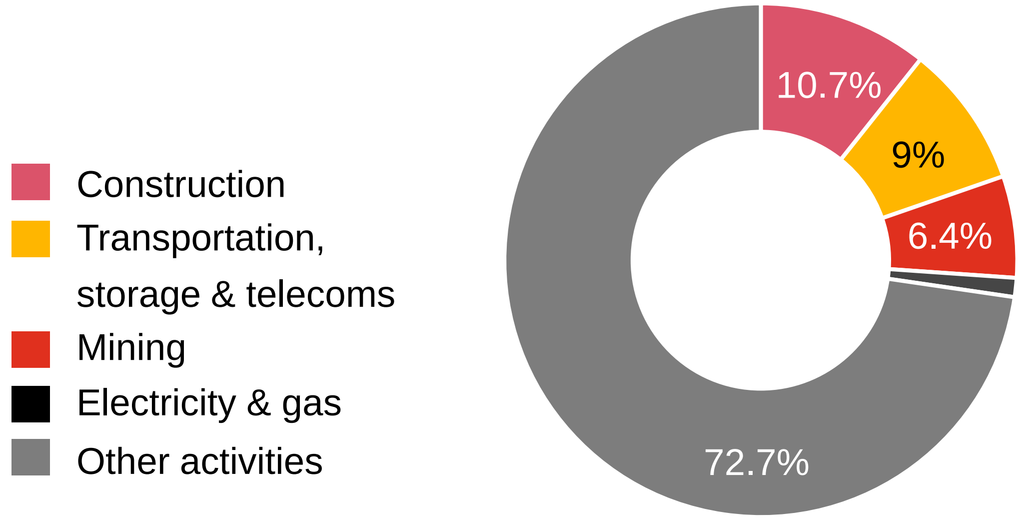
- Optimal use of environmental resources
- Respect for socio-cultural authenticity of host communities
- Viable, long-term economic operation

Indonesia has commitment to sustainable tourism development

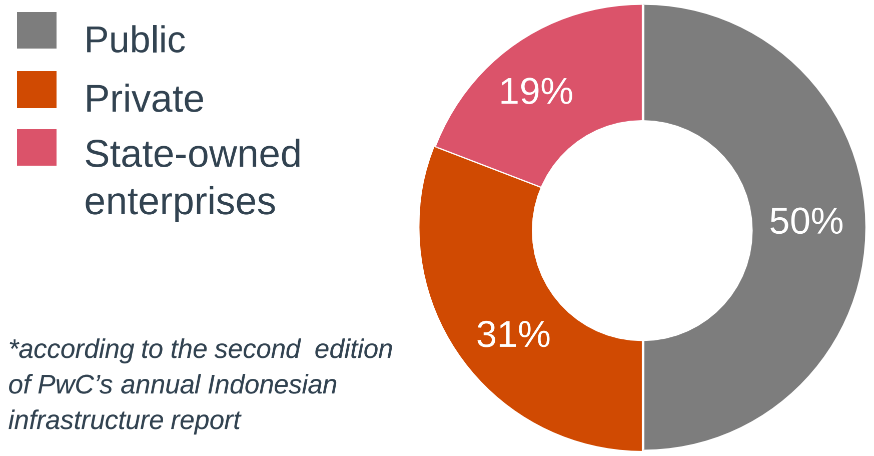
Law No. 10/2009 on Tourism

- Sustainability must embrace natural, social, economic and cultural ecosystems
- Long-Term National Development Plan (RPJPN) 2005-25
- Includes provisions to develop tourism alongside environmental protection

Infrastructure-related sectors contribute 27.4% to GDP in 2020

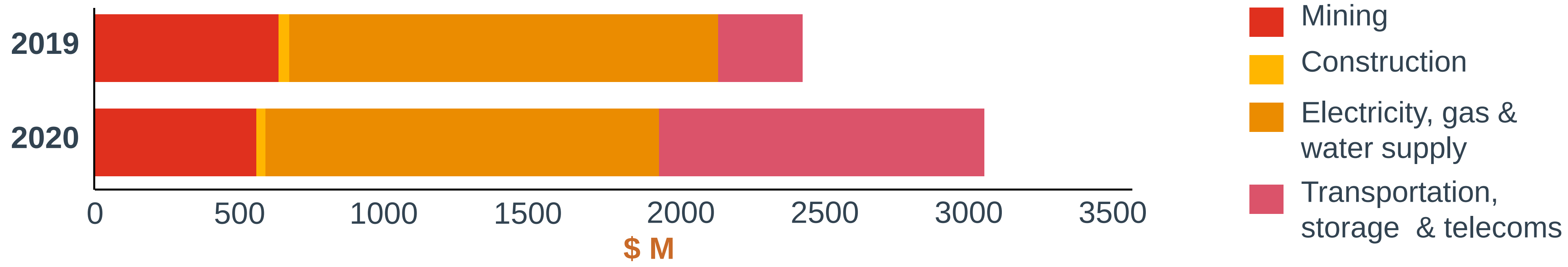


Public funds accounted for half of Indonesia's transport infrastructure funding in 2015-19*



**according to the second edition of PwC's annual Indonesian infrastructure report*

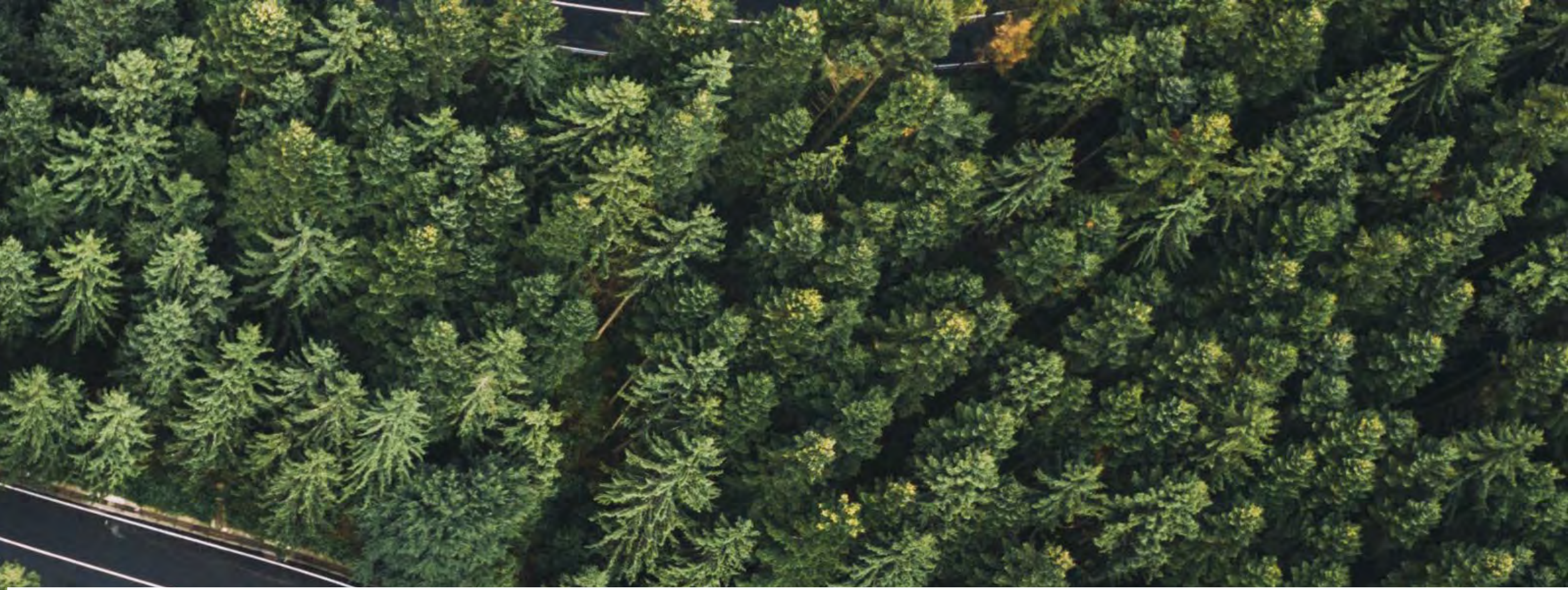
Utilities, transport and telecoms accounted for the majority of infrastructure-related FDI in 2019-20



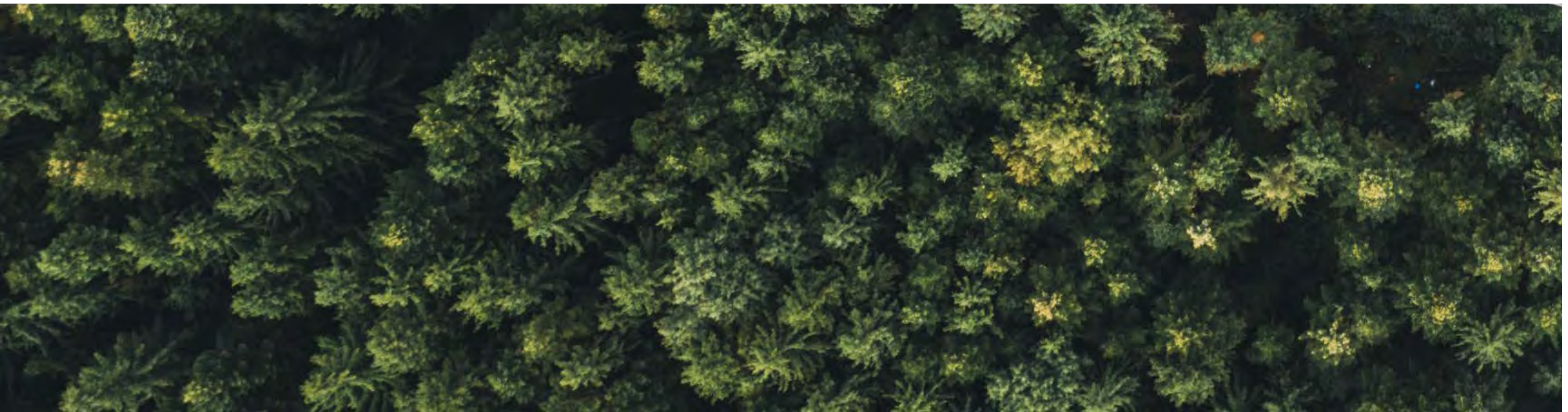
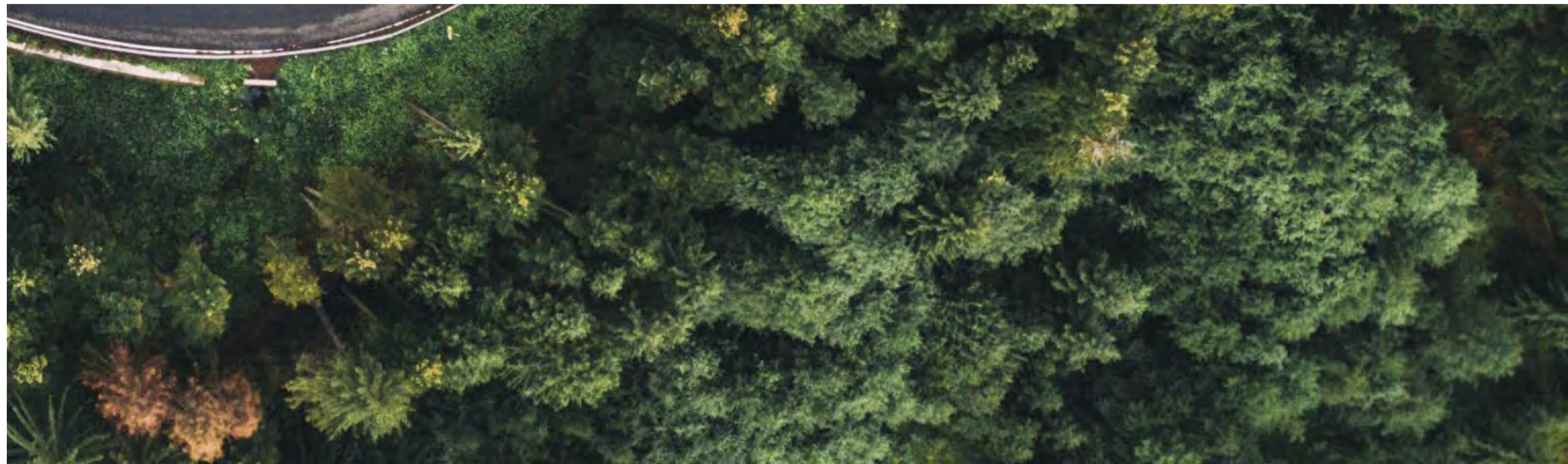
Indonesia's funding needs for 2020-24 were estimated at Rp6.4trn by Ministry of National Development Planning (BAPPENAS) in 2019.

Enhanced transportation and logistics, in line with ASEAN's agenda, will lower costs, improve reliability and access, and potentially enable digital solutions to maximise productivity.

Sources: *ASEAN; MoT; OECD; Statista; UN WTO; UN SDG; WEF*

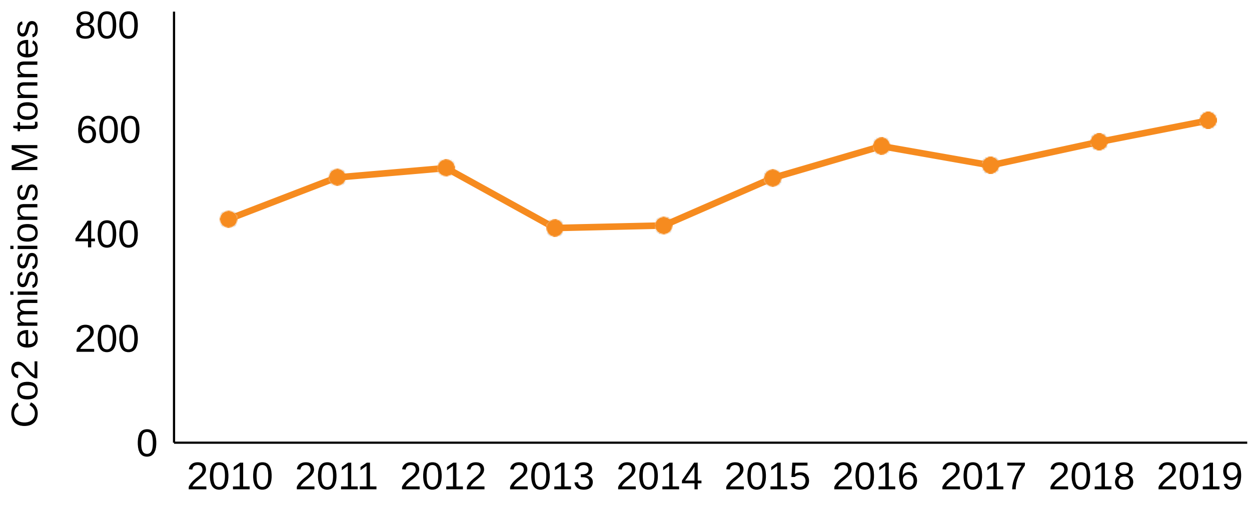



Climate Sustainability

Indonesia's environmental sustainability policies are aligned with the UN SDGs and the Paris Agreement

Indonesia's GHG emissions increased by 44% in 2010-19



Emissions reduction

Nationally Determined Contribution (NDC), 2016-30:
Outlines necessary emissions reductions for Indonesia to meet **Paris Agreement*** commitments

Indonesia's NDC targets :

↓**29%** in GHG emissions against a 2030 business-as-usual scenario

↓**41%** in GHG emissions with international assistance for finance, technology transfer and capacity-building

**international treaty to limit global warming to below 2°C, and preferably to 1.5°C, compared to pre-industrial levels*

COP 26

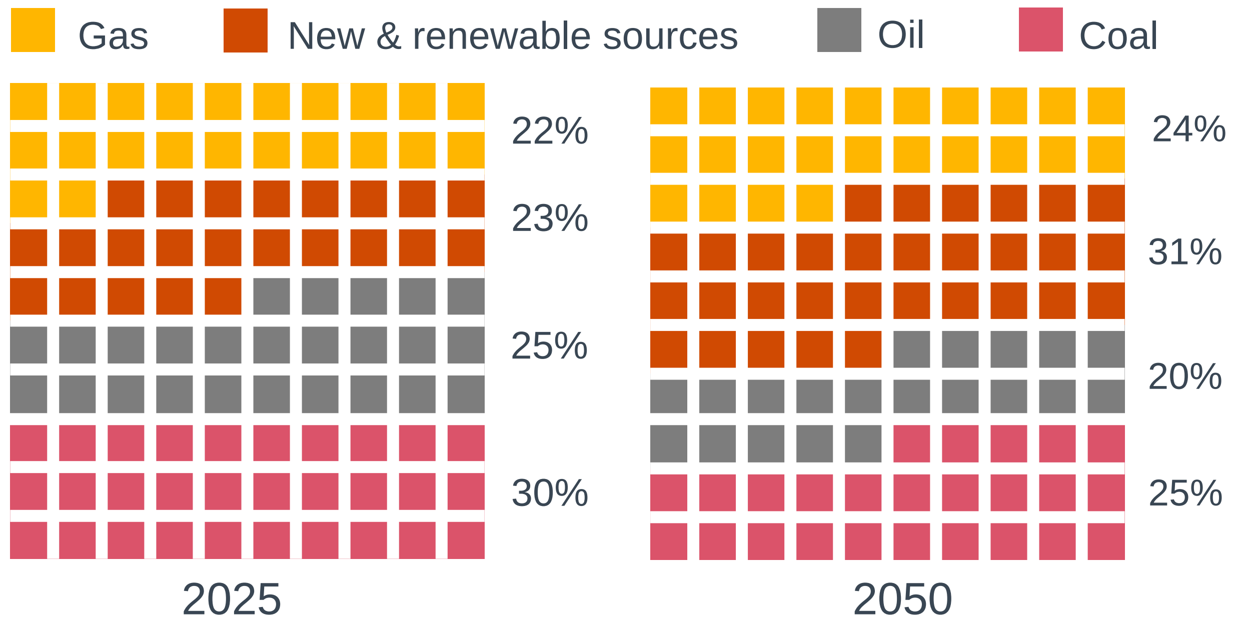
Committed to combatting deforestation and achieving net zero in tandem with socio-economic development, at COP26 President Jokowi reiterated the importance of developed markets realising climate-related financial commitments.

The ADB launched the Climate Action Catalyst Fund at the conference: this carbon fund aims to mobilise over $100m from the public and private sector for investments aligned with the Paris Agreement and SDGs.

Energy Efficiency

National Energy General Plan (RUEN), 2017-50:
Designed to achieve energy independence and energy security

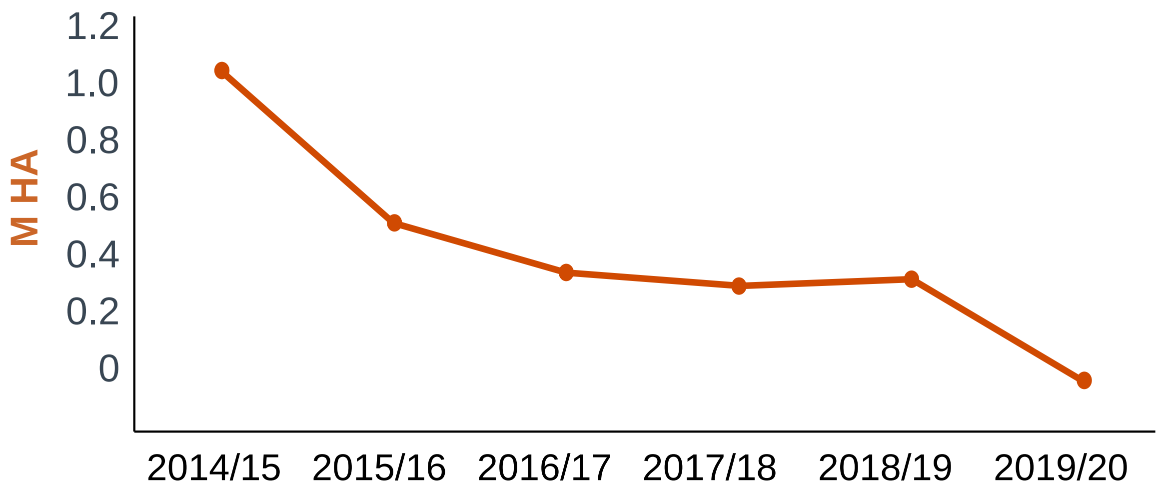
RUEN targets, 2025-50



Combatting deforestation

- Indonesia hosts the world's third-largest tropical rainforest, after Brazil and the Democratic Republic of Congo
- Global forests sequestered – or captured and stored – around twice as much CO_2 as they emitted in 2001-19, representing one of the planet's most important carbon sinks

Indonesia reduced annual deforestation by 86% in 2014-19, according to KLHK data



Protection of land use

89% reduction in Indonesian forest fires in 2015-20, from 2.6m ha to below 296,500 ha, according to World Resources Institute Indonesia

2021 commitments

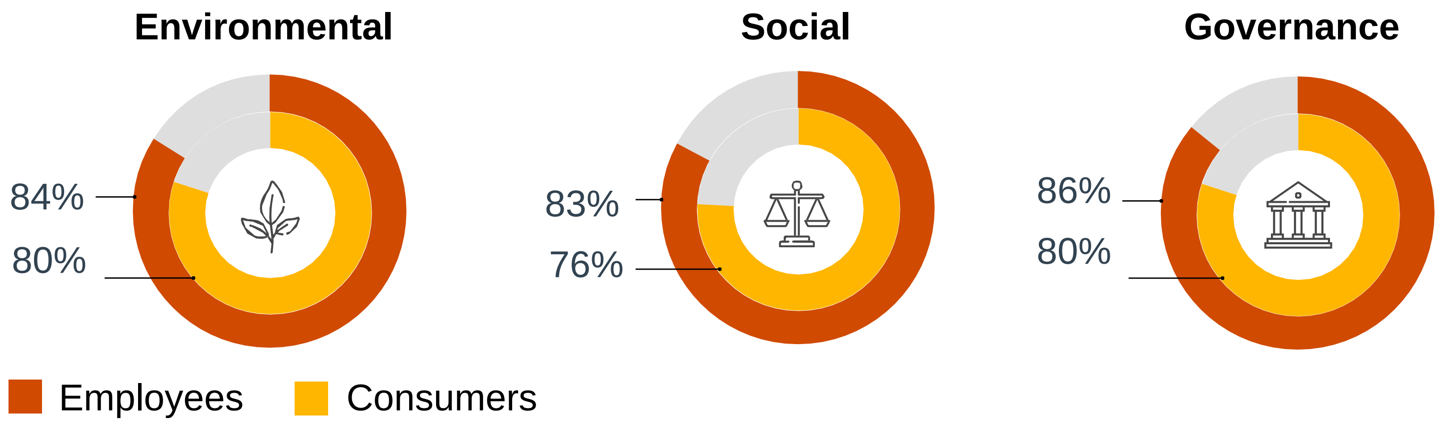
Indonesia submitted an Updated NDC, alongside a Long-Term Strategy on Low Carbon and Climate Resilient Development (LTS-LCCR) 2050, to the UN Framework Convention on Climate Change in July 2021. Among others, this outlines 2020-24 milestones towards climate goals and strengthens alignment with long-term economic development. In line with the 2021 G20 commitment, the LTS-LCCR 2050 states that emissions from Indonesia will peak by 2030, before the country secures net-zero emissions by 2060. Committed to combatting deforestation in tandem with economic development, at COP26 President Jokowi reiterated the importance of developed markets realising climate-related financial commitments for emerging market progress.

Sources: *ADB; KLHK; Our World in Data; UN; World Bank; WRI*

Reporting complexity contributes to a gap between risk awareness and management

Financial returns and employee engagement are among the key benefits of ESG

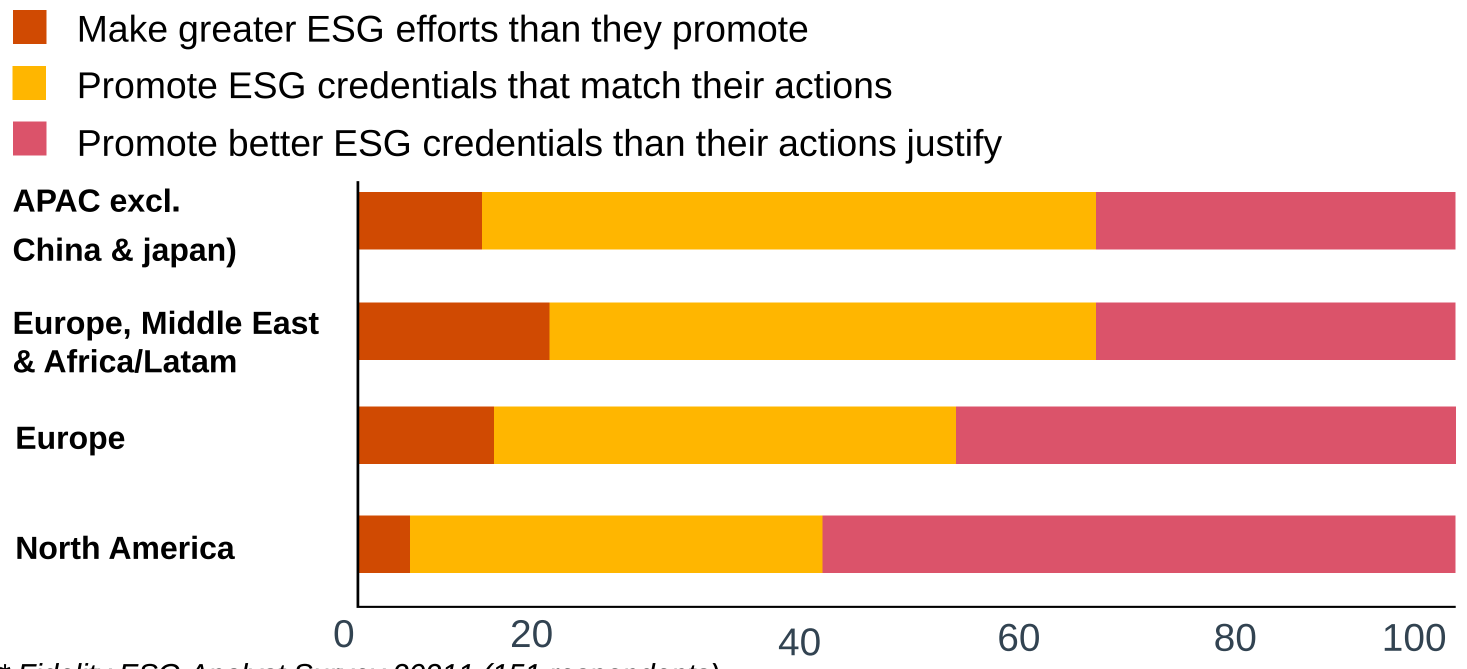
Please indicate how much you agree or disagree with the following statements:*
"I am more likely to buy from/work for a company that stands up for..."



**PwC's Consumer Intelligence Series. Survey conducted across the US, Brazil, the UK, Germany and India. (5005 consumer responses and 2510 employee responses collected during March-April 2021).*

APAC companies may be less prone to greenwashing than those in other regions

*What do you think about your companies' efforts to promote their ESG credentials relative to their actions?**



** Fidelity ESG Analyst Survey 20211 (151 respondents)*

30% of global CEOs report being concerned about climate change, compared to 40% who have factored this into strategic risk-management activities
38% of Indonesia's CEOs report being concerned about climate change, with 22% having factored this into strategic risk management*

Indonesian responses align with global trend identified by PwC: results suggest a moderately **negative correlation** between exposure to natural hazards and companies' preparedness for climate-related risk.

** PwC's Global CEO Survey 2021 (5050 global responses collected in January-February 2021)*

Lack of certainty and complexity around ESG reporting pose adoption barrier

*Which of the following do you feel are the biggest barriers preventing your company from progressing on ESG issues?**

1st	Balancing ESG with growth targets	40%
2nd	Lack of reporting standards & regulations/complexity	37%
3rd	Lack of attention or support	33%

**PwC's Consumer Intelligence Series. Survey conducted across the US, Brazil, the UK, Germany and India. (1257 global executive responses collected during March-April 2021).*

"Our external challenges primarily concern the lack of clear guidelines for the industry to integrate ESG best practices – particularly within this region's unique context and balanced with economic growth priorities"
- Tanah Sullivan, Group Head of Sustainability, GoTo

Adoption gap

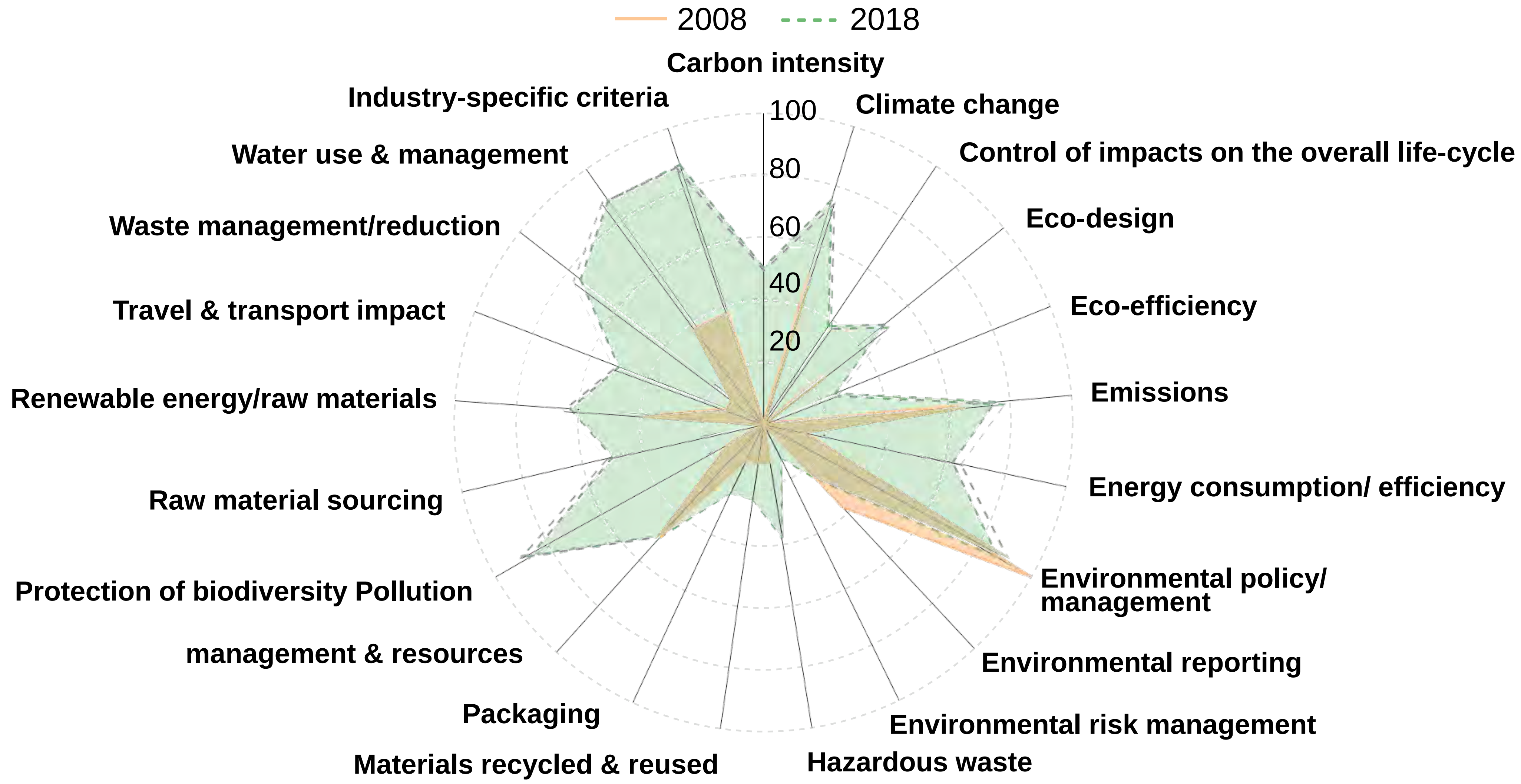
While consumer spending and employee engagement are among the key opportunities for ESG value creation, incumbent adoption barriers on the global level include: balancing ESG with growth targets; a lack of reporting standards and complexity, including regulations; and insufficient attention or support from senior leadership. PwC's Global CEO survey results in 2021 suggest a moderately negative correlation between exposure to natural hazards and companies' preparedness for climate-related risk – mirrored by results for Indonesia. Without one standardised methodology for ESG data collection and reporting, organisations may additionally be wary of promoting better credentials than their actions justify.

Sources: *Fidelity International; PwC*

Harmonised sustainability standards should enable more consistent and comparable reporting

ESG ratings agencies measure different environmental elements and criteria change over time, 2008-18

Proportion of the eight ESG rating and information provider agencies that apply each E criterion into evaluation of corporate sustainability*



**based on analysis of eight ESG rating and information provider agencies, including FTSE Russell ESG Ratings, MSCI ESG Research, REFINITIV and Sustainalytics*

International collaboration towards universal metrics

- PwC collaborated with the World Economic Forum, the International Business Council and other services firms to identify universal metrics for more consistent and comparable reporting
- Released in September 2020, these Stakeholder Capitalism Metrics include full implementation of Task Force on Climate-related Financial Disclosures recommendations; broadened to nature-based impact, including biodiversity, with mid-2021 launch of Taskforce on Nature-related Financial Disclosures
- At COP26, the International Financial Reporting Standards (IFRS) Foundation announced the formation of a new International Sustainability Standards Board (ISSB) to develop a comprehensive global baseline of high-quality sustainability disclosure standards

Overcoming inconsistency

The third-party verification of ESG data is important to validate progress. ESG ratings agencies, meanwhile, benchmark performance against industry, regional and global peers. However, agencies assign different weighting to different ESG elements. Moreover, criteria change over time and also vary by industry and market. While the evolution of criteria is necessary to keep pace with broader change, it also impedes comparable reporting. Efforts have been ongoing to address the lack of universal ESG metrics, such as the September 2020 Stakeholder Capitalism Metrics by the WEF and other partners. The IFRS Foundation's COP26 commitment to form the ISSB should further accelerate progress towards this.

Sources: *IFRS; MDPI; Sustainability; WEF*

Climate sustainability and socio-economic development must both be considered for Indonesian energy

Indonesia's growing population is accompanied by rising demand for utilities

Total population in 2021

276.4m

Additional forecast population by 2030

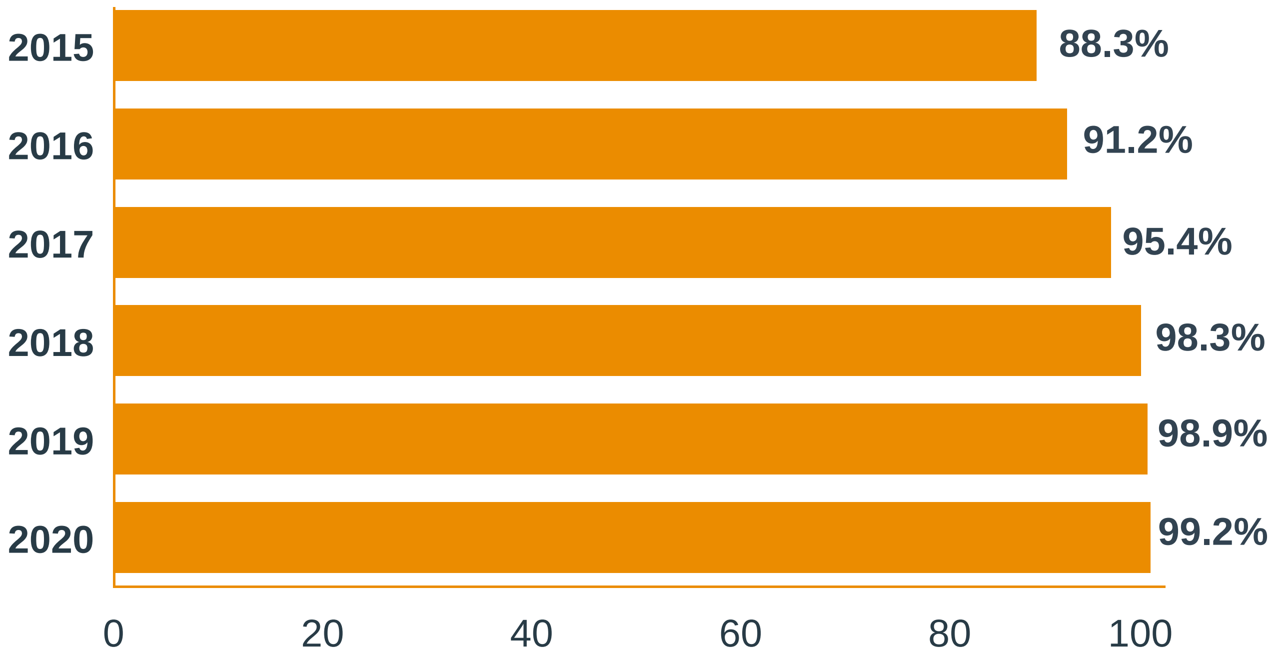
22.8m

Global rank by population, 2021-30

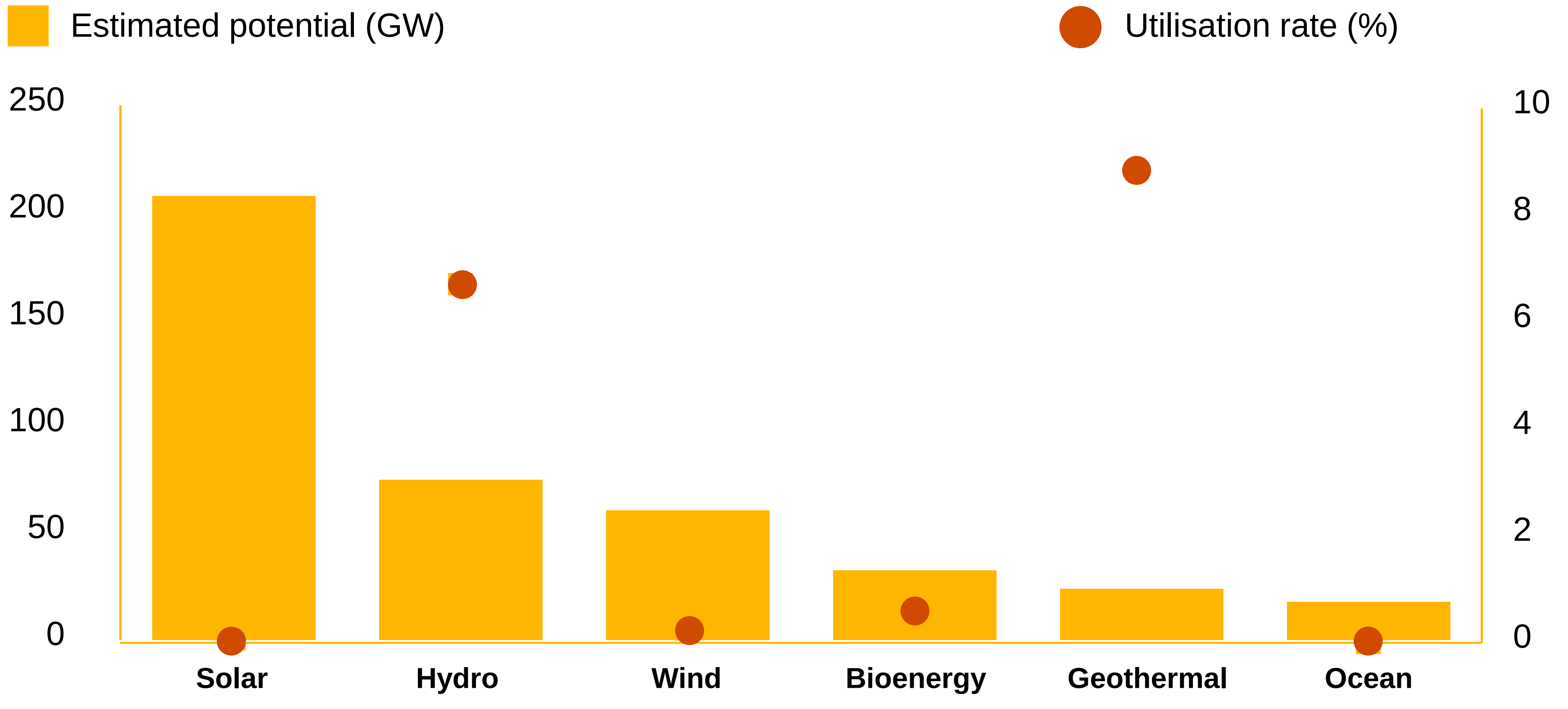
#4

National electricity demand had been forecast to triple over 2010-30, driven by robust economic growth, urbanisation and industrialisation as well as population expansion

Indonesia is expanding electrification and filling relative disparities in the archipelago



Indonesia's utilisation of renewable energy resources is considerably lower than estimated potential*, 2019



**OECD calculations based on statistics from the Ministry of Energy and Natural Resources (MEMR) and Perusahaan Listrik Negara (PLN), the state-owned power producer and operator*

Non-renewable sources may be needed to support socio-economic development

- Low renewables usage in Indonesia has been attributed in part to the dominance of coal in the country
- Many emerging markets are at an energy-intensive stage of development, with access to
- a ordable electricity fundamental for inclusive growth; growing energy demands need to be met with non-renewable sources such as thermal coal, oil and gas
- The green premium attached to renewable solutions underscores the importance of balancing socio-economic and environmental considerations in the local context

Indonesia's Electricity Power Supply Business Plan (RUPTL) 2021-30 aims to increase the proportion of renewables to at least 50%, up from 30% in RUPTL 2019-28

Sustainable electrification

Indonesia's large population is forecast to grow by 22.8m between 2021 and 2030, which will translate into increased demand for electricity. Efforts to widen electrification in Sulawesi, East and West Nusa Tenggara, East Kalimantan, West Sumatra and Yogyakarta, as well as ongoing industrialisation and GDP growth, will also raise demand. It seems unlikely that renewables alone, particularly given underinvestment in the segment, will be sufficient to meet these demands across the archipelago. Non-renewables will therefore remain important for Indonesia's socio-economic development. Within this context, net-zero action from private and public organisations will be key to expanding renewables and minimising emissions.

Sources: *MEMR; Mongabay; OECD; PLN; Statista; World Bank*

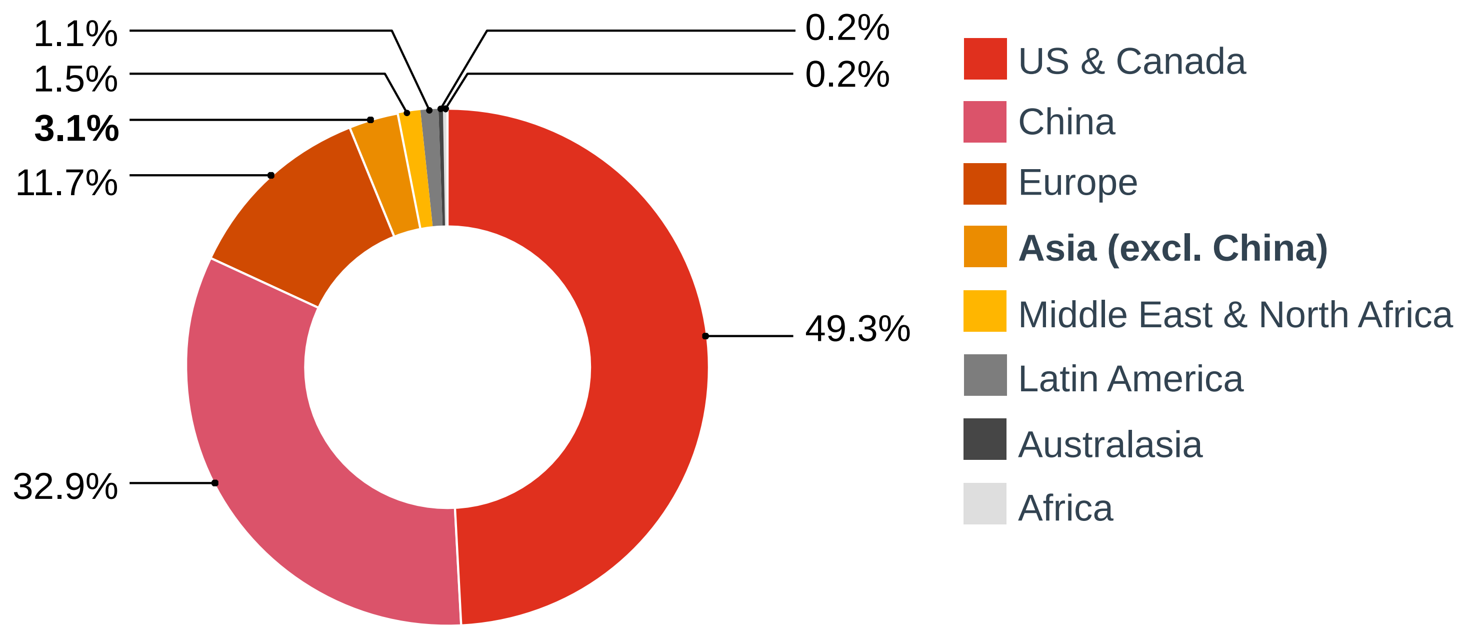
There is considerable scope for green technologies to enhance Indonesia’s climate sustainability

What is green technology?

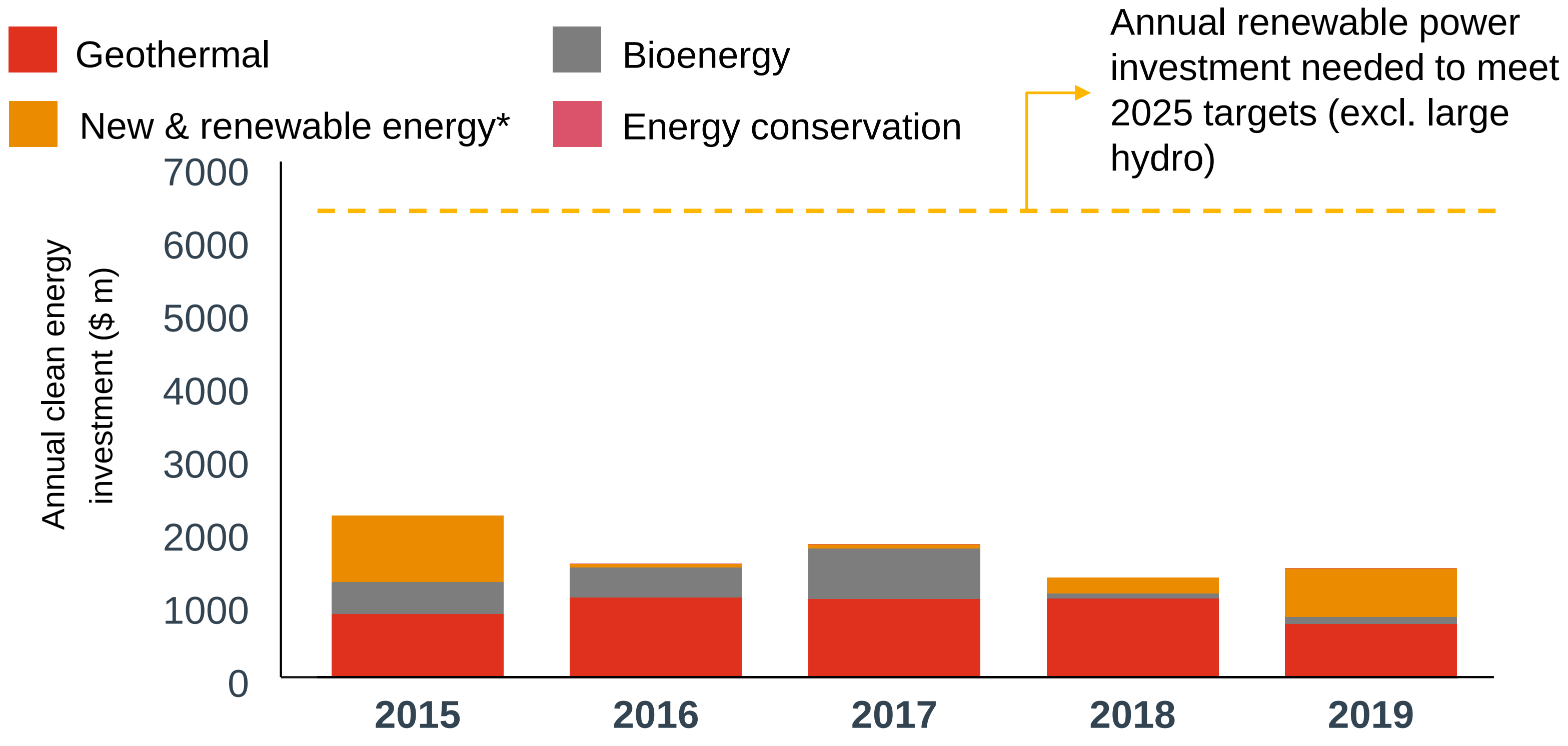
Green technology provides services while mitigating or reversing the effects of human activity on the environment. For example:

Energy	• Production, development and distribution of alternative fuels • Measures that support renewable energy, including storage and supply-demand balancing mechanisms, and increase the efficiency of the energy sector and energy-intensive electronics
Mobility & transport	• Improvements that increase the efficiency of engines, design or materials associated with transportation, and urban planning and design • Development of EVs and micro-mobility vehicles, and related infrastructure, such as ride-sharing apps and charging stations
Food, agriculture & land use	• Food production methods that reduce carbon intensity, including substitution of animal products, and low-GHG farming practices • Development of new fertilisers with a lower carbon footprint, and processes that reduce GHG emissions levels
Heavy industry	• Reduction of emissions from the manufacturing of large, heavy articles and materials in bulk, and activities to reduce waste • Creation of low-GHG alternatives to traditional inputs such as chemicals, steel and plastics
Built environment	• High-efficiency, fixtures, lighting and heating and cooling systems; smart management of energy consumption using sensors and smart devices • Efficient construction methods with an emphasis on easing construction and reducing on-site waste, including modular construction and 3D printing
GHG capture and storage	
Climate and earth data generation	

Despite being hard hit by climate change, Asia (excl. China) accounts for 3.1% of global venture capital investment in climate-tech start-ups **Proportion of total value of venture capital investment in climate tech by region**



Indonesia needs greater annual clean energy investment to meet its 2025 target of 23% renewables



*includes all renewables aside from geothermal, bioenergy and large hydro

Greener solutions

Green technologies offer a competitive and sustainable solution to Indonesia’s growing demand for utilities and natural resources, and could help address infrastructure challenges. These technologies will facilitate climate mitigation and adaptation, food security and coastal protection. Standout examples include wastewater treatment and waste management technologies, renewable energy and EVs. While these have high up-front costs, they lead to long-term resource savings alongside environmental footprint reduction. There should be scope for the country’s buoyant start-up ecosystem to help meet these needs, presenting an opportunity to optimise assets in long-term projects that align with ESG criteria and contribute to long-term development.

Sources: *BAPPENAS; Climate Investment Funds; OECD; PwC; US ITA*

Sustainability advances in agri-business present another emergent opportunity

The Roundtable on Sustainable Palm Oil (RSPO), the world's largest non-profit organisation for ethical palm oil production, issues sustainability certifications when palm oil is produced without causing harm to environment or society

Principles and criteria for sustainable palm oil production created by the RSPO

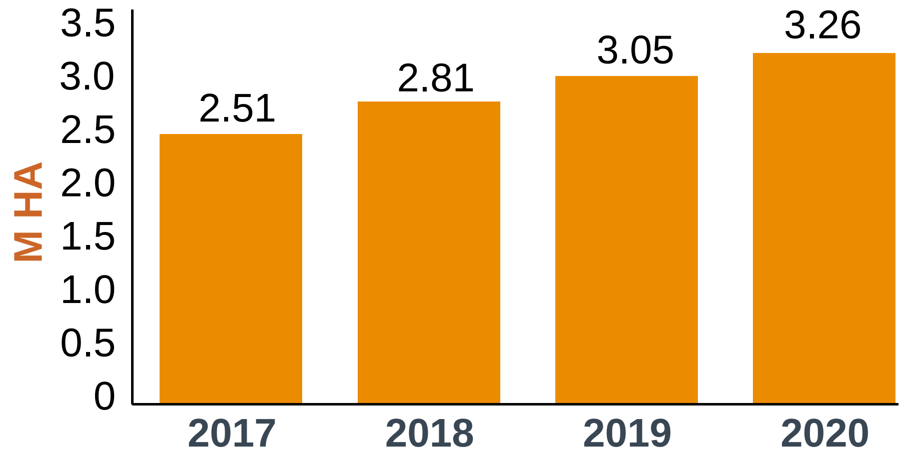
- ✓ Fair working conditions
- ✓ Protection of lands and rights for indigenous groups
- ✓ No clearing of primary forest
- ✓ Preservation of wildlife on plantations
- ✓ Lowering of GHG emissions
- ✓ Decreased industrial pollution

Additional ESG-related benefits include reduced use of pesticides, reduction of workplace accidents and enhanced productivity

Indonesian Sustainable Palm Oil (ISPO) certification was introduced in 2011 by the Ministry of Agriculture Regulation No.19/Permentan/OT.140/3/2011, and updated by Ministry of Agriculture Decree No.11/2015 and Decree No. 38/2020. ISPO certification has been mandatory for all producers other than smallholder farmers since 2014; ISPO certification is set to be mandatory for smallholders by 2025

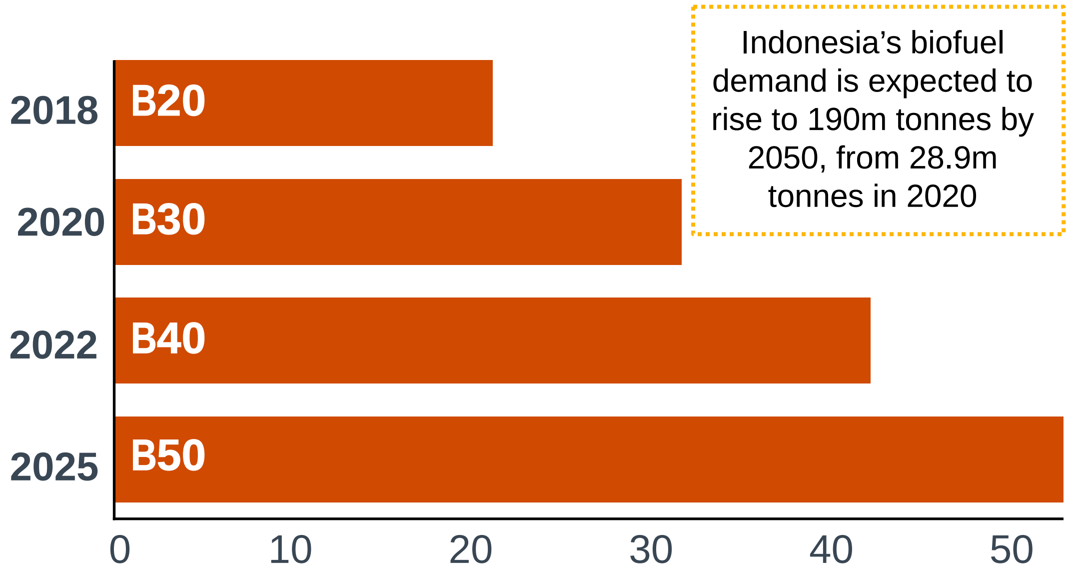
51% of global RSPO-certified palm oil came from Indonesia, and **42%** from Malaysia, in 2020

Global RSPO-certified production area has grown considerably



Indonesia remains committed to transitioning towards biofuel and away from fossil fuels

B20 programme mandated 20% palm oil in fuel, so-called biodiesel, for vehicles and heavy machinery from end-2018



Plantations still present social and labour challenges

Payment below minimum wage
Adopted piece-rate pay remuneration system, in which workers are paid for productivity rather than time

Exposure to hazardous chemicals
Mainly used as pesticides and herbicides in plantations

Concerns around child labour
Particularly in areas with limited access to schooling and childcare facilities

Food insecurity
Pest and saltwater intrusions can limit crop yields; expansion of plantations reduces land available for edible crops

Palm oil action and COP26 recommitment to end deforestation

Palm oil industry plans to ramp up efforts to help smallholder farmers – which account for 6.7m ha, or 75% of the country's total plantations – replace old plants with new crops. This is necessary to maintain or raise yields without increasing land use. Challenges for smallholder farmers include potential loss of income during the replanting process; the required use of certified seeds; and adherence to fertilisation and land-clearing practices without burning.

Agri-business opportunity

The sustainable development of Indonesian agri-business offers benefits for multiple stakeholders, with 51% of global RSPO-certified palm oil produced in Indonesia in 2020. This indicates better protection for indigenous groups, native flora and fauna biodiversity. Plantations are increasingly aiming to be self-sufficient in terms of energy usage, including the use of oil palm shells in boilers and methane gas projects. The move towards biofuel presents another opportunity for local value addition. Sustainability advancements can raise international perceptions of Indonesia, create opportunities for smallholder farmers and reduce reliance on energy imports. More remains to be done to address social and governance-related challenges.

Sources: *Human Rights Watch; ISPO; Mongbay; RSPO; WWF*

Case study: New capital city could offer a model for green, smart and inclusive cities

Analysis of business case for Indonesia's planned new capital, using five-case model

Five-case model is a project planning methodology developed by the UK government to outline cases for change, supported by the World Bank and the G20

Strategic case

- Critical water supply in current capital
- Strengthened national unity and redistribution of socio economic opportunity

Economic case

- Human-centred model for other Indonesian cities
- Sustainable construction, renewable energy and waste management

Cities such as West Java's capital, Bandung, and South Sulawesi's capital, Makassar, are working to leverage technology for better quality of life: Bandung digitised public services to reduce bureaucratic red tape, lower corruption and boost efficiency; Makassar hopes to leverage 5G technology, launched in the city in December 2021, to revive agriculture, trade and tourism, and enhance local lifestyles.

Financial case

- Presence of sufficient funding to finance expected project cost

Commercial case

- Viability of project completion, given capacity of available resources

$33bn, 10-year project announced in April 2019; 2024 target date for first occupants

Management case

- Strong project management office
- Efficient and transparent organisational structure

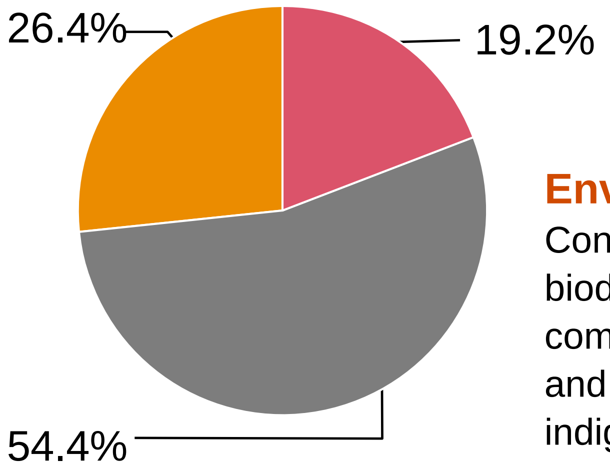
Indonesia's position in South-east Asia's Smart City Index offers room for improvement, 2020

Rank (of 109)		Change in rank since 2019
1	Singapore	0
54	Kuala Lumpur	16
71	Bangkok	4
84	Hanoi	-18
94	Jakarta	-13
104	Manila	-10

Smart capital

President Jokowi officially announced the migration of Indonesia's capital city from Jakarta to Borneo's East Kalimantan in August 2019. This $33bn, 10-year project aims to offer a green, tech-integrated and socially inclusive solution to the overcrowding, traffic congestion, high pollution and health risks of Indonesia's existing capital city. While concerns remain about the impact on local biodiversity, the new capital's ESG-aligned urban planning and construction could serve as a blueprint in smart city development for other cities in Indonesia and the region. The ambitious project, partially delayed by the pandemic, will be financed through public-private partnerships and global foreign investment, as well as the government budget.

New capital city's development sources, 2019



Private sector
Public-private partnership
State budget

Environmental and social risks

Concerns remain about the impact on local biodiversity, despite President Jokowi's commitment to protect Borneo's rainforests and endangered animals, as well as indigenous communities

The new city is being designed to:

Be

- Congestion-free
- Pollution-free
- Free from health risks such as air pollution and lack of sanitary facilities

Plans to only allow EVs and for 80% of movement of people to happen via public transportation, walking or cycling

Expand

- Innovative sustainable construction projects
- Water cycle management
- Technologically integrated urban management
- Effective and eco-friendly public services
- Public health care as a priority
- Large public spaces
- Inclusive society
- Integrated sustainable living solutions

Sources: *PwC; Reuters*

Julian Smith, ESG and Net Zero Leader, PwC Indonesia

What are the challenges for organisations seeking to start their ESG journey?

Organisations can start their journey by carefully analysing which ESG factors will affect their industry and their company. The business environment is now more complex and dynamic than ever before; companies need to recognise that certain trends will require an adaptation of their business model and potentially lead them to exit some activities altogether. It is important to remember that ESG offers opportunities – including new products, green business models, additional revenue streams from the circular economy, and ESG – related services and branding – as well as threats.

Organisations must take a holistic approach by considering capital and stakeholders, and evaluating how ESG impacts expectations of management and operations.

In which ways can organisations leverage technology for ESG-related goals?

Changes in consumer preferences present opportunities for value creation. Many organisations would adopt ESG-friendly products and services if they were readily available and did not come at such a high cost. This creates an opportunity for businesses to launch new product lines or re-brand existing lines to emphasise ESG principles and benefits.

It is crucial to avoid greenwashing in areas ranging from environmental impact to the treatment of employees. This is one of the most significant ESG-related business risks. As the price of carbon continues to increase, Indonesia's businesses – particularly in primary industries such as logging and mineral mining – have the opportunity to generate a new revenue stream from carbon credits.

Yuliana Sudjonno, Assurance Partner, PwC Indonesia

In what ways does trust contribute to building a strong ESG ecosystem?

ESG is about a business' ability to build trust with its stakeholders; trust between a company and society can lead to higher value for shareholders.

It is important that companies disclose their non-financial performance in a manner that is transparent, accurate and reliable.

All companies are exposed to ESG-related risks, but firms that are transparent and honest about those risks and can present a comprehensive risk-management and mitigation plan will be better positioned for a favourable ESG rating.

How can firms choose which ESG reporting frameworks and standards to use?

As announced at COP26, the UN Conference on Climate Change, the International Financial Reporting Standards Foundation will lead the convergence of key international frameworks to form global ESG reporting standards through the International Sustainability Standards Board.

The main challenge is to develop a set of core indicators that can be applied uniformly across all markets and industries. Companies must start now in order to comply with regulatory or investor requirements; identify ESG risks and opportunities; and understand what gaps exist in terms of data collection and capacity to monitor and achieve ESG targets effectively.

"Changes in consumer preferences present opportunities for value creation"