



INDONESIA SDG INVESTOR MAP HANDBOOK



ACKNOWLEDGMENTS

The SDG Investor Map development process for Indonesia has been a work of deep collaboration and participation from multiple stakeholders. We are thankful to the 45+ government officials, investors, think tanks and enterprises who took the time to speak with us through in- depth consultations and contributed with their insights and deep experience. This overview document is a snapshot of the detailed map that can be accessed at [the SDG Investor Platform](#).

Advisors:

Dr. Vivi Yulaswati, M.Sc, Expert Staff for the Minister on Social Affairs and Poverty Reduction/ Head of National SDGs Secretariat, Ministry of National Development Planning (BAPPENAS)

Devahuti Choudhury, SDG Impact Specialist for Asia-Pacific UNDP

Muhammad Didi Hardiana, Head of Innovative Financing Lab, UNDP Indonesia

Map Development Team:

Aghnia Dima Rochmawati, Gender and Climate Finance Officer, Innovative Financing Lab, UNDP Indonesia as Coordinator of Indonesia SDG Investor Map

Luhur Fajar Martha, National Consultant for Indonesia SDG Investor Map

Ritika Mehrotra, International Consultant for Indonesia SDG Investor Map

Setyo Budiantoro, SDGs Manager for Economic Development Pillar of National SDGs Secretariat of Ministry of National Development Planning (BAPPENAS)

Farhana Zahrotunnisa, Assistant Manager for Economic Pillar at National Secretariat of Ministry of National Development Planning (BAPPENAS)

Scholastica Rania Allbright, Junior Project Clerk, Innovative Financing Lab UNDP Indonesia

Kalila Anneszka Wibowo, Innovative Finance & Impact Accelerator, Junior Consultant, Innovative Financing Lab UNDP Indonesia

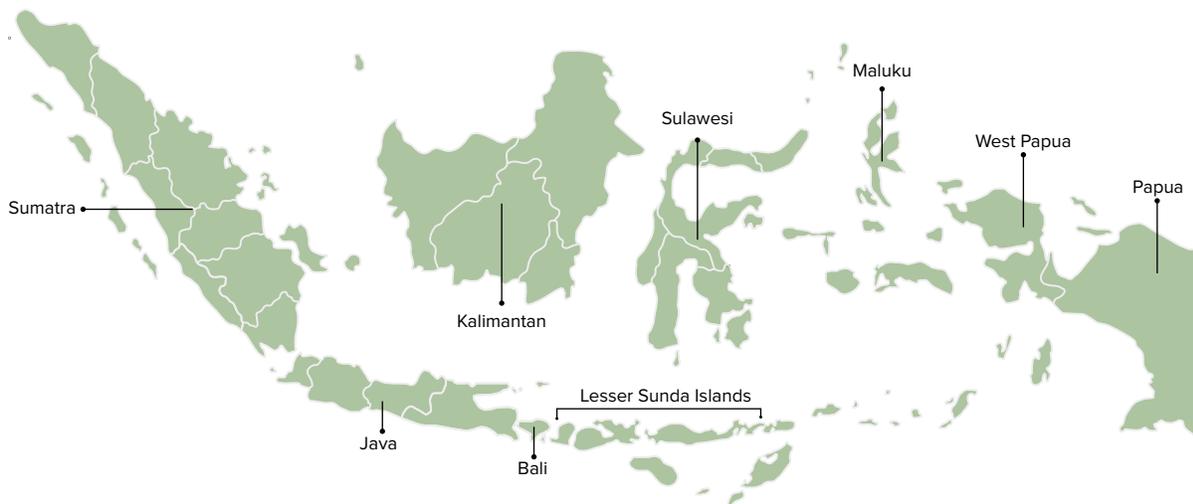
TABLE OF CONTENTS

1. Introduction	2
2. Why does Indonesia need an SDG Investor Map?	3
3. Sector-wise insights:	6
- Food and Beverages	
- Healthcare	
- Education	
- Financial Services	
- Infrastructure	
- Renewable Energy	
4. SDG Investor Map Methodology	18
5. Project Collaborators	19
6. List of References	21

1. INTRODUCTION

Achieving the global Sustainable Development Goals (SDGs) could create millions of jobs, expedite growth trajectories and unlock trillions of dollars in market opportunities. Yet, with less than eight years left to meet the SDGs, the need for sustainable flows of private capital remains more critical than ever before. Unlocking private capital requires robust market intelligence and strong investment relationships.

The Indonesia Investor Map has been developed through a consultative process with government stakeholders, think tanks, enterprises and 45+ leading impact and commercial investors to produce tangible market intelligence.



Population	270.2 million (2020 Population Census).
Provinces	34 provinces spread over five main islands- Sumatra, Jawa, Bali & Nusa Tenggara, Maluku & Papua, Sulawesi and Kalimantan.
Income category	Lower Middle Income as of 2021.
GNI Per Capita (USD)	3,870 as of 2021
Demographic dividend	Over 68% of the population is aged between 15 and 65, with a low dependency ratio and a dynamic workforce with high literacy rates.
Investment climate	Currently ranks 4th as a global investment destination after India, China, and the USA. It is the largest economy in South-East Asia and is predicted to be the 4th largest consumer market in the world by 2030.
Ease of doing business rank	73 of 190 countries in 2020.
Human Development Index	107 of 189 countries in 2020.
Total private sector Investment Realization by value	USD 29 billion (FDI) and USD 29.8 billion (DDI) as of 2020.

2. WHY DOES INDONESIA NEED AN SDG INVESTOR MAP?

1. The SDGs in Indonesia are institutionalized from the highest national level to subnational entities and integrated into national and subnational development planning. This is a significant and collaborative endeavour between government and non-state actors designed to serve 270.2 million people – a third of which are children – comprising 1,300 ethnic groups across 17,000 islands.
2. **The SDG Investor Map for Indonesia adequately captures the investment and policy momentum to capture profitable and impactful market intelligence that can contribute positively to the SDGs.**
3. In the wake of the pandemic, and the recovery plans that have been constituted by the government, it is necessary that all public and private sector activity should focus not only on maximizing profits but also on optimal social and environmental returns. With a clear roadmap and commitment to achieve the SDGs, Indonesia encourages stakeholders to adopt approaches that help embed sustainability in their business as usual practices.
4. The map has identified **18 Investment Opportunity Areas (IOAs)** *[mature or emerging areas that have already seen investor activity and may have recorded favourable exits. These models have scaled and gained traction]* and **7 white spaces** *[areas that have the potential for deep development impact but see low participation from the private sector due to policy or regulatory considerations]*
5. The investment areas and business models have been identified for Healthcare, Education, Financial Services, Food and Beverages, Renewable Energy and Infrastructure sectors.



INDONESIA SDG INVESTOR MAP: OVERVIEW OF FINDINGS

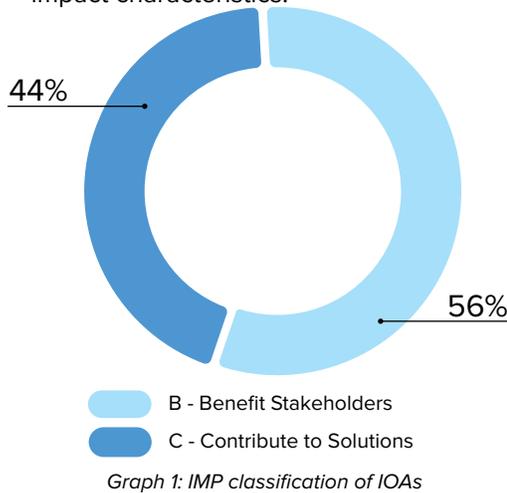
6 Sectors 
13 Sub-sectors

18 Investment Opportunity Areas 
7 White Spaces

 <h3>Healthcare</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Telemedicine and ancillary healthcare services with a focus on last-mile delivery. 2. Production and delivery of alternative medicines [herbal] / supplements. 3. Pathology laboratories or testing centers carrying out genomic and molecular testing. <p>White Space:</p> <ol style="list-style-type: none"> 1. Low-cost healthcare service providers, including hospital chains, care-units, etc. 2. Manufacturing and supply of affordable medical equipment. 	 <h3>Education</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Digital platform for interactive learning for K12 to support after school learning and development. 2. Virtual skill development facilities for K12 level and professional workers (including computer technologies, graphic designing and the like). 3. Virtual skill development facilities for K12 level and professional workers (including computer technologies, graphic designing and the like). 4. Affordable education loans for students. <p>White Space:</p> <ol style="list-style-type: none"> 1. Online / Offline vocational skill training centers. 	 <h3>Financial</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Micro credit to serve consumption finance requirements of low income groups and retail customers beyond urban areas. 2. Payment solutions for digitizing cash flows. 3. Financing solutions to promote the growth of Micro, Small & Medium Enterprises (MSMEs). 4. InsurTech platforms serving as aggregators and providers of affordable insurance products. <p>White Space:</p> <ol style="list-style-type: none"> 1. Development of lean infrastructure such as ATMs / Agent Network.
 <h3>Food & Beverages</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Sustainable production of food products focused on staple food fortification. 2. Input-side digital platforms offering effective farming advice, input solutions (processing, monitoring, etc.), financing and logistics support. 3. Output side digital platforms offering efficient supply chain management assistance and connecting farmers with end consumers. 4. Aquaculture supply-chain management. 	 <h3>Infrastructure</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Affordable housing development. 2. Integrated waste management for commercial and household waste. 	 <h3>Renewable Energy</h3> <p>Investment Opportunity Areas:</p> <ol style="list-style-type: none"> 1. Solar PV and Rooftop Solar Power systems. <p>White Space:</p> <ol style="list-style-type: none"> 1. Biomass based energy generation. 2. Manufacturing and trading of efficient energy management solutions, including energy storage systems / equipment. 3. Manufacturing and Trading of Electric Vehicles.

6. **Some key insights that showcase strong stakeholder value for the Investment Opportunity Areas and themes in the Indonesia SDG Investor Map:**

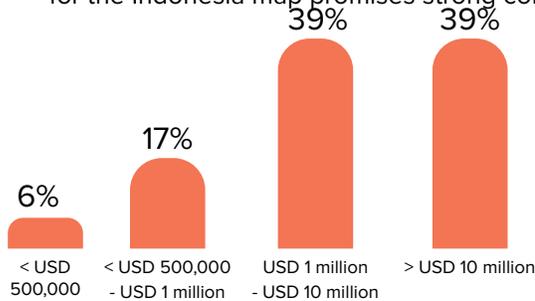
a. **Potential for impact:** To avoid being judged on their investment potential alone, each of the 18 IOAs has been analyzed for its impact potential and mapped to the Impact Management Project’s [IMP] impact classes that can help investors group their investments based on a unique set of impact characteristics.



Graph 1: IMP classification of IOAs

- 10 IOAs (including those under Education, Infrastructure and RE sectors; most under Healthcare sector) fall under **Category B - Benefit Stakeholders**.
- 8 IOAs (specifically those under the Financial Services sector and the majority under the Food and Beverages sector) fall under **Category C - Contribute to Solutions**.
- None of the IOAs fall under **Category A - Act to Avoid Harm**.

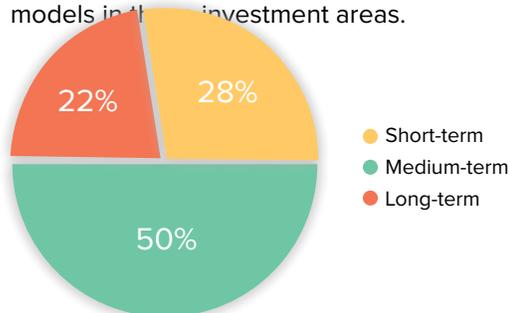
b. **Proof of scale and commercial viability:** With their impact potential established, each of the IOAs for the Indonesia map promises strong commercial returns, making them attractive for investors.



Graph 2: Range of investment ticket sizes

- Business models falling under 78% of IOAs have been able to raise funding of over USD 1 million. This includes the majority of IOAs under Education, Healthcare, Financials and Renewable Energy.

7. **Competitive payback period:** All the IOAs have well-defined and predictable investment timeframes with the map providing extensive examples of investor exits showing the successful scale of business models in the investment areas.



Graph 3: Investment timeframe for IOAs

- 50% (maximum) IOAs have a gestation period of 5 to 15 years, i.e. medium-term.
- IOAs under Education and Financials typically have a short to medium-term investment gestation period, while IOAs under the Healthcare sector have a medium to long investment gestation period.

3. SECTOR-WISE INSIGHTS:



Food and Beverages

Investment Opportunity:

Demand grew by 105% for wheat and by 61% for vegetables (2000-2015). With an expected annual growth in the population by 10%, growth of GDP and per capita GDP at 140% and 79%, respectively (Between 2015 to 2030), food demand is expected to grow sharply over the next 30 years.¹

Development Need:

In 2020, Indonesia ranked 65/113 countries in the Global Food Security Index indicating high food insecurity and poor nutrition across regions² which results in malnutrition, stunting and wasting.³

Policy Momentum:

Medium-Term National Development Plan (RPJMN) 2020-2024 states the policy directions for managing economic resources (including increasing the availability, accessibility, and quality of food consumption through the development of biofortified rice seeds) and addressing the issue of undernourishment, food insecurity experience, scale and percentage of paddy fields defined as sustainable.



INVESTMENT THEMES IDENTIFIED:				
Sub-sector	Agricultural products			Meat, Poultry and Dairy
Investment Areas	Sustainable production of fortified food products.	Input side digital platforms to improve farm productivity and increase farmer income.	Output side digital platforms for efficient supply chain management assistance from farm to table.	Aquaculture supply chain management.
Are they fundamentally marketable?	✓	✓	✓	✓
Scale potential	This investment area currently services ~265 mn consumers. ⁴ That is expected to expand to 280 mn by 2025. ⁵	These investment areas can potentially impact a third of the workforce that is employed by the agriculture sector of which 93% are smallholder farmers. ⁶		This investment area can impact 6 mn fishermen (wild or inland/coastal waters) leveraging a coastline of ~81,000 km of which only 7.38% is currently utilised. ⁷
Proven in market?	~USD 298 mn of foreign investments poured into the F&B sector in Q1-2020. Indonesian consumers spent >USD 200 bn on F&B products between 2014 & 2019. ⁸	In 2020, AgriTech startups raised more than USD 165 mn across 26 deals. ⁹		The freshwater fish segment was the most lucrative in 2019, with total revenues of USD 7.1 bn (~54% of the industry's overall value). ¹⁰
Business models	Invest in B2C / B2B Manufacturers of sustainable food products, to ensure improved nutrient intake for consumers and to improve production efficiencies.	Invest in B2C AgriTech models engaged in offering: <ul style="list-style-type: none"> Logistics support. Productivity boosting tools. Advisory on specialized agri-value chains. Financial assistance. 	Invest in B2B / B2B2C AgriTech models offering: <ul style="list-style-type: none"> Post-harvest supply chain solutions. Improved market access through online and offline marketplaces. 	Invest in B2B/B2B2C digital platforms focused on providing end-to-end supply-chain assistance for aquaculture.
SDGs Impacted				
<p>Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the SDG Investor Platform.</p>				





Healthcare

Investment Opportunity:

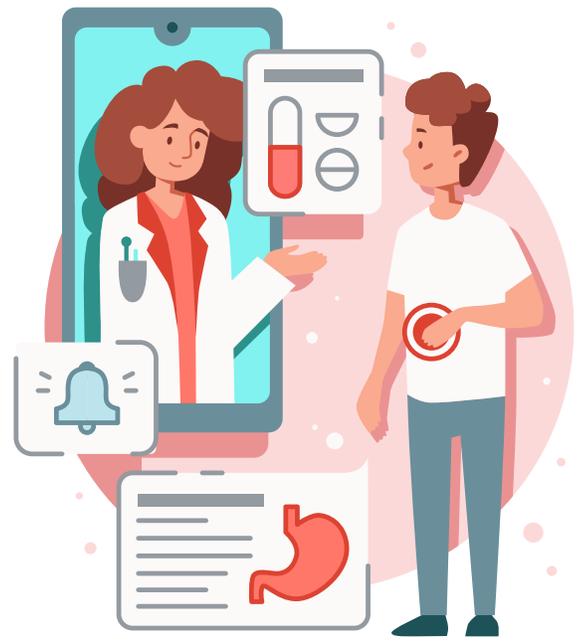
Healthcare spending in Indonesia was USD 38.3 bn [or USD 112 per capita], i.e. 3.6% of GDP, and USD 21 bn in 2019.¹² It is expected to reach USD 51 bn by 2020 (4.18% of GDP).¹³

Development Need:

Below optimum referral system of healthcare services and lack of accessible quality health care has led to an increase in unmet needs for healthcare from 4.66% (2015) to 5.44% (2020)¹⁴, high maternal mortality rate (305/100,000 live births, 2015) and an infant mortality rate of (26.9/1,000 live births, 2015)¹⁵.

Policy Momentum:

Healthcare policy, under the National Priority (PN) 3 aims to improve human capital and competitiveness. Priority Program (PP) 3 and 2 cover universal health coverage to address maternal and infant mortality, communicable and non-communicable diseases, reproductive health and family planning.¹⁶



INVESTMENT THEMES IDENTIFIED:			
Sub-sector	Healthcare Delivery	Biotechnology Pharmaceuticals	Medical Equipment and Supplies
Investment Areas	Telemedicine for last-mile populations.	Production and delivery of alternative medicines and supplements.	Diagnostic Services.
Are they fundamentally marketable?	✔	✔	✔
Scale potential	This investment area has the potential to impact over 80% of the population (226 million people) that are currently registered with the National Health Insurance (BPJS).	The health and food supplement market has generated more than USD 318 million in 2020. ¹⁷ In Q1-2020, <i>Jamu</i> and herbal supplements segment contributed >68% of Indonesia's USD 730.72 billion revenue. ¹⁸	With the growing rate of diseases that need expert diagnostic services, Indonesia's Clinical Laboratory Market is estimated to reach USD 3.2 bn in 2022. ¹⁹
Proven in market?	The Internet penetration rate is expected to reach 89.3% by 2025, with over 200 mn users. ²⁰ Healthcare spending in Indonesia was USD 38.3 bn in 2018 (3.6% of GDP) and is expected to reach USD 51 bn by 2020 (4.18% of GDP). ^{21,22}	Total pharmacy market revenue in April 2021 was USD 5.92 bn. ²³ During 2019-2021, earnings of pharmaceuticals companies grew by 11% per annum, and revenues grew by 12% per annum. ²⁴	Expert consultations show that investors expect an average of 15-20% YoY growth in revenue driven YoY growth in total number of tests, number of tests per customer visit and revenue per visit assuming blended Average Selling Price [ASP] is at USD 45.69/person.
Business models	Invest in B2C models that aggregate Healthcare services using tech-based platforms offering last-mile connectivity for consultations with licensed doctors, certified partner pharmacies through medical delivery and licensed pathology lab services.	Invest in B2B and B2C models for manufacturing and supplying herbal-based products in the form of pharmaceutical preparations, traditional medicines and affiliated products.	Invest in B2C models offering affordable and accessible pathology laboratories or diagnostic centres.
SDGs Impacted	   	   	  
Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the SDG Investor Platform .			



Education

Investment Opportunity:

The GoI allocates 20% of its state budget for the education sector each year [USD 38 bn in 2021].²⁵ Annual consumer spending on education is expected to grow at 6% per annum and collectively reached USD 23.6 bn in 2020.²⁶

Development Need:

Quality of learning outcomes remains low, indicated by a low productivity rate which is 1/4th of that of peer countries like Malaysia. The workforce is currently dominated by 50.2 mn people (or 39.7%) that are elementary school graduates or below.²⁷

Policy Momentum:

For 2020-24, the GoI prioritizes the improvement of quality of education by focusing on teaching and learning outcomes; increasing equitable access to education services at all levels and accelerating its 12-year compulsory education with assurances to improve the quality of learning outcomes.²⁸



INVESTMENT THEMES IDENTIFIED:				
Sub-sector	Education Technology			Education Infrastructure
Investment Areas	Digital platform for interactive learning for K-12.	Virtual skill development facilities for K-12.	Development of high-quality, digital content through learning management systems (LMS) for K-12 education.	Affordable education loans for students.
Are they fundamentally marketable?				
Scale potential	4th largest education system globally with over 50 million students and 4 million teachers resulting in an opportunity worth approximately USD 40 billion. ²⁹	Approximately 10 million people are required by 2030 as workers with advanced degrees and new skills. ³⁰	Schools pay LMS providers USD 5-6/ student per year, which implies a market size of USD 250 mn for an optimal outreach to nearly 50 million students. ³¹	Over 30% of out of school students drop out due to lack of finances, further exacerbated by COVID-19 due to shrinking family incomes. ³²
Proven in market?	Companies in this area generate an average of USD 30-50 ARPPU ³³ , with 1%-2% conversion to paid users. ³⁴	Demand is driven by the rate (~10%) of skilled workers (university degree or higher) that form part of the labour force which expanded to 1.7 mn people in 2017. ³⁵	EdTech industry in Indonesia reached ~USD 112 mn in 2019, growing at ~24.9% annually. ³⁶	In Indonesia, the cost of tertiary education increases by USD 1000-5000 per student per annum, driving demand for education loans. ³⁷
Business models	Invest in B2C digital platforms that connect private tutors and students, offering subscription-based learning videos, private and on-demand tutoring services and online exam tryouts.	Invest in B2C digital platforms that offer technical and skill development through online classes, workshops and certification programs.	Invest in: <ul style="list-style-type: none"> LMS Platforms operating with SAAS business model. Development of digital interactive content, including books and other learning materials (audiovisual, augmented reality) for K-12, smart classes, tutoring and skill training courses. 	Invest in [B2C] Financial Service Providers engaged in offering credit to students for both formal and informal education [professional courses].
SDGs Impacted	 	 	 	
Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the SDG Investor Platform .				



Financial Services

Investment Opportunity:

Indonesia is home to 20% of all fintech companies in Southeast Asia which are expected to generate USD 8.6 bn in revenue over the next 5 years (by 2026).³⁸ Access to e-money encourages urbanization by reducing transaction costs for remitting. 26% of urban and 22% rural population uses digital financial services for online shopping.

Development Need:

Since the onset of COVID-19, banks have adopted a more conservative approach for lending to MSMEs, resulting in a decline in the number of MSME credit accounts (4.20%) with the sharpest decline recorded for the Microcredit segment.³⁹ People from low resource settings mostly rely on informal sources for financial services and may turn to negative coping mechanisms to bridge address their financial needs.⁴⁰

Policy Momentum:

Financial Services Authority's (OJK) 2nd pillar of Structural Framework 2021-2025 focuses on the development of the financial services ecosystem by increasing the role of FSS in supporting priority economic sectors, MSMEs, job creation and regional development, including directing all FSIs to expand services to MSMEs (especially in remote rural areas).⁴¹



INVESTMENT THEMES IDENTIFIED				
Sub-sector	Corporate and Retail Banking			Insurance aggregators and providers
Investment Areas	Microcredit- for low-income populations.	Payment solutions for digitizing cash flows.	Access to Finance for MSMEs.	Insurance aggregators and providers.
Are they fundamentally marketable?				
Scale potential	60% of the population is unbanked and 60% of the population own a mobile phone. ⁴²	56% of payments are now made digitally ⁴³ and the E-wallet userbase is projected to grow to 202 mn users by 2025. ⁴⁴	99% of total businesses in Indonesia are MSMEs. ⁴⁵	As of 2019, 1 in 3 Indonesians didn't have health insurance ⁴⁶ and overall the insurance penetration is 2.8% of the population against a global average of 6.1%. ⁴⁷
Proven in market?	Bank assets grew 7x between 2002 and 2019 ⁴⁸ and the neo-banking segment is expected to show revenue growth of 41% by 2023. ⁴⁹	Digital Payments is likely to be the biggest contributor to the growth of Indonesia's FinTech industry with an expected transaction value of USD 64,741 mn in 2022 alone. ⁵⁰	There are 64.2 mn MSMEs that constitute 61.07% of GDP, 97% of the total workforce and 60.42% of the total private sector investments in Indonesia. ⁵¹	The market size of the aggregator industry for loans & insurance is slated to grow by ~29% CAGR between 2019-2024. ⁵²
Business models	Invest in B2C and P2P financing companies offering affordable and accessible personal loans (small-size, low-interest rates and collateral-free).	Invest in digital platforms (P2P/ P2B / B2B) offering accessible and affordable financial services, including access to secure payments, transfers, cash-in/out, asset management, investments with attractive reward points-based incentives.	Invest in B2C and P2P financing companies offering affordable business loans to serve working capital requirements of MSMEs including invoice financing, supply chain financing, term loans and microloans.	Invest in B2A / B2C / B2B2C digital insurance companies engaged in the provision of: <ul style="list-style-type: none"> Low-income segment focused on affordable Microinsurance (life and health insurance) Mass market insurance products
SDGs Impacted	   	   	   	  

Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the [SDG Investor Platform](#).



Infrastructure:

Investment Opportunity:

GOI has executed 28 infrastructure projects under Government Cooperation with Business Entity (KPBU) with a total expenditure of USD 17 bn.⁵³ The 2020-2024 RPJMN targets 70% of households living in decent housing, i.e. ~11 mn households.

The success rate for handling national waste reached 67.4%, against the target of 80%. In addition to waste handling data, urban household access to waste management services reached 59.08% for handling and 1.55% for reduction.

Development Need:

To achieve the GDP growth target, infrastructure spending should reach ~USD 450 bn, while GOI allocated 37% from the state budget.⁵⁴

In 2019, 13.86% of Urban Slum Households (growing each year) were unfit for habitation and without proper sanitation facilities.⁵⁵ By 2020, 40.47% population were living in slums, informal settlements or inadequate housing.⁵⁶

In 2019, Indonesia was able to reduce, reuse, and recycle ~14.58% of its waste, while 34.6% was dumped in landfills or incinerated, thereby bringing the national waste management to 49.18%.⁵⁷

Policy Momentum:

The GoI puts infrastructure as one of the major development priorities for supporting economic development and basic services fulfilment in the 2020-2024 national development agenda. GoI aims to provide accessible affordable housing for low-income households (MBR), including the continuation of programs such as the 1 million urban housing (Sejuta Rumah) program. GoI also targets to reduce waste by 30% and to manage the remaining 70% by 2025.⁵⁸



INVESTMENT THEMES IDENTIFIED		
Sub-sector	Real Estate	Waste Management
Investment Areas	Affordable housing development.	Integrated waste management for corporates and communities.
Are they fundamentally marketable?	✔	✔
Scale potential	The government aims to build 1 million affordable housing units (<i>Program Satu Juta Rumah</i>), under the National Medium-Term Development Plan from 2020-2024. As of October 2021, under the Program, 871,218 housing units were built throughout Indonesia, including 650,649 units for MBR (Low-Income Communities) and 220,569 units for non-MBR. ⁵⁹	Government targets to manage at least 30% of the total waste generated, reduce 70% of marine debris and increase current waste handling capacities by 70% by 2025. ⁶⁰
Proven in market?	Companies in the affordable housing segment have been successful in expanding their operation to newer areas, symbolizing the demand for affordable housing. ⁶¹	Waste Management businesses generated a revenue of USD 140.8 mn in 2019. ⁶² and the annual revenue is expected to grow to USD 10 bn over the next 20 years. ⁶³
Business models	Invest in Real-estate operators offering affordable housing schemes including financing options for the development of residential complexes	Invest in B2B and B2C operators of modern waste management systems, including material recovery facility, treatment, processing and collecting waste from businesses or households.
SDGs Impacted		
<p>Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the SDG Investor Platform.</p>		





Renewable Energy:

Investment Opportunity:

Indonesia's total power investment needs are estimated at USD 9.14 bn annually over 2021-30, or 1.6x times Indonesia's actual spending power in 2019 to meet its net-zero target.

Development Need:

The use of New Renewable Energy (NRE) has increased, but has not realized its full potential. The energy mix for NRE is ~11%, still lower than the 2025 target of 23%.⁶⁴ GOI pledged to reduce emissions during 2020-2030 by 29% (unconditional) up to 41% (conditional) against the 2030 business as usual scenario.⁶⁵

Policy Momentum:

Under Presidential Regulation no.18/2020, NRE is prioritized to fulfil the energy demand. Improving Environment, Increasing Disaster and Climate Change Resilience, which include energy policy, are designated as one of the national priorities (PN6).⁶⁶

Under COP26, Indonesia pledged to commit more than 50% of new electricity capacity through RE by 2030, achieve partial coal phase-out by 2040 and achieve a net-zero target by 2060.



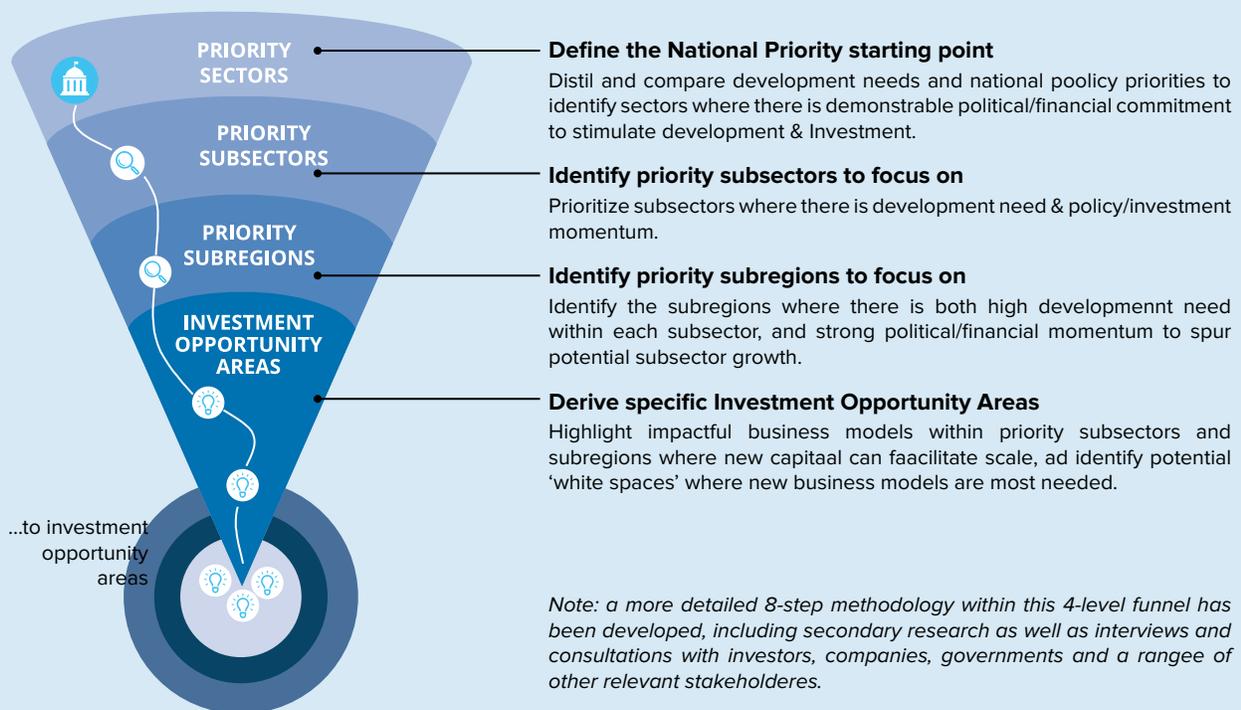
INVESTMENT THEMES IDENTIFIED	
Sub-sector	Alternative energy
Investment Areas	Solar PV system / Rooftop Solar for industrial, housing and commercial use.
Are they fundamentally marketable?	✓
Scale potential	Electricity consumption is slated to grow to 9000 TWh per year by 2050. ⁶⁷
Proven in market?	Solar rooftop projects have an energy generation potential of over 32.5 GW. ⁶⁸
Business models	Invest in B2B and B2C models focusing on the generation of electricity through solar power using Solar PV systems or Roof Solar based solutions for households or corporate buildings.
SDGs Impacted	   
Gender and marginalization, digitalization and climate are underpinning themes, the implications of which on the business models and vice versa are captured in the detailed investor map. Please visit the SDG Investor Platform .	



4. METHODOLOGY FOR DEVELOPING THE SDG INVESTOR MAP:

1. The methodology consists of a four-stage process that draws from a combination of in-depth desk research and focused in-country stakeholder consultations. Through an iterative research-intensive process, the objective is to identify and validate where there is overlap between development need and policy priority and refine the opportunity into a specific Investment Opportunity Area.
2. For Indonesia, we carried out extensive consultations with public and private sector stakeholders to validate a long list of 45 Investment Opportunity Areas for each Sector and sub-sector before arriving at the final list of investment areas that are commercially viable and have the potential for deep development impact.
3. **Gender [SDG 5]** and **Technology & Communications** [Underpinning various SDGs] are ‘horizontal’ themes that will be explored for every sector given Indonesia’s policy push for gender equality and the building of a digital economy.”

Methodology



5. PROJECT COLLABORATORS:



The United Nations Development Programmes (UNDP) is the leading United Nations organization fighting to end the injustice of poverty, inequality, and climate change. Working with our broad network of experts and partners in 170 countries, we help nations to build integrated, lasting solutions for people and planet. UNDP believes that the people of Indonesia should have ownership over the programmes and projects we support. All UNDP programmes therefore actively promote the spirit of mutual respect, support and accountability and subscribe to the principle of national ownership as enshrined in the Jakarta Commitment – a declaration put forward by the government and its development partners in 2009 to strengthen aid effectiveness in Indonesia.



Established by Temasek Holdings in 2007, Temasek Trust is a steward of philanthropic endowments and gifts. Its purpose is to strive for sustainable funding for the long-term well-being and security of our communities. Temasek Trust provides governance and financial oversight of endowments for Temasek Foundation, Stewardship Asia Centre and Temasek Life Sciences Laboratory. The work at Temasek Trust supports a common purpose of doing good, uplifting lives and advancing communities in Singapore and beyond. Temasek Trust strives also to enable new pathways for philanthropy and to inspire and enable giving.



SDG Impact is a UNDP flagship initiative focused on supporting the mobilization of private sector capital and investments in support of the SDGs. By providing investors and businesses with the clarity, insights, and tools required to support and authenticate their contribution to achieving the Sustainable Development Goals, SDG Impact's vision is a world in which all capital flows advance the 2030 Agenda. By driving consistency and accountability, SDG Impact will work to enable more effective investment toward the global good. It will allow investors, businesses and others to confidently authenticate their contributions to achieving the SDGs and to identify SDG investment opportunities in emerging economies and developing countries. This initiative is the first of its kind at the United Nations and the champions and thought leaders on the Steering Group represent an influential cross-section of industries from the global North and South that can collectively influence investing around the world.



Innovative
Financing
Lab

Innovative Financing Lab (IFL) established by UNDP Indonesia in 2018 as a dynamic platform for SDG finance. The Lab operates as collaborative space for Government, the private sector, financial institutions, investors, entrepreneurs, religious organizations, civil society, other UN agencies, and other interested stakeholders to work together and develop solutions for financing the SDGs. Based in Jakarta but global in ambition to offer services to partners, the Lab aims to innovate on means to unlock and leverage new finance to help close the SDGs financing gap through designing and testing new innovative financing instruments, helping to enhance investments for higher SDGs-returns, and contributing to a stronger enabling environment for SDG-friendly finance.



Kementerian PPN/
Bappenas

The Ministry of National Development Planning Indonesia, or National Development Planning Agency (Badan Perencanaan Pembangunan Nasional/BAPPENAS), formulates and determines the Government of Indonesia's development policies and builds synergy between planning, budgeting, regulations, and institutions at central and regional level. It is the leading institution in the formulation of the medium-term national development plan document, translating every elected President's visions and missions into development priority programs and targets). Functioning as well as a think-tank institution, BAPPENAS builds policies based on evidences and knowledge, through participatory and forward-oriented approaches.



KEMENTERIAN INVESTASI/
BKPM

The Ministry of Investment/Investment Coordinating Board (BKPM) of Indonesia oversees policy implementation and service coordination in investment in accordance with the provisions of the regulations. As the primary interface between business and government, BKPM aimed to boost domestic direct investment (DDI) and foreign direct investment (FDI) through creating a conducive investment climate. BKPM sets not only to seek more domestic and foreign investment in term of quantitative value but also seek quality investments that may drive the Indonesian economy and absorb a lot of manpower while creating impact on economic growth, increasing welfare of people, and environmental sustainability.

6. LIST OF REFERENCES

1. Asian Development Bank (ADB). 2019. Policies to Support Investment Requirements of Indonesia's Food and Agriculture Development during 2020-2045. <https://www.adb.org/sites/default/files/publication/534336/indonesia-food-agri-development-2020-2045.pdf>.
2. Ministry of National Development Planning/ National Development Planning Agency. Roadmap of SDGs Indonesia Towards 2030: A Highlight. <https://www.unicef.org/indonesia/media/1626/file/Roadmap%20of%20SDGs.pdf>.
3. R. Hadyan. 2021. Indeks Ketahanan Pangan Global 2020: Posisi Indonesia Turun ke-65. <https://ekonomi.bisnis.com/read/20210313/12/1367047/indeks-ketahanan-pangan-global-2020-posisi-indonesia-turun-ke-65>.
4. Cekindo. Where to Invest: Food and Beverages Sector in Indonesia (cekindo.com)
5. CompassList. Indonesia Agritech Report 2020: Startups, Investors and Outlook.
6. L. Goh and K. Wu. 2021. Investing in data and innovation ecosystem to transform Indonesia's agriculture. World Bank Blogs. <https://blogs.worldbank.org/eastasiapacific/investing-data-and-innovation-ecosystem-transform-indonesias-agriculture>
7. Ipsos Business Consulting. 2016. Indonesia's Aquaculture Industry: Key Sectors for Future Growth. <https://www.ipsos.com/en-id/indonesias-aquaculture-industry-key-sectors-future-growth>
8. Constultancy.asia. 2021. Covid-19 a catalyst for growth in Indonesia's e-grocery market. <https://www.consultancy.asia/news/3941/covid-19-a-catalyst-for-growth-in-indonesias-e-grocery-market>
9. L. Goh and K. Wu. 2021. Investing in data and innovation ecosystem to transform Indonesia's agriculture.
10. Market Research. Aquaculture in Indonesia. <https://www.marketresearch.com/MarketLine-v3883/Aquaculture-Indonesia-13512433/>
11. EY. 2017. Ripe for investment: the Indonesian health care industry post introduction of universal health coverage. <https://persi.or.id/wp-content/uploads/2017/12/ripe-for-investment.pdf>
12. Macrotrends. Indonesia Healthcare Spending 2000-2022. <https://www.macrotrends.net/countries/IDN/indonesia/healthcare-spending>.
13. US Department of Commerce, export.gov. 2019. Healthcare Resource Guide: Indonesia. https://2016.export.gov/industry/health/healthcareresourceguide/eg_main_108589.asp#:~:text=According%20to%20Fitch%20Solutions%27%20Pharmaceuticals,4.18%25%20in%20the%20same%20period.
14. Republic of Indonesia. 2021. Indonesia's Voluntary National Review (VNR) 2021 Sustainable and Resilient Recovery from the COVID-19 Pandemic for the Achievement of the 2030 Agenda.
15. Intercensal Survey (SUPAS). 2015.
16. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
17. Cekindo. Food Supplement Indonesia: How to Invest in the Sector. <https://www.cekindo.com/sectors/food-supplements>
18. F. Susanty. "Market reports paint a bright, post-pandemic future for Indonesian 'jamu'".

- The Jakarta Post. <https://www.thejakartapost.com/news/2020/04/29/market-reports-paint-a-bright-post-pandemic-future-for-indonesian-jamu.html>.
19. Ken Research. 2018. Indonesia Clinical Laboratory Market Outlook to 2022 - By Type (Public Clinical Lab, Private Hospital Labs and Private Independent Labs), By Type of Test (Routine, Non Laboratory and Esoteric). <https://www.kenresearch.com/healthcare/diagnostics/indonesia-clinical-lab-market/143543-91.html>.
 20. Cekindo. Digitization in Indonesia Healthcare System: All You Need To Know. <https://www.cekindo.com/blog/indonesia-healthcare-digital>
 21. Macrotrends. Indonesia Healthcare Spending 2000-2022. <https://www.macrotrends.net/countries/IDN/indonesia/healthcare-spending>.
 22. US Department of Commerce, export.gov. 2019. Healthcare Resource Guide: Indonesia
 23. IDNFinancials. 2020. Export of Indonesian herbal medicine product increases by 14.08% in 9M 2020. <https://www.idnfinancials.com/news/37453/export-indonesian-herbal-medicine-product-increases-m>.
 24. Simply Wall St. Indonesian (IDX) Growth Pharmaceuticals & Biotech Stocks. <https://simplywall.st/stocks/id/pharmaceuticals-biotech/growth>.
 25. Indonesia's 2021 State Budget (APBN)
 26. i360. 2020. i360 Report: Edutech Industry in Indonesia. <https://theravenry.com/wp-content/uploads/2020/08/i360-Report-Edutech-Industry-in-Indonesia.pdf>.
 27. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
 28. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
 29. Ruangguru. Indonesia's largest tech-enabled provider for quality teaching & content. (ut.ac.id)
 30. i360. 2020. i360 Report: Edutech Industry in Indonesia. <https://theravenry.com/wp-content/uploads/2020/08/i360-Report-Edutech-Industry-in-Indonesia.pdf>.
 31. EdTech in Indonesia - The Way Forward. 2021. <https://oldrope.substack.com/p/indonesia-edtech?s=r>.
 32. United Nations Children's Fund (UNICEF) and United Nations Educational, Scientific and Cultural Organization (UNESCO). 2021. Indonesia Case Study Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia.
 33. Average Revenue Per Paying User
 34. EdTech in Indonesia - The Way Forward. 2021. <https://oldrope.substack.com/p/indonesia-edtech?s=r>.
 35. World Bank. 2019. Indonesia Skills Development Project (P166693). <https://documents1.worldbank.org/curated/en/594741563369992590/pdf/Concept-Stage-Program-Information-Documents-PID-Indonesia-Skills-Development-Project-P166693.pdf>
 36. i360. 2020. i360 Report: Edutech Industry in Indonesia. <https://theravenry.com/wp-content/uploads/2020/08/i360-Report-Edutech-Industry-in-Indonesia.pdf>.
 37. A. Janni. 2020. MICROCAPITAL BRIEF: Accion Venture Lab Takes Equity Stake in Pintek of Indonesia, Provider of Online Loans to Students, Schools. <https://www.microcapital.org/microcapital-brief-accion-venture-lab-takes-equity-stake-in-pintek-of-indonesia-provider-of-online-loans-to-students-schools/>.
 38. A. Medina. 2021. Opportunities in Indonesia's Financial Technology Sector. ASEAN Briefing. <https://www.aseanbriefing.com/news/opportunities-in-indonesias-financial-technology-sector/>
 39. OJK – BCG Joint Research. 2020. BAGAIMANA UMKM & PERBANKAN DAPAT SUKSES DI ERA DISRUPSI EKONOMI & DIGITAL. <https://www.ojk.go.id/id/data-dan-statistik/research/prosiding/Documents/Kajian%20Bagaimana%20UMKM%20dan%20Perbankan%20Dapat%20Sukses%20di%20Era%20Disrupsi%20Ekonomi%20dan%20Digital.pdf>

40. Survey on Financial Inclusion & Access (SOFIA). 2017. Understanding people's use of financial services in Indonesia: Headline Results Report.
41. Financial Services Authority (OJK). 2021. The Indonesian Financial Services Sector Master Plan 2021-2025.
42. Ken Research. 2020. Indonesia Online Loan and Insurance Industry Outlook to 2024 : Compelling Incumbents to pursue growth via Product Development & International Expansion. <https://www.kenresearch.com/banking-financial-services-and-insurance/loans-and-advances/indonesia-online-loan-aggregator-industry-outlook/347119-93.html>.
43. TEMPO. 2019. OVO Slams Bankruptcy Rumors; Posts 19-fold Revenue Increase. <https://en.tempo.co/read/1284272/ovo-slams-bankruptcy-rumors-posts-19-fold-revenue-increase>.
44. M. Liivak. 2021. Mobile wallets spotlight: Indonesia. <https://fortumo.com/blog/mobile-wallets-spotlight-indonesia/>.
45. Ministry of Investment/BKPM Indonesia. 2021. Collaboration between the Ministry of Investment/BKPM and Gojek to Empower MSMEs. <https://www.bkpm.go.id/en/publication/press-release/readmore/2426101/75701>.
46. LokaData.id. 2021. 1 dari 3 penduduk tak punya asuransi kesehatan. <https://lokadata.id/artikel/1-dari-3-penduduk-tak-punya-asuransi-kesehatan>.
47. Ken Research. 2020. Indonesia Online Loan and Insurance Industry Outlook to 2024 : Compelling Incumbents to pursue growth via Product Development & International Expansion. <https://www.kenresearch.com/banking-financial-services-and-insurance/loans-and-advances/indonesia-online-loan-aggregator-industry-outlook/347119-93.html>.
48. • Indonesia: total bank assets value | Statista
49. Statista Market Forecast. FinTech - Indonesia. <https://www.statista.com/outlook/dmo/fintech/indonesia>
50. Statista Market Forecast. FinTech - Indonesia. <https://www.statista.com/outlook/dmo/fintech/indonesia>.
51. BritCham Indonesia. 2021. MSME digitization necessary to support Indonesia's economic recovery. <https://britcham.or.id/msme-digitization-necessary-to-support-indonesias-economic-recovery/>
52. Ken Research. 2020. Indonesia Online Loan and Insurance Industry Outlook to 2024 : Compelling Incumbents to pursue growth via Product Development & International Expansion. <https://www.kenresearch.com/banking-financial-services-and-insurance/loans-and-advances/indonesia-online-loan-aggregator-industry-outlook/347119-93.html>.
53. Mairizal et al. 2021. Electronic waste generation, economic values, distribution map, and possible recycling system in Indonesia. Journal of Cleaner Production.
54. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
55. Statistics indonesia (BPS), Persentase Rumah Tangga Kumuh Perkotaan (40% Ke Bawah), Menurut Provinsi (Persen), 2017-2019.
56. Republic of Indonesia. 2021. Voluntary National Review: for Implementation of New Urban Agenda (Provisional Report). https://www.urbanagendaplatform.org/sites/default/files/2021-10/INDONESIA_Provisional%20Report%20NUA_signed.pdf.
57. German-Indonesian Chamber of Industry and Commerce. 2021. Indonesia's waste management sector still going strong. <https://indonesien.ahk.de/en/infocenter/news/news-details/indonesias-waste-management-sector-still-going-strong#:~:text=According%20to%20data%20from%20the,national%20waste%20management%20to%2049.18%25>.
58. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
59. Ministry of Public Works and Housing, pu.go.id
60. Republic of Indonesia. Presidential Regulation No. 97/2017.

61. Please see more details of examples of companies in this space for Indonesia on the SDG Investor Platform where the map is hosted.
62. Market Research. Waste Management in Indonesia. <https://www.marketresearch.com/MarketLine-v3883/Waste-Management-Indonesia-13512533/>.
63. Global Plastic Action Partnership. 2020. Indonesia National Plastic Action Partnership (NPAP) Reveals Recommendations to Unlock Financing Gaps to Cut Marine Plastic Debris by 70 percent. <https://globalplasticaction.org/pressrelease/indonesia-national-plastic-action-partnership-npap-reveals-recommendations-to-unlock-financing-gaps-to-cut-marine-plastic-debris-by-70-percent/>.
64. Direktorat Jenderal Energi Baru Terbarukan dan Konservasi Energi (Direktorat Jenderal Energi Baru Terbarukan dan Konservasi Energi Kementerian ESDM). 2021. Forum Kehumasan Dewan Energi Nasional: Menuju Bauran Energi Nasional Tahun 2025. <https://ebtke.esdm.go.id/post/2021/04/09/2838/forum.kehumasan.dewan.energi.nasional.menuju.bauran.energi.nasional.tahun.2025?lang=en>.
65. Indonesia's Nationally Determined Contribution (NDC) 2021.
66. Republic of Indonesia. The National Medium-Term Development Plan For 2020-2024.
67. D. Silalahi, et al. 2021. Indonesia's Vast Solar Energy Potential. *Energies* 2021, 14(17), 5424; <https://doi.org/10.3390/en14175424>
68. The Diplomat. 2021. A Turning Point for Renewable Energy in Indonesia?. <https://thediplomat.com/2021/10/a-turning-point-for-renewable-energy-in-indonesia/>.

