Land Use Finance Impact Hub | Country Factsheet

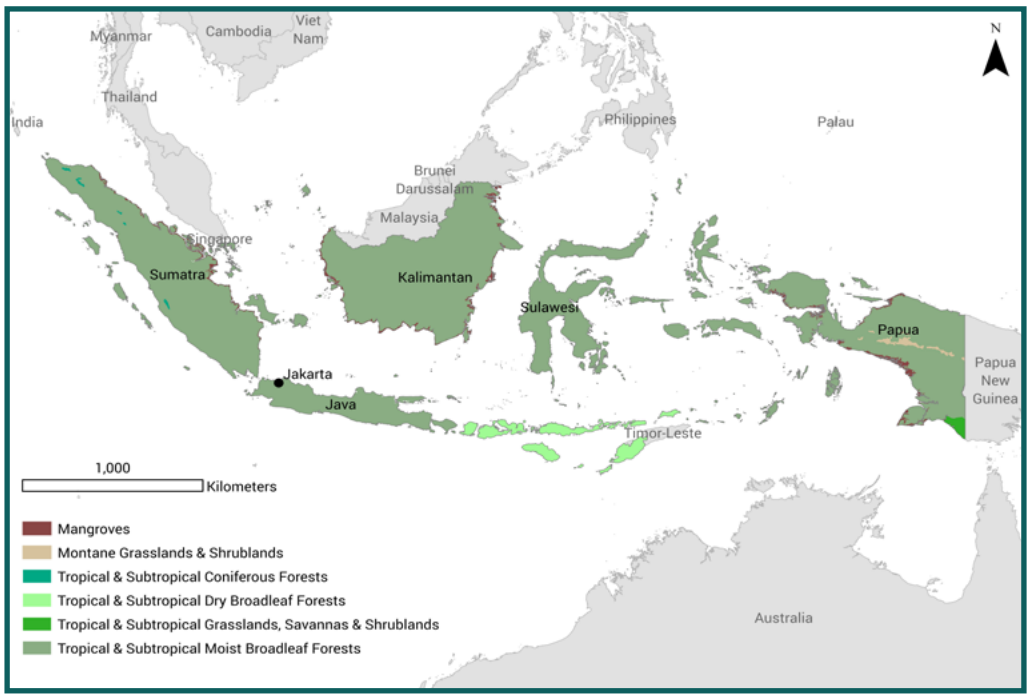
Investor guide to environmental and social opportunities and risks:

Indonesia

This factsheet provides essential information for financial institutions seeking to generate measurable positive social or environmental impact in conjunction with financial returns. The factsheet focuses on investments in sustainable land use in Indonesia – such as sustainable agriculture, agroforestry and ecosystem restoration. This forms part of a series of factsheets focusing on environmental and social risks and impacts at a country level, which are hosted on the Land Use Finance Impact Hub.

Country context is key when considering environmental and social risks, as investors should be aware of regulatory frameworks, specific environmental challenges, and socio-cultural issues at the national level. In Indonesia, historically high rates of land use change have been reduced by a number of strong legal interventions and private sector initiatives. However, challenges related to regulatory complexities and monitoring efficiency remain. Investors should ensure that their investments account for and promote the welfare of relevant stakeholder groups, such as Indigenous Peoples, smallholders, and women.

Given the importance of natural resources to Indonesia's economy and the country's vulnerability to climate change, there are many opportunities for landscape-level action in peatland, mangrove and forest restoration and protection. Government interventions are also laying the groundworks for an increased focus on carbon trading in Indonesia.



Key Facts and Figures

- Population (2022): 275,501,339
- Capital: Jakarta
- Language: Bahasa Indonesian
- Surface Area: 1,916,907 km²
- Five main islands, four archipelagos > 17,000 islands in total.
- Main exports: palm oil, thermal coal
- Currency: Indonesian rupiah (IDR)
- GDP (current US$, 2022): $1.319 trillion

Source: DataBank from the World Bank, World Development Indicators.

Above: **Map of Indonesia, showing key habitats by biome, neighbouring countries, and names of major island provinces.**[1] The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

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Environmental and Social Context

This section covers an introduction to environmental and social topics associated with land use that are material for investors and require assessment and considerations before an investment decision is taken. Resources are listed for further reading. The four sub-sections below align with the impact areas considered in the Positive Impact Indicators Directory.

Biodiversity and natural ecosystems

Indonesia holds 92 million hectares of forested land and is home to 24.7 million hectares of peatlands and 3.36 million hectares of mangrove forests.[2,3] Additionally, Indonesia is one of the most species-rich countries globally, with a high rate of endemic species (species which only occur in Indonesia).[4] **This richness of species and ecosystems make the country a good target for investors that have biodiversity protection and ecosystem restoration as part of their impact objectives. While ecosystem conversion rates have decreased in recent years, this remains a threat, and so investments which protect and restore ecosystems provide additionality in this context.**

In 2019, 259 species in Indonesia were classified as critically endangered on the IUCN Red List of Threatened Species. Many of the mammals considered to be under threat of extinction are endemic to the country.[5] The government of Indonesia is targeting 25 priority species for conservation, including key charismatic species such as the Sumatran rhinoceros, Bornean orangutan and the Javan Hawk-eagle.[6]

Forest

Forest loss in Indonesia has historically been a concern, however, policy interventions and private No Deforestation, No Peat, No Exploitation (NDPE) initiatives have led to a dramatic decrease in conversion rates. Forest loss climbed steadily from 2000-2010, peaked between 2012-2015, and has fallen markedly since 2015. According to Government of Indonesia (GOI) statistics, average forest loss between 2017-20 is 40% lower than at the start of the decade (2010-2012; 339,000 vs 543,000 ha per annum).[7] **Recent hotspots for forest loss are Kalimantan (where 48% of recent forest loss occurred), followed by Sumatra (29% of recent forest loss), Sulawesi (10%), and Papua (10%).[8] Investors should therefore be aware of forest loss risks across the country, but particularly in these regions.**

Forest loss can occur both in the legally defined 'forest zone' (which is largely intended to remain under permanent cover of natural or planted forest – see Box 1), and in areas outside of this zone which are intended for conversion to non-forest uses.[9] However, according to GOI statistics, more forest loss took place inside the Forest Zone than outside in all years between 2000 and 2020.[10]

Box 1 – Land classifications

Indonesia's land area is divided into different zones by the government, which delineate what those areas are able to be used for. All land is either classified as forest zone, or non-forest zone. These zones are legal distinctions of forest land use and do not entirely reflect land cover conditions – for example, both the forest zone and non-forest zone is made up of a mix of forested and non-forested areas.

Forest Zone (*kawasan hutan* - also known as state forest area)

- 1,181,950 km^2, covers around 2/3 of Indonesia's landmass, and falls under the administration of the Ministry of Environment and Forestry (MOEF).
- Largely inhabited by local communities. Less than 3% of forest is under private ownership.
- Further divided based on functions such as:
  - ***Production forests (HP/hutan produksi)*** - 671,640 km^2,
  - ***Protected forests (HL/hutan lindung)*** - 292,480 km^2, with a function of watershed protection, and
  - ***Conservation forests (HK / hutan konservasi)*** (217,830 km^2)

Non-Forest Area (*areal penggunaan lain*)

- Covers 693,930 km^2, or about one third of the landmass of Indonesia
- Under the administration of the National Land Agency (BPN).
- Includes both State lands and private lands.
- About 30% of the non-forest area is formally titled as privately owned lands. Similar to the forest zone, part of the State lands under the APL category is also de facto used by local people

Government regulation PP No. 23 Tahun 2021 regulates forestry planning, changes in the allocation of forest areas and changes in the function of forest areas, and the use of forest areas.

References:

CIFOR, 2017. Overview of forest tenure reforms in Indonesia.

Ministry of Land and Forestry, 2023. Rekalkulasi Penutupan Lahan Indonesia Tahun 2022 (Recalculation of Indonesian Land Cover in 2022)

Two key policies have been instrumental in reducing the rates of forest loss:

- The Moratorium on new licenses in primary forest and peat, enacted in 2011 and made permanent in 2019 (**Presidential Instruction 5/2019**).
- The three-year Moratorium on new plantation development in forested areas of Indonesia's state managed Forest Zone, enacted in 2018 until 2021 (**Presidential Instruction 8/18**).

Peatlands

Indonesia holds more than 24.7 million hectares of peatlands, mainly in Sumatra and Kalimantan. However, large areas of peatland have been drained to provide land for cultivation of oil palm, rubber and trees for pulp and paper. Dried peatland is extremely flammable, and when fires are started (sometimes to clear land) they can burn for months, releasing 10 times more carbon than forest fires. More than 2.6 million hectares of forest and peatland areas on the islands of Kalimantan and Sumatra were burned in the 2015 fires.[11]

Following the 2015 fires, government regulation was strengthened to reduce risk of future fires. **Regulation PP RI No. 57 Tahun 2016** covers peatland management, and mandates that business actors working in peat ecosystems should carry out restoration. Restoration activities include the installation of canal blocks and rainfall monitoring stations, as well as vegetation recovery through rehabilitation, revegetation and natural succession.[12] Restoration is coordinated by the Peatland and Mangrove Restoration Agency (BRGM). **There are opportunities for investors to support peatland restoration, potentially in tandem with the creation of carbon credits, given the huge potential for carbon storage in these ecosystems.**

Mangroves

There are 3,364,080 hectares of mangroves in Indonesia, with a further 756,183 hectares of potential mangrove habitat.[13] However, mangroves are being rapidly lost, driven by conversion into aquaculture ponds, mainly for shrimp, in Kalimantan and Sulawesi. Other causes of losses include conversion of coastal areas to palm oil plantations and for urban expansion. However, the government is looking to protect mangroves for the future, by creating spatial plans delineating zones for protection and economic uses.[14] Further, the BGRM is aiming to rehabilitate 600,000 hectares of mangroves between 2021 and 2024.[15] **There are opportunities for investors to support the conservation and restoration of these economically important mangroves, bolstering local livelihoods and carbon storage.**

Protected Areas

Indonesia has 733 protected areas, with 12.17% of the country's terrestrial and inland waters protected.[16] Protected areas fall within the land category of conservation forests (*hutan konservasi*), as well as marine conservation areas. Terrestrial and marine protected areas are categorized into:

- Sanctuary Reserve Areas *(Kawasan Suaka Alam, KSA)*, which consist of Strict Nature Reserves *(Cagar Alam)* and Wildlife Sanctuaries *(Suaka Margasatwa)*.
- Nature Conservation Areas *(Kawasan Pelestarian Alam, KPA)*, consisting of National Parks *(Taman Nasional)*, Nature Recreation Parks *(Taman Wisata Alam)*, and Grand Forest Parks *(Taman Hutan Raya, Tahura)*

One of the more famous terrestrial KPAs in Indonesia is Komodo National Park, the home of the Komodo Dragon *(Varanus komodoensis)*, and a UNESCO world heritage site.[17]

Additionally, 494 Key Biodiversity Areas have been identified in Indonesia, representing some of the most important sites for biodiversity conservation worldwide (by comparison, neighbouring Australia has 330 KBAs, and Brazil has 275).[18] On average, only 25.82% of each Key Biodiversity Area is covered by a Protected Area, leaving the majority of these key areas for biodiversity unprotected.[19] **Investors should, therefore, assess if their targeted investment area overlaps with both protected areas and Key Biodiversity Areas, the latter of which may become protected in the future. In both cases, increased steps should be taken to protect the ecosystems on the site.**

Key resources:

- Government of Indonesia, National Forest Monitoring System (SIMONTANA) – *holds up to date land cover data for the country, as well as information on administrative boundaries*
- Ministry of Environment and Forestry, 2022. The State of Indonesia's Forests, 2022. Towards FOLU Net Sink 2030 – *government-led overview of Indonesia's forests, including key statistics and regulations*
- SiPongi – *fire monitoring platform for Indonesia*
- Asian Forest Cooperative Organization (2023). Country Profile & Context – Indonesia. – *country profile including detail on land use change and forest and non-forest areas, and legal context*
- USAID, Indonesia Tropical Forest and Biodiversity Analysis (FAA 118 &119) Report for Country Development Cooperation Strategy (CDCS): 2020-2025 (2019) – *report covering status of biodiversity in Indonesia, and including regulatory context for conservation*

Livelihoods and Gender

Indonesia is an upper middle-income country and the largest economy in Southeast Asia. From 1995 to 2020, a series of important development transitions including increased access to electricity and urbanization have led to a significant reduction in poverty, which fell from 19% in 2000 to 9.4% by 2019.[20] **Investors should, however, be aware that there are significant variations in economic strength between the main islands and provinces of Indonesia.** For example, there are much higher rates of poverty in Indonesia's eastern provinces and rural areas, and limited local economic development in disadvantaged and rural areas. Java, by comparison, holds 56% of the total population and 60.1% of the country's economic power.[21,22]

Land Tenure

The complexity of land laws and regulations has strong implications for smallholders in Indonesia. Two-thirds of Indonesia's land is formally classified as part of the forest zone, while the remaining third is divided between productive agricultural land and urban land (see Box 1). Indonesia's 1960 Basic Agrarian Law (BAL) favoured the notion of the state as having *de facto* proprietary right over all land and using this right to benefit its citizens. Within this framing, large areas of the forest zone classified as production forests *(Hutan produksi)* were in the past allocated through concessions to private and state firms, overlooking the interests of smallholders and local communities.[23] This allocation model, together with administrative divisions over the implementation of land policies in different areas of the country, has resulted in disputes between local communities and companies granted corporate leaseholds.[24] As of 2019, only 4,031 out of 10,802 cases of land disputes had been resolved.[25]

There are also inequalities in the ownership, control and utilisation of land. Almost 90% of Indonesia's farmers own less than 2 hectares of land and 58% of total farm households control half a hectare of land or less.[26]

The government has taken steps to assist smallholders and improve their livelihoods through programs such as the National Land Reform (TORA), the Systematic and Complete Titling (PTSL) program and the Social Forestry (SF) program. The TORA aims to formalize land ownership of 9 million hectares to smallholders, half of which will be redistributed from state forest concessions and plantation areas.[27] The PTSL aims to title 23 million parcels of land and make 4 million hectares of degazetted forest land available to smallholders.[28] Finally, the SF program aims to award social forestry licences for 12.7 million hectares of the forest zone by 2030, in order to enable recognition of smallholders and businesses' sustainable forest management activities.[29] **As they identify investment opportunities, investors should be aware of concerns related to the history and complexity of land tenure in Indonesia and work with local initiatives to ensure they navigate these issues sensitively.**

Indigenous (Adat) Peoples

Indigenous Peoples in Indonesia are estimated to be between 50 and 70 million, or 20 to 28% of the population.[30] **Article 18b-2 of the** Indonesian Constitution acknowledges the existence of *adat* peoples, the Basic Agrarian Law (BAL) recognizes their customary norms and institutions, and the Constitutional Court decision 35/2012 established their ownership rights over state forests. However, formal recognition of customary lands is a complex process that is generally undertaken by provincial and district governments and can take many years.[31] Transferring forest ownership to *adat* communities means ensuring customary tenure security.

Box 2 – Private Land in Indonesia

Investors should be aware that the concept of 'private land' does not imply outright ownership, but the existence of a certain private right allocated to the land occupant and user by the State. A hierarchy of land rights then follows:

- ***Hak Milik*** – control (the closest to a form of freehold ownership);
- ***Hak Pengelolaan*** – land management (also a strong right, with elements of ownership)
- ***HakGuna Usaha*** – cultivation only
- ***HakGuna Bangunan*** - building only
- ***Hak Pakai*** - use only

All but Hak Milik are temporary rights and can be used for different periods. Concessions (and social forestry communities) with a right to land management have access to the land for 35 years and can then apply for extension conditional on the State's performance assessment. Recording land rights should happen through deed registration at the local Land Office. Even though the courts accept private conveyance as an informal means of recording land rights, the process is not regulated.

Within the production forest zone, the MOEF can also issue different types of forest business license (PBPH) for private and state-owned companies, depending on the source of utilized timber forest products (e.g. natural forests, industrial plantation forests, and ecosystem restoration). Specific licenses can also be awarded to businesses that aim to contribute to climate mitigation through carbon market schemes.

References:

Tanner, C., Bicchieri, M., Nijhoff, P. and Daley, E. 2020. A review of land tenure issues in Indonesia and options for the future. FAO Indonesia Report. Jakarta, FAO. https://doi.org/10.4060/cb0429en

Ministry of Environment and Forestry, 2022. The State of Indonesia's Forests, 2022. Towards FOLU Net Sink 2030.

As of August 2023, the government has recognized an area of 3.73 million hectares as customary land (221,648 hectares of which are customary forests).[32] However, investors should be aware that the area of land and forests claimed by indigenous communities is likely to be much higher, as mapped by the independent initiative Ancestral Domain Registration Agency. As a result, **it is vital to understand whether investments occur in areas that are claimed by indigenous communities or that are recognized as customary lands. Given the complexity of land recognition processes, investors should conduct due diligence on land ownership through land tenure studies and social impact assessments ahead of investment. Investors should also enter a fair process of consultation with the relevant rights-holders and gather Free, Prior and Informed Consent ahead of investment.**

Gender Inequality

Women in Indonesia face inequalities when it comes to access to land and employment. Indonesia ranked 104th out of 162 countries in the Gender Inequality Index and is the third lowest country in ASEAN. The female labour force participation rate has only reached 52% compared to that of men at 83% (National Labour Force Survey, August 2019). The participation of women in formal employment is 34% compared to 66% of men (National Labour Force Survey, August 2018).[33] Given this inequality in access to jobs, **investors who strive to ensure that 40% of the formal workforce in investable projects are women, or that invest in female-owned or -led businesses, can potentially achieve significant gender-related impacts**.[34]

According to the National Land Agency (BPN), only 24% of Indonesian land is registered under female ownership. Rural women also have limited access to extension services and new technologies.[35] With this in mind, **investors should ensure that they provide women with equal opportunities to access investment and services, and look to enforce women's property rights. Investors should, however, be aware of cultural differences between islands and regions in Indonesia when it comes to women's rights**.

Financial Inclusion

Inclusion of smallholders and local communities in sustainable land use activities across commodity supply chains is fundamental to enhance livelihoods and safeguard natural resources. Given this, investors might focus on the role that financial inclusion plays in facilitating meaningful engagement. Bank account ownership in Indonesia has increased from 20% to 52% between 2011 to 2021 and there is no significant gender gap. Mobile money account ownership has also surged in recent years, registering 18.8 million users in 2021.[36] Level of access to smartphones is higher in urban areas than in rural areas, and in men than in women – albeit the gap became narrower in the 2015-2020 period.[37]

Decent Work

Notwithstanding the strong decline in the poverty rate, decent work in Indonesia still faces challenges linked to changing nature of employment (e.g. an increasing shift to the gig economy),[38] skills mismatch, informalities, insufficient social security coverage and declining bargaining power of workers. Women and rural workers are particularly vulnerable.[39]

Informal employment makes up a significant part of rural jobs –estimated to be around 58% in 2017.[40] **Investors should pay particular attention to labour conditions before investing and consider how their investments can generate formal employment and improve working and living conditions through robust social security schemes.**

Key resources:

- FAO, 2019. Country Gender Assessment Of Agriculture and the Rural Sector in Indonesia.
- FAO, 2020. A Review of Land Tenure Issues and Options for the Future.
- ILO, 2020. Decent Work Country Programme for Indonesia 2020-2025.

Sustainable Production

Indonesia's economy is largely primary, with agriculture accounting for 27.5% of exports ($72.7 billion) in 2021. Palm oil alone accounts for 9.99% of exports, with only coal taking a larger proportion at 10.83%. Indonesia exports agricultural products predominantly to China (21.48%), USA (11.33%) and India (6.92%).[41] It should also be noted that Indonesia is the world's largest nickel producer and the country with the biggest nickel reserves, which it intends to rapidly exploit to provide for the energy transition.[42]

Globally, Indonesia is the world's largest producer of palm oil and cloves, and the second largest producer of rubber, cinnamon, vanilla, and coconut oil.[43] Rice and palm oil are the two largest commodities produced domestically, while palm oil and rubber account for more than half of agri-food exports.[44]

Palm Oil

Palm oil production is distributed across both large-scale commercial producers and smallholders. However, smallholder operations (representing 60% of total production) have yields up to 40% below those of the larger producers, and often cannot afford to comply with and get certified for sustainable production techniques. **There is an investment opportunity for investors to help close this productivity gap by providing finance and access to technical support to replace older plantations with new high-yielding varieties, and to comply with certification.**[45] However, as accessing smallholders at a suitable scale for investment can be hard, working with and providing technical assistance to local partners and cooperatives is key. Some smallholder-focused organizations are the Oil Palm Farmers Union (SPKS), and the Indonesian Palm Oil Farmers Forum on Sustainability (FORTASBI).

Relevant certification schemes for this sector are the internationally recognised Roundtable of Sustainable Palm Oil (RSPO), and the Indonesian Sustainable Palm Oil (ISPO) standard, introduced by the government of Indonesia in 2011.[46] The ISPO scheme is being rolled out as a national requirement for all palm oil stakeholders, primarily the private sector and state-owned enterprises, and it will be mandatory for smallholders by 2030 (as stipulated by government regulation **PP RI No. 44 Tahun 2020**).[47] However, smallholders face difficulties in accessing certification, including financial constraints, insecure land tenure, bureaucratic challenges, and the lack of a guarantee of a premium price for certified products.[48]

While oil palm can be a very high yielding and efficient crop, it does present other challenges. For example, historically biodiverse rainforest areas and peatlands have been converted to grow oil palm, before further government regulation was brought in, and some conversion risk still remains. Burning to clear land for plantations can lead to far reaching peatland fires, as discussed above.[49] Additionally, after harvest oil palm fruits must be taken to the mill within 48 hours for optimal processing, which can be challenging for many smallholders due to weak transport links, leading to some fruit rotting and value being lost.

The Plasma scheme, introduced by the government of Indonesia in 2007, provides a legal obligation to share a fifth of any new commercial plantation (not just oil palm) with smallholders. These plasma smallholders are supported to develop productive smallholdings by the commercial company to which they are allied, becoming independent smallholders once they have paid off any debts.[50,51] Recent investigations have highlighted that many oil palm plantation companies are failing to deliver on this legal obligation, which is leading to conflict between the companies and smallholders.[52]

Rubber

Natural rubber is the second largest agricultural export commodity for Indonesia (by value) after palm oil. The commodity provides a livelihood for more than 2.5 million smallholder farmers, who manage more than 85% of rubber plantations.[53] The islands of Sumatra and Kalimantan are the main production areas for rubber, accounting for 96% of Indonesia's total production and plantation areas.[54] However, the sector has faced recent challenges from the emergence of a disease *(Pestalotiopsis sp)*, which has reduced production per hectare by 50%, impacts of changes in El-Nino weather, and a decline in world tire production during the COVID-19 pandemic.[55]

Land use change for the development of rubber plantations is allowed in the Forest Zone, which may be driving some of the forest loss seen in that area. **Investment in deforestation-free rubber, and associated traceability schemes, would provide additionality for investors in light of the EU Deforestation Regulation (Regulation (EU) 2023/1115).** However, given the current low prices of rubber due to oversupply on the global market (which is driving rapid conversation of existing rubber plantations to other crops) this may not be a significant economic investment currently.

Cocoa

Indonesia is the sixth largest producer of cocoa globally (as of 2018), producing 240,000 tonnes of cocoa in 2017/18.[56] More than 95% of this production is due to smallholder farmers working two hectares of land or less, usually relying on aging trees and facing challenges from climate change and pest outbreaks. These factors, combined with policy interventions that resulted in farmers converting their cocoa fields into rice fields, led to a decline in cocoa production rates and a drop in bean quality.[57,58] **There is an opportunity for investors to help smallholders to increase productivity again from existing land, by providing access to training in good agricultural practices and better post-harvest handling as well as access to international market opportunities.**

EU Deforestation Regulation

Investors should be aware of EU Deforestation Regulation (EUDR), which came into force in June 2023 and has implications for investments in commodity sourcing. The legislation relates to the production of seven commodities: wood, cocoa, soy, palm oil, coffee, rubber and cattle. Under the Regulation, any operator or trader who places these commodities on the EU market, or exports from it, must be able to prove that the products do not originate from recently deforested land (cut-off date: 31st December 2020) or have contributed to forest degradation. The area of production must also comply with local social and environmental laws.[59] The European Commission, Indonesia, and Malaysia have agreed to a Joint Task Force to implement the EU Deforestation Regulation.[60]

Pollution

Forest and peat fires are some of the key causes of air pollution in Indonesia. Measured in terms of life expectancy, particulate pollution is among the top three greatest threats to human health in the country. The majority of Indonesia's population is also exposed to water pollution and more than half of its rivers are heavily polluted due to chemical inputs used in mining and on large plantations. As potash, phosphate, and nitrogen fertiliser consumption increased along with agricultural outputs, they account for over 10% of agriculture-related emissions and they might be used inefficiently – thus contributing to ecosystem degradation through leaching of excess nitrogen into ecosystems.[61,62] **Investors could look to integrate pollution reduction considerations into their sustainable land use investments in the country.**

Key resources:

- World Bank, 2023. Indonesia Country Climate and Development Report.
- OECD, 2019. Green Growth Policy Review of Indonesia

Climate Action

Indonesia has a tropical climate, favourable for agriculture and forestry. Land-use systems in mountainous areas and lowlands are exposed to similar mean annual temperatures (23°C and 28°C, respectively), but have significant variation in rainfall patterns (1800-3200mm as opposed to 6000mm). Future trends are uncertain due to lack of fine resolution modelling, with average warming expected to range from 0.8°C-1.4°C by the 2050s and precipitation registering an overall increase, but with great regional variability. Together with these long-term changes, an increase in extreme weather events such as floods and droughts make Indonesia highly vulnerable to the negative impacts of climate change.[63] Data from the National Agency for Disaster Management (BNPB) shows that natural disasters in Indonesia sharply increased in the 2011-2021 period, with 24,270 cases of hydrometeorological disasters resulting in humanitarian and environmental casualties.[64] Ambitious climate action is the key to safeguard Indonesia's future.

Climate change impacts are likely to bring about shifts in Indonesia's agriculture sector. Together with precipitation and temperature changes, indirect effects such as water resource availability and seasonality, soil organic matter transformation and soil erosion will influence the sector, whose value could be reduced by 10% by mid-century.[65] Rice production is particularly vulnerable to temperature and precipitation patterns, which are also likely to shift optimal coffee growing ranges and decrease the climatic suitability of oil palm – expected to decrease by the 2030s and becoming more pronounced up to 2100.[66] **Investors should consider current and future climatic changes when considering investment opportunities, and ensure that climate resilient crops and techniques are chosen to future proof the investment.**

Box 3 – Indonesia, jurisdictional approaches and REDD+ projects

The World Bank reports that "Indonesia is harnessing international emission reduction payments to incentivize jurisdiction-wide actions in Jambi and East Kalimantan provinces" and proposes scaling this to other provinces. Payments for verified emissions reductions from a defined region help avoid project-level leakage and offer a monetary incentive to achieve set goals. Prices are determined between donors and recipient jurisdictions, and payments are to be disbursed on the basis of a benefit-sharing plan. For example, the Forest Carbon Partnership Facility (FCPF) pledged to provide up to US$110 million in payments for verified reduced emissions within the province during 2020 - 2025. Emission reduction actions include the protection of High Conservation Value forest within oil palm concessions.

Beyond government-led jurisdictional REDD+ initiatives, Indonesia has many ongoing REDD+ projects, developed by non-profit organizations, private companies, or in collaboration. **Private investors could look to either fund or invest in government-designed REDD+ activities or develop carbon offset projects in line with established VCM standards.** However, at the time of writing, there is a government moratorium on issuing post-2020 carbon credits linked to sectors that do not yet have a carbon trading roadmap. While the forestry sector has a roadmap, there are no quotas on the number of credits that can be internationally traded. It should also be noted that under **Regulation No. 21/2022**, trading carbon credits in the international market needs to be authorized by the MOEF. **Investors should be aware that there are still uncertainties on how Indonesia plans to engage with Article 6 and whether it will be possible to accept VCM registries such as Gold Standard and Verra under the national registry.**

References:

World Bank, 2023. Indonesia Country Climate and Development Report.

CIFOR, 2023. InfoBrief: Towards Indonesian Carbon Market.

Abatable

Contributions to Indonesia's Nationally Determined Contribution (NDC)

As a signatory to the UNFCCC Paris Agreement, Indonesia submitted an updated NDC in 2022, which frames the country's mitigation and adaptation efforts as "an integrated concept that is essential for building resilience in safeguarding food, water and energy resources."

On mitigation, approximately 60% of Indonesia's emissions reduction target is intended to be met through actions in the food and land use sector. Priority actions include slowing the rate of deforestation, carrying out land rehabilitation through afforestation, reforestation and acceleration of timber plantation establishment in unproductive lands, and restoring and rewetting peatlands. **To further understand how their land use interventions would add additionality to the country's climate mitigation strategy, investors should familiarise themselves with Indonesia's FOLU Net Sink 2030 target and REDD+ National Strategy.**[67]

On adaptation, Indonesia's goals focus on economic resilience, social and livelihood resilience, and ecosystem and landscape resilience. **Within these categories, outlined areas of intervention – which could be supported through targeted investments – include sustainable agriculture and plantation (e.g. climate resilient crops), integrated watershed management, reduction of deforestation and forest degradation, enhancement of adaptive capacity, and ecosystem conservation and restoration.**[68]

Carbon Pricing

As a way to achieve its NDC target, Indonesia also passed **Presidential Regulation No. 98/2021** and **MOEF Regulation No. 21/2022** regarding the economic value of carbon and the implementation of carbon pricing through mechanisms such as carbon trading, results-based payments, and carbon levies.[69] More recently, **MOEF Regulation No. 7/2023** focuses on procedures for carbon trading in the forestry sector. **Interested investors can follow developments in this space, including how to adopt integrity measures, including – but not limited to – transparency, accountability, and the active involvement of Indigenous Peoples and local communities in the project initial design and benefit sharing mechanisms.**

Key resources:

- World Bank Group and Asian Development Bank, 2021. Climate Risk Country Profile: Indonesia.
- Carbon Ethics, 2023. Navigating the Indonesian Carbon Market Landscape.

Opportunities for Investors

Indonesia's government has taken steps to catalyse a transition to sustainable land use systems, which is seen as crucial to advance climate mitigation and adaptation efforts and strengthen rural livelihoods. There are numerous opportunities for investors who wish to support internal efforts on the sustainable land use transition, while delivering positive environmental and social impact in the country:

- **Sustainable and resilient agriculture practices** to increase yields, strengthen climate resilience and enhance local livelihoods.
  - » Promote the transition to climate resilient and low-emission crops;
  - » Provision of technologies and training for efficient water management;
  - » Support farmers to reduce pesticide and fertiliser use, to reduce pollution, and save on input costs.
- **Sustainable intensification of agricultural commodity production**, to increase yields and prevent further conversion of natural ecosystems. Support to intensify is particularly needed for smallholders. Effective interventions include improving access to technologies and inputs, such as high-yielding varieties and targeted fertiliser use.
- **Enhancements to traceability systems**, to enable the rewarding of sustainable practices at farm level (e.g. through concession licence renewals and price premiums for sustainably produced goods) and ensure compliance with incoming EU Deforestation Regulation.
- **Peatland rewetting and restoration** – provides an opportunity to sequester carbon (and potentially develop carbon credits), help biodiversity to thrive, and reduce fire risks
- **Mangrove restoration and conservation** – provides opportunity to bolster local livelihoods, support biodiversity, strengthen storm protection, and store carbon (and potentially develop carbon credits).
- **Forest restoration and conservation** – provides opportunity to support biodiversity and store carbon (and potentially develop carbon credits)
- **Sustainable forest management and production of non-timber forest products** – opportunity to work with Indigenous Peoples and local communities to develop community-based businesses focused on sustainable harvest of non-timber forest products. Could be associated with helping local communities to secure social forestry licences and clarify their land rights.
- **Strengthening the representation of women in**

the labour force, by providing women with equal opportunities to access investment and services – alignment with the 2X Challenge Criteria provides a well-recognised framework for providing additionality on gender.

Investors that are interested in carrying out such actions should seek to collaborate with a broad range of stakeholders and channel their investments into landscape-level initiatives that allow for mitigation of risk and maximization of impact.

References

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