



CONNECTING COMMODITIES, INVESTORS, CLIMATE, AND THE LAND

A Toolkit for
Institutional
Investors



Investor Group on
Climate Change

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CHANGE



The Asia Investor Group on Climate Change (AIGCC) is an initiative to create awareness among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing. AIGCC provides capacity for investors to share best practice and to collaborate on investment activity, credit analysis, risk management, engagement and policy. www.aigcc.net

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About the Gordon and Betty Moore Foundation

The Gordon and Betty Moore Foundation fosters path-breaking scientific discovery, environmental conservation, patient care improvements and preservation of the special character of the Bay Area.

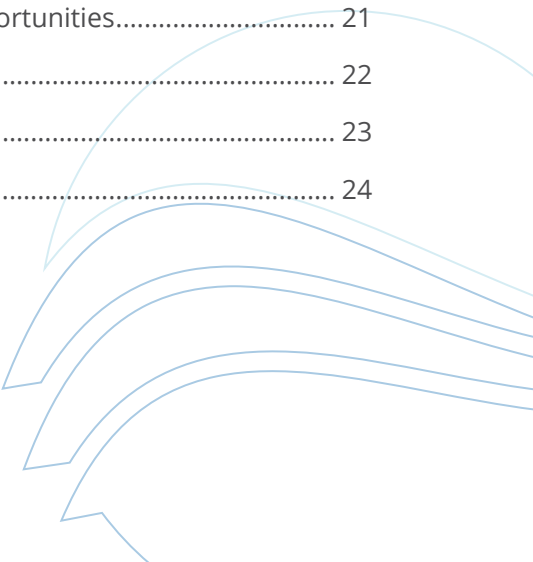
This work is part of a collaboration among the Gordon and Betty Moore Foundation and other partners designed to reinforce corporate commitments to eliminate specific practices broadly recognized as problematic; and put in place systemic changes that will incentivise companies to be more proactive in addressing natural resource risks/opportunities.

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TABLE OF CONTENTS

- 1. **Executive Summary** 1
- 2. **Introduction** 2
 - About this toolkit 3
 - Investor Workshop 2017 3
- 3. **Context: land sector economies, emissions, and policy directions** ...4
 - Market Profile: Australia 4
 - Market Profile: New Zealand 5
 - Market Profile: South-East Asia 6
- 4. **Risks, Opportunities and Challenges for Investors**..... 10
 - Risks 10
 - Opportunities 12
 - Challenges and barriers 15
- 5. **A toolkit for institutional investors**..... 16
 - Key environmental standards and certification schemes in the land sector 17
 - New Approaches to managing environmental risk in finance 18
 - Shedding light on finance and the Land: civil society Initiatives 20
- 6. **The investor response**..... 21
 - Engaging on climate change risks and opportunities..... 21
 - Next steps and strategies for investors..... 22
- 7. **Conclusions and next steps** 23
- References** 24



1 EXECUTIVE SUMMARY

Global emissions associated with the land sector account for almost a quarter of the world's carbon emissions, including deforestation and livestock production.¹ But we have barely begun to understand the challenges this will present for commodity-dependent economies, for local communities and for investors if we hope to limit global warming to less than 2°C.

Commercial agricultural production associated with four soft commodities—beef, soy, pulp and paper, and palm oil—drive the bulk of deforestation and land-sector emissions globally. Across Australia, New Zealand, and Southeast Asia, emissions are rising—driven in large part by deforestation, land degradation, and/or livestock production.

Global and national public policy strategies and mechanisms, explicitly targeting emissions associated with the land sector, are emerging, as agriculture and forest management are increasingly recognised as having a key role to play in mitigating climate change.

For investors, there are material financial risks from investments linked to deforestation and unsustainable land use. There are also emerging opportunities for sustainable and low-carbon investment in the land sector.

This toolkit has been developed to help institutional investors better understand the climate related risks and opportunities emerging across the land sector and to scale up the investor response. It builds upon research and engagement with investors and across the finance sector, as well as with key representatives in policy and civil society focused on climate-related issues in the land sector.

It offers investors a broad outline of the land sector's economic and emissions profile in Australia, New Zealand, and Asia, with a focus on Southeast Asia. It describes current policy responses in key markets with the potential to impact the sector and incentivise innovation in response to climate change risks and opportunities. It provides an overview of the core financial risks and emerging innovative solutions for institutional investors engaging in the land sector. It also highlights outstanding challenges for investors looking to increase engagement and investment into the land sector.

Finally, it aims to summarise the research and resources currently available to investors to inform investment decision-making and corporate engagement activities and highlight new investment opportunities emerging in sustainable agriculture, forestry and emissions abatement in the sector.

2 INTRODUCTION

“The problem is in moving from awareness to pricing risk”

Workshop Participant

Worldwide, the land sector, including deforestation and livestock production, is a major contributor to climate change. Deforestation, together with emissions from ruminant livestock, nitrogenous fertilizers and other land-based sources, account for almost a quarter of the world’s carbon emissions.² At the same time, rural industries and communities face mounting climate risks. However, avoiding deforestation and establishing new forests and a range of other land management options present substantial opportunities to reduce and even reverse emissions. Hence, the potential opportunities for sustainable investment are substantial.³

While the rate of global forest loss has declined by almost half since 1990, net deforestation continues, with flow-on consequences, including making some areas more fire-prone and risking soil erosion. In that time, the world has lost a net area nearly four times the size of Vietnam. Crucially, emissions from deforestation, rising since the start of the century, show no signs of dropping.⁴

Forest conversion for (mainly) beef, soy, and palm oil, as well as pulp and paper has eclipsed timber as the biggest driver of deforestation, accounting for up to 80% of global forest loss.⁵ While timber plantations remains a significant part of the problem, the area under crops and livestock grazing is accelerating rapidly, as populations and per capita demand for soft commodities rise, and natural resource governance remains weak in many instances. Rising demand in China and other parts of Asia, in particular, is an increasingly powerful driver of emissions from the land sector.

Deforestation rates remain very high.⁶ Major centres of deforestation and land degradation are found in the Amazon Basin, South-East Asia, and the Congo Basin, as well as north-eastern Australia.⁷ Indonesia and Brazil, for example, are both losing forest cover at over half-a-million hectares annually, and a recent upsurge in land clearing in Australia places it among the world’s top-ten deforesting countries.⁸

According to the World Bank, private finance in forestry is 24 times that of Official Development Assistance (ODA), but seldom aims at delivery of environmentally sustainable outcomes.⁹ A shift to genuinely sustainable land uses and management systems, however, can yield a range of benefits—to the private sector, as well as to local communities, landscapes, and the climate. There are certainly challenges, but institutional investors are well placed to work across commodity supply chains, to identify opportunities and risks, and to actively scale up sustainable land use.

The last decade has seen a rapid and promising rise in investor engagement in avoided deforestation, better risk management, and the emergence of new investment solutions. Large financial institutions, often working together, have deployed sound environmental and social policies, made strong public commitments to zero deforestation, deployed innovative financial instruments, and entered into progressive partnerships with governments, NGOs, and local communities.¹⁰ While challenges remain, there are a growing number of opportunities and real-world examples of sustainable investment on which to build.

For investors, there is now a broad range of certification frameworks, tools and resources to help better inform investment decision-making and engagement with companies across the sector that are exposed to climate-related risks and opportunities. There are also emerging examples of investment innovation able to deliver strong risk-adjusted returns and better climate and sustainability outcomes.

However, while awareness may be growing—the investor response has significant room to grow.

About this toolkit

This toolkit has been developed to help institutional investors better understand the climate related risks and opportunities present across the land sector, and to scale up the investor response.

It offers a broad outline of the land sector's economic and emissions profile in Australia, New Zealand, and Asia, with a focus on Southeast Asia. It describes current policy responses in key markets with the potential to impact the sector and incentivize innovation in response to climate change risks and opportunities.

It also provides an overview of the the material financial risks and emerging innovative solutions for institutional investors engaging in the land sector.

Finally, it aims to summarize the research and resources currently available to investors to inform investment decision-making and corporate engagement activities and highlight new investment

Investor Workshop 2017

In August 2017, IGCC and AIGCC convened a workshop, hosted by Baker McKenzie in Sydney, with a diverse mix of investors and stakeholders, to:

- Increase awareness of investor climate-related risks and opportunities in the land sector
- Map existing and emerging investor tools, practices, resources and research needs; and
- Increase industry understanding on how to act on identified risks and opportunities.

From the discussion, a number of common themes emerged:

- Many investors are more or less aware of the climate-related risks, but not the investment solutions.
- Collaboration between investors and other stakeholders is needed to more fully explore the opportunities and deal with the challenges.
- There is a need for a more granular, detailed understanding of supply chains, and associated climate risks and opportunities.
- Investors need due diligence questions with which to engage companies.
- Policy certainty is essential.
- Climate risk should be central to investor decision-making.

These insights have been embedded into the development of this Investor Toolkit.

3 CONTEXT: LAND SECTOR ECONOMIES, EMISSIONS, AND POLICY DIRECTIONS

opportunities emerging in sustainable agriculture, forestry and emissions abatement in the sector.

To a large extent, rural development, deforestation, and emissions profile still remain tightly linked to one another.¹¹

This section offers a snapshot of the economic significance of key agricultural commodities in Australia, New Zealand, and Asia; outlining major trends in land use and emissions.

Across the markets reviewed for this report, the economic contribution from commodities, national policy frameworks for managing land sector emissions and deforestation and sustainable land use investment opportunities remain closely interwoven.

MARKET PROFILE: AUSTRALIA

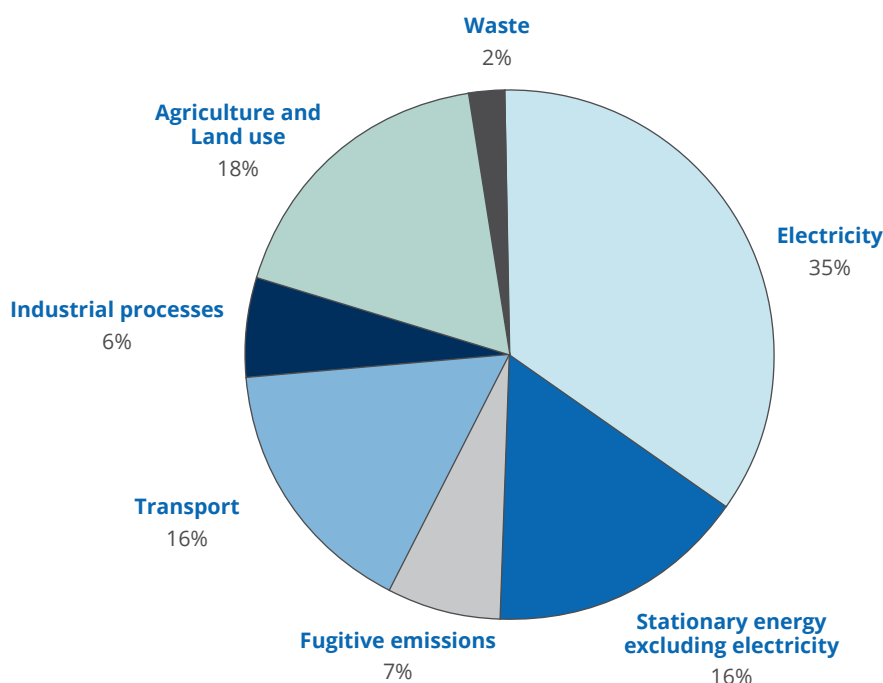
Economy and Emissions

Australia is a major agricultural exporter with around 17% of Australia's total exports by value, generating 1.9% of GDP.¹² Around half of all of Australia farm exports are destined for growing Asian markets. Around 60% of the country is managed for cropping and grazing,¹³ while forests covers about 16% of the country with production forestry confined to small, high-rainfall areas.¹⁴

Australia is one of the world's top beef exporters, second only to Brazil, with China emerging as a major market.¹⁵ About 43% of the continent is occupied by 63,000 beef producers, contributing about A\$8.4 billion to the economy.¹⁶ While most beef operations are family owned, corporate ownership is prevalent in the northern beef production, processing, and feedlot industries. Major companies include Brazil-based processor JBS Australia, Teys Australia (50% owned by US company Cargill), Top Cut Foods (a subsidiary of US company JR Simplot), and Chicago-based OSI International Foods (a supplier of McDonalds, among others).¹⁷ The country's largest beef producer is AACo, which exports to 27 countries.¹⁸

Australia's land sector accounts for around 18% of Australia's annual emissions, mostly from livestock and land clearing for livestock.¹⁹ Australia ranks among the world's top-ten deforesting countries, with clearing for cattle pasture mainly in Queensland.²⁰ Australia's national emissions target aims to reduce emissions by 5% below 2000 levels by 2020 and 26 to 28% below 2005 levels by 2030.²¹ However, there is growing evidence that land sector emissions will make this difficult to achieve, rising at least 1.2% a year to 2050.²²

Emissions by Sector



Source: Australian Government, *Australia's National Inventory Report 2012, 2014*.

Note: Figures are expressed using Kyoto Protocol accounting rules in terms of millions of tonnes of carbon dioxide equivalents (MtCo₂-e) using the global warming potentials published in the Intergovernmental Panel on Climate Change's Second Assessment Report.

Key Policy Developments

In 2011, Australia introduced an emissions trading scheme, but this was repealed shortly afterwards following a change in the Federal Government. The current centrepiece of national policy is the Emissions Reduction Fund (ERF)²³—a reverse auction, using federal funds to purchase abatement from a range of, mainly land-based projects. The ERF relies on the Carbon Farming Initiative (CFI)—a legislated offsets programme that includes an array of approved methodologies, including additional avoided deforestation and reforestation.²⁴ According to Meat and Livestock Australia, so far, around 65% of Australia's Emission Reduction Fund has been allocated to projects on grazing properties.²⁵

The independent Climate Change Authority recently announced a new review of the CFI and ERF, and their contribution to Australia's emissions reduction efforts.²⁶ A 2014 review identified policy uncertainty as an obstacle to greater investment in abatement.²⁷

Emissions from land clearing currently far outweigh abatement under the ERF, recently surging 60% following changes to state-based legislative frameworks.²⁸

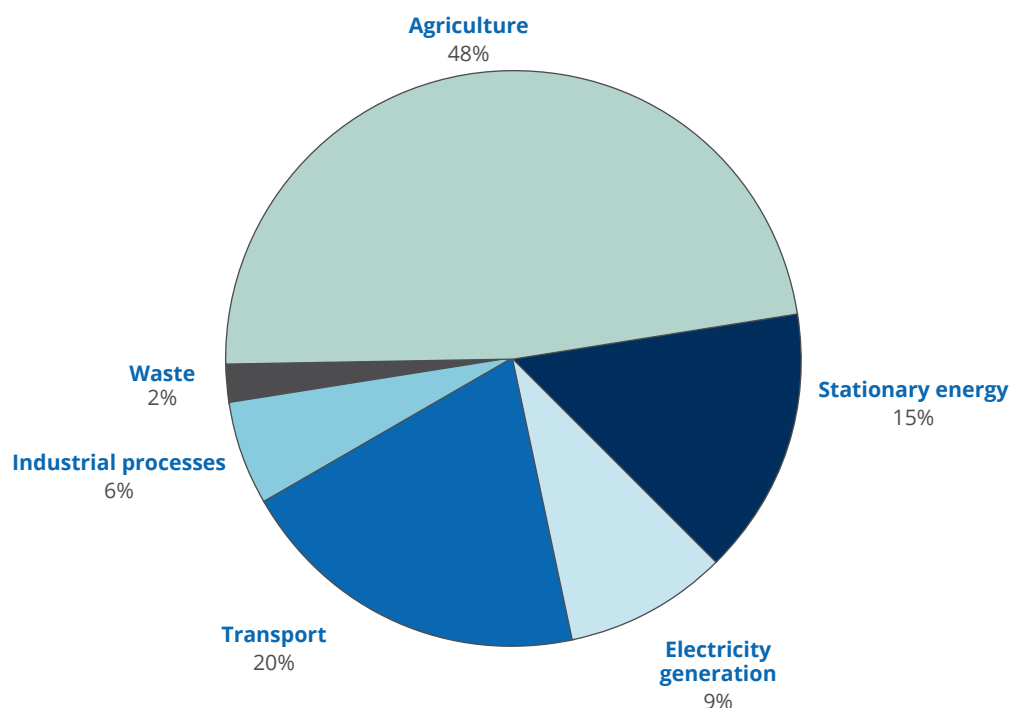
MARKET PROFILE: NEW ZEALAND

Economy and Emissions

Agriculture, especially dairying, is a key plank in New Zealand's economy, contributing around 5% to New Zealand's GDP in 2012. Milk products accounted for more than 40% of total exports in 2014.²⁹

Farming—especially dairying and fertilizer use—is also the biggest driver of the country's emissions, about 48% in 2015, while forestry is a net carbon sink,³⁰ sequestering almost 16% of the country's gross emissions in 2015. Between 1990 and 2015, emissions from the land rose by 16% as the dairy herd grew by more than 88% and the use of nitrogenous fertilizers by some 500%.³¹

Emissions by Sector



Source: NZ Ministry for the Environment.³²

Key Policy Developments

In 2008, New Zealand introduced its Emissions Trading Scheme (NZ ETS), amending it in 2009 and 2012 to respond to international conditions. A further review was recently undertaken in 2015/16 to address transitional design issues.

In the first half of 2016, 8.5 million carbon permits (NZUs) were transferred to participants for removal activities, including 7.1 million for forestry.³³ However, it is not clear that the ETS has been a significant driver of new forests beyond business as usual.³⁴ Following a recent review of its ETS, the NZ Government indicated that it would introduce auctioning of NZUs, limit the use of international units, revise the current NZ\$25 price ceiling, and set supply over a five-year rolling period³⁵. Agriculture was explicitly excluded from the review and the details for the future of forestry in the ETS are yet to be decided, although it is expected to remain a mainstay of the scheme.³⁶

While the possibility of pricing farm-level emissions is still raised in public discussions, including the recent election, there seems little prospect that methane from livestock will be brought into the ETS in the near future.³⁷

In June 2017, DairyNZ in partnership with Fonterra, launched Dairy Action for Climate Change, intended to review what the dairy sector can do to address on-farm methane and nitrous emissions.³⁸ New Zealand is an active participant in the Global Research Alliance on Agricultural Greenhouse Gases.

MARKET PROFILE: SOUTH-EAST ASIA

Economy and Emissions

China's economic growth, and demand for key soft commodities, is a major regional driver of land use—from Southeast Asia to Australia to Brazil. Sino–Latin American trade grew from US\$10 billion in 2000 to US\$255.5 billion 2012.³⁹ China accounts for 60% of global beef demand growth since 2012.⁴⁰ China now imports more beef from Brazil than any other country aside from the US. Australia is China's second biggest supplier.⁴¹

In 2014, China, imported 43% of all soy traded internationally, and accounted for 37% of the value of South American soy exports.⁴² South American soy crops are also used to produce oil and cake for livestock feed markets, further driving emissions. By 2020, China is on track to becoming one of the largest overseas investors in soy, with market share rising 70–90% by 2020 from 2000.⁴³

Indonesia's agricultural output is the world's second highest and it is major timber forest product exporter. Together with Malaysia, Indonesia accounts for 90% of global palm oil and it is the second largest producer of pulpwood.⁴⁴ Production of palm oil, and pulp and paper rose by 10 and 5% respectively between 2000 and 2013.⁴⁵ While domestic demand is increasingly important, deforestation is largely driven by overseas demand—mostly China, as well India and Pakistan.⁴⁶ Demand for timber is smaller, peaking in the 2000s following a rapid rise from 1990, but pulpwood production is rising, with Indonesia the world's second largest producer.⁴⁷

Nearly 50 million Indonesians depend, directly or indirectly, on agriculture and plantations for their livelihoods.⁴⁸ More than 1.5 million Indonesian smallholders are involved in the palm oil industry, and the trade supports at least 5 million jobs in rural areas. It also provides the Indonesian government with considerable revenues annually.⁴⁹

Agriculture and land use are major drivers of greenhouse gas emissions across the region. The big commodity drivers of land sector emissions in Southeast Asia are soy, beef, pulp and paper, and palm oil.⁵⁰ Primary forests are still being lost at high rates in almost all South-East Asian countries.⁵¹ Deforestation and loss of canopy cover has been particularly intense in Sumatra, Malaysian and Indonesian Borneo, West Papua and Myanmar. Smaller scale forest loss also occurs in Laos, Vietnam, Cambodia and the Philippines.⁵²

Expanding deforestation and peatland fires mean Indonesia's emissions are rising sharply, driven largely by pulp and paper, and palm oil production. From 2000 to 2013, Indonesia lost 10% of its forest cover, mostly to palm oil and pulpwood, making it second after Brazil for annual net deforestation.⁵³ By 2030, Indonesia is expected to lose a further 25% of its forests on present trends.

Emissions by Sector

Country	Total GHG (Mt CO ₂ -e, exc. LULUCF)	Total GHG (Mt CO ₂ -e, inc. LULUCF)	Emissions from Agriculture (Mt CO ₂ -e)	GHG reduction target	Land sector policies in (I)NDC (Y/N)
China	11,895,765.00	11,320,248.20	937,856.00	Reduce emissions per unit of GDP by 40–45% from 2005 by 2020	Y
India	2,100,849.73	1,848,317.78	390,165.38	Reduce emissions per unit of GDP by 33–35% from 2005 to 2030.	Y
Indonesia	554,333.48	1,375,587.93	73,399.98	2009 pledge to reduce emissions 26% below BAU by 2020 and 29% by 2030 or by 41% with international support.	Y
Malaysia	286,874.40	27,283.57	15,775.30	Reduce emissions from 2005 to 2030 by 35% or 45% with international support.	N
Thailand	305,524.36	234,586.60	52,927.30	Reduce emissions from 2005 to 2030 below BAU by 20% or 25% with international support.	Y
Vietnam	266,049.23	246,830.63	88,354.78	Reduce emissions 2005 to 2030 by 8% below BAU by 2030 or 25% with international support.	Y
Philippines	126,878.71	21,767.34	37,002.69	Reduce emissions by 70% by 2030 below BAU with international support.	Y

Sources: UNFCCC, Greenhouse Gas Inventory Data—Detailed data by Party

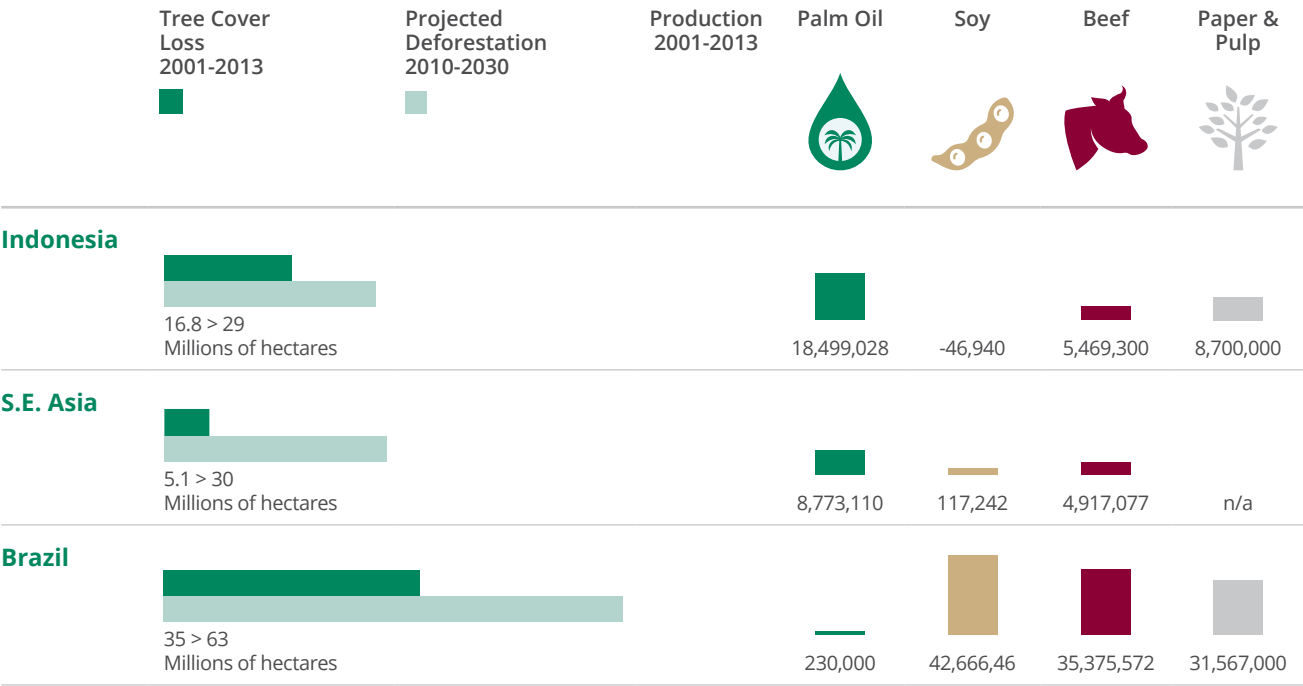
Key Policy Developments

Most Southeast Asian countries have expressed an intention to reduce deforestation and many are developing national strategies to reduce emissions and derive other benefits from deforestation and forest degradation (REDD+).

Agriculture and forestry feature prominently in the Intended Nationally Determined Contributions (INDCs) of many developing countries, according to a 2016 analysis by the UN Food and Agriculture Organization.⁵⁴ This reflects the sector's pivotal role in economic and social development. Agriculture, forestry, and other land uses feature in 100% of East and Southeast Asian INDCs, with 80% acknowledging the sector's role in mitigation, although very few spell out sectoral emissions reduction targets (Vietnam and Indonesia are notable exceptions).⁵⁵ Around half mention the need to address deforestation and forest management, though only a small number mention reforestation. As of 2016, 39 countries refer to REDD+ in their INDCs. They include Vietnam, Indonesia, Laos, Thailand, Myanmar, the Philippines, India, and Cambodia.⁵⁶ As yet, however, INDCs provide financial institutions with little more than broad directions for investment opportunities and risks.⁵⁷

The Indonesian government has pledged to significantly cut land sector emissions, but its commitments do not currently appear to substantively address deforestation or peatland fires.⁵⁸ Indonesia has created a new Peat Restoration Agency, which aims to restore two million hectares of peat land.⁵⁹ There are ongoing challenges in the significant inconsistencies between official government figures and independent scientific opinion of deforestation rates.⁶⁰ Independent analysts put their contribution as high as 84%,⁶¹ though government estimates are significantly lower.⁶² This makes Indonesia the third-highest emitter after China and the United States.

REGIONAL DEFORESTATION AND FOREST-RISK COMMODITY PRODUCTION



Sources: Global Forest Watch, FAO and WWF Living Forests Report 2015

In Southeast Asia four commodities drive most deforestation and land-sector emissions—predominantly in Indonesia.⁶³

4 RISKS, OPPORTUNITIES AND CHALLENGES FOR INVESTORS

“The best known technology for carbon capture is a tree. If you bring it to scale it's a forest.”

Al Gore

There are very real links between climate risks, land use, and how investors respond. Failure to properly anticipate and prepare for these risks potentially exposes an investor to one or more material risks. Conversely, proactive sustainable investment policies can yield several important opportunities, many of which are known to translate into improved or at least more secure returns.

According to the Carbon Disclosure Project, 24% of companies report that a quarter of their revenues depend on commodities driving deforestation, such as beef, soy and palm oil. Most have already experienced impacts that have caused them to make significant expenditure, revenue, or operational decisions. Only one in five, however, gauge their long-term risks.

The number of investors seeking deforestation-related data is rising.⁶⁴ Co-operation, data generation, transparency, and information sharing with peers, are increasingly seen as a key part of risk management. Importantly, NGOs, the private sector, and the two working in tandem are developing well-researched and practical guidance for investors seeking to identify and minimize climate, deforestation and related risks.

RISKS

Investments in unsustainable forestry, agriculture and other land uses carry a suite of potential financial risks-direct and indirect.

Financially material business risks



OPERATIONAL RISK. Climate change and extreme weather events can jeopardize productivity and result in stranded assets.

Deforestation and land degradation can prove costly to manage, reducing long-term agricultural productivity. Climate change risks disrupting supply chains and assets, so depreciation rates of assets may rise. Many companies in soft commodities have already experienced impacts that have caused them to make significant expenditure, revenue, or operational decisions.⁶⁵

In 2014, Norwegian pension fund and insurer, Storebrand, divested from eleven palm oil companies on deforestation and sustainability concerns.⁶⁶

In 2015, Singaporean supermarket chains NTUC FairPrice, Sheng Siong and Prime Supermarket, as well the Dairy Farm group, pulled items produced by Asia Pulp and Paper (APP) and four other companies because of their ties to peatland fires in Sumatra and Kalimantan.⁶⁷

REGULATORY RISK. Unprepared investors may find themselves caught out by regulatory changes.

Pressure for stronger policy measures, including direct regulation and carbon pricing, is likely to continue to grow.

According to the Tropical Forest Alliance, 50–80% of soy, beef, pulp and paper, and palm oil production in the tropics is tied to deforestation.⁶⁸

LITIGATION RISK. Businesses that fail to manage environmental impacts may face litigation, even in the absence of specific environmental regulations.

The Government of Indonesia, for instance, has recently begun prosecuting publicly traded companies associated with forest fire haze.

In 2016, a Jakarta court fined Sampoerna Agro US \$81 million—slightly less than its revenue in the first six months of 2016—for 2014 forest fires on its Indonesian concessions.⁶⁹ Singapore's National Environment Agency, using the 2014 Transboundary Haze Pollution Act, sued five Indonesian companies blamed for farm and plantation fires causing serious air pollution over the city-state.⁷⁰

MARKET RISK. Social and environmental changes can drive price volatility and sourcing constraints.

Businesses may lose contracts or market access due to changes in social preferences in those markets that emphasize strong sustainability standards. Wider market shifts are driving low carbon investment strategy change.

In 2016, as part of a larger climate risk management strategy, New Zealand Super committed to moving away from fossil fuels, exploring renewable energy opportunities, and public reporting. By August 2017 the fund had established 19.6% emissions reduction from its passive equities portfolio, with 40% of the total fund low-carbon.⁷¹

REPUTATIONAL RISK. Improved transparency and connectivity substantially raise risks to investors seen to be flouting environmental best practices.

Many brands, particularly international ones, are highly sensitive to reputational problems linked to clearing areas of high-conservation and high-carbon value.⁷² In 2015, reputation and other intangible assets accounted for 87% of market value of S&P 500 companies.⁷³

Greenpeace's 2010 faux advertisement linking Nestlé's palm oil use in Kit Kats to orang-utan deaths was viewed over 300,000 times within one day after launch.⁷⁴

In 2010, New Zealanders' outcry against Cadbury's sourcing of irresponsible palm oil pushed the brand from 1st to 36th most trusted.⁷⁵

OPPORTUNITIES

There is every reason to believe that the opportunity for sustainable finance in the land sector will continue to grow. Starting from a relatively low base, the investment market in forest conservation, sustainable forestry, and sustainable agriculture is growing rapidly. Doubling in the last decade, the market is attracting more and more mainstream investors.⁷⁶

A recent investor survey for the Low Carbon Investment Registry shows that sustainable agriculture, forestry and other land uses already constitute the second largest area of green investment by value.⁷⁷

Estimates of the potential value of conservation finance and deforestation-free supply chains put the market at between US\$ 160 and 400 billion by 2020.⁷⁸ Between 2004 and 2015, US\$8.2 billion in private capital was invested in financially rewarding conservation projects—up 62% since 2014.

Sustainable food and fibre production accounted for US\$ 6.5 billion, with US\$ 1.3 billion in habitat conservation, and US\$ 400 million in water quality.⁷⁹

Managing risk and opportunity concurrently is an important part of the investor response. According to CDP, 92% of companies with board-level oversight of deforestation risk recognize opportunities from risk management compared with 73% of those where responsibility sits lower.⁸⁰

Emerging investment opportunities

Use climate risk management to deepen supply-chain knowledge, performance, and influence.

The field of sustainable investment in the land sector is still largely untapped, giving early movers room to build a solid understanding of strategies likely to offer stronger returns and lower risks of, e.g. certification schemes, technologies, land uses, management systems, ecosystem services schemes, and so on.⁸¹ Investors who become savvy on sustainability issues may also be in a position to provide advisory services to others, become more attractive partners in joint ventures, and create business value ahead of the industry curve. Some companies that have committed to zero deforestation and sustainable supply chains have already begun to invest internally, improving their operations and the performance of their suppliers.⁸² Efficiency measures and sustainable intensification (producing more from the same or less land rather than clearing more), can yield productivity and input cost savings sufficient to offset extra capital costs.⁸³

Convert environmental services to revenue through public or private schemes.

Beginning in Europe, carbon markets have multiplied and are now established in more than thirty subnational, national and international levels. Vivid Economics, in an international study for the Tropical Forest Alliance 2020, suggests that at realistic prices per tonne of CO₂, the rate of return on avoided deforestation can be significantly higher than that on traditional investments.⁸⁴ The Australian Emissions Reduction Fund allows for abatement projects from the land sector, including but not limited to avoided deforestation, reduced emissions from livestock, and methane capture and conversion to C₂O (a much less potent greenhouse gas) in intensive operations—a process that also generates electricity.⁸⁵

Blended private-public investments reduce risk, offer new opportunities.

Cross-sectoral partnerships and joint ventures are becoming more commonplace in landscape finance; topping up market drivers and making projects—particularly projects based on a whole-of-landscape approach—more attractive to institutional investors. Public funds (including development banks) can leverage private finance, covering some of the real or perceived risks.⁸⁶ Such blended finance or capital stacking can also pool existing technical expertise and establish new facilities, further augmenting the overall chance of commercial success.

Collaborative investments and project bundling to optimize returns, reduce risk.

Often, sustainable forest management, reforestation, and sustainable agriculture projects are small with high transaction costs if taken individually. Aggregating several projects across a landscape or together with others in other asset classes helps to minimize risk and reduce the costs of monitoring, while delivering multiple benefits. Additional management costs can be minimized where good relations are established with local technical expertise, communities, and NGOs.

Leverage conservation capital from mainstream investments.

An alternative to higher-risk forest conservation investments, one suggested by Credit Suisse Group AG and the McKinsey Center for Business and Environment, is simply to direct cash flows from more mainstream investments towards sustainable land use.⁸⁷ Beyond philanthropy, the long-term appeal of this approach would lie in capitalizing the maturation of the sustainable investment market, while mainstreaming best practice in existing commodity supply chains.

CASE STUDY: NEW FORESTS —INVESTING IN WHOLE LANDSCAPES.

While discrete commodities and their certification schemes are an important entry point, there is a growing recognition of the need for a more integrated, landscape-scale approach to sustainable natural resource management.⁸⁸ The landscape approach requires a different way of thinking, and recognizing that conversations, collaboration, and consensus take time and trust. By their very nature, landscape-scale projects cut across sectors and asset classes, which presents challenges for investors. Despite this, some companies, such as Unilever Plc, are starting to show an interest in sourcing from linked climate and forest investments,⁸⁹ and asset managers, New Forests, have made it their specialty.

Founded in 2005, New Forests manages more than A\$3.9 billion in various timber and ecosystem-service-related assets globally, with a focus on the Asia-Pacific. New Forests' Tropical Asia Forest Fund—the first institutional investment fund dedicated to sustainable forestry in Southeast Asia—invested in a portfolio of three assets covering 160,000 hectares of gross area and targeting long-term management of 60,000 hectares of timber and rubber plantations. The remaining land area was dedicated to a variety of uses, including conservation and restoration, community use, and infrastructure. For example, the New Forests fund invested in PT Hutan Ketapang Industri (HKI), which operates within a 100,000-hectare concession in West Kalimantan, Indonesia. Their finance supports a landscape approach that includes a mix of rubber plantation, restoration and conservation, and plantings to support local livelihoods.

CHALLENGES AND BARRIERS

Investment in the land sector does hold some challenges and there are a number of outstanding barriers which need to be taken into account and managed by investors. These frequently relate to cost, return, scale, project proponent or counterparty, capacity and resources, policy uncertainty and economic value fundamentals.

“Its not just about regulatory frameworks— you need consistent market signals.”

Workshop participant

Challenges and barriers to investment

<p>Price premiums and certification schemes are rarely sufficient to transform land use.</p>
<p>While small price premiums (3–5%) for deforestation-free supply chains are observed,⁹⁴ they are not guaranteed. Moreover, certification systems are imperfect or sometimes absent (e.g. beef), with various levels of robustness. In any case, alone they cannot transform markets, making investor policies and principles even more important.</p>
<p>Investment in more sustainable supply chains can be expensive, at least initially.</p>
<p>The cost of sustainably produced commodities can be higher than their unsustainable counterparts. And the price differential can widen when production is high. Direct costs can include assessments, certification, land acquisition, reforestation, and technical assistance. Opportunity costs, such as setting aside land for conservation, can add another hurdle. Collaboration, knowledge-sharing, and efficiency savings can help to minimize up-front costs. New technologies and tools, such as the Australian dairy industry’s Climate Toolkit, can help reduce climate risk, lift efficiency, and make more cost-effective investment decisions—for investors and producers alike.⁹⁵</p>
<p>A good understanding of stakeholders and local conditions is fundamentally important.</p>
<p>Sustainable land-use projects typically involve a host of different stakeholders, often taking considerable time to become established. Investors and NGOs, for example, may not speak the same language and arrive at the table with quite different philosophies and worldviews. Exactly what is meant by ‘sustainable land use’, ‘deforestation’, and other terms is not always clear and often contextual. Uncertainty makes assessing investment risk difficult and often requires specialist expertise, as well as time and patience—allowing for all stakeholders to arrive at a common understanding.</p>
<p>Transforming supply chains in the land-use arena is seldom straightforward and can be hard to track.</p>
<p>Tracing supply is key to making more sustainable investment decisions, but supply chains can be opaque, with disclosure difficult. Sustainability in the land sector is often hard to gauge, although some metrics are available. Even so, it can be hard to guarantee if a sustainable investment policy is translated into local practice. The alternative, however, is remaining ignorant of risks and opportunities in the value chain.</p>
<p>Without a carbon price, profitable forest conservation investments are likely to remain in short supply, small, and hard to scale.</p>
<p>Several experts attest to the general lack of good quality, mature, avoided deforestation projects with favourable risk-return profiles.⁹⁶ Without a regulated carbon price the return on investment per hectare from soft commodities will continue to outstrip that of carbon, and the growth of the market will remain hamstrung.⁹⁷ This underscores the need for investors to collaborate with one another, NGOs, and others in the supply chain to demonstrate to governments the central importance of carbon pricing.</p>

CASE STUDY: INNOVATIVE SUSTAINABLE INVESTMENT VEHICLES

International Finance Corporation (IFC) Forestry Bonds

IFC Forestry Bonds comprise the first of a kind of principal-protected, fixed-income instrument issued under IFC's AAA-rated programme that will pay bondholders a coupon.⁹⁰ The coupon can be received as cash, carbon credits (which can be retired as offsets or sold), or a mix of the two. BHP underwrites the bond by agreeing to purchase any remaining carbon units. The project was launched with multiple environmental and social goals, including reducing deforestation. Thus far, it has proven challenging finding forest conservation investments with a reasonable risk-return profile, and attention has turned to more traditional asset classes, albeit ones that meet environmental performance criteria.

Sustainable forest funds

There are a number of specialist sustainable forest funds globally, some of which are listed in the Low Carbon Investment Registry. Hancock Natural Resources Group, Stafford, Pictet Timber, Timberland Investment resources actively offer a variety of investment options.⁹¹ Many use either the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC). Investors can be attracted to sustainable forestry because the asset class has a low correlation with debt and equity markets, and offers some protection against inflation. Additionally, trees can be expected to keep growing regardless of macroeconomic conditions. Investments in Timberland also benefit from land ownership, which can increase in value, helping to boost returns.

The Althelia Climate Fund

The €101 million Althelia Climate Fund is a specialized investment fund seeks integrated landscape projects that link revenues from sustainable agroforestry and deforestation-free cocoa, as well as carbon and other ecosystem services. Risks are offset by a guarantee from USAID to cover 50% of the investment portfolio. The robustness of this blended approach has attracted investment from AXA, several Development Finance Institutions (DFIs), and others.⁹²

SLM Australia Livestock Fund

The SLM (Sustainable Land Management) Australia Livestock Fund, managed by SLM Partners (Australia) Pty Ltd, buys beef cattle properties to which it applies 'holistic' land and herd management principles.⁹³ The Fund aims to 'increase soil carbon, improve water cycles, and enhance biodiversity' as part of profitable cattle operations. Launched in 2012, the Fund has acquired more than 480,000 hectares in Australia. It works in stable political environments with suitable partners.

5 A TOOLKIT FOR INSTITUTIONAL INVESTORS

Investor awareness of the importance of engaging on climate-related risks and opportunities in the land sector have been growing for a number of years.





At the same time, new tools, resources, guides and certification frameworks have emerged to assist investors in better understanding the risks and opportunities and to take practical steps to respond.

Consultation with investors undertaken for this toolkit found that many identified the need for greater clarity of what information and tools are already available as a key enabler to further investor action in the Asia-Pacific region.

This toolkit aims to capture the certification schemes and frameworks, finance sector initiatives, and civil society resources currently available for use in investment-decision making when assessing both risk and opportunity.

KEY ENVIRONMENTAL STANDARDS AND CERTIFICATION SCHEMES IN THE LAND SECTOR

Over recent years, a number of commodity-specific performance assessment and verification standards have emerged. These can help investors by providing an accessible, independently verified assessment of performance. Understanding the benefits, advantages and remaining challenges of each is critical.

	<p>Roundtable on Sustainable Palm Oil (RSPO)</p> <p>http://www.rspo.org</p>	<p>Established in 2004, the RSPO is the oldest and most well known of the global roundtables on soft commodities with almost 1,200 members. It comprises producers, processors and traders, manufacturers, retailers, banks and investors, and nongovernmental organizations, each with equal rights, to develop and implement global certification standards for sustainable palm oil. Producer members of the RSPO are expected to implement the organization's Principles and Criteria for sustainable palm oil, and to have their operations certified (CSPO), while non-producers are expected to implement equivalent standards for procurement and use. As of 2016, around 18% of global palm oil is certified.⁹⁸ The RSPO has been the subject of substantial criticism for weak standards and poor enforcement, at least some of which the organization acknowledges and seeks to address.⁹⁹ Greenpeace recently reported that many leading companies had not yet broken the link between palm oil and deforestation.¹⁰⁰ Conversely, World-Wide Fund for Nature (WWF) argues the RSPO, while imperfect, is an important vehicle for progress.¹⁰¹</p>
	<p>Roundtable on Responsible Soy (RTRS)</p> <p>http://www.responsiblesoy.org/</p>	<p>The RTRS is a multi-stakeholder platform that develops and applies global standards and a Code of Conduct for actors in the soy supply chain, including certification, market development, and a grievance procedure. Its main focus is South American production, where most soy is produced, principally for livestock feed. Significant soy production also takes place in India and some production in South-East Asia, notably Indonesia. WWF describes the RTRS as, 'the best international mechanism to move soy producers and traders toward responsible production that does not harm nature or people' but is not a 'silver bullet' to deforestation.¹⁰²</p>
	<p>Forest Stewardship Council (FSC)</p> <p>https://ic.fsc.org/en</p>	<p>FSC was founded in 1993 as a way to lift and certify best-practice environmental and social performance in global timber supply chains. Forests are certified by FSC after consultation with a network of global stakeholders, representing environmental, social, and economic interests. It is the only timber certification system supported by Greenpeace and WWF.¹⁰³ As of August 2017, FSC certifies almost 200 million hectares of land in 84 countries.¹⁰⁴ It is expected that the market for FSC-certified products will grow 400% to more than US\$200 billion to 2022.¹⁰⁵</p>
	<p>Programme for the Endorsement of Forest Certification (PEFC)</p> <p>https://www.pefc.org/</p>	<p>The main alternative to the FSC, the PEFC endorses national forestry certification schemes, although project and chain-of-custody options are also available. Forty-three PEFC-certified national schemes cover 300 million hectares of forest and 18,800 companies. Among civil society, however, the PEFC does not enjoy the same legitimacy as the FSC. Greenpeace argues that the PEFC lacks rigour and fails to distinguish between responsible and irresponsible forest management; enabling the conversion of natural forests to plantations in, for example, Malaysia.¹⁰⁶</p>
	<p>Verified Carbon Standard (VCS, formerly Voluntary Carbon Standard)</p> <p>http://www.v-c-s.org/</p>	<p>The Climate Group, the International Emissions Trading Association, the World Economic Forum, and the World Business Council for Sustainable Development founded the VCS (formerly the Voluntary Carbon Standard) in 2005 to assure quality in the global voluntary carbon offsets market. The VCS develops and manages standards and frameworks to assess environmental and sustainable development projects, build capacity, and source investment, principally on carbon sequestration projects. Lately, the VCS has expanded to include whole-of-landscape projects, Climate, Community, and Biodiversity Standards, and standards for REDD+ projects. The VCS is widely recognized as a credible international standard for carbon projects, including by the Australian Government for the purposes of carbon forest projects funded by the Emissions Reduction Fund.¹⁰⁷ A total of 29.5 MtCO₂e in REDD+ offsets have been issued by 34 projects developed under the Verified Carbon Standard since 2010. With continued funding, these projects collectively have the ability to issue an estimated 29.5 MtCO₂e every year—and that's not including the REDD+ projects in the VCS pipeline.</p>
	<p>Global Roundtable on Sustainable Beef (GRSB)</p> <p>http://grsbeef.org/</p>	<p>The GRSB is not yet a certification body, but currently a multi-stakeholder forum on issues and global principles of sustainable beef, intended to 'advance continuous improvement in sustainability of the global beef value chain through sharing their knowledge, leadership, science and through multi-stakeholder engagement and collaboration'.¹⁰⁸ While the GRSB's focus to date appears to have been on the Americas, it plans to extend its reach and impact to include Australia and New Zealand. Notable members include beef processors Cargill and JBS, as well as WWF, the Rainforest Alliance, Rabobank, McDonald's, and the Cattle Council of Australia. Other NGOs have criticized the GRSB for not setting firm targets to eliminate deforestation from beef supply chains.</p>

NEW APPROACHES TO MANAGING ENVIRONMENTAL RISK IN FINANCE

Industry groups and collaborative initiatives continue to emerge at a rapid rate. These can take a number of different forms, including investor engagement tools, sustainable commodity frameworks or disclosure vehicles. Each can be useful for investors adopting or evaluating different responses to identifying climate related risks and opportunities.

<p>CERES Engage the Chain</p> <p>https://engagethechain.org/</p>	<p>Launched in mid-2017, Engage the Chain is an online guide for investors in the food sector seeking to reduce environmental and social risks, prepared by US non-profit organization, CERES.¹⁰⁹ The tool covers a range of key commodities, including beef, palm oil, and soy—key drivers in deforestation in Asia and Australia. Dairy—a major source of New Zealand’s emissions—is also included. Covered are key drivers of financial risk in supply chains, including climate change and deforestation, global production data, and an assessment of risk exposure for major US food and beverage companies. Investors are provided with steps they can take to evaluate and reduce material risks. The tool, which CERES developed with support from investors, companies, and NGOs, comes after 23 sustainability-focused shareholder resolutions were filed against major food companies in the first half of 2017. In all, CERES notes there have been 131 such resolutions since 2011—more than one-third related to climate change and deforestation issues in supply chains.¹¹⁰</p>
<p>Banking Environment Initiative (BEI) ‘Soft Commodities’ Compact</p> <p>https://www.cisl.cam.ac.uk/business-action/sustainable-finance/banking-environment-initiative</p>	<p>Formed in 2010 and convened by the Cambridge Institute for Sustainability Leadership (CISL) the BEI now comprises 12 banks, including China Construction Bank and Westpac. In partnership with the Consumer Goods Forum (CGF), the BEI aims ultimately to shift banking services in support of zero net deforestation by 2020. Compact banks make two commitments: (1) financing the transformation of supply chains and (2) raising industry-wide banking standards, including by reviewing their services and procurement policies to reinforce sustainable markets.</p>
<p>The Task Force on Climate-Related Financial Disclosures (TCFD)</p> <p>https://www.fsb-tcf.org/about/</p>	<p>Developed for and by the finance industry, the TCFD is a 32-member group chaired by Michael R. Bloomberg, offering not just the ‘why’—the rationale and context—but the ‘how’: recommendations for mainstreaming climate-risk disclosure globally. Key themes are consistency, comparability, reliability, clarity, and efficiency across a range of sectors and markets, including agriculture and forestry. The TCFD uses scenario analysis up to 2°C of warming to help organizations build resilience and flexibility.¹¹¹ TCFD’s disclosure recommendations cover: governance of climate-related risks and opportunities; the actual and potential impacts of climate-related material risks and opportunities for businesses, strategy, and financial planning; climate risk identification, assessment, and management; and setting metrics and targets¹¹² (e.g. expenditure, emissions, carbon stocks, investment) used to assess and manage relevant, material climate-related risks and opportunities.</p>
<p>UNEP Bank and Investor Risk Policies on Soft Commodities</p> <p>http://www.naturalcapitalfinancealliance.org/softcommoditytool/</p>	<p>Produced for the Natural Capital Declaration—a global partnership launched by the United Nations Environment Programme and Global Canopy Programme—the policies form a framework to evaluate deforestation and forest degradation risk in agricultural investments. As a first step, the framework outlines minimum risk management standards as well as best practices.¹¹³ Minimum standards include: a general policy statement on environmental and social issues, reference to relevant roundtables and credible sustainability certification schemes when assessing client/investee performance, setting specific environmental and social requirements, and plans for implementation and monitoring. Best practices: a formal policy addressing the environmental and social impacts associated with specific soft commodities—allied to all financial services offered and across the value chain; a requirement that upstream companies commit to/meet a time-bound plan for relevant, credible sustainability certification.</p>

<p>Equator Principles (EPs)</p> <p>http://www.equator-principles.com/</p>	<p>A global credit risk management framework, established in 2003 for determining, assessing and managing environmental and social risk. Intended to establish minimum standards of due diligence and to support responsible decision-making.¹¹⁴ EPs are cross-commodity and apply to project finance advisory services, project finance, related corporate loans, and bridge loans. Institutions applying EPs are not expected to do so already established investments. Currently, there are 91 EP Financial Institutions (EPFIs) operating in 37 countries. A recent assessment by the UN Environment Programme found that compliance problems remain an issue for signatories for many financial institutions.¹¹⁵</p>
<p>CDP (formerly the Carbon Disclosure Project)</p> <p>https://www.cdp.net</p>	<p>CDP manages the world's largest global disclosure system enabling companies, cities, states, etc. to measure and manage environment-related risks, including climate and forest impacts. CDP's forests programme, collects data on company management of deforestation risk, looking at key commodities, e.g. palm oil, beef, etc. CDP's latest climate disclosure report includes data from nearly 1,100 companies, covering 12% of global emissions. The whole CDP network covers over US\$ 100 trillion, collecting data from thousands of companies, which CDP uses to research trends and insights for use by investors, policymakers, and others. According to CDP, over 5,600 companies disclosed environmental data in 2015, which, in 2016, was sought by more than 800 investors, amounting to more than US\$ 100 trillion in finance.</p>
<p>PRI (Principles for Responsible Investment)</p> <p>https://www.unpri.org</p>	<p>PRI is a network of investor proponents of its six Principles, covering environmental as well as social, governance, and disclosure issues. The Principles are high-level, 'voluntary and aspirational', and sit along advice on implementation across asset classes, on the understanding that each organization will tailor them to suit its strategy and capabilities. To date, PRI has more than 1,750 signatories, representing approximately US\$ 70 trillion. PRI works to develop a range of resources for investors, including mapping impact investment and regulations, exploring fiduciary duty, and so on. In 2016, Ceres and PRI partnered focused on commodity drivers of deforestation in South America. The partnership aids institutional investors in their approach to food and timber companies to eliminate deforestation and other problems from their supply chains—mapping and benchmarking company performance, and engaging in public advocacy for change.</p>

SHEDDING LIGHT ON FINANCE AND THE LAND: CIVIL SOCIETY INITIATIVES

Civil society and non-governmental organisations continue to play a vital role in calling out Environment, Social and Governance (ESG) risks and compliance concerns on the ground. Many groups have developed tools and performance trackers which can act as a useful reference guide for investors.

<p>The Forest and Finance Database</p> <p>http://forestsandfinance.org/</p>	<p>The Forest and Finance Database was launched in 2016 by a coalition of campaign and research organizations, including the Rainforest Action Network (RAN) and Profundo. It draws on financial data from Thomson EIKON and Bloomberg, as well as publicly available company reports, to identify corporate loans, credit and underwriting facilities provided to 50 selected companies between 2010 and 2015. The initiative is, essentially, a name-and-shame campaign in the form of an online database of banks and investors funding risky forest activities in Southeast Asia. It shows those financiers without adequate social/environmental safeguards on their capital, with the biggest located in Malaysia, China, and Europe.</p>
<p>The Global Canopy Programme: Forest 500</p> <p>http://forest500.org/rankings/financial-institutions</p>	<p>The Forest 500 is a rainforest rating agency, established by the Global Canopy Programme, that scrutinizes and ranks the deforestation commitments of 250 companies, 150 financial institutions, and other powerbrokers. Firms are selected based on their exposure to risky commodity supply chains. Ranking and analysis is repeated annually until 2020.</p>
<p>The ZSL SPOTT Initiative</p> <p>https://www.spott.org/</p>	<p>Beginning with thorough assessments of the transparency and sustainability commitment of the 50 largest palm oil companies, the Zoological Society of London's SPOTT initiative has already expanded to pulp and paper, and will soon include assessments of soy and other key commodities. Formerly the Sustainable Palm Oil Transparency Toolkit, SPOTT reviews publicly available information on company policies and practices to inform investors' due diligence. SPOTT assesses companies according to a comprehensive set of indicators: from sustainability leadership to emissions to land management and labour rights. Companies are invited to review SPOTT draft assessments before finalization. The initiative depends on transparency and demonstrates little about actual implementation.</p>
<p>WWF Sustainable Finance Initiative</p> <p>http://www.wwf.sg/?uNewsID=312970</p>	<p>World-Wide Fund for Nature's Asia Finance and Commodities team focuses on sustainable finance research and initiatives. In October 2017, WWF released the report Sustainable Banking in ASEAN—Addressing ASEAN's Forests, Landscapes, Climate, Water, Societies. The report looks at the potential and first steps already taken by the ASEAN banking sector leading to sustainable development in the region. It reviews the sustainable finance regulatory landscape, shedding light on the environmental, social and governance (ESG) integration progress of banks.</p>

6 THE INVESTOR RESPONSE

Investors can play a powerful and proactive role in driving the sustainable transformation of the land sector by identifying and managing climate-related risks and supporting new and emerging investment opportunities.

In many cases this might involve extending or embedding consideration of industry-sector specific issues into existing climate change governance and investment frameworks. It may also involve increasing capacity and understanding of the asset class and investment parameters in order to become more comfortable with the issue specific to the sector.

Engaging on climate change risks and opportunities

When engaging companies on deforestation and sustainable land use, there are a number of focus areas where investors can establish the baseline performance of the company.

1. **Governance.** Is there a proper governance structure in place that ensures that the board has appropriate oversight of climate change risk and opportunities in line with the Paris Agreement, where responsibilities are clearly defined?
2. **Strategy.** Has the company developed a long-term climate change management strategy which is resilient to transition and physical risks and emerging opportunities? Does the company engage with (the) relevant commodity environmental and social assurance scheme(s)?
3. **Emissions management.** Has the company adopted a robust, science-based emissions reduction plan, with meaningful metrics and time-bound targets to reduce and eliminate deforestation from its operations and supply chain? Is the company working collaboratively with others in the sector to sustainably transform the market? Does the company have an internal carbon price? Does this include independent, credible, third-party verification of the company's performance?
4. **Transparency and disclosure.** Does the company disclose, in annual reports and financial filings, its position regarding these questions?
5. **Public policy.** Does the company proactively engage with policymakers and other stakeholders to enable market transformation and drive the transition to a low-carbon economy in line with a 2°C scenario?

This approach builds on the series of Investor Expectations guides developed by the Global Investor Coalition on Climate Change, including both IGCC and AIGCC as participating organisations.

NEXT STEPS AND STRATEGIES FOR INVESTORS

There are a number of responses that investors can pursue when scaling up their approach to climate-related risks and opportuneness in the land sector. Many of the recommendations identified here emerged through investor and stakeholder consultation as part of the development of this toolkit.

Build Capacity

Take steps to increase awareness and understanding of natural capital and climate related impacts in the sector, and where they intersect with traditional risks. Become more familiar with the asset class. Invest in personnel and resources to map risks and opportunities within the portfolio. Become familiar with regulatory and policy frameworks, including carbon crediting and pricing mechanisms.

Good Governance

Integrate knowledge of climate-related impacts for the sector into the organisational climate change governance framework. Embed management of climate-related risks and opportunities in ongoing management and engagement across the asset class. Develop a formal policy that addresses environmental and social impacts with specific soft commodity investments, including a pledge to net zero deforestation for example.

Manage Risk

Integrate heightened awareness into investment decision-making approach. Identify and adopt existing tools and resources available or emerging in the sector. Understand the management skills required to effectively manage the assets. Identify data sources and benchmarks for best practice climate risk performance by company/industry sector/country and level of materiality of climate risk issues by company/sector. Identify risk analysis and pricing tools and frameworks.

Invest

Actively seek low carbon or sustainable investment opportunities in the sector. Visit plantations or make site visits with fund managers and property managers to understand how sustainable land use/forestry can be part of a balanced portfolio. Identify those commodities that have a niche or value add, or will be favourably produced in Australia compared to other countries. Address within passive investment strategies, tools and investment approaches.

Engage

Engage with project developers, companies and investors active in the sector on risks and opportunities. Pursue a targeted approach to corporate engagement with companies in your existing portfolio, and with potential investment opportunities. Require (or strongly encourage) upstream companies to commit to achieve or commit to a time-bound plan to achieve certification against the relevant commodity roundtable or other credible sustainability assurance scheme. Encourage companies to adopt and disclose against the TCFD framework including relevant metrics for the sector. Explore investor-led shareholder resolutions targeting non-performing companies in the sector.

Collaborate

Collaborate on research to better understand emerging impacts for the sector, and approaches to reducing, mitigating or managing the identified risks/opportunities. Participate in industry-led collaborative initiatives. Partner on the development of better tools.

Disclose

Disclosure how relevant, material climate-related risks and opportunities will be assessed, measured and monitored. Set meaningful targets to reduce risk and increase exposure to new opportunities. Report on outcomes.

7 CONCLUSIONS AND NEXT STEPS

This toolkit was prepared with the assistance of many different stakeholders and with extensive investor consultation. It presents some of the important insights in connecting commodities, climate risk management, and the land, notably:

- **Policy certainty and political consensus** is crucial to long-term risk assessments and investment planning. The situation in Australia is particularly difficult in this regard.
- **A price on carbon is fundamentally important** to up-scaling sustainable investment opportunities in the land sector. Without it, the very large potential of this market, with all its many benefits, is unlikely to be realized.
- **There are investment opportunities**, even so. In particular, investors, governments, and philanthropic organizations should actively seek opportunities to collaborate and blend finance for forest conservation and sustainable forestry.

IGCC and AIGCC intend to continue to consult with industry, civil society, researchers and government to build on this toolkit. This includes developing a more thorough understanding of the investment risks and potential and opportunities in sustainable agriculture, forestry and the land sector.

We welcome any feedback you may have on the tools and resources and the recommendations set out in this toolkit for investors.

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