

ESG Risk Assessments for Australia

Sources & Methodology

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What is ESG?

ESG stands for Environmental, Social, and Governance, the three broad categories of interest, often non-financial factors, that investors and key business stakeholders are increasingly applying as part of their analysis and risk management processes.

Environmental criteria consider how a company performs as a steward of nature. Social criteria examine how it manages relationships with employees, suppliers, customers and the communities where it operates. Governance deals with a company's leadership, corporate policies and overall business ethics.

Why is ESG Important?

Climate change and social inequality are urgent and pressing issues, so business leaders must understand and implement ESG practices. As the threat of these issues has grown, governments have stepped up to try and limit the negative societal impacts. The resulting regulations around ESG have put businesses under immense pressure to educate their teams and pivot their practices to create greener and more equitable operations.

Failure to account for ESG issues can damage a business's reputation, while not incorporating ESG opportunities and threats into strategic decision-making can create operational risks.

Contextualising the factors that form ESG is vital to understanding a business's and market's vulnerability to possible compliance issues. Conducting ESG research is now a crucial step in strategic planning, investor due diligence, commercial lending and assurance. Evolving regulations, in particular, have created

an urgent need for ESG guidance. Regulatory bodies are developing tools to help explain and regulate ESG definitions and reporting requirements. At the same time reserve and central banks worldwide have begun implementing environmental considerations into their decision-making. Private corporations have also been including ESG issues in their strategic plans and decision-making for both financial and non-financial objectives, as inaction can create economic losses.

Introducing ESG Risk Scores

To help businesses and investors navigate ESG complexities and monitor risk, IBISWorld provides industry-wide ESG Risk Scores and Assessments.

Scores are presented on a scale of 1 to 9, with 1 indicating the lowest level of risk related to possible compliance issues and litigation claims, detriments to society, and defamation of public image, among other factors. When industries score high on the scale, these issues are considered severe enough to pose negative financial impacts.

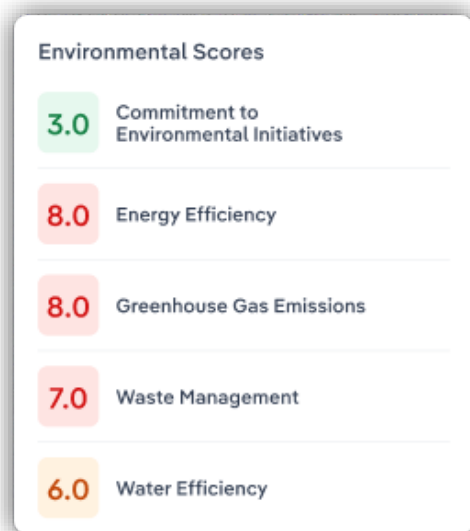
To derive an industry's Total ESG Risk Score, IBISWorld assesses the nature of and the extent to which firms across the industry engage in ESG practices, and checks their adherence to Australian and international ESG-centric policy.

The three different E, S, and G issues are scored separately according to different factors. Analysts consider five factors per issue, for a total of 15. Scores are given at both the issue and factor level. All scores are weighted according to materiality and impact to the industry's Total ESG Risk Score.

ESG Score Components

The 15 main E, S, and G factors that analysts consider to arrive at a final ESG Risk Score are:

- Energy Efficiency¹
- Greenhouse Gas Emissions²
- Waste Management³
- Water Efficiency⁴
- First Nation Participation⁵
- Pay Equality⁶
- Workforce Composition⁷
- Leave Benefits⁸
- Commitment to Environmental Initiatives
- Fair Labour Standards
- Trade With Risky Geopolitical Regions
- Modern Slavery
- Regulatory Complexity
- Fines, Penalties and Enforceability
- Tax Corruption



The 15 score factors are broken down evenly across E, S, and G.

In scoring individual factors, analysts research and account for the following variables:

- Energy-saving measures
- Transition efforts to renewable energies
- Trading with CO2-certificates
- Scope 3 emissions
- Production of hazardous waste
- Recyclability of waste
- Investments in protection of the environment
- Government support for environmental initiatives
- Cultural incorporation
- Pay equality of migrant workers and/or other minorities
- Salary of contract workers vs. regular employees
- Gender equality in management positions
- Diversity in the workplace
- Flexible work options provided
- Paid parental leave
- Average wage of the industry
- Employee turnover
- Labour agreements
- Risk from foreign suppliers
- Subsidiaries in low-wage countries
- Supply chain transparency
- Due diligence measures to mitigate risk of modern slavery
- Reputational impact through media coverage
- Strength of regulatory bodies
- Market share concentration
- Anti-corruption mechanisms

These variables and factors have been selected for their relevance to all industries and because of their presence in Australian legislation.

Moreover, these factors align closely with disclosure recommendations from the Task Force on Climate-Related Financial Disclosures (TCFD), ensuring their relevance to a wide range of professionals across procurement, consulting, banking, accounting and other fields.

ESG Risk Score Weightings

In developing the ESG Risk Assessment product, IBISWorld considered feedback from its existing ESG tools and conducted thorough research into the materiality of different score components to arrive at ideal weightings:

Score Component Weightings

Component	Weight*
Environmental	70.0%
Energy Efficiency	22.2%
Waste Management	22.2%
Greenhouse Gas Emissions	22.2%
Water Efficiency	22.2%
Commitment to Environmental Initiatives	11.1%
Social	20.0%
First Nations Participation	22.2%
Pay Equality	22.2%
Workforce Composition	22.2%
Leave Benefits	22.2%
Fair Labour Standards	11.1%
Governance	10.0%
Trade with Risky Geopolitical Regions	25.0%

Modern Slavery	25.0%
Regulatory Complexity	25.0%
Fines, Penalties and Enforceability	12.5%
Tax Corruption	12.5%
Total	100.0%

**Score weightings are rounded in the table above, thereby masking repeating numbers that are present in the technical calculation of these scores.*

Scoring Methodology

Analysts take a balanced approach to scoring, incorporating both quantitative data and qualitative research to score each ESG component. Quantitative data contributes at least 50.0% to the scoring, while qualitative measures make up the remainder. This qualitative research contributes to industry specificity, making the scores more dynamic. Qualitative research is hyper-specific to each industry as it is based on more granular data and reporting from company financial statements, annual reports, CSR policies, sustainability reports, industry associations and unbiased news coverage. By combining quantitative metrics with qualitative research from diverse sources, analysts can provide well-rounded, contextualised risk scoring for each ESG issue.

Environmental Score

The first component in IBISWorld's ESG Risk Score is Environmental. It measures the extent to which companies across the industry are environmentally engaged. Environmental engagement is dependent on companies' consideration of sustainability issues when devising their operating strategies.

Analysts use various datasets and surveys, described in depth in the following sections, to determine whether companies across the industry are implementing environmentally sustainable practices across the five different factors.

Within this component, all scores are defined by the same logic:

- 1.0-1.9 | Negligible/no environmental risk
- 2.0-2.9 | Very low level of environmental risk
- 3.0-3.9 | Low level of environmental risk
- 4.0-4.9 | Moderate-to-low level of environmental risk
- 5.0-5.9 | Moderate level of environmental risk
- 6.0-6.9 | Moderate-to-high level of environmental risk
- 7.0-7.9 | High level of environmental risk
- 8.0-8.9 | Very high level of environmental risk
- 9.0 | Absolute environmental risk

The Environmental Score is broken down into five components that cover the core environmental factors common to all industries.

I. Energy Efficiency

The Energy Efficiency factor measures an industry's efficiency in producing output with a given energy input. To assess Energy Efficiency and associated ESG risk, our analysts utilise energy consumption data from the Australian Energy Statistics published by the Department of Climate Change, Energy, the Environment and Water. This data, paired with revenue figures, facilitates the calculation of an energy intensity metric at the most granular industry/division level permissible by data availability. However, the scoring methodology goes beyond just the energy intensity data. Analysts also research and evaluate energy-saving measures implemented by industry operators as well as their activities and

investments towards transitioning to renewable energy sources. This qualitative assessment of energy efficiency initiatives is combined with the quantitative energy intensity data to determine an overall risk score for this factor.

II. Greenhouse Gas Emissions

For the Greenhouse Gas (GHG) Emissions factor, analysts calculate an emissions intensity metric by pairing GHG emissions data provided by the Department of Climate Change, Energy, the Environment and Water with revenue figures at the most granular industry/division level available.

This emissions intensity data forms the quantitative backbone of the scoring. However, analysts go beyond just the intensity numbers to evaluate qualitative factors impacting an industry's overall GHG emissions profile. This includes research into whether industry operators participate in carbon trading/offsetting schemes as well as analysis of their upstream and downstream (Scope 3) emissions from suppliers and product use. By combining the quantitative emissions intensity data with qualitative assessments of carbon trading, offsetting and Scope 3 emissions, analysts can provide a comprehensive scoring of the GHG emissions risk for each industry.

III. Waste Management

For the Waste Management factor, our analysts assess data on the use of outsourced waste collection, treatment and disposal services provided by the Australian Bureau of Statistics relative to revenue at the division level to calculate a waste intensity metric. However, the scoring methodology goes beyond just this quantitative waste intensity data. To make the assessment properly industry-specific, analysts also research qualitative factors like the production levels of hazardous waste by

operators within that industry. Another key qualitative criteria evaluated is the degree to which the waste generated by the industry is considered recyclable versus non-recyclable. By combining the waste intensity numbers with qualitative analysis of hazardous waste volumes and recyclability of the industry's waste streams, a comprehensive risk score can be determined for each industry's waste management practices and impacts.

IV. Water Efficiency

For the Water Efficiency factor, analysts calculate a water intensity metric by taking data on the use of water supply, sewerage and drainage services provided by the Australian Bureau of Statistics at the division level and normalising it by revenue figures. This quantitative water intensity data forms the basis of the scoring. However, to make the assessment properly industry-specific, analysts also qualitatively evaluate two key factors: regulation in the area of wastewater management that impacts the industry, as well as the production levels of contaminated wastewater by major industry operators. By combining the water intensity numbers with analysis of pertinent wastewater regulations and the volumes of contaminated discharge from industrial processes, a comprehensive risk profile can be established for each industry's water efficiency practices. Industries with high water intensity, coupled with lax regulations and significant contaminated discharge, will receive a higher risk score.

V. Commitment to Environmental Initiatives

When scoring this factor, analysts evaluate the risk stemming from a potential lack of commitment to environmental sustainability initiatives. Analysts assess the extent of investments, initiatives and capital projects undertaken by industry players, specifically

aimed at environmental protection. They also consider government support policies and targets that either incentivise or mandate environmental commitments within that industry. Based on the synthesis of company-level environmental investment data and relevant regulations, the assigned risk score for this issue increases as the observed commitment to environmental initiatives across the industry decreases.

Social Score

The second component in IBISWorld's ESG Risk Score is social. It focuses on a company's or industry's policies and practices regarding labour and supply chains. It is broken down into five factors that are defined using the following scoring logic:

- 1.0-1.9 | Negligible/no social risk
- 2.0-2.9 | Very low level of social risk
- 3.0-3.9 | Low level of social risk
- 4.0-4.9 | Moderate-to-low level of social risk
- 5.0-5.9 | Moderate level of social risk
- 6.0-6.9 | Moderate-to-high level of social risk
- 7.0-7.9 | High level of social risk
- 8.0-8.9 | Very high level of social risk
- 9.0 | Absolute social risk

I. First Nations Participation

For the First Nations Participation factor, we utilise data from the Australian Bureau of Statistics on the Indigenous status of employees within each industry. A higher share of the industry's workforce identifying as First Nations Australians will result in a lower risk score for this factor. The underlying premise is that greater First Nations representation indicates more equitable participation. However, the scoring is not based solely on this quantitative workforce data. Analysts also qualitatively evaluate the extent to which

industries have taken steps to incorporate First Nations values, cultures and consultation into their operational practices. This could include seeking input from Traditional Owners, utilizing indigenous knowledge systems or undertaking culturally-aware community engagement.

By combining the quantitative workforce data with this qualitative assessment of cultural incorporation, a comprehensive risk profile is established for each industry's level of genuine First Nations participation – looking beyond just employment numbers to holistic inclusion of First Peoples' perspectives. Strong workforce representation coupled with meaningful cultural integration translates to the lowest risk score.

II. Pay Equality

For the Pay Equality factor, analysts evaluate quantitative data on the gender pay gap within each industry, which is calculated as the difference between the average total remuneration for men and women. This data is sourced from the Workplace Gender Equality Agency (WGEA) at the 2-digit subdivision level. A larger gender pay gap will result in a higher risk score. However, the scoring goes beyond just the gender pay gap to also consider qualitative factors around pay equality for other demographics. Analysts research and assess pay equality for migrant workers and racial/ethnic minorities within each industry.

Additionally, they evaluate whether there are salary discrepancies between contract/temporary workers and regular employees. By combining the quantitative gender pay gap data with qualitative analysis of equality issues across other worker groups and employment types, analysts can establish a comprehensive pay equality risk profile. Industries with large gender gaps, compounded by pay disparities affecting minorities and

contract staff, will receive the highest risk scores for this factor.

III. Workforce Composition

For the Workforce Composition factor, IBISWorld evaluates quantitative data on the gender composition of each subdivision's workforce relative to the economy-wide averages. This data is sourced from the Workplace Gender Equality Agency (WGEA) at the 2-digit subdivision level. A lower risk score is assigned to industries where the workforce gender mix does not significantly deviate from overall economic norms.

However, the scoring methodology goes beyond just looking at overall workforce compositions. Analysts also qualitatively assess gender equality in management positions and diversity in the workplace for each industry. By combining the quantitative workforce composition data with this qualitative analysis of gender equality in management and broader diversity initiatives, a comprehensive risk profile is established. Industries with workforce mixes significantly skewed from societal averages, underrepresentation of women in leadership and poor diversity practices will receive higher risk scores.

IV. Leave Benefits

When scoring this factor, analysts rely on data from the Workplace Gender Equality Agency (WGEA) at the 2-digit subdivision level to evaluate the prevalence of employer-paid parental leave offerings across industries. A higher uptake of paid parental leave is viewed as a positive indicator, resulting in a lower risk score. In addition to parental leave data, the scoring accounts for qualitative assessments around flexibility and other paid leave benefits. Analysts research the availability of flexible work arrangements like remote work,

compressed schedules and other work-life-balance initiatives within each industry. They also examine the extent to which vacation time, sick leave, family care and other personal/medical paid leave is provided to employees.

The risk scoring combines the quantitative parental leave data with this qualitative analysis of work flexibility and additional paid leave policies. Industries that lack paid parental leave, have rigid scheduling practices and fail to offer generous overall paid time off receive higher risk ratings for the Leave Benefits factor. Conversely, lower risk scores go to those demonstrating commitment to supportive parental and sick/personal leave, along with promoting work-life balance.

V. Fair Labour Standards

For the Fair Labour Standards issue, our analysts evaluate three key qualitative measures: the average wage levels within the industry, employee turnover rates and the prevalence of labour agreements between employers and workers. A higher average wage, lower employee turnover and more widespread labour agreements in place are viewed as positive variables that reduce the risk score for this factor. The underlying premise is that decent wages, stable workforce and collectively bargained labour terms are indicative of an industry upholding fair labour practices and standards.

Governance Score

The third component of IBISWorld's ESG Risk Score is Governance. It refers to how an organisation's objectives are set and achieved, how risk is monitored and addressed, and how performance is optimised. It is broken down into five factors that are scored using the following logic:

- 1.0-1.9 | Negligible/no governance risk
- 2.0-2.9 | Very low level of governance risk
- 3.0-3.9 | Low level of governance risk
- 4.0-4.9 | Moderate-to-low level of governance risk
- 5.0-5.9 | Moderate level of governance risk
- 6.0-6.9 | Moderate-to-high level of governance risk
- 7.0-7.9 | High level of governance risk
- 8.0-8.9 | Very high level of governance risk
- 9.0 | Absolute governance risk

I. Trade with Risky Geopolitical Regions

For this factor, analysts evaluate both quantitative trade data as well as qualitative risk factors around an industry's global operational footprint. On the quantitative side, they assess each industry's proportion of trade attributable to countries considered high-risk based on the Corruption Perceptions Index published by Transparency International. This trade exposure data is sourced from IBISWorld's international trade figures identifying the top 4 export and import partners per industry.

In addition to trade volumes, the scoring process accounts for qualitative aspects. Analysts closely examine the extent to which industry operators have subsidiaries or significant suppliers located in low-wage, high-risk nations. They scrutinise potential risks emanating from exposure to foreign suppliers, international subsidiaries and operating presences in unstable regions.

The overall risk score amalgamates the quantitative trade data with qualitative assessments of corporate exposures like overseas facilities and supplier networks in risky geographies. Those industries with substantial trade tied to corrupt nations, coupled with on-the-ground operating footprints

in those areas, will be assigned the highest risk ratings.

II. Modern Slavery

For the Modern Slavery factor, analysts assess industries' exposure to reporting requirements under the Modern Slavery Act 2018 for entities with \$100M+ revenue. This entails analysing data sources like the Online Register for Modern Slavery Statements published by the Department of Home Affairs and Counts of Australian Businesses by turnover size data published by the ABS to gauge the extent operators must report on modern slavery risks and mitigation strategies in their operations and supply chains.

However, the scoring methodology extends beyond just compliance exposure to incorporate qualitative factors reflecting overall modern slavery risk management. Analysts evaluate supply chain transparency by examining visibility into sourcing and production processes. They also assess the rigor of operators' due diligence processes to identify and remediate modern slavery risks. Finally, public reputation impacts like credible media allegations of labour exploitation are considered. While not measuring direct modern slavery prevalence, the scoring reflects inferred risk levels related to compliance, supply chain transparency, due diligence robustness and reputational exposure from modern slavery issues.

III. Regulatory Complexity

This factor considers any regulation that is directly applicable to the industry or its employees, including certain qualifications. It also identifies legislation that applies to all industry businesses, such as data protection laws. Regulatory complexity can be an important benchmark to establish best-practice

behavior and maintain a high level of industry standards. The Regulatory Complexity score determines how the industry compares to the wider economy in terms of regulatory complexity.

Analysts predominantly rely on the industry's level and trend of regulation, sourced directly from IBISWorld Industry Reports. Additionally, the strength of the regulatory bodies that oversee an industry is considered, along with information on the time and resources needed for compliance within the industry. A low score is associated with a low level of regulation, while a higher score is associated with a greater level of regulatory complexity. By assessing these factors, IBISWorld aims to provide a comprehensive view of the regulatory environment faced by each industry.

IV. Tax Corruption

For the Tax Corruption factor, analysts evaluate primary qualitative and quantitative measures, including the level of anti-corruption mechanisms within each industry and the overall market share concentration. The presence of robust anti-corruption policies, auditing practices, whistleblower protections and other ethics safeguards is viewed as a mitigating factor in reducing tax corruption risks.

Separately, a more consolidated industry structure with higher market share held by a few major players tends to correspond with lower corruption prevalence. This is often because larger companies, which dominate consolidated industries, are typically subject to greater regulatory scrutiny and have more resources to invest in effective compliance programs. Analysts source this information directly from IBISWorld Industry Reports, which provide data on the market share concentration levels.

However, the scoring process also involves qualitative research into any prominent tax corruption scandals, regulatory violations, or accountability gaps faced by the industry. The score for this factor weights both the quantitative measures around anti-corruption safeguards and market share concentration, combined with qualitative insights into the industry's historical issues or emerging problems related to tax avoidance, evasion or other corrupt practices. Industries with lax controls and fragmented competition, especially if compounded by investigations or prosecutions, receive a higher risk score.

V. Fines, Penalties and Enforceability

This factor identifies industry operators' accountability for breaches of laws or regulations that enforce fines or penalties. Industries with higher regulatory complexity and lower levels of tax corruption are typically subject to stringent levels of accountability for their actions.

To determine this factor's core, analysts measure the level of fines and penalties applicable to the industry or its employees and the extent to which these are enforced in cases of misconduct. A low score is associated with a low level of fines, penalties and enforceability, while a higher score is associated with a greater level of fines, penalties and enforceability. By evaluating these factors, IBISWorld provides insight into the industry's regulatory environment and the effectiveness of enforcement mechanisms in maintaining industry standards.

Sources

¹Energy Efficiency – Energy consumption is measured using:
<https://www.energy.gov.au/publications/australian-energy-update-2023>

²Greenhouse Gas Emissions – Emissions intensity data is derived from:
<https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-2022>

³Waste Management – Use of waste collection, treatment and disposal services is measured using:
<https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-supply-use-tables/latest-release>

⁴Water Efficiency – Use of water supply, sewerage and drainage services is measured using:
<https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-supply-use-tables/latest-release>

⁵First Nations Participation – Percentage of Employees that are Aboriginal and/or Torres Strait Islander:
<https://www.abs.gov.au/websitedbs/censushome.nsf/home/tablebuilder>

⁶Pay Equality – Average Total Remuneration Gender Pay Gap:
<https://www.wgea.gov.au/data-statistics/data-explorer>

⁷Workforce composition – Percentage of Female Employees:
<https://www.wgea.gov.au/data-statistics/data-explorer>

⁸Leave Benefits – Weeks of Employer Funded Parental Leave: <https://www.wgea.gov.au/data-statistics/data-explorer>



About IBISWorld

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