

Enabling Environment of the Water-Energy-Food Nexus

COUNTRY PROFILE - INDONESIA



Contents

1 SUMMARY	2
1.1 Current Political and Socio-Economic Condition	2
1.2 Priorities and Resources for Innovators in the Water-Energy-Food Nexus	2
2 MACRO-LEVEL: POLICIES AND TRENDS IN THE WATER-ENERGY-FOOD.....	3
NEXUS	3
2.1 Economic Growth and Agriculture	3
2.2 Energy/Water	3
2.3 Investment and End-user Finance	4
2.4 Environmental, Social, and Governance (ESG)	4
3 BUSINESS-LEVEL: PRIORITIES AND RESOURCES FOR INNOVATORS IN THE	6
WATER-ENERGY-FOOD NEXUS	6
3.1 Business Operations	6
3.2 Market Growth and Investment Opportunities	6
3.3 End-User Access	7
3.4 Scale-up and Expansion Support	7
4 WE4F INNOVATIONS MARKET READINESS: FACTORS INFLUENCING.....	8
ADOPTION OF INNOVATIONS	8
REFERENCES.....	9
ANNEX 1: SWOT SUMMARY ANALYSIS OF ENABLING ENVIRONMENT POLICIES AND PLANS	10
ANNEX 2: SUMMARY OF RELEVANT POLICIES IN THE WEF NEXUS	11
ANNEX 3: LOCAL ENABLING ENVIRONMENT ACTORS AND STAKEHOLDERS IN THE WEF	
NEXUS	14
ANNEX 4: EMERGING PLAYERS IN MSME SUPPORT LANDSCAPE (INCUBATORS AND	
ACCELERATORS)	18
ANNEX 5: TAX PROFILE	20
ANNEX 6: MAJOR CROPS GROWN AND EXPORT STATUS	21

1 SUMMARY

1.1 Current Political and Socio-Economic Condition

Agriculture is a huge contributor to Indonesia's economy. Around 29% of Indonesian workforce works in agriculture, fisheries and livestock sector, which contributes nearly 13% to GDP. The sector has emerged as crutch of Indonesian economy during the COVID pandemic. Commodities contribute around 60% of all exports from Indonesia. Five main commodities are oil palm, rubber, coffee, cacao, and paddy. Most agriculture is rainfed; only 17%–20% of agriculture relies on irrigation. Geographical conditions, rural economic activities, funding schemes, and market structure are challenges that hamper rural electrification program in Indonesia. Increasing production costs, changes in weather, and pest attacks have pushed farmers to change professions, with landowners converting land to other uses or selling it. Indonesian women made up about 40% of farmers and agriculture yet owned just 20% of the land.¹

1.2 Priorities and Resources for Innovators in the Water-Energy-Food Nexus

Indonesia's ranking in World Bank's Ease of Doing Business (EODB) index remained stagnant with score of 69.6 out of 100. *Investment Coordinating Board of the Republic of Indonesia (BKPM)* is a government agency to assist foreign companies; offers one-stop shop and online service to help foreign investors. In response to Covid-19 pandemic, government issued National Economic Recovery (PEN) policy to encourage re-growth of micro-, small and medium enterprises (MSMEs). Government of Indonesia to provide incentives for 2.4 million farmers under economic stimulus program to maintain domestic food production, in the form of monthly stipends 600,000 IDR (\$42 USD) for 3 months.

See Annex 1 for SWOT summary analysis of enabling environment policies/plans.

See Annex 2 for summaries of relevant policies in the water-energy-food nexus.

See Annex 3 for the local enabling environment actors/stakeholders in the nexus.

See Annex 4 for business service providers (incubators and accelerators) in Indonesia.

See Annex 5 for a tax profile of the country.

See Annex 6 for a map of major area and crops grown, and export status.

2 MACRO-LEVEL: POLICIES AND TRENDS IN THE WATER-ENERGY-FOOD NEXUS

2.1 Economic Growth and Agriculture

- Indonesia's economic growth is expected to rebound after 2020 with government targeting 4.5% - 5.5% growth. Projections from international institutions: IMF (6.1%), World Bank (3% - 4.4%) Asian Development Bank (5.3%).²
- Around 29% of Indonesian workforce works in agriculture, fisheries and livestock sector, which contributes nearly 13% to GDP. It is third-biggest contributor to economy after manufacturing and trade, according to Statistics Indonesia (BPS) data.³ Agriculture emerged as buttress against pandemic's impact on economy and managed to grow 2.59% year-on-year in fourth quarter of 2020.⁴
- Increasing production costs, changes in weather and pest attacks have pushed farmers to change professions. Fewer young people pursuing farming compared with previous generations. From 2013 and 2019, agricultural land decreased to 7.46 million ha from 7.75 million ha.⁵
- Commodities contribute approximately 60% of exports from Indonesia. Five main commodities: oil palm, rubber, coffee, cacao, and paddy rice.⁶ The major agriculture export commodities and values can be found in the Annex 5.
- In Indonesia, approximately 49% of agricultural households comprise of women farmers according to the 2018 Agriculture Census. These women are involved in almost all agricultural processes and vital functions.⁷
- Total number of farmers decreased by 5.1 million (from 2003 to 2013) to 26 million, according to Statistics Indonesia (BPS). This trend is expected to continue in the next few years.⁸

2.2 Energy/Water

- In 2018, total primary energy production from oil, gas, coal and renewable energy was 411.6 MTOE. Total energy consumption (without traditional biomass) was approximately 114 MTOE by 40% transportation, 36% industry, 16% household, 6% commercial sector and 2% other sectors.⁹
- National Energy Policy mandates renewable energy mix target to reach at least 23% by 2025. The majority of Indonesia's electricity is provided by the state-owned electricity company PLN.
- Geographical conditions, rural economic activities, funding schemes, and market structure are some of challenges that hamper the rural electrification program in Indonesia.¹⁰
- Total water requirement of agriculture estimated at 3,500 billion m³ per year. But most agriculture is rainfed; only about 17%–20% of agriculture relies on irrigation. Irrigation water demand estimated at 5,441 m³/s.¹¹ The islands closest to Australia, including Nusa Tenggara and the eastern tip of Java, tend to be dry, with some areas experiencing less than 1,000 millimeters (39.4 in) per year.
- Women's incomes are considerably lower than men's and the capital requirements to invest in irrigated crops can be quite high. Thus, access to credit mechanisms would be important to enable women's access to technology. Service based models will serve women and poorer farmers better.

2.3 Investment and End-user Finance

- Foreign direct investment in agriculture, hunting, forestry and fishery in Indonesia was over \$1 USD billion in 2019.¹²
- According to the Strategic Investment Planning for 2014-2019 and Bappenas's Strategic Investment Planning draft 2020 - 2024, government has placed a new focus on several business sectors including agriculture (i.e., food estate, corn plantation, cattle, and rice).¹³
- Indonesian government passed *Omnibus Law* on job creation (Oct 2020); to comprehensively amend or revoke hundreds of regulations to create job opportunities and improve Indonesia's investment ecosystem.
- MSMEs total over 64 million (99% of total businesses), employ 97% of workforce, contribute 61% of GDP.
- Women-owned SMEs contribute to 9.1% of the GDP; 34% of medium sized and 51% of small sized enterprises are women owned.¹⁴
- In response to the lack of access to formal financial services, women tend to access informal financial services, such as "arisan".¹⁵ Thus, informal women's groups play a dominant role as the source of credit.¹⁶
- Indonesia shows a reverse gender gap: 51.4% of the female adult population is banked compared to 46.2% of the male population. Nonetheless, 48% (47 million) of women remain unbanked.¹⁷
- **National Economic Stimulus as a Countercyclical Policy of Coronavirus Disease 2019 Infection Impact ("POJK 11/2020")**: supports economic growth for debtors impacted by COVID-19, including MSMEs.

2.4 Environmental, Social, and Governance (ESG)

- The poverty line in March 2020 was recorded at 454,652 IDR (\$32 USD) / capita / month. The number of poor people in March 2020 was 26.42 million people, and 15.26 million people live in rural areas,¹⁸ about 14 million people in poverty work in the agricultural sector (March 2017).¹⁹
- Access to food is inequitable and is influenced by poverty and lack of infrastructure compounded by high food prices (rice 50-70% more expensive than neighboring countries). As a result, 19.4 million people are unable to meet their dietary requirements.²⁰
- Indonesia is ranked as the 78th most vulnerable and 74th least ready country in climate change adaptation and regarded as moderately ready to combat the effects of climate change.²¹ Indonesia is one of 35 Disaster Prone Countries in the World.²²
- Indonesia still has low score on the corruption perceptions index (CPI). In 2020, CPI score of Indonesia is 37.²³
- Indonesia is ranked 85th out of 149 countries in Global Gender Gap rankings; index score for Indonesia in 2020 was 0.7 (with score of 1 absolute parity; 0 absolute disparity).²⁴

- Around 17% of all ventures that apply to Start-up Assistance Organization (SAO) programs are women-led. However, the representation of women-led enterprises participating in SAO programs is, on average, 22%.²⁵
- Women's participation in agriculture is critical, both as farmers and workers. Women are involved in almost all agricultural processes and vital functions. Therefore, many organizations have worked to strengthen their access to market and incomes in Indonesia. (Examples of initiatives that work with women farmers and create opportunities for them to access the market are listed in Annex 3).

3 BUSINESS-LEVEL: PRIORITIES AND RESOURCES FOR INNOVATORS IN THE WATER-ENERGY-FOOD NEXUS

3.1 Business Operations

- Indonesia is ranked 73rd in Ease of Doing Business (EODB) index stagnant with score of 69.6 out of 100, slightly increasing 1.64 points from last year's score of 67.96.²⁶
- **Investment Coordinating Board of the Republic of Indonesia (BKPM)** is government agency to assist foreign companies to invest in Indonesia. Offers one-stop shop and online service to foreign investors, with targets for approval times.
- Application for Foreign Company Representative Office submitted manually to BKPM, but to establish Foreign Trade Company Representative Office conducted via online system (i.e., Online Single Submission System - OSS System).²⁷
- Income Tax is generally a flat rate of 25%. Public companies entitled to tax cut of 5%; small enterprises (turnover < 50 IDR billion) to 50% discount. Small enterprises (turnover < IDR 4.8 billion or equivalent to \$343,000 USD) subject to Final Tax at 0.5% of turnover. (See Annex 5 Tax Profile).
- Taxpayers investing in certain industries and/or in certain less developed regions having high priority on a national scale can be granted tax facilities. New investment in "pioneer industry" may obtain exemption or reduction of CIT.
- New taxpayer with business in Special Economic Zones eligible for tax facility of 20% to 100% reduction in CIT liability for 10 to 25 years, depending on investment value. Also entitled to obtain VAT and Import Tax facilities.
- CIT rate to be reduced gradually from 25% to 22% for 2020-2021; and 20% by 2022. Limited liability companies with at least 40% paid-up shares, listed on Indonesia Stock Exchange, can receive further 3% deduction to CIT.²⁸

3.2 Market Growth and Investment Opportunities

- Total demand for food & beverages expected to reach \$330 USD billion in 2020 with average growth rate of 9.93% per year (2016-2020).²⁹
- Growth in food / agri-business sector creates FDI opportunities; agribusiness FDI reached \$5.41 USD billion growth in 2014, food crops & plantation FDI growth averaged at \$1.9 billion USD (2013-2016) while livestock and fisheries FDI growth average was much lower at \$40-50 USD million (2014-2016).³⁰
- Range of projections for primary energy mix for 2025 differ by scenarios for "sustainable development" or "low carbon": new renewable energy NRE (23-36%), oil (21-19%), gas (24-21%), and coal (32-24%).
- Decline in number of farmers in Indonesia makes need for technology application more urgent. To meet this demand, several startups in agriculture technology offer products in energy and water nexus: drone spraying (PT Mitra Sejahtera Membangun Bangsa - MSB), water quality management (PT. Atnic Ekotekno Wicaksana), smart agriculture management (Ci-Agriculture), and digital

platforms to manage farm irrigation systems (Habibi Garden). But the number of players in this nexus still limited.

- Estimated average increase in profitability of 117% with application of agri-tech innovations across range of production systems.³¹

3.3 End-User Access

- In response to COVID-19 in 2020, 1.8 IDR trillion (equivalent to \$128.5 USD million) from the Agriculture Ministry's reallocated for seed assistance, labor-intensive programs, stabilization of food stocks and prices, as well as food distribution and transportation. The Ministry of Social Affairs provides subsidy for 10 million household through "Program Keluarga Harapan (PKH)", which are mostly received by women, either as they are wives or single parents.³²
- Government provided incentives for 2.4 million farmers under economic stimulus program to maintain domestic food production by providing 600,000 IDR (\$38 USD) monthly stipend for three months in the form of 50% in direct cash and 50% in agricultural inputs such as seeds and fertilizers.³³
- Government issued Government Regulation no. 23/2020 on Economic Recovery Program support businesses during the pandemic specifically targeting: (i) MSMEs: loan interest subsidy (34.15 IDR trillion, or equivalent to \$2,4 USD billion), tax incentive (28 IDR trillion, or equivalent 2 USD billion), loan guarantee (125 IDR trillion or equivalent \$8.9 USD billion), (ii) Corporations: Tax incentives, loan restructuring.
- Government provides interest subsidies, simplifies credit / financing requirements and funding for MSMEs, including via People's Business Credit (KUR), and providing loan payment relief for MSMEs.³⁴
- Government committed to electrifying country by 2020 (RUEN, 2017), but over one million households without electricity access, particularly rural areas. Electrification rate 62% (2018) in East Nusa Tenggara; lowest in Indonesia.

3.4 Scale-up and Expansion Support

- Government allocated special loan for MSMEs, ("Kredit Usaha Rakyat") IDR 190 trillion (equivalent to \$13.5 USD billion) and will increase up to 325 IDR trillion (equivalent to \$23.2 USD billion) in 2024. The interest rate is 7% per annum (lower than commercial loan).
- The Revolving Fund Agencies for Cooperative and MSMEs ("*LPDB-KUMKM*") provides loans and business incubation. To date, Agency distributed loan amounting 12.37 IDR trillion (equivalent to \$883.5 USD million).
- **PT Permodalan Nasional Madani (Persero) or "PNM"** - state owned company to support MSMEs through financial access, coaching and capacity building.
- The IT Ministry is currently running a "Farmers and Fishermen Go Online" campaign to encourage traditional players to cooperate with digital agritech platforms.³⁵
- The government has promulgated several regulations on food safety such as Act 18/2012 on Food and Government Regulation No. 28 of 2004 on Food Safety, Quality and Nutrition. Also, the

government has established the National Agency for Drug and Food Control to monitor and supervise the food sector.

4 WE4F INNOVATIONS MARKET READINESS: FACTORS INFLUENCING ADOPTION OF INNOVATIONS

Factors	Opportunity	Threats
Digital penetration	Number of internet users are growing fast and have reached 175.4 million in 2020 with penetration 64%, and 94% of them use smart phone. ³⁶	Geographically, the 4G signal only reaches 49.33% of the land area of Indonesia ³⁷ . Ownership of smartphones by farmers is only 43.5%, and mostly are concentrated in Java and Sumatra. ³⁸
Access to subsidies/incentives	Through the National Economic Recovery (PEN), the government provides subsidy and/or incentives for acceleration of irrigation improvement and solar energy development. These subsidies will reduce cost of construction and/or production.	The National Economic Recovery program is temporary program, so the companies should find the longer-term solution in order to keep affordable price for the products and services.
Transaction cost to reach the farmers	The presence of microfinance service providers, NGOs, and CSOs which works in the rural area can assist to reach the farmers in rural areas and reduce the transaction cost.	Farmers mostly live-in remote area and not concentrated with bad transportation and communication infrastructure, it will increase the cost to reach the farmers.
Affordability	Combination of loan and the innovative payment model, such as non-cash payments that allows farmers to pay in instalments and trade the agriculture products for payments.	Agriculture sector are still perceived as high-risk sector by the banks/financial services providers. Limited number of good microfinance institutions and high interest rates of microfinance loans hamper the smallholder farmers to access the innovations.
Access to finance for women	The presence of microfinance services and fintech targeting on women and informal financial services, such as " <i>arisan</i> " (rotating savings and credit association) provide financial access to women.	Women's incomes are considerably lower than men's, and women. 48% (47 million) of women remain unbanked.

REFERENCES

- ¹ Land Tenure Issues in Indonesia and Options for the Future. FAO, 2020.
- ² Indonesia 2021 Market Outlook. NH Korindo Sekuritas.
- ³ A Land without farmers: Indonesia Agricultural Conundrum. The Jakarta Post, 2020.
<https://www.thejakartapost.com/longform/2020/08/13/a-land-without-farmers-indonesias-agricultural-conundrum.html>
- ⁴ <https://finance.detik.com/berita-ekonomi-bisnis/d-5362864/bps-catat-sektor-pertanian-tumbuh259-di-kuartal-iv-2020>
- ⁵ According to data by Agrarian and Spatial Planning Ministry, BPS and several other government institutions
- ⁶ Retrieving the National Main Commodity Maps in Indonesia Based on High-Resolution Remotely Sensed Data Using Cloud Computing Platform. Land & MDPI. October 8, 2020
- ⁷ Empowering Indonesia's Women Farmers. I Dewa Made Agung. April 5, 2020. <https://theaseanpost.com>
- ⁸ <https://www.thejakartapost.com/longform/2020/08/13/a-land-without-farmers-indonesias-agricultural-conundrum.html>
- ⁹ Indonesia Energy Outlook 2019. Secretariat General National Energy Council. Sep, 2019
- ¹⁰ Indonesia Clean Energy Outlook. IESR. Dec, 2019
- ¹¹ Indonesia Country Water Assessment. ADB. 2016
- ¹² <https://www.statista.com/statistics/680189/foreign-direct-investment-agriculture-indonesia/>
- ¹³ 2019-2020 Investment Window into Indonesia (IW), Deloitte
- ¹⁴ Women-owned SMEs in Indonesia: A Golden Opportunity for Local Financial Institutions. IFC and USAID, 2016
- ¹⁵ Survey on Financial Inclusion and Access (SOFIA): Focus note on Gender. Oxford Policy Management, Nov 2017
- ¹⁶ <https://www.sciencedirect.com/science/article/pii/S0306919217303688>
- ¹⁷ <https://www.womensworldbanking.org/country-strategies-indonesia/>
- ¹⁸ Profil Kemiskinan di Inonesia Maret 2020. Badan Pusat Statistik (BPS-Statistics Indonesia). July 15, 2020
- ¹⁹ Understanding poverty and poverty data in Indonesia. UNESCAP, October 2017
- ²⁰ <https://www.wfp.org/countries/indonesia>
- ²¹ Climate Change Profile: Indonesia. Ministry of Foreign Affairs of the Netherland. April 2018.
- ²² <https://www.cnnindonesia.com/nasional/20201215141037-20-582358/doni-monardo-ri-masuk-35-negara-rawan-bencana-di-dunia>
- ²³ <https://en.tempo.co/read/1427429/indonesias-corruption-perceptions-index-drops-in-2020-tii>
- ²⁴ <https://www.statista.com/statistics/973044/global-gender-gap-score-indonesia/>
- ²⁵ Start-up Assistance Organizations in Indonesia: Taxonomy and Landscape. ANGIN. May, 2018
- ²⁶ <https://www.doingbusiness.org/en/data/exploreeconomies/indonesia>
- ²⁷ 2019 – 2020 Investment Window into Indonesia (IW). Deloitte.
- ²⁸ COVID-19 Response of the Indonesian Government on Funding and Financial Support Measures. White & Case. May 2020
- ²⁹ Investment Opportunities in Indonesia: Food and Agri-business. WAVTEQ. May 2017
- ³⁰ -ibid-
- ³¹ <https://australiaindonesia.com/aic/webinars/agtech-and-investment-in-indonesia-partnership-csiro/>
- ³² <https://nasional.kompas.com/read/2020/08/03/19503061/kemensos-sebut-sudah-bantu-kepala-keluarga-perempuan-saat-pandemi-covid-19?page=all>
- ³³ Gov't Provides Incentives to Nearly 2.5 Million Farmers to Maintain Rice Production. Jakarta Globe. April 28, 2020
- ³⁴ Strengthening MSMEs as Drivers of National Economic Recovery. BPKM. <https://www.investindonesia.go.id/>
- ³⁵ <https://kr-asia.com/indonesian-agritech-complicated-but-promising>
- ³⁶ Digital 2020: Indonesia. Hootsuite
- ³⁷ <https://tekno.kompas.com/read/2020/09/11/21395607/cakupan-4g-di-indonesia-kurang-dari-setengah-keseluruhan-wilayah?page=all>
- ³⁸ Survey TIK 2017. Ministry of Communication and Informatics, 2017.

ANNEX 1: SWOT SUMMARY ANALYSIS OF ENABLING ENVIRONMENT POLICIES AND PLANS

Strengths	Weaknesses
– Agriculture is huge contributor to Indonesia's economy. – Demand for food and beverages is growing fast with growth rate of 9.93% per year (2016-2020). – Government special loan for MSMEs (KUR) allocated 253 IDR trillion (equivalent to \$18 USD billion) in 2020; will increase up to 325 IDR trillion (equivalent to \$23.2 USD billion) in 2024 – Indonesia's climate is equatorial, with abundant rainfall throughout the year. – Indonesia has established BKPM which offers one-stop shop and online service to help foreign investors.	– Agriculture sector are still perceived as high-risk sector by the banks/financial services providers. – Indonesia's ranking in World Bank's Ease of Doing Business (EODB) index remained stagnant with score of 69.6 out of 100. – Indonesia 78th most vulnerable and 74th least ready country in climate change adaptation – Indonesia still has low score on the corruption perceptions index (CPI). In 2020, scored of Indonesia is 37.
Opportunities	Threats
– Government has just issued Omnibus Law that are more conducive for business and investment (especially Foreign Investment) – National Energy Policy mandates renewable energy mix target to reach at least 23% by 2025. – Through the National Economic Recovery (PEN), the government provides subsidy and/or incentives for acceleration of irrigation improvement and solar energy development. – Irrigation water demand estimated at 5,441 m³/s – Growing number of fintech company provide services to agriculture sector. – Number of internet users are growing fast and have reached 175.4 million in 2020 with penetration 64%, and 94% of them use smart phone.	– Fewer young people pursuing farming compared with previous generations, – Agricultural land and number of farmers decreased during the recent years. – Indonesia is one of the most disaster-prone countries.

ANNEX 2: SUMMARY OF RELEVANT POLICIES IN THE WEF NEXUS

Agriculture

- **Strategic Plan of the Indonesian Ministry of Agriculture 2020-2024** is generally aimed at achieving a self-reliance, developed, and prosperous agricultural community by increasing food security and agricultural competitiveness. It focuses on: (i) Increasing food security through improving the production of agricultural commodities; (ii) Strengthening agricultural infrastructure resources and facilities; (iii) Enhancing the capacity of human resources, competitiveness, and agricultural innovation; and (iv) Reforming the bureaucracy.
- **Law no. 18/2012:** food administration is carried out to fulfill basic human needs that provide fair, equitable and sustainable benefits based on food sovereignty, food independence, and food security.
- **Government Regulation No. 28 of 2004 on Food Safety, Quality and Nutrition**
- **Law no. 22/2019 on Sustainable Agriculture System:** this Law covers about principles, definition, agriculture planning, land use planning, land utilization, agriculture management, water utilization, agriculture protection, agriculture inputs and infrastructure.
- **Village Law No. 6/2014** explicitly describes the vital importance of women's empowerment and gender equality.
- **Integrating Gender Issues into the Planning & Agricultural Development Budgeting Manual.** This manual is developed by Ministry Women's Empowerment and Child Protection in cooperation with Ministry of Agriculture, issued in 2009.
- Infrastructure investment support facilities include:
 - Government set 37% of \$415 USD billion investment in **National Medium Term Dev. Plan (RPJMN)** to come from private sector, and 22% from state-owned company.
 - Ministry of Finance established PT Penjaminan Infrastruktur Indonesia (Persero) as **Indonesia Infrastructure Guarantee Fund (IIGF)** to provide "single window" for government guarantees for infrastructure Public-Private Partnership (PPP) projects.
 - **PT Sarana Multi Infrastruktur (Persero) or PT SMI**, is state-owned enterprise and non-banking financial institution focusing on infrastructure financing in country.
 - **PT Indonesia Infrastructure Finance (IIF)** established to provide alternative financial assistance for PPP projects.

Energy / Water

- **National Energy Policy (KEN)** mandates renewable energy mix target in primary energy mix to reach at least 23% by 2025 by minimizing the use of oil at least 25% by 2025. Energy efficiency is also targeted to decline 1% per year.
- **National Energy General Plan (RUEN)** which becomes the consideration in energy demand projection that consist of city gas, electric vehicle target, primary energy mix of power plant, and the use of Dimethyl Ether (DME) to substitute Liquified Petroleum Gas (LPG).

- **Law no. 30/2007 on Energy** stipulates that energy is managed based on the principles of benefit, efficiency with justice, added value, sustainability, community welfare, preservation of environmental functions, national resilience, and integration by prioritizing national capability.
- **Law no. 17/2019 on Water Resource** was issued to protect the people's right on water access, to ensure the sustainability of water resources, water conservation and water control.
- **Presidential Regulation No. 4 of 2016 (Article 14) on Electricity Infrastructure Acceleration** states that the acceleration in electricity infrastructure should prioritize the utilization of new and renewable energy. The Central Government and/or Regional Government may give support in the form of fiscal incentive, simplification in permits or non-permits, electricity purchasing price stipulation from each new and renewable source, establishment of business entity to supply electricity to PT PLN (Persero), and/or subsidy.
- The government is preparing new regulation that allows PLN consumers to sell the electrical energy produced by the solar home system to PLN through an export-import scheme. Based on this scheme, the amount of energy that is transacted to PLN can be used as a deduction for consumer electricity bills.¹

Environment

- **Law number 32/2009 on the Management and Protection of the Environment ("Environmental Law")** is the principal regulation on environmental protection in Indonesia. The law establishes a framework for environmental planning, environmental impact analysis and licensing, and rights, responsibilities and penalties. The law requires regional governments to formulate environmental protection and management plans and to conduct strategic environmental assessments to be used as a basis for regional development planning. It also stipulates that activities expected to have an impact on the environment are required to undergo an environmental impact analysis or to develop an environmental management/environmental monitoring plan, depending on the nature of the activity, as a condition for obtaining an environmental license. Additional requirements for environmental license holders include mandatory, periodic environmental audits and the establishment of dedicated environmental remediation funds. The Law also includes provisions for the management of hazardous and toxic materials as well as hazardous and toxic waste. Rights of communities and Non-governmental Organizations (NGOs) to file legal claims regarding environmental pollution or damage are expanded under the Law, which also imposes harsher administrative and criminal penalties for violators. The implementation of **Environmental Protection and Management Law of 2009** is governed by the **Ministry of Environment Regulation No. 38/2019**.
- Indonesia has yet to formulate a national green growth strategy but has adopted national and sub-national strategic action plans for climate change. Some districts and cities are also moving towards green growth strategies, often with a 'landscape approach' to spatial planning that aims to reconcile sometimes competing conservation and development goals.
- **Rencana Aksi Nasional – Perubahan Iklim (RAN-API) or Indonesia's National Action Plan on Climate Change Adaptation** is Indonesia's national action plan on climate change adaptation. It

¹ <https://ekonomi.bisnis.com/read/20210114/44/1343122/kementerian-esdm-targetkan-revisi-regulasi-plts-atap-rampung-2021>

identifies two key areas of climate change and their impacts on livelihoods. These two areas are sea level rise and changes in the weather, climate, and rainfall. Increasing sea level rise impacts fisheries, marine economies, and agriculture. Changes in weather, climate, and rainfall impacts health (vector borne disease and respiratory illness from fire), water availability, and contributes to natural disasters.

ANNEX 3: LOCAL ENABLING ENVIRONMENT ACTORS AND STAKEHOLDERS IN THE WEF NEXUS

Sector(s)	Name	Relevance to WE4F
Local NGOs/CSO or Policy advocacy groups		
Energy	Yayasan Rumah Energi	- A local foundation engages in various projects renewable energy and food security https://www.rumahenergi.org/
Energy	Institute for Essential Services Reform (IESR)	- A think-tank in the field of energy and environment. - IESR encourage transformation into a low carbon energy system by advocating a public policy that rests on data-driven and scientific studies, conducting capacity development assistance, and establishing strategic partnerships with non-governmental actors. https://iesr.or.id/
Energy	Institut Bisnis dan Ekonomi Kerakyatan (<i>People Centered Business and Economic Institute</i>)	- a social business entity in energy sector with a strong engineering focus. http://3.ibeka.or.id/
Energy	Research Center for Energy	- This center is operated under the Institute for Research and Community Service (LPPM), ITS - to support government programs in maintaining energy security and energy sustainability in Indonesia https://www.its.ac.id/drpm/en/research-center/research-center-for-energy/
Energy	Yayasan Rumah Energi	- A local foundation which implemented a multi-stakeholder renewable energy program initiated by HIVOS in collaboration with the Ministry of Energy and Mineral Resources (MEMR) https://www.biru.or.id/
Energy	WRI Indonesia	- A non-profit organization focuses on the issues of climate, forests, energy, as well as cities and transport https://wri-indonesia.org/
Energy	Indonesia Institute for Energy Economy (IIEE)	- A think tank to support the national policies about prudent development and the utilization of energy resources in Indonesia. https://iiee.or.id/from-chair-of-governing-board/
Energy	Masyarakat Energi Terbarukan Indonesia (METI)	A forum for scientists, educators, regulators, business developers and organizations, NGO's, associations of renewable energy sector, and other stakeholders to discuss and exchange views on Renewable Energy related issues
Agriculture	SATUNAMA	- A non-profit organization engaged in community empowerment through mentoring, advocacy and training, with focus on rural development and agriculture. https://satunama.org/sejarah-satunama/
Agriculture/Rural Development	Yayasan Bina Swadaya	Institution of pioneering in improving community empowerment and / through social entrepreneurship, especially in agriculture and rural development
Agriculture	Yayasan Plan International Indonesia	- A local entity which affiliated with Plan International, a non-profit international organization. One of the projects is the Youth Economic Empowerment Program. https://plan-international.org/indonesia

Sector(s)	Name	Relevance to WE4F
Agriculture	Mercy Corps Indonesia	- A local entity which affiliated with Mercy Corps, a non-profit international organization. One of the projects is Agri-Fin Mobile. - https://www.mercycorps.or.id/
Water/Gender Equality	SERUNI	- This grassroots women's organization advocates for gender equality and women's rights in Indonesia. SERUNI's work in the area of environmental justice includes advocacy and campaigning for women's land rights, and against land grabbing and environmental degradation, such as haze pollution and unsafe water. - https://www.mamacash.org/en/seruni-serikat-perempuan-indonesia-indonesian-women-s-organization
Agriculture/Rural Development	BITRA http://bitra.or.id/	- A local NGO facilitates implement community development program focusing in rural area, including women farmers
Agriculture	KSU Annisa	- A women cooperative which provides financial services, food crop post-harvest processing, warehousing and distribution.
Government Organization/Regulatory Bodies		
Energy	Ministry of Energy and Mineral Resources	- Responsible on developing policy and managing all energy sources in Indonesia. - https://www.esdm.go.id/
Energy	Dewan Energy Nasional (DEN) or National Energy Council	- The members consist of 7 (seven) Ministers who are directly responsible for the supply, transportation, distribution, and utilization of energy and 8 (eight) members from the Stakeholder. - https://www.den.go.id/
Agriculture	Ministry of Agriculture	- Responsible on developing policy and managing the agriculture sector, including water for agriculture. - https://www.pertanian.go.id/
Water	Direktorat Jenderal Sumber Daya Air	- A department under Ministry of Public Works and Public Housing whose carry out the formulation and implementation of policies in the field of water resources management in accordance with the provisions of statutory regulations. - http://sda.pu.go.id/
Water	Direktorat Jenderal Pengendalian Daerah Aliran Sungai dan Hutan Lindung (Ditjen PDASHL)	- A department under Ministry of Environment and Forestry whose carry out the formulation and implementation of policies in the field of increasing the carrying capacity of watersheds and protected forests. - http://pdashl.menlhk.go.id/
Agriculture	Indonesian Agricultural Environment Research Institute (IAERI)	- A research institute focuses on crop research on rainfed land under food crops research institute. - http://en.litbang.pertanian.go.id/unker/one/664/
Gender in Agriculture	Working group for gender mainstreaming in agriculture. Ministry of Agriculture	- A working group under Ministry of Agriculture which responsible on gender mainstreaming in agriculture sector
Gender	Ministry of Women Empowerment and Child Protection	- A government ministry responsible for the right and welfare of women and children of Indonesia and coordinating gender mainstreaming in various sector, including agriculture.
International Bodies/Agencies		
Water/Energy/ Agriculture	SNV	- SNV has been working in Indonesia since 2013 in partnership with government institutions, private sector, and local organizations across three main sectors – agriculture, water and sanitation and renewable energy

Sector(s)	Name	Relevance to WE4F
Energy	GIZ	- GIZ is working in Indonesia on behalf of BMZ, with focus on Energy, Environmental protection, and Technical and vocational education and training (TVET) https://www.giz.de/
Energy	Hivos	A Dutch NGO which operated in 40 countries. In Indonesia, Hivos implement several projects on renewable energy, including Sumba Iconic Island Initiative, and biogas.
Water	The Netherlands Water Partnership (NWP)	- This is a network of 181 internationally oriented Dutch organizations working in the water sector. https://www.netherlandswaterpartnership.com/regions/asia/indonesia
Agriculture	FAO	- Collaboration between FAO and Indonesia across the food and agricultural sectors, including in fisheries and forestry. http://www.fao.org/indonesia/fao-in-indonesia/en/
Agriculture	IFAD	- helping smallholder producers and marginalized groups to become more resilient, integrate into supply chains and gain access to services, technologies and finance. https://www.ifad.org/en/web/operations/country/id/indonesia
Agriculture	Rikolto	- An international NGO having more than 40 years' experience partnering with farmers' organisations and food chain actors. - In Indonesia, Rikolto operates in 7 provinces and focuses on 5 main commodities (rice, coffee, cocoa, cinnamon, seaweed) https://indonesia.rikolto.org/en
Agriculture	Solidaridad	- An international network organization with partners all over the world, including Indonesia. One of the projects in Indonesia is strengthening women's farmer groups https://www.solidaridadnetwork.org/
Donor funded Projects and Public Private Partnerships (PPP)		
Water	Bring Water For Life	- UNDP and KOPPESDA, a local NGO, propose to build a solar water pump in East Nusa Tenggara province https://www.id.undp.org/content/indonesia/en/home/ourwork/environmentandenergy/bring-water-for-life0.html
Water	Integrated Participatory Development and Management of the Irrigation Sector Project	- The overall goal is to improve food security, incomes, and livelihoods for 900,000 poor rural smallholder households in Indonesia. - The objective is to increase the value and sustainability of irrigated agriculture. https://www.ifad.org
Energy	Sumba Iconic Island Initiative	- To provide access to reliable and 100 percent renewable forms of energy for the 750,000 inhabitants of Sumba Island https://sea.hivos.org/program/sumba-iconic-island-initiative/
Energy/ Agriculture	P4G – Partnering for Green Growth and the Global Goals 2030	- The world's leading forum for developing concrete public-private partnerships at scale to deliver on the SDGs and the Paris Climate Agreement - Indonesia joined P4G as a partner country in September 2019. - Several programs in Indonesia: Clean Energy Investment Accelerator, Indonesia Food Loss and Waste Action Partnership, PlusPlus Partnership.
Agriculture	Rural Empowerment and Agriculture	Aims to deliver sustainable improvements in the livelihoods of the rural poor by further increasing smallholder household assets and

Sector(s)	Name	Relevance to WE4F
	Development Scaling-up Initiative	incomes, reducing chronic malnutrition in children, improving access to markets and services, and decreasing food insecurity. – https://www.ifad.org/
	AIP-PRISMA	– Provides comprehensive and sustainable solutions for the prosperity of smallholder farming households in Indonesia. – https://aip-prisma.or.id/en
Agriculture/ Gender	Mercy Corps's Agri-Fin Mobile Program	– Introduce digital technology to smallholder farmers to increase their productivity, incomes and resilience. – https://www.mercycorpsagrifin.org/program-overview/
Agriculture/ Gender	Plan International's Youth Economic Empowerment Program	– Funded by the European Commission, the project provides training to young women to help them establish farming groups and cultivate fruit and vegetables to be sold in both traditional markets and modern supermarkets. – https://plan-international.org/supporting-young-farmers-indonesia

ANNEX 4: EMERGING PLAYERS IN MSME SUPPORT LANDSCAPE (INCUBATORS AND ACCELERATORS)

Key Players	Key Activities
Interstellar https://instellar.id/	– Accelerating social innovation in organizations, and working together towards scalable and sustainable social impact through incubation, consultancy, and investment in other mission-driven companies
Mekar https://mekar.id/en/	– Provide funding for small businesses, especially which run by women
ANGIN (Angel Investment Network Indonesia) https://www.angin.id/about-angin	– Early-Stage Investment Platform – Research and Advisory Services
PT Permodalan Nasional Madani (PNM)	– Provide financing, coaching and capacity building for MSMEs
Lembaga Pengelola Dana Bergulir Koperasi, Usaha Mikro, Kecil dan Menengah (LPDB-KUMKM)	– Provide financing and business incubation for MSMEs
Batavia Incubator http://batavia-incubator.com	– To grow up together with young talented tech startups in Indonesia, to supply not only seed funding capital, but historically proven internet business models and strategies and financial schemes
GnB Accelerator https://gnb.ac/	– A collaborative program between Japanese IT company Infocom Corporation and Pegasus Tech Ventures from Silicon Valley, dedicated to progress and innovation that brings together the people, the funding, and the partners.
Kinara Indonesia https://kinaraindonesia.id	– An early-stage Impact Investing firm focuses on providing financial access and scaling-up support to impact businesses in Indonesia
KIBAR	– A tech startup ecosystem builder in Indonesia – In collaboration with the Ministry of Communication and Information Technology, initiated National Movement of 1000 Digital Startup
Indigo Incubator	– It is part of Telkom Indonesia and provides selected start up initial funding and mentoring as well as joining the incubation programs at Jakarta such as Digital Valley, Bandung Digital Valley, or Jogja Digital Valley.
IdeoSource https://ideosource.com/v2/	– An incubator that helps support entrepreneurial talents by turning ideas and existing products/services into solid and sustainable revenue generation business models
SEAF (“Small Enterprise Assistance Funds”)	– SEAF is an investment management group that provides growth capital and business assistance to SMEs in emerging and transition markets. – In 2017, SEAF launched the SEAF Women’s Opportunity Fund, focusing investments on SMEs in Indonesia, the Philippines, and Vietnam
IIX Foundation https://iixfoundation.org/	– A registered US 501(c)3 organization and registered Singapore charity dedicated to supporting women across all stages of their journey to empowerment. – P4G through IIX has launched Women’s Livelihood Bond 3 (WLB3), amounting of \$27.7 USD million in order to support SMEs, especially related to women empowerment

Simona Ventures https://medium.com/@hello_39436/simona-apac-women-founders-bd8f57fcae54	- Simona Ventures, a platform that provides access and opportunities to empower businesses and initiatives that solve the gender gap challenges, recently launched their first batch of APAC Women Founders Accelerator
---	---

ANNEX 5: TAX PROFILE

Summary of Corporate Tax

Direct tax	Income Tax – Generally, a flat rate of 25% – Public companies with >40% of shares traded on stock exchange entitled to 5% tax cut – Small enterprises (turn over IDR 4.8 billion - 50 billion or equivalent to \$343,000 - \$3.57 USD million) are entitled to a 50% discount. – Small enterprises with gross turn over < 4.8 IDR billion (\$343,000 USD) subject to Final Tax at 0.5% of turnover Branch profit tax rate – 20% Stamp Duty – Payable as a fixed amount of 10,000 IDR (equivalent to \$0.71 USD) (starting Jan 2021)
Indirect tax	Capital gains taxes. – 0.1% - 25%. Value Added Tax (VAT): 10% – SGT rates may differ by goods the specific goods tax rates range from 5% to 60%
Loss relief	– Carryforward: 5 years – Carryback: No
Withholding tax	– Dividend: 20% (non-resident), 10%/15% (resident) – Interest: 20% (non-resident), 15%/20% (resident) – Royalties: 20% (non-resident), 15% (resident) – Technical Service fee: 20% (non-resident), 2% (resident)
Transfer tax	– 0.1% (transfer of shares listed on Indonesia stock exchange) – 5% (transfer of non-listed resident company's shares by a non-resident) – 0%/1%/2.5% of gross proceeds (transfer of land and/or buildings) – Tax on founder shares at initial public offering: 0.5%

Summary of Tax Incentive due to Covid-19

Incentive for MSMEs	– 0.5% final tax regime under Government Regulation No.23 Year 2018 will be borne by the Government
Incentive on Income Tax	– eligible taxpayers, Article 21 Employee Income Tax (EIT) for employees earning annual regular income not exceeding IDR 200 million (equivalent to \$14,285 USD) will be borne by Government
Incentive for companies in construction sector	– companies that provide services in the Acceleration of Improvement of Irrigation Water Use program, their income tax will be borne by government
Incentive for Import tax	– Article 22 Income Tax on imports by eligible taxpayers will be exempted.
Tax installment	– Article 25 monthly Income Tax instalment of eligible taxpayers will be reduced by 30%.
Value Added Tax (VAT)	– Accelerated Value Added Tax (VAT) refund will be available for eligible taxpayers requesting a refund for a maximum 5 IDR billion (equivalent to \$357,000 USD)

Source: Ministry of Finance decree number 9/PMK.03/2021 dated 2 February 2021 juncto PMK-86/PMK.03/2020 juncto PMK-110/PMK.03/2020

Note: The above tax incentives are eligible until 30 June 2021.

ANNEX 6: MAJOR CROPS GROWN AND EXPORT STATUS

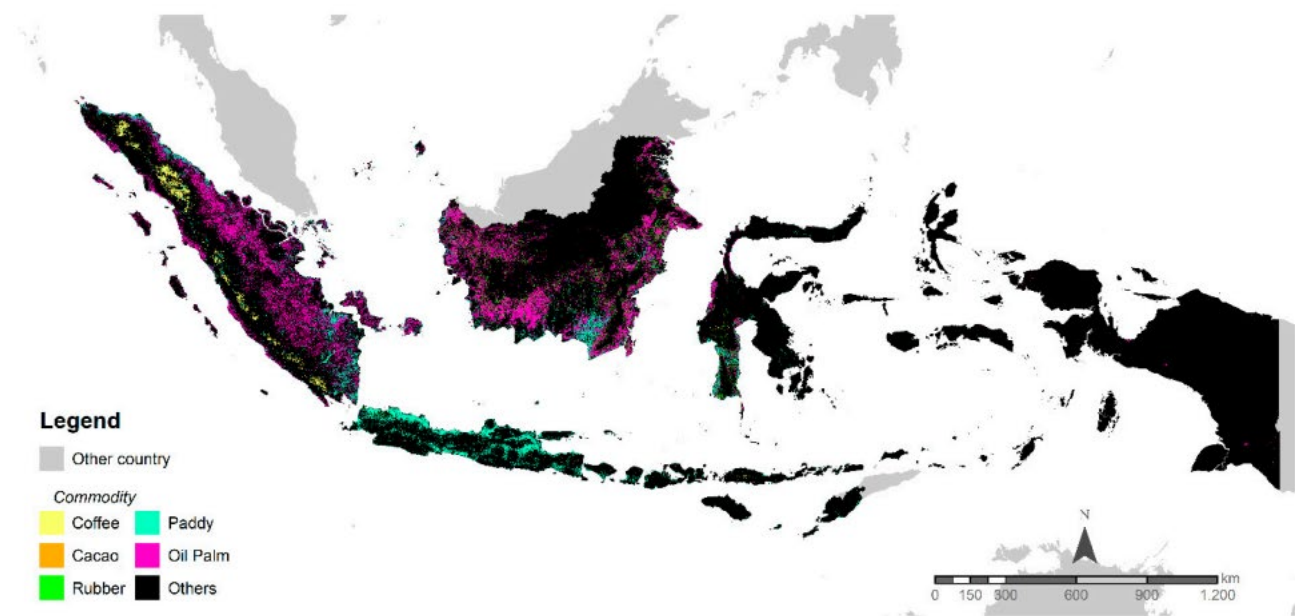


Figure 1. National commodity map of 2019

Source: Retrieving the National Main Commodity Maps in Indonesia Based on High-Resolution Remotely Sensed Data Using Cloud Computing Platform. MDPI. 2019

Export Agriculture Commodities in 2019

Type of Commodity	Volume (000 ton)	Annual Value (USD in million)
Palm Oil	-	15,574.4
Coffee	355,8	872.4
Coconut Oil	1,275.5	853.8
Cocoa	145	785.4
Rubber	50.2	50.2

Source: Analisis Komoditas Ekspor 2012 - 2019



Government of the Netherlands



Sweden
Sverige



USAID
FROM THE AMERICAN PEOPLE