An integrative approach to responsible investment

First Sentier Investors

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Front cover image: Solar power stations and wind turbines, China, Getty images, jia yu, 06/08/21

01 | About First Sentier Investors and the authors

First Sentier Investors is a global asset management group focused on providing high quality, long-term investment capabilities to clients. We bring together independent teams of active, specialist investors who share a common commitment to responsible investment and stewardship principles. These principles are integral to our overall business management and the culture of the firm.

All our investment teams – whether in-house or individually branded – operate with discrete investment autonomy, according to their investment philosophies.

Although approaches to responsible investment differ across our investment teams, at firm level, we are primarily focused on four areas: climate change; human rights and modern slavery; diversity, equity and inclusion; and nature and biodiversity.

First Sentier Investors' Responsible Investment team led the development of this whitepaper with contributions comprising a cross section of our investment teams including the First Sentier Australian Equities Growth, First Sentier Global Listed Infrastructure, FSSA Investment Managers, Igneo Infrastructure Partners, and Stewart Investors teams.

Kate Turner, Global Head of Responsible Investment, and her team are responsible for defining and delivering First Sentier Investors' responsible investment strategy globally. This includes supporting investment teams to integrate ESG factors into their investment processes and engaging with clients and stakeholders on responsible investment. She is a Board Member of the Responsible Investment Association of Australasia and First Sentier Investors (Australia) IM Ltd, Chair of Investors Against Slavery and Trafficking APAC and Advisory Group member of the Net Zero Asset Managers Initiative.

Kristen Le Mesurier, Head of ESG, First Sentier Australian Equities Growth, is responsible for managing the ongoing integration and engagement of ESG across the Australian Equities Growth team's fundamental research process. Prior to joining First Sentier Investors, Kristen ran a range of ethical and ESG superannuation funds and analysed companies on ESG issues. She has led engagements on modern slavery, climate change, gender diversity and governance. She has also worked as a sell-side analyst, litigator and business journalist.

Sophie Smith, Analyst, First Sentier Global Listed Infrastructure, is responsible for researching the utilities sector on behalf of the team. Her role includes meeting with company management teams, undertaking financial modelling and qualitative reviews and the ideation of new stock ideas for inclusion in portfolios. She has previously worked as an analyst in the consulting and advisory sector.

Rowan Element, Head of Responsible Investment Australia and New Zealand, Igneo Infrastructure Partners, is responsible for setting Igneo's responsible investment strategy and overseeing its implementation. He is also involved in all aspects of Igneo's investment process, including new acquisitions and asset management, currently working with the asset team for coNEXA and on the board of portfolio company, Integrated Waste Services.

Sophie Durham, Head of Responsible Investment Europe, Igneo Infrastructure Partners, is responsible for setting Igneo's responsible investment strategy and overseeing its implementation. She currently sits on the board of directors of investee company, Nordion. Her prior experience spans climate change and global public policy and overseeing social and political risk for resources companies.

Pablo Berrutti, Portfolio Specialist, Stewart Investors, works closely with the investment and client teams, meeting regularly with prospective and existing clients, consultants, industry groups and the media to discuss a broad range of topics from the Stewart Investors portfolios, through to sustainability challenges. He was previously Head of Responsible Investment Asia Pacific at Colonial First State Global Asset Management and is the founder of a not-for-profit library and resource centre, Altiorem, dedicated to supporting a sustainable financial system.

The **FSSA Investment Managers** team contributed to this whitepaper. FSSA are specialists in Asia Pacific and Global Emerging Markets equity strategies and manages assets on behalf of clients globally. As responsible, long-term shareholders, the team has integrated ESG analysis in its investment process and engages extensively on environmental, labour and governance issues. www.fssaim.com

www.firstsentierinvestors.com[1]

1 The SFC has not reviewed the contents of this website.

02 | Background

About this paper

This paper explores an approach to making environmental, social and governance (ESG) investment decisions that we, at First Sentier Investors, believe can lead to stronger, more transparent and more consistent long-term financial and sustainability outcomes, across more measures, than when using more traditional frameworks.

This approach involves a more holistic view that, rather than zeroing in on singular ESG factors or narrow measures of materiality, also takes into account the synergies – or potential positives – and trade-offs – or potential negatives – that are often the flow-on effects when ESG considerations are applied to investments.

It looks at key issues such as how such synergies and trade-offs will affect companies in different ways over different time horizons, and how to assess companies that excel in one area at the expense of another.

It then goes on to discuss how recognising interdependence and considering the integration of risks and opportunities can help investors identify opportunities and points of leverage that might otherwise be missed.

To illustrate our approach in practice, we provide case studies from investment teams across the First Sentier Investors in some of the areas where ESG considerations have the greatest potential impact on investors, communities, the environment and, by extension, wider society.

These include examples of sustainable supply chain management, supporting just and equitable transitions to a low carbon economy, navigating issues facing the mining industry, and ways of addressing the climate-nature nexus.

In each example provided, we show how investment and sustainability goals can be better aligned and achieved by holistically addressing multiple ESG factors rather than only one or a few. It's the process followed by multiple teams at First Sentier Investors, and we believe it is key to making well-informed investment decisions.

Image: Bald eagle flying in front of wind turbine on farm, United States, Getty Images, Todd Ryburn Photography, 31/01/22

03 | Introduction

Why we need a change in thinking

While globally many governments are adopting a narrow 'climate-first' approach to sustainable finance reforms, and critics of ESG investing argue that it has become a box-ticking process, as investors, we need to understand and address *all* the material sustainability-related risks and opportunities connected to our investments, rather than focusing on single and/or separate measures individually.

> *"To a significant extent, the whole ESG industry has evolved around this relatively simplistic, siloed framework"*

A prime example is when considering the risks and opportunities connected with the transition to a low carbon economy. In this scenario, as well as considering risks and opportunities relating to the transition, we also seek to understand and manage any unintended consequences of addressing them. These may include, among others, increased social and economic inequality, heightened risks of modern slavery and loss of First Nations People's rights. It's an approach that proceeds from our understanding that if, as part of the low carbon transition, we worsen those other issues, they will be more difficult to address later. Conversely, there are multiplier effects of driving positive change on interconnected issues, making efforts more effective and creating new opportunities.

How the siloed approach falls short

Often under more traditional frameworks, investors factoring environmental, social and corporate governance into their investment decisions have used data inputs that delineated between each ESG factor.

For example, on climate change, investors might look at carbon emissions and energy consumption. On social issues, they may check for modern slavery incidents or health and safety statistics. For governance, they may look at board directorship, diversity or remuneration. Often, they hire specialists in those delineated areas and use data providers that provide data on E, S, and G factors either separately, or aggregated in ways that mask rather than reveal interactions or critical interdependencies.

As a result, companies and investors are often not seeing the whole picture. To a significant extent, the whole ESG industry has evolved around this relatively simplistic, siloed framework.

Further, and throwing more confusion into the mix, not all ESG issues are relevant or important to all companies, giving rise to the concept of materiality to help target the most relevant or important issues in certain sectors or business models. While certainly helping to prioritise the most material issues for certain industries or companies, this approach has also brought up challenges. This is because it tends not to address the inevitable trade-offs – or downsides – and synergies – or upsides – that result from prioritising different ESG factors.

Image: Air conditioning (HVAC) installed on the roof of industrial buildings, Thailand, Getty Images, bancha singchai, 05/09/22

For example, we see trade-offs in the context of mining the critical metals needed in technologies that support climate transition. In many cases, such activities are causing problems in the environment due to biodiversity loss as well as the local communities.

> *"As well as considering risks and opportunities relating to the (low carbon) transition, we also seek to understand and manage the unintended consequences of addressing them"*

Conversely, we see synergies in the context of small holder farmers, where access to education, health care, financial services and fair pricing for their products can give them greater security and confidence to invest in more sustainable farming practices. This can bring co-benefits such as reduced child labour and increased community resilience. In such instances, actively anticipating and addressing these issues has potential to help support more resilient supply chains that are increasingly being impacted by climate change.

A broader framework for better outcomes

A reality we grapple with as investors is that in practice, ESG means different things to different investors. One investor's goal may be to create a more stable and sustainable environment, society and economy, while another's may be to address risks and/or identify opportunities in the investment process. However, failure to recognise the impacts of trade-offs in effect undermines *both* goals.

Although such trade-offs cannot always be avoided, in our view they should be understood, acknowledged and, to the extent possible, addressed – just as the other financial trade-offs inherent in all investments are.

In short, this is why taking a holistic approach to ESG issues is central to making a well-informed investment decision. Investor focus should go beyond considering individual ESG factors separately and instead include sustainable development and just, equitable and inclusive transition of our economy. Investors should also be thinking about the role of the company in that wider context, what they can control and influence, and what other potentially impactful business issues they should be monitoring.

04 | Supply chains showing the way

Supply chain management is a critical and growing area in which the more holistic application of sustainability considerations can both reduce risk and improve sustainability outcomes.

Globalisation, technological advancements and the need to adapt to dynamic market conditions continue to increase supply chain complexity.[1] This complexity is further increased as organisations rely on a wider network of suppliers in an attempt to achieve greater efficiency and competitive advantage and creates challenges in terms of managing logistics, coordinating activities and ensuring timely delivery of goods and services.

Long and complex supply chains and poor visibility beyond direct suppliers can pose challenges in companies trying to manage sustainability risks within their supply chains. This can result in financial and reputational losses for companies, particularly as regulation is introduced in jurisdictions globally which requires companies to address sustainability risks within the supply chain and increasingly the broader value chain.[2] A range of interconnected sustainability issues play out within supply chains. Such risks include those related to climate change, deforestation, pollution, human rights and, in particular, labour rights and worker safety.

It seems clear that effectively addressing such growing and myriad issues to contribute to a more resilient global supply chain ecosystem requires a holistic approach, featuring increased transparency and traceability along with robust monitoring and auditing systems.

"Recognising that where one of these issues is at play, others may also be present, is a helpful way for investors to understand a potentially broader set of issues"

1 Gov UK. (2015). Transparency in Supply Chains etc. A practical guide. Gov UK.

2 Gov UK. (2015). Modern Slavery Act 2015. Legislation.gov.uk; Australian Modern Slavery Act 2018 (Cth); Sustainable Agriculture Supply Chains Initiative. (2024). Deforestation-free supply chains. Sustainable Agriculture Supply Chains Initiative.

Image: Farmer on rice field, Thailand, Getty Images, Weerapon Niawpan / 500px, 16/11/18

Case in point: Smallholder Farmer supply chain challenges and opportunities (Stewart Investors)

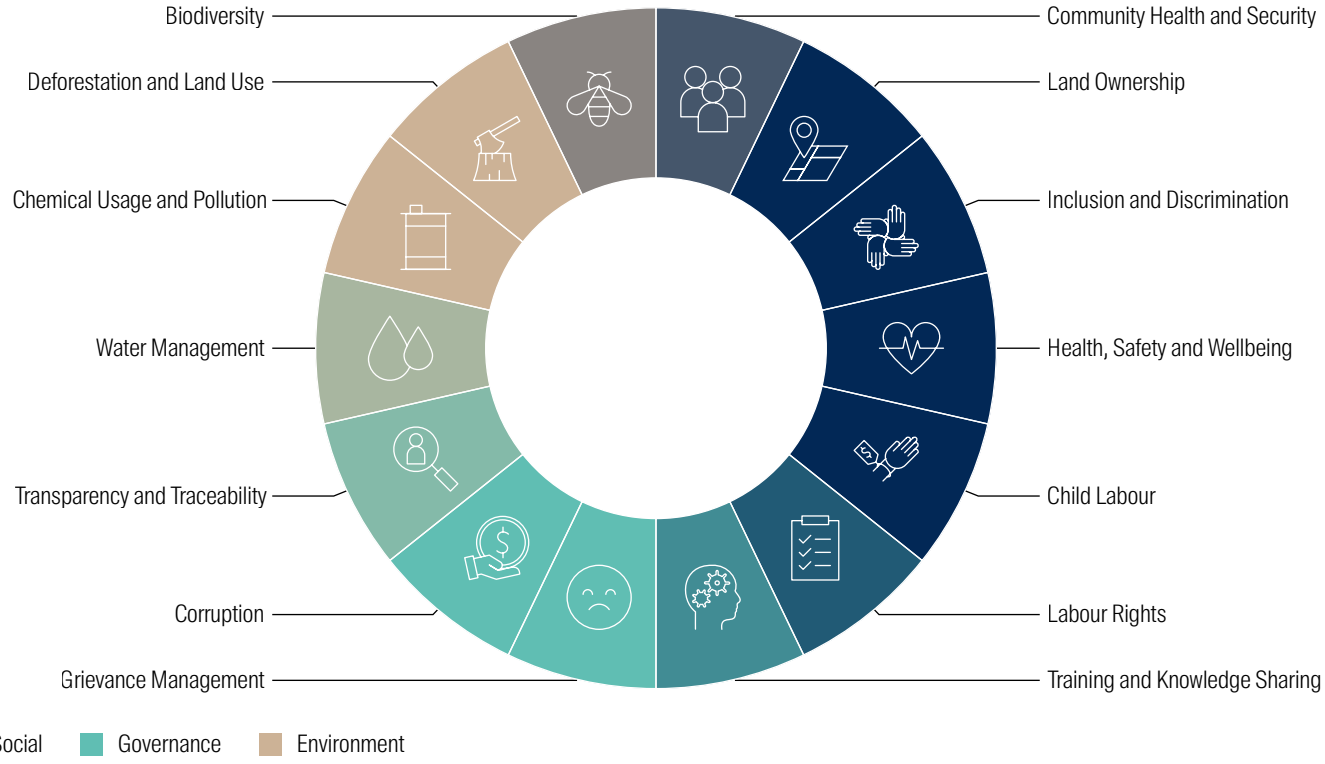
Smallholder Farmers (SHFs) are farmers that have 'limited resource endowments relative to other farmers'.[3] They are one of the largest agricultural producer groups worldwide, with more than 500 million smallholder farmers accounting for the production of up to 80% of certain crops. Often, they are the primary source of key products for multi-national consumer goods companies, supplying palm oil, cocoa, coffee, sugar and rubber, among others.

However, SHF supply chains are also often associated with significant environmental, social and governance challenges, ranging from deforestation to forced labour to bribery and corruption. These supply chains are increasingly in the public spotlight as consumer interest in sustainable produce grows. The consumer goods companies at the furthest point downstream in the supply chain are now under rising pressures to address the environmental and social issues found throughout global SHF supply chains.

Rather than solely a risk for companies, SHF's can offer tremendous opportunities. Resolving challenges at the community and landscape level can have powerful knock-on effects that mitigate risks from other issues, while also securing the sustainability of supply chains under increasing stress from issues like climate change.

In 2021, Stewart Investors commissioned research which identified the following 14 key sustainability issues faced by SHF supply chains. While a number of these factors do not present immediate risks, they are likely to have long-term consequences for the SHFs, their supply chains and the companies sourcing through them.

Key ESG issues in SHF supply chains



Source: Investment and Sourcing through Smallholder Supply Chains, Stewart Investors, 19 May 2021, NIRAS-LTS International Limited, p 21

3 Dixon, J., Tanyeri-Abur, A., and Wattenbach, H. (2004), Framework for Analysing Impacts of Globalization on Smallholders

The synergies and trade-offs across these issues, as they apply to SHFs, are multifaceted. For example:

- Deforestation and land use change is often connected to land ownership and relocation as well as labour rights issues.
- Biodiversity loss often arises from wider ESG issues such as land clearance and chemical inputs and can be managed for the most part through management of those wider issues.
- In addition to minimising biodiversity loss, addressing chemical usage and pollution also has benefits in terms of SHF health, safety and wellbeing.
- Minimising deforestation, chemical use and pollution can make farmers' plots more resilient to a changing climate, for example by providing natural defences against flood or drought.
- Income support for workplace accidents and incidents can disincentivise dangerous working practices and, together with better grievance management, can positively influence both labour rights and health, safety and wellbeing.
- Access to education, health care, financial services and fair pricing can give farmers the security and confidence to invest in more sustainable farming practices, with co-benefits such as a reduction child labour and increased community resilience.
- Sound water management creates both environmental benefits and can support community health and safety through increased water security and sanitation standards.

The research found that individual companies cannot solve the challenges across SHF value chains. Solutions will require long-term collaboration across stakeholders, as well as the right policy settings. However, this should not be used as an excuse to not act, given the size and influence of many companies in the broader value chain and the need to secure vulnerable supply chains.

As SHF supply chains are highly intermediated, companies' intent on addressing issues properly are working with partners who can facilitate deep, ongoing community engagement. The research recommends that companies and investors address issues holistically, as interventions targeting only one issue can exacerbate others and, in some cases, undermine the original objective. For example, strict standards around child labour may make a farm unviable, which further impacts the children of farmers.

Conversely, investments in some areas can act as a powerful lever for resolving other issues. For example, supporting the establishment of cooperative structures allows farmers to negotiate better pricing and terms for the sale of their products, share knowledge and equipment and reduce the need for child labour, particularly where education opportunities are also provided.

Given that reliable data in relation to SHF value chains can be difficult to come by, triaging the information available and recognising that where one of these issues is at play, others may also be present, is a helpful way for investors to understand a potentially broader set of issues.

Investor engagement with companies to seek deeper insight into relevant time horizons and priorities is also vital, as ultimately it is the quality and integrity of a company's management that determines whether the long-term, inclusive and patient approach required to address critical ESG issues for SHFs will be maintained.

"Resolving challenges at the community and landscape level can have powerful knock-on effects that mitigate risks from other issues"

Examples of such holistic approaches include **Costco's Sassandra Cocoa Program**. Based in the Cote d'Ivoire, it has provided training to over 9,000 SHFs on agronomic practices, financial management, traceability and reducing child labour. It offers premium prices to participating SHFs and interest-free loans to cocoa cooperatives, working to strengthen the broader supply chain and local community.

HDFC Bank has more than 50% of its branches in rural and semi-rural areas, and after reaching its goal to expand this rural footprint to 225,000 villages by FY24, the Bank plans to increase its coverage in existing villages and deepen those relationships. HDFC's holistic approach to engaging with SHFs includes the development of crop and geography-specific financial products which empower farmers to invest for the future. The company also works with Government and other stakeholders, including through a 6.5% equity stake in CSC e-Governance Services India Ltd, which is village-run and provides access to government services and HDFC products.

HDFC recognises that farmer education and fair pricing makes farmers more resilient borrowers. It has built farmer centres in four regions where farmers can access training and critical information from soil health to sustainable farming practices. With six other banks, HDFC integrated with National Agriculture Market, a pan-India electronic trading portal, providing better price discovery through a transparent auction process.

Marico is the largest buyer of coconuts in the subcontinent, purchasing an estimated one in 10 of the coconuts produced. The company recognises that its future prosperity is tied to the success and resilience of smallholder coconut farmers. Through its various programs, Marico supports over 101,000 farmers, a large portion of which are smallholder. Marico's education program has reached 81,000 farmers, resulting in a 17% increase in FY24 yields following these interventions. During the COVID-19 pandemic the company changed its payment terms so farmers could receive payment one day after sale, helping boost their cashflows.

Non-profits and collaborative initiatives

The **International Cocoa Initiative (ICI)** is a non-profit organisation that works to protect the rights of children and adults in cocoa-growing areas in West Africa. It runs community development programs targeted at resolving a range of ESG issues and partners with a range of organisations, including cocoa and chocolate companies, civil society, governments, international organisations and farmers' organisations. It recently released a report on the impact of these programs in Ghana and Cote d'Ivoire based on its work with 75 cocoa growing communities in the region.

It's key activities include:

- Establishing Community Child Protection Committees to raise awareness of child labour risks, promote education and identify at-risk children.
- Supporting gender diversified income generating activities.
- Setting up community service groups of trained young community members.
- Supporting educational activities for children.

The **Global Platform on Sustainable Natural Rubber** (GPSNR)[4] was launched in 2019 to work with companies, SHFs, academia and civil society to address human rights and deforestation issues in the rubber industry.

Its key activities include:

- Requiring member companies to: publish policies adhering to human rights and environmental protection, adopt a grievance mechanism, follow reporting requirements and implementation guidance.
- Knowledge sharing, engagement and capacity building across stakeholders throughout the supply chain.
- Encouraging and supporting SHF organisation and participation and assessing SHF needs.
- Supporting the development of traceability and risk assessment solutions.

In undertaking these activities, the GPSNR targets the following impacts:

- International Labour Organisation (ILO) conventions, customary land rights, human rights, anti-corruption upheld.
- Farmer livelihoods improve with access to clean water, sanitation, education, healthcare.
- Healthy functioning natural ecosystems are maintained.
- Equity in the value chain is maintained with stable wages, small and medium holders rights, gender equity.
- Rubber-based households have improved and resilient livelihoods.

4 Global Platform for Sustainable Natural Rubber. (2024). Theory Of Change For A Sustainable Natural Rubber Supply Chain.

05 | Towards a just and equitable transition

The concept of a 'just and equitable transition' is probably the most common idea investors consider when it comes to the interplay of environmental and social issues.

The term **just transition** was recognised internationally with its inclusion in the preamble of the Paris Agreement, which refers to 'the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities'. This entails understanding and addressing the social dimensions of the transition to a low carbon economy on communities, workers and their families.

The term **equitable transition** recognises that the costs and benefits of the low carbon transition fall unevenly, and seeks to ensure that particular communities, workers or their families are not overly disadvantaged as a result.

Globally, investors are recognising that these considerations should be embedded in any net zero strategy. However, promoting and enabling a just and fair transition requires a multi-stakeholder approach in which governments, companies, investors and financiers work together with affected stakeholders and their representatives.

For investors, the just transition is relevant because it sits at the intersection of two systemic risks, climate change and social inequality, both of which undermine the ability of the financial system to deliver long-term returns. Identifying and addressing the social dimension of both physical and transition climate-related risks and opportunities, allows investors to de-risk portfolios and identify new performance drivers.[1]

> *"Just transition is relevant because it sits at the intersection of two systemic risks, climate change and social inequality, both of which undermine the ability of the financial system to deliver long-term returns"*

1 Robins et al. (2019). Investing in a just transition in the UK. Grantham Research Institute, p 12–13

Image: Solar panels and wind turbines, Turkey, Getty Images, sefa ozel, 02/01/24

The key challenges for investors seeking to support a just transition have been identified by the Investor Group on Climate Change in the following table:[2]

Challenges for investors in supporting a just transition

Scalability of opportunities	Investment opportunities with limited ability to be scaled up are unlikely to receive capital from large investors.
Risk-return profile of investments	Limited investor practice on how to explicitly embed just transition considerations into risk/return assessment.
Policy uncertainty	Climate policy uncertainty does not provide strong capital market signals to investors and heightens risk.
Complexity and minimal leading guidance	Technical, economic and social complexity of just transition issues and lack of clear guidance creates a knowledge barrier for investors.
Unique communities	Impacted communities in transition are each unique, vary significantly and require differentiated responses.
The role of divestment in a just transition	Divestment strategies that aim to de-risk portfolios by removing exposure to carbon-intensive assets or equity classes can leave communities more at risk and inhibit access to transition capital.
Benchmarking and metrics	A lack of clear risk-related metrics and reporting frameworks for measurable just transition risks and investable just transition solutions.
Short-termism vs long term value	A prioritisation of short-term returns over long-term value can discourage investment that support a just transition.
Limited level of advocacy influence	Investors seeking to advocate for fairness in net zero discussions may have limited influence if they are not a major shareholder
The role of public vs private markets	Lack of clarity on the role of government versus the private sector creates disincentives and potential market barriers for investor action

In 2024, The Investor Group on Climate Change released guidance to support investors to evaluate Just Transition plans, which is available here: https://igcc.org.au/just-transition-report/

Case in point: Five Minimum Standards for infrastructure companies and solar supply chains (Igneo Infrastructure Partners)

As an infrastructure investor, Igneo Infrastructure Partners (Igneo), invests in companies that typically operate large, physical assets which can significantly impact the environments and communities in which they operate, and be impacted by these factors, too.

While infrastructure companies play a pivotal role in the transition to a low carbon economy, they also provide essential services to the economy and surrounding communities. As such, it is vital they offer stable supply, possess a strong social license to operate and prioritise managing the significant health and safety risks typically attendant in large infrastructure businesses. Igneo has developed and engages with all its portfolio companies on its 'Five Minimum Standards'. It is Igneo's aim to implement all five standards in any business in which it invests, regardless of the industry or company size.

Five Minimum Standards we aim to implement at all portfolio companies

		How do we measure progress?
1. Health and Safety	• Set a zero accident target • Track standardized safety metrics	• Is this in place? Y/N • The Accident Frequency Rate (AFR*) per 100,000 hours worked
2. Environment	• Set emissions reduction targets • Track GHG emissions	• Is this in place? Y/N • Scope 1, 2 and material 3 emissions
3. Diversity	• Set diversity priorities • Report on representation	• Is this in place? Y/N • % women on the board, in senior management, among all employees, and among new hires
4. Governance	• Independent board representation • Risk management processes • Standards, certifications or qualifications • Customer satisfaction surveys • Cyber-security assessment • Modern slavery risk assessment	• Is this in place? Y/N
5. Employee Engagement	• Employee engagement surveys • Apprenticeship or Continuous Professional Development	• Is this in place? Y/N

2 Investor Group on Climate Change. (2021) Investors Role in an Equitable Transition to net zero. Investor Group on Climate Change, p 14

Implementing the Five Minimum Standards can lead to both ESG synergies and trade-offs. For example, the rapid deployment of renewable energy, while critical to the energy transition, can also lead to trade-offs across a number of other ESG issues, including relating to human rights and biodiversity.

In 2021, for example, risks around modern slavery in global solar panel supply chains garnered Igneo's attention and quickly became a key focus. The team engaged with all portfolio companies that procure solar panels, undertook supply chain risk assessments and issued them with clear guidance. This guidance provided context, contained a risk assessment for each company, and set expectations on managing those risks.

CPE Renewable Investment Unit Trust (CPERI) is one of Igneo's portfolio companies, that has used the guidance for its solar panel supply chain. CPERI develops, owns and operates multi-utility assets and is currently developing a 40 MW utility-scale solar farm involving the procurement of around 70,000 solar panels in Victoria, Australia.

In its initial tendering, CPERI included queries on modern slavery in requests for proposals, then conducted further due diligence on shortlisted suppliers. After identifying its preferred supplier, CPERI collaborated with it to confirm where every component of the panels would be sourced and manufactured.

The procurement contract then committed the supplier to:

1 Produce CPERI's panels in a unique, traceable production batch, supported by detailed supply chain records.

2 Warrant that none of the components would be sourced from regions identified as at high risk of modern slavery practices.

3 Provide CPERI with a supply chain map detailing the supplier and manufacturing location of each component.

4 Maintain internal systems that support this traceability and are made available to independent audits that may be undertaken by CPERI.

5 Provide results of the supplier's own third-party audits on controls and practices on this topic.

Igneo recognises limitations in this approach. For example, even if the supply chain for the CPERI panels is verified as low risk of modern slavery, it is still possible for the same supplier to produce high risk panels for others. Such 'bifurcation' of supply chains is not a long-term solution to the wider solar panel labour rights issue. However, it is a step in the right direction and sends important demand signals.

If replicated across the wider industry, we believe this approach can help shift all solar supply chains away from high-risk regions, which we recognise is ultimately the only solution to this problem.

Case in point: Utilities navigating a just transition (Global Listed Infrastructure)

Utilities are at the forefront of navigating a just and equitable transition, and it is important for investors to understand their just transition strategies and commitments. This includes having a structured process to asset closures and clear lines of communication with workers, communities and their representatives.

Our Global Listed Infrastructure (GLI) team is a long-term investor in Xcel Energy (Xcel), a regulated utility company operating in eight US states that provides electricity and natural gas services to approximately 3.9 million electric and 2.2 million natural gas customers. The company has made strong progress towards decarbonising its operations with the closure of coal-fired power stations and a shift towards renewables. Its coal-fired generation capacity has decreased from over 8,000 megawatts in 2006 to a forecast of 4,400 megawatts in 2024, with a target of zero by 2030. Renewables are expected to increase from 9% in 2006 to 74% in 2030.

Xcel's efforts to mitigate climate change have been successful, resulting in steady, low-risk earnings growth. However, it is also important to consider the cost of shifting to a healthier economy and more sustainable production.

Xcel's 'Just Transition Position Statement' acknowledges that the transition to a low carbon economy will affect employees and local communities in different ways, and that each situation needs to be treated differently.

"Promoting and enabling a just and fair transition requires a multi-stakeholder approach"

It includes the following overarching principles for enabling a just transition:

Summary of Xcel Energy's Just Transition principles

Be proactive, transparent and consistent. Communicate directly with employees and communities about plans and potential impacts prior to public announcements or regulatory filings.

Provide a long runway. Communicate plans as far in advance as possible to allow time for employees to complete retraining or programs for new roles.

Retain talent. Provide employees with support for other opportunities at the company. Look at current and future workforce needs, attrition and take steps to retain talent.

Support employees. Provide impacted employees time to explore potential opportunities and work locations and support their career aspirations. Provide transition pathways, training, and tuition support programs.

Sustain and empower communities. Build on long-standing stakeholder relationships, partner with community leaders, state and local government officials, economic development groups and local businesses.

Workforce Transition Planning Process. To facilitate a Just Transition across states, take a tailored approach to each closure. Model, plan, design, and facilitate workforce transition.

Tracking Progress. Track specific community impacts, tax, and labor metrics throughout the transition. Report on project progress and results in Xcel Energy's Annual Sustainability report.

Equal Opportunity. Respect the rights of all people to be treated ethically, with dignity and without discrimination. Manage early plant closures in line with the company's Equal Opportunity Policy and Human Rights Position Statement.

Policy & Regulatory Advocacy. Work closely with states and federal government to ensure the right tools, analysis, and procedures are in place to advance equity and support for communities impacted by the energy transition.

In July 2023, the GLI team met with Xcel to discuss the closure of the Sherburne County Generating Station ("Sherco") in Minnesota. The closure is scheduled to occur in three stages: Unit 2 in 2023, Unit 1 in 2026 and Unit 3 in 2030. This will result in a workforce reduction from 187 employees to approximately 88 employees by 2030. During the meeting, we discussed how Xcel plans to incorporate a just transition into the closure process, including how the just transition plan was developed, its main stakeholders, the relevant KPIs and what regulatory considerations were taken into account.

Our research and engagement indicate that Xcel has taken meaningful steps to engage key stakeholders, including employees, community colleges and clean energy groups. The company has also regularly updated the regulator on community and employee conversations as the closure unfolds. The transition plan is further supported by detailed metrics, targets and KPIs, which were provided during our meeting.

We would like to see Xcel's just transition KPIs for Sherco published to enable investors to undertake their own assessments and further engage with the company, feedback we have shared with Xcel. We will continue to ask for further information over time.

06 | Navigating the intersection of cultural heritage and the environment in the mining industry

The mining industry is critical to the transition to a low carbon economy. At the same time, the industry has a substantial ecological footprint.

Its operations may lead to conflicts with indigenous communities and local populations which can escalate into protests and legal proceedings, sometimes exacerbated by the impacts of climate change and water scarcity. Human rights issues arise from artisanal mining and child labour, while mineral demand can lead to conflict and corruption.

Certainly, good practice exists. Equally however, the industry has faced significant ESG controversies that underscore the complex challenges of balancing resource extraction and sustainable practices.

A number of investor initiatives seek to address these issues in a holistic way. The Global Investor Commission on Mining 2030 is a multi-stakeholder initiative which recognises the mining industry's role in society and the transition to a low carbon economy, and the need for the industry to manage systemic risks which can threaten its social license to operate.[1]

Its focus areas include anti-corruption, artisanal mining, automation, biodiversity, child labour, climate change, conflict and reconciliation, rehabilitation, indigenous communities and First Nations rights, and mine tailings waste and site closure.

The Commission's vision for 2030 is of a socially and environmentally responsible mining sector that has a clear social licence to operate, can meet the needs of society in a responsible manner without driving conflict or corruption, operates in a way that respects planetary boundaries and positively contributes to social development and the environment.

Case in point: Emerging issues between miners and traditional owners (Australian Equities Growth)

Australia is the world's largest iron ore miner, accounting for over half of global production, with almost all production based in Western Australia.[2] When Rio Tinto destroyed the 46,000-year-old Juukan Gorge cave site in 2020, it shone a light on the damage to First Nations cultural heritage that can occur on mine sites.

Rio Tinto, BHP Group and other Australian listed miners responded by committing to deepening relationships with First Nations groups and re-negotiating land-use agreements with First Nations peoples in Australia.[3]

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1 Mining 2030. (2024). About.
2 Australian Government. (2018). Iron Ore. Geoscience Australia.
3 Rio Tinto. (2024). Community Agreements.

Image: Cornwall Pit, Australia, Getty Images, Photon-Photos, 10/11/22

For miners and investors, the early focus was the quality of relationships with traditional owners and modernising land use agreements. In this context, the cultural heritage discussed was land-based and physical, for example, artefacts, sacred sites, carvings and cave drawings etc. Mine plans were reviewed and cultural surveys commenced.

However, for First Nations peoples in Australia, intangible cultural heritage is just as important as tangible cultural heritage and extends to their connection to country.

The risk for miners and investors is poor management of any of these aspects of cultural heritage. The risks often manifest in operational delays, resource carve-outs, permitting challenges, reputational and/or social license issues.

In July 2024, an Australian Equities Growth analyst representing our team travelled to the Pilbara to assess the quality of miners' relationships with traditional owners on the ground.

What we heard was that the interconnectedness of First Nations cultural heritage protection, climate change, water risk and nature and biodiversity is clear. Land use agreements aren't just about royalties for iron ore mined, they are designed to reflect a broader relationship and aim to set out a flexible way for miners and First Nations to work together.

The First Nations groups told us respect and patience are key when agreements are being negotiated. Discussions should be ongoing and open to help manage their continued cultural connection to country. They would like the right to say no to disturbing significant cultural sites including men/women's business sites, sacred sites, burial grounds and meeting places.

We also heard that the First Nations groups would like a say in how water is used, above and below ground. This is because sacred sites and meeting places are often near waterways and water is needed for animals, the bush and for subsistence living. Water rights are typically granted by the state. They would like ongoing discussions about rehabilitation, employment opportunities, procurement opportunities and development, truth telling on country and the opportunity to train mine workers on cultural heritage.

Informed by these discussions, we have been talking to companies in our portfolio about progress with their agreement modernisation program. There are some positive developments. Rio Tinto signed an updated agreement with Yinjibarndi covering country that Rio's rail network traverses[4] and, in October 2023, signed a memorandum of understanding to collaborate on renewable energy projects on Yindjibarndi country. At Gudai-Darri, Rio Tinto re-designed its mine plan and cut its reserves at the current pit by 10%. At Western Range, Rio Tinto minimised the mine's impact on water, flora and fauna and formalised this in the heritage management plan.

In its FY24 annual report, BHP published the results of its first survey of traditional owners, asking them how healthy they think their relationship with BHP is.[5] In FY24, BHP formalised 11 cultural heritage management plans.[6] This is an area that we continue to research and monitor.

"The (mining) industry has faced significant ESG controversies that underscore the complex challenges of balancing resource extraction, community expectations and sustainability"

Case study: Robe River and RIO Tinto - climate change, water, cultural heritage management

The Robe River Kuruma (RRK) people have traditional rights to an area covering nearly 16,000 square kilometres in the Pilbara region of Western Australia, with almost 10,000 square kilometres determined through two native title consent determinations made in 2016 and 2018. Robe River country includes the Jajiwurra (Robe River) system which is in the most westerly part of the Hamersley Range. RIO operates two iron ore mines in this area: Mesa A and Mesa J.

The lower Robe River contains a series of Aboriginal sites and has high heritage value to the traditional owners because the river pools contain an abundance of fish and are close to sites which are significant for ceremonial reasons, as well as to burial sites.[7]

4 Rio Tinto. (2024). Rio Tinto and Yindjibarndi Energy sign Pilbara renewables MOU. ; Rio Tinto. (2024). Rio Tinto and Yindjibarndi people strengthen ties with updated agreement.

5 BHP. (2024). Annual Report 2024. https://www.bhp.com/investors/annual-reporting/annual-report-2024

6 BHP. (2024). Annual Report 2024. https://www.bhp.com/investors/annual-reporting/annual-report-2024

7 Government of Western Australia, Department of Water. (2012). Lower Robe groundwater allocation limits methods (Water Resource Allocation and Planning Series Report No. 57).

In 2012, the West Australian Government approved the extraction of ground water for a number of coastal towns in the Pilbara including Karratha.[8] Rio Tinto operates the bore field, supplies water to the state and uses water for its own operations including dust suppression.

The challenge for the Pilbara is that rainfall is variable and relies on cyclonic events and localised thunderstorms between December and March each year. Annual average evaporation in the region is about 10 times the long-term mean annual rainfall in the nearest town and the groundwater relies on cyclones to refill the volumes that are abstracted. However, there is a concern that cyclonic patterns in the Pilbara are changing.[9]

Rio Tinto has responded by committing $395 million to a desalination plant in the Pilbara. It will have an initial nominal capacity of 4 gigalitres annually with the potential for this to increase to 8 gigalitres in the future. The project includes construction of a new supply pipeline to connect to the existing water network.[10]

The plant will be constructed on previously reclaimed land and RIO says it will minimise disturbance to the local environment by using existing infrastructure at the company's Parker Point operations.[11] It should be producing water in 2026.

8 Government of Western Australia, Department of Water. (2012). West Pilbara water supply scheme.

9 Government of Western Australia, Department of Water. (2012). Lower Robe groundwater allocation limits methods (Water Resource Allocation and Planning Series Report No. 57).

10 Rio Tinto. (2023). Rio Tinto to invest in Pilbara desalination plant. Retrieved from https://www.riotinto.com/en/news/releases/2023/rio-tinto-to-invest-in-pilbara-desalination-plant

11 Rio Tinto. (2023). Rio Tinto to invest in Pilbara desalination plant. Retrieved from https://www.riotinto.com/en/news/releases/2023/rio-tinto-to-invest-in-pilbara-desalination-plant

07 | The climate-nature nexus

The future of our planet depends on nature – that is, natural resources, ecosystem services, and the complex workings of often fragile, interrelated ecosystems.

When looking at overall climate impacts, it is crucial to understand that climate is part of nature. Climate change is one of the key drivers of nature loss, and is inextricably linked in cause and effect to the other drivers. The cascading impacts of climate change and society's overexploitation of nature are giving rise to the unprecedented devastation of nature and biodiversity.

Two examples include increases in extreme stormwater events, which result in coastal erosion; and decreases in bee populations which hampers pollination of crops. Such losses compromise the security of our societies and increase the risks to business and investors, including our ability to mitigate and adapt to climate change.

Addressing nature loss and land, water and ocean degradation is therefore crucial to achieving a net zero and climate resilient future.

However, if not planned in a holistic way, efforts to mitigate climate change can sometimes harm nature. For example, converting forest lands to install solar PV can reduce the net effect of reducing carbon emissions and cause deforestation. Initial flooding to develop dams for hydropower generation can have a significant impact on land and freshwater ecosystem use, adversely affecting terrestrial plants and animals. Offshore wind farms can have impacts on marine fauna due to high noise, collision with construction vessels and changes to the seafloor.[1]

"Climate change is one of the key drivers of nature loss"

These examples show the importance of considering and mitigating against potential negative impacts on nature when developing renewable energy or other low carbon transition initiatives.

1 Taskforce on Nature-related Financial Disclosures. (2024). Additional sector guidance - Electric utilities and power generators.

Image: Palm oil plantation with peatland forest, Malaysia, Getty Images, Muslianshah Masrie, 16/01/21

Case in point: The impact of wind farms on protected species (Igneo Infrastructure Partners)

Infrastructure companies can both cause and contribute to nature impacts while simultaneously depending upon nature for the success of their own operations and/or supply chains.

In 2012, Terra-Gen, an Igneo portfolio company which develops, constructs, owns and operates utility-scale wind, solar and battery storage projects throughout the USA, developed Alta Environmental Services (AES). This is an industry-leading avian monitoring program that helps wind energy operators reduce impacts on local bird populations.

AES was developed to monitor species designated 'protected' by the US Federal Government in the Tehachapi region of California, including the California Condor, the Golden Eagle and the Bald Eagle.

During daylight hours when these birds are active, a full-time AES team monitors their movements from avian observation towers, using GPS tracking devices, VHF/radio and direct visual observations. When a bird flies close to the wind turbines, GPS trackers on the birds signal biologists in a nearby tower. The biologists then track the bird's movements and, if warranted, notify the wind farm operator of their presence. Once notified, the operator can require specific wind turbines to shut down in as little as one minute. Doing so protects the birds while often also allowing other parts of the wind farm to continue to operate. The AES team then continues to monitor the birds and communicates when it is safe to resume operations.

In addition to tracking and wind-farm curtailment recommendations, AES records additional characteristics such as the behaviour, distance, height, speed, sex and age of the birds. This data is shared with the Fish and Wildlife Service and other researchers to contribute to wider conservation efforts.

AES currently monitors over a dozen wind projects for Terra-Gen and close to three dozen projects in total, representing more than 3,000 MW of power generation. To date, there have been no known injuries or mortalities to California Condors at any of the sites that use the monitoring program.

"If not planned in a holistic way, efforts to mitigate climate change can sometimes harm nature"

Case in point: Impact of refrigerants on climate change and the environment (FSSA Investment Managers)

Increases in the frequency and intensity of heatwaves and other extreme weather events caused by climate change poses challenges to human health, infrastructure and agriculture. Cooling appliances such as air conditioners and refrigerators are critical to relieve heat stress and preserve food and medicine. Ironically however, cooling appliances also significantly contribute to climate change,[2] being responsible for an estimated 7% of annual global greenhouse gas emissions,[3] with other potential impacts on the environment and human health.[4]

Currently, only 8% of the 2.8 billion people in the hottest parts of the world own an air conditioning unit. By 2050 around half of that population is projected to need cooling systems in order to survive.[5]

In addition to a power source, cooling appliances usually also require a refrigerant, a substance that alternates between liquid and gas, to absorb heat. Many of these gases, particularly fluorinated gases, have a significantly higher warming potential than carbon dioxide. They can leak during operation or be improperly disposed of, contributing further to climate change and environmental degradation.[6]

2 Project Drawdown. (2020). The Drawdown Review 2020: Climate solutions for a new decade.
3 United Nations Environment Programme (2023). Global Cooling Watch 2023: Keeping it Chill: How to meet cooling demands while cutting emissions.
4 University of Birmingham. (n.d.) Clean Cold and the Global Goals. Birmingham Energy Institute.
5 Burrows, L. (2022). In a hotter world, air conditioning isn't a luxury, it's a lifesaver. Harvard John A. Paulson School of Engineering and Applied Sciences.
6 Project Drawdown. (2020). The Drawdown Review 2020: Climate solutions for a new decade.

Better management of leakage and disposal of refrigerants, as well as transitioning to less harmful alternative refrigerants such as ammonia or captured carbon dioxide, are critical to reducing emissions from cooling appliances.[7]

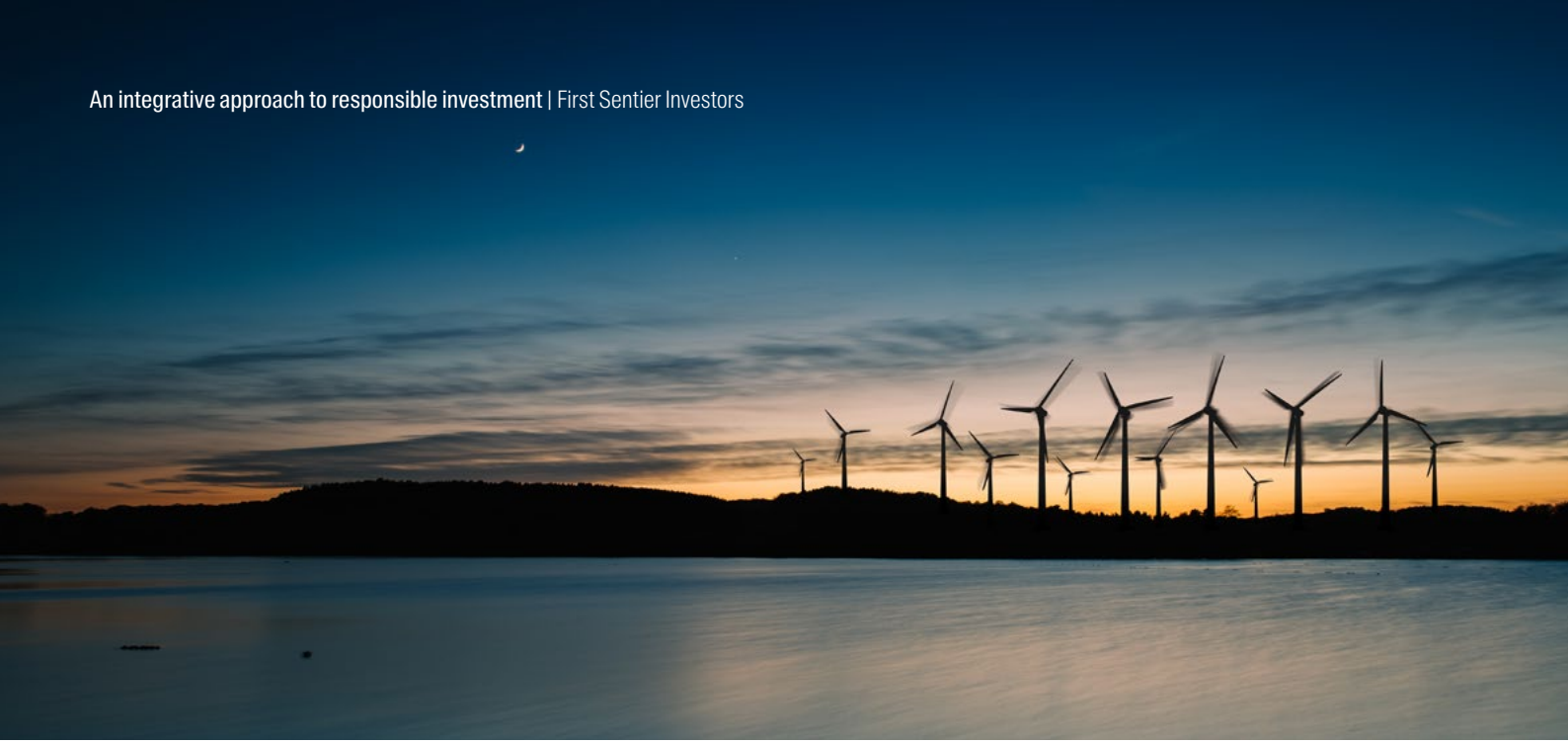
Midea Group, a company in which FSSA Investment Managers has invested since 2016, is China's largest home appliance company. Our team has been meeting Midea Group and its management over many years and observed the group's growth. Its product portfolio now includes smart home devices, industrial technology, building technologies, robotics and automation and other businesses.

One of the group's number one appliance categories is residential air conditioners, with around 34% market share. When asking about R&D and new investment areas in 2022, we learned about its longstanding eco refrigerant initiatives and continue to liaise with Midea on this topic.

The company's consistent focus on energy-efficiency has yielded extremely positive results. In 2022, years of development and improvement resulted in Midea producing the world's first 'Energy Efficiency Grade 1' air conditioner using the R290 refrigerant performing almost 6% better than the relevant highest standards in China, with a negligible Global Warming Potential (GWP).

Midea's focus on innovation aligns directly with its climate goals to reach peak carbon in 2030 and net zero by 2060, whilst minimising exposure to tightening emissions regulations.

7 Project Drawdown. (2020). The Drawdown Review 2020: Climate solutions for a new decade.



08 | Conclusion

Considering all the relevant ESG risks and opportunities associated with an investment decision and in particular how they interplay, is critical to making decisions that more effectively address the multifaceted challenges evident across today's investment portfolios.

At a company level, investees that identify and leverage constructive synergies arising from addressing ESG factors are better positioned maximise those positive impacts and create more efficient and integrated solutions.

Equally, companies that understand and consider potential downsides from trade-offs can make more informed decisions that balance competing priorities and mitigate adverse impacts. Further, companies that are transparent about trade-offs can help build stakeholder trust and engagement.

In summary, we believe that taking such a holistic approach to responsible investment helps build more resilient portfolios, creates long-term value and contributes to a more sustainable economy and society.

Image: Wind turbines, United Kingdom, Getty Images, RistoArnaudov, 10/07/18

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