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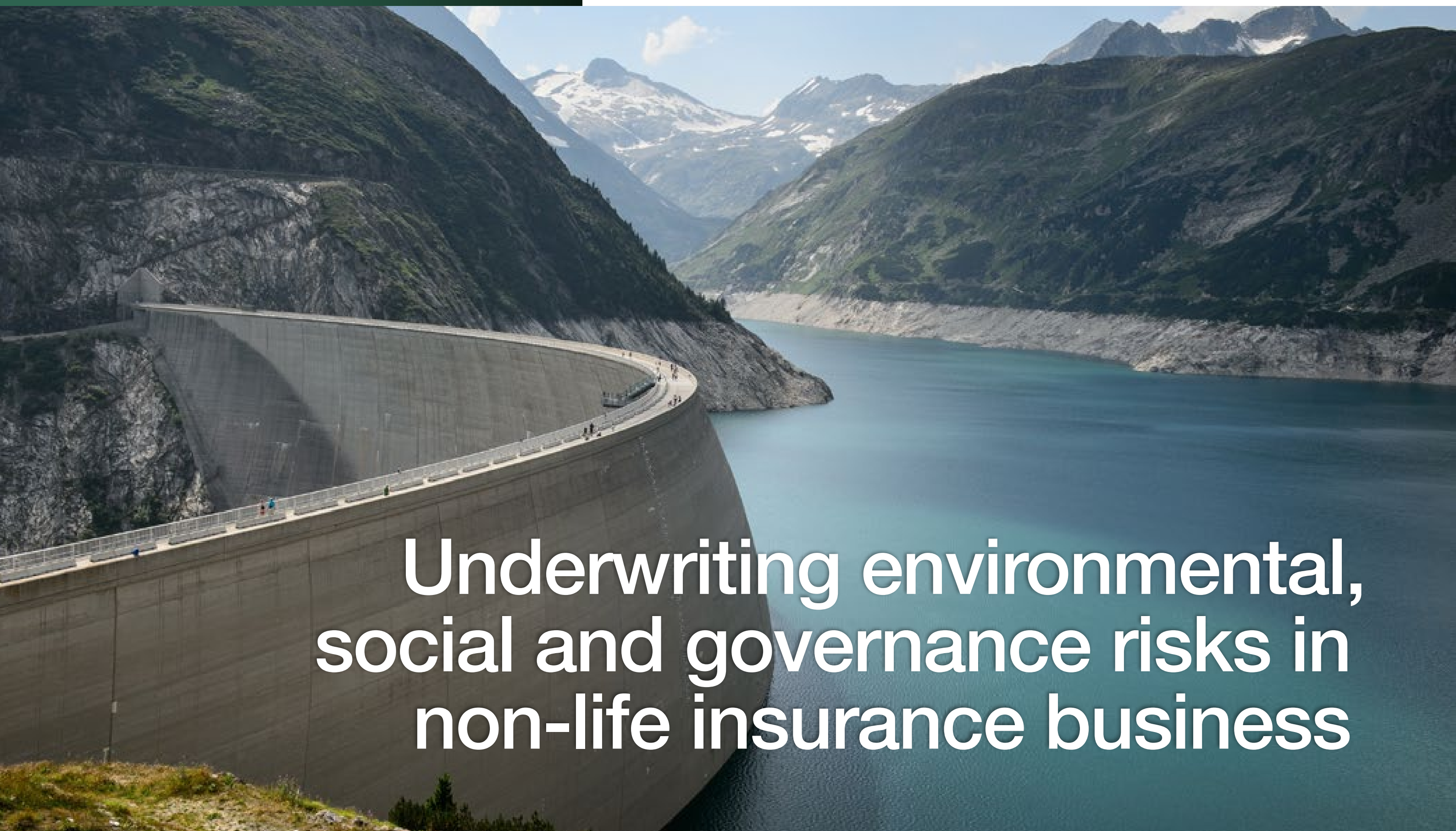
UNEP FINANCE INITIATIVE

PSI Principles for Sustainable Insurance



Underwriting environmental, social and governance risks in non-life insurance business

The first ESG guide for the global insurance industry developed by UN Environment's Principles for Sustainable Insurance Initiative

This PSI project was co-sponsored by:

Allianz

PSI working paper
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PSI Project Team Members

Allianz, AXA, Generali, MAPFRE, Munich Re, QBE, RSA, Santam, Temple University's Fox School of Business, UN Environment, University of Technology Sydney, West Chester University, and Zurich

Contents

1. About UN Environment's Principles for Sustainable Insurance Initiative (PSI)

Endorsed by the UN Secretary-General and insurance industry CEOs, the Principles for Sustainable Insurance (PSI) serve as a global framework for the insurance industry to address environmental, social and governance (ESG) risks and opportunities—and a global initiative to strengthen the insurance industry's contribution as risk managers, insurers and investors to building resilient, inclusive and sustainable communities and economies.

Developed by UN Environment's Finance Initiative, the PSI was launched at the 2012 UN Conference on Sustainable Development (Rio+20), and has led to the largest collaborative initiative between the UN and the insurance industry.

The vision of the PSI Initiative is of a risk-aware world, where the insurance industry is trusted and plays its full role in enabling a healthy, safe, resilient and sustainable society. Its purpose is to better understand, prevent and reduce ESG risks, and to better manage opportunities to provide quality and reliable risk protection.

www.unepfi.org/psi

"The Principles for Sustainable Insurance provide a global roadmap to develop and expand the innovative risk management and insurance solutions that we need to promote renewable energy, clean water, food security, sustainable cities and disaster-resilient communities."

UN Secretary-General (June 2012)

2. About this document

This document is intended to provide guidance primarily to insurance industry participants with non-life insurance business, particularly industrial and commercial insurance business. It is aimed at industry participants who intend to develop their approach to integrating ESG risk considerations into their core insurance business processes and decision-making.

This guide is also useful for stakeholders who might need to assess or obtain information on ESG risks from insurance industry participants, and who would like to better understand the relevance of ESG issues to the insurance business and approaches to managing them.

This version of the guide is a public consultation document. The consultation period will be open from 27 February to 30 September 2019.

Feedback will be reviewed by members of the PSI project team. Interested parties can send their feedback for consideration to psi-underwriting@unepfi.org.

A full 1.0 version of the guide will be published by December 2019. It is intended to be iterative, seeking regular feedback and updates on a yearly basis.

To view the online version of this public consultation document and to learn more about the project, please visit www.unepfi.org/psi/underwriting-ESG-risks.

3. Acknowledgements

We are indebted to all the individuals and organisations worldwide who contributed invaluable insights to the development of this pioneering guide through interviews, a global survey, meetings and events.

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4. Introduction to the guide

As risk managers, insurers and investors, the insurance industry plays an important role in promoting economic, social and environmental sustainability—or sustainable development. With the adoption of the UN Sustainable Development Goals, Paris Agreement on Climate Change, and Sendai Framework for Disaster Risk Reduction in 2015, there is growing pressure and urgency across all sectors of society to respond and find solutions to sustainability challenges the world is facing.

Environmental, social and governance (ESG) issues—also known as sustainability issues—pose a shared risk to insurers, communities, businesses, cities, governments and society at large, providing a strong incentive for innovation and collaboration.

The four Principles for Sustainable Insurance, including a list of possible actions, provide a common aspiration and global framework for the insurance industry to manage ESG issues, and to strengthen its contribution to building resilient, inclusive and sustainable communities and economies.

This document is a result of a multi-year PSI initiative to develop the first global guide to manage ESG risks in insurance underwriting—the core process of evaluating, defining and pricing insurance risks. It has an initial focus on non-life insurance business—also known as property & casualty insurance business.

This guide goes to the heart of implementing the Principles for Sustainable Insurance, particularly Principle 1: "We will embed in our decision-making environmental, social and governance issues relevant to our insurance business". It builds on studies since 2007 on the relevance of ESG issues to the insurance business that led to the development of the PSI, and subsequent studies and activities after the PSI was launched in 2012.

There is growing interest in the insurance industry and the wider financial sector in understanding the correlation between ESG factors and strong performance of companies across industries. Developing the first insurance industry guide on ESG issues will raise awareness of the potential benefits of ESG integration in the insurance business model.

The insurance industry is also subject to a growing number of international standards and best practice frameworks across ESG issues (e.g. UN Guiding Principles on Business & Human Rights). At the same time, the number of industry participants who actively integrate ESG risk factors into their underwriting process is growing. There is an opportunity to streamline information requests and build knowledge within the insurance industry, making it easier for business partners to carry out ESG due diligence on clients and transactions. For smaller insurance industry participants, navigating these standards and frameworks and applying them to their business can be resource intensive and confusing.

Some ESG issues, such as climate change, require efforts from the entire industry. Working together as an industry to raise awareness of the importance of ESG issues and to support clients in managing them will play an increasingly important role in the future.

5. Developing the guide

Developing this insurance industry ESG guide for non-life underwriting directly supports the aims of the Principles for Sustainable Insurance, and stemmed from PSI projects.

In 2016, a PSI survey focusing on ESG risks in infrastructure, co-led by Munich Re and the International Finance Corporation, was initiated and led to the PSI report, The 4th factor: Underwriting for sustainable development in surety bonds. The focus on surety bond underwriting and infrastructure provided a useful platform to start considering ESG risks more widely across other lines of business and economic sectors.

The initiative to develop the first-ever ESG guide for non-life underwriting was one of the main outputs of the international PSI event, Insuring for sustainable development: Making it happen, which was hosted by Allianz in Munich in October 2016. It then became a priority PSI initiative.

Co-led by Allianz and the PSI Secretariat at UN Environment, a working group of interested PSI members was formed. To develop an insurance industry guide that is fit for purpose, the PSI carried out a comprehensive global consultation process to get input from the insurance industry and key stakeholders.

In 2017, over 50 interviews with senior experts from over 30 organisations were conducted. These included expert underwriters, insurance CEOs, risk engineers, brokers, loss adjusters, regulators, investors, non-governmental organisations (NGOs) and academia. This initiative was also discussed at various PSI market events from 2017 to 2018, spanning Africa, Asia, Europe, Latin America, North America, and Oceania. One of the key findings from the interviews and events is the lack of industry-wide ESG guidance tailored for the insurance business.

The second phase of development involved a multi-lingual global ESG survey in 2018 led by academic partners who are members of the PSI project team (i.e. West Chester University, Temple University, and University of Technology Sydney). The survey built on the work of the original PSI research on surety bonds and infrastructure in 2016, and the aim was to take a snapshot of underwriters' perspectives on ESG issues. The survey helped establish current understanding of ESG issues across lines of business and economic sectors and helped structure future guidance. One of the key findings of the survey was that only a quarter of the more than 200 survey respondents had any internal guidance on ESG issues.

The third phase of the project involved analysis and review by members of the PSI project team. This work led to this public consultation version of the guide.

The final phase is to produce a full 1.0 version of the guide by the end of 2019. Thereafter, the aim is to update the guide on a yearly basis.

6. Using the guide

6.1. Objectives

The objectives of this guide are to:

a. Provide guidance to insurance industry participants in developing approaches to assess ESG risks in non-life insurance business transactions, particularly industrial and commercial insurance business

b. Support clients, intermediaries and other stakeholders in facilitating ESG-related information which might be required during the ESG due diligence of transactions

c. Highlight the materiality of ESG risks to various lines of business and economic sectors, including characteristics which might affect the ability to assess and mitigate such risks

d. Address growing concerns by stakeholders (e.g. civil society organisations, investors, governments) on ESG risks and articulate the peculiarities of the insurance business

e. Demonstrate the valuable role the insurance industry plays in the global economy and society, and strengthen the industry's contribution to sustainable development

6.2. Scope

This guide is not intended as a formal standard which organisations are required to comply with or follow directly. Each insurance company is unique depending on its business model, specific lines of business, size, geographic scope, and other factors. The guide is an optional support tool to help organisations, particularly those without or limited ESG knowledge. It is set it in the context of the non-life insurance industry based on existing good practices.

The guide is not intended to be exhaustive but a reflection of the consensus of the PSI project team based on the global consultation process described in Section 5 above. This document is intended to be iterative, seeking regular feedback and updates on a yearly basis.

6.3. Developing your ESG approach

The guide consists primarily of two "heat maps" indicating where there is potential ESG risk (yellow), a potential elevated risk (orange), or a potential high or direct risk (red). This classification is based on the results from the different project phases and serves as an indication only, and is not exhaustive. This indication highlights to the reader where there may be an ESG risk which might need to be checked during further ESG due diligence.

ESG risks can vary by country or region, line of business, type of cover, economic sectors, client characteristics, and other factors. Again, this reinforces that the heat maps are an indication only to help inform insurance industry participants about the potential for ESG risk exposure. The guide helps draw attention to this complex range of considerations and how some industry participants are going about their integration of ESG risk factors into non-life underwriting.

6.4. Establishing your ESG risk appetite

Each organisation will vary in setting which ESG risks it wishes to focus on. There are a number of natural determinants which will help establish your focus, such as countries of operation and types of insurance business you are involved in. ESG issues are often those which are not regulated, but present a reputation or ethical challenge for the organisation providing the insurance-related service. It is critical to involve underwriters and stakeholders likely to be in scope of your ESG risks to develop your own internal processes. Since insurers are also institutional investors, with some operating an investment management business, it is important to consider consistency in managing ESG issues across your insurance and investment activities.

From a reputation perspective, organisations might wish to guard against negative publicity. This is more pronounced when organisations have a retail facing business where consumers might be more sensitive to negative press reports. There is also the potential for this to impact employee morale and investor perception of the organisation. Rating agencies and ESG data providers are increasingly assessing the performance of insurers across a range of areas.

From an ethical perspective, the risk appetite is often driven by the culture and norms of the location of the headquarters of the organisation. The location of the host country can often define a set of ethics that investors, retail clients and/or the public will expect a company to conduct itself across other countries of operation or lines of business. This creates a challenging environment for organisations to operate in across different cultures and societal traditions. Non-governmental organisations (NGOs) and campaign groups also play an important role in signalling where ESG risks and concerns might arise. Organisations should be mindful of these concerns and be taken into account when establishing your ESG risk appetite. NGOs are often open to constructive collaboration and engagement with the ability to provide in-depth knowledge on ESG issues. In some cases, this can provide an important societal lens to help determine your appetite for ESG risks.

At the same time, each organisation must consider their financial and strategic objectives. This must be taken into account to avoid creating unnecessary detection of ESG risks which the company is unwilling or unable to manage, or potentially avoid. Ultimately, each company must make a decision on balancing these objectives against ESG risks.

It will often be the case that ESG decision-making will be steered by a risk appetite that takes into account many factors and is subject to change over time as internal knowledge and capacity grows. As one factor in the decision-making process for a transaction, ESG issues will not be the only consideration in doing business with a client or in deciding on a transaction.

A subject of discussion often relates to whether the country where the risk is located has an influencing factor on the severity of the ESG risk. This certainly can have a bearing on, for example, whether a human rights risk is more likely, or whether environmental legislation is actively enforced. Many organisations set a high-risk country list for certain types of underwriting (e.g. credit & surety). A similar approach can be taken based on human rights information sources (see item 9 below, “Risk mitigation and good practices”) to define a set of countries which might be of concern and require additional due diligence.

Key questions

- Are there specific ethical issues or business that your company wishes to avoid or exclude?
- Are there specific ESG issues that you need to collaborate on as an industry?
- Are stakeholders raising specific ESG issues with your business?
- Have you consulted internally on your exposure to ESG issues and stakeholder views?
- What is your senior leadership's appetite to manage ESG risk exposure?
- Have you determined which ESG issues are most material across your lines of business?

6.5. Integrating ESG issues into your organisation

The results of the 2018 PSI global survey on ESG in underwriting indicated that organisations have different approaches to the governance of ESG risks. Organisations will need to develop some form of internal guidance to establish the risk detection and prioritisation process, guidance on managing the risks, and an escalation process for decision-making.

This can be tackled through one or a combination of the following ways:

a. Some organisations might wish to develop a unique ESG governance policy framework or similar structure which details roles, responsibilities and processes. This can allow a well-defined approach, but there might be a greater effort needed to develop guidance and subsequent internal implementation.

b. Integration into the existing risk framework of organisations is common, sometimes within reputation risk policies. At the minimum, organisations will show cross-linkages to the core risk framework of the organisation. By integrating into the risk framework, it allows a quicker implementation route, but the ESG appetite and processes may require greater customisation to fit into those processes.

c. Integration into the underwriting standards and guidelines of the organisation often allows the best uptake of ESG issues and, at the least, should cross-reference any additional ESG governance elsewhere. Although there are significant advantages, underwriting standards often deal with very specific criteria. The integration of ESG criteria within underwriting standards may differ from the existing content due to value-based decisions on certain ESG risks by each organisation.

d. Alignment of ESG approaches within different parts of an organisation is also prudent. This ensures a consistent approach to ESG issues for the organisation as a whole, where possible (e.g. implementing the Principles for Sustainable Insurance and the Principles for Responsible Investment).

There is no single best approach to ESG integration. It can be successfully carried out in a number of ways, but flexibility is key in the development internally.

Key questions

- Is there a governance framework in place into which ESG issues could be effectively integrated?
- Is the governance framework flexible enough to implement an independent ESG approach and do you have the resources to develop and implement?
- Have you established a cross-functional working group to understand the need and potential options to develop ESG approaches internally?

6.6. Establishing roles and responsibilities for ESG issues

Establishing roles and responsibilities for ESG issues can vary greatly between organisations due to the size, organisational setup and internal culture. Two trends are generally common in many insurance organisations—there is a desire to empower insurance professionals to make decisions, and to minimise the resource impact on the business due to additional new processes.

Senior leadership support for ESG issues is critical to be able to develop ESG governance and subsequent implementation. Support from the CEO and senior executives/board members is advisable to make implementation a success. This is also important in establishing your internal escalation processes for ESG risks. These senior-level representatives might take individual ownership of ESG issues or form part of a wider ESG committee overseeing implementation.

Underwriters play a vital role in detecting ESG risks. There is a range of tools which can support risk detection (see item 6.8 below, "Detecting and analysing ESG risks"), or some form of training might be needed to help underwriters detect, mitigate or know when to escalate a risk. This will depend on the approach by each organisation with regard to their governance setup or the extent to which their underwriting process is automated. All underwriters can benefit from training on ESG issues for general awareness or for those exposed lines of business where ESG risks might be prioritised in line with your risk appetite. Raising awareness of ESG issues might also be beneficial for other employee groups such as audit, risk, sales and communications.

Risk managers will play an important role, especially if you integrate ESG issues into your core risk framework. Depending on your organisational setup, they may play a role in overseeing transactions and the risk appetite for certain businesses or countries of operation. Consideration will need to be given if they need awareness training or if you will have more centralised expert support on ESG issues.

Communications managers may also be relevant to managing ESG risks, particularly if the process is embedded in or aligned with your reputation risk framework and managed at local levels. Many will be concerned about potential negative media exposure and the implications of ESG risk exposure to various internal stakeholders (e.g. a risk underwritten in another country can have reputation implications for retail brands in other countries or group-level stakeholders).

Often in smaller organisations, you may find that roles are combined or part of existing functions. This means that caution should be exercised in avoiding overburdening with new processes, training or required actions. This reinforces the need for proactive internal engagement in determining your ESG approach. Impartiality of the ESG assessment should also be considered to allow a fair assessment of potential ESG risks vis-a-vis business potential. It may be necessary to separate these roles to allow effective due diligence.

The size of an organisation can determine if you need specialist ESG professionals or a function to help manage such risks. Some organisations will favour a decentralised approach with greater discretion given to underwriters, while others will favour a centralised expert support function to reduce the ESG risk assessment burden on underwriters. ESG expertise can be invaluable in the mitigation and detection of risks which might otherwise be missed. It can also help reduce the burden on underwriters who may already be under significant pressure from their existing business roles and responsibilities.

Key questions

- Is there a senior-level decision-maker responsible for ESG issues (e.g. CEO, Chief Underwriting Officer, Chief Risk Officer, Chief Financial Officer, Board Member, Board Committee)?
- Do you have resources for specialist ESG personnel? This will help determine if underwriters should be trained on ESG content or how to access specialist personnel.
- What other roles will form part of your ESG decision-making process?

6.7. Escalating ESG risks to decision-makers

As the roles and responsibilities for ESG issues are developed, it is important to define the escalation route to decision-making. It is highly likely that ESG risks will be detected, needing senior-level management review. Such risks may be ambiguous in nature or relate to strategic clients. In such cases, senior management will need to balance the decision and be responsible for it.

Depending on how you integrate ESG issues into your governance frameworks, it is highly likely this will follow the underwriting route of escalation, or other existing risk management issues (e.g. reputation risks). The route of escalation must be clear from local levels up to top-level management who might be the only individuals empowered to make decisions on certain ESG risks (e.g. CEO, board member responsible for ESG issues, Chief Risk Officer, Chief Underwriting Officer). A committee approach (e.g. Risk Committee) is an alternative approach to decision-making, if empowered to do so by senior management. This allows a greater consensus and diversity of views, but caution should be exercised on the available time of committee members to make decisions.

Any escalation due to a detected ESG risk which potentially cannot be mitigated usually provides both the business case for proceeding with the transaction as well as the negative ESG risks for doing so. This balanced view should be presented to the designated individuals or committee for decision-making. It is critical that the escalation should facilitate a quick process—business transactions often have a very quick turnaround time of 1 to 2 days only, if not shorter. Therefore, it is important to note that underwriters (if not assessing the risk themselves) will need very quick feedback.

When implementing your ESG due diligence process, it is easy to be overwhelmed with potential escalations of ESG risks, particularly in the initial phase. Therefore, it is important to set internal thresholds by focusing on your material risks and issues, or by setting an alternative threshold (e.g. risks over a certain premium or sum insured).

Key questions

- Have you established how quickly your decision-making needs to be?
- Have you set thresholds to avoid overburdening decision-makers?
- Have you planned escalation up to senior-level decision-makers?

6.8. Detecting and analysing ESG risks

Once your priority issues, sectors and lines of business are established in your risk appetite, implementation needs considering. Not all insurance industry participants are fully digital in the underwriting process, and many insured customers are state-owned enterprises or SMEs with limited publicly available information. This is a barrier to having predetermined ESG information to cover your entire portfolio in advance.

There is a wide range of ESG and reputation-related company screening tools in the market. These can help support employees with decision-making by providing an overview of current media reports in relation to the project/client, and in some cases, an ESG assessment subject to the tool provider's methodology. Various NGOs provide lists of companies which can also be used, but as with tools in the market, the quality and bias of the provider must be considered. Companies over a certain size publish a range of ESG-related information in different formats. Research via the internet can be time consuming so some prefer to use third party tools to support the process.

These tools can provide a range of benefits:

a. Relating your ESG risks of concern to a list of companies or locations which can be geo-coded or listed via identifier numbers (e.g. ISIN, GICS, NAICS). This can allow integration into an organisation's underwriting, risk or compliance system. This approach is usually beneficial for organisations providing insurance services to large companies and projects and can help deliver:

- A pre-approved ESG list of clients/projects
- An excluded list of clients/projects (subject to availability of public information)

Some drawbacks of this approach can be the cost of licences for the use of tools within organisations, or when the client has limited public information available and therefore not captured in the tool. These lists are also subject to regular updates, so if the organisation is not digital in its use of underwriting guidance, it can also prove to be a logistical challenge to manage various versions of lists.

b. Geographic information-based tools are commonly used in insurance companies for a variety of reasons. These usually involve physical risks, so there is a greater association with environmental risks. The tools can be useful, particularly when focusing on a single site transaction (e.g. a single mine). This can allow greater insight into the proximity of sensitive sites or species. However, for large-scale industrial and commercial insurance business, majority of insurance transactions do not relate to single-site transactions, which limits the usefulness of these tools.

While these tools can support the detection of ESG risks to limit the burden on the underwriting process, it is inevitable that some case-by-case detection and decision-making on ESG risks will occur. This often happens for smaller business or areas which are not integrated into the same underwriting systems. It is important to set your thresholds for escalation to make ESG risk management impacts on resources acceptable and to avoid overburdening your underwriters. Your risk appetite and thresholds can be adjusted over time as your organisational knowledge develops further.

Key questions

- Is your business process digital or manual? What is easiest for your employees?
- Do you have the budget to procure specialist tools or research?
- If so, which systems could you integrate company lists or issues of concern into?
- Do you have types of insurance business where geographic information on ESG issues would be useful (e.g. decision-making on single sites)?

6.9. Decision-making on ESG risks

When analysing an ESG risk, it is important to consider how severe you believe the ESG risk is, and if this is a regularly occurring issue within the company or project. It is possible that a one-off issue can occur and is not indicative of systematic behaviour of the client, which might affect your decision-making.

Part of the decision-making on ESG risks is to consider if the client or project has taken action to remedy or mitigate the ESG risk, which might make it acceptable. For example, protected species are impacted from a construction project, but subsequent updates to the environmental and social impact assessment indicate that the location has been changed, or independent biodiversity specialists have been brought in to assess and develop mitigation measures.

Companies will usually publish information on what actions they have taken with regard to ESG risks reported on by the media—this can help inform a decision.

In many cases, an ESG risk may be triggered due to the lack of information on public allegations against a company with no obvious public response, and not something you have discussed with the client, intermediary (agent or broker), or lead (re)insurer. It is ideal to seek this further information from your business partner. In the case of human rights abuses, it is considered a requirement in the UN Guiding Principles on Business and Human Rights.

Obtaining this information can be challenging due to the timelines in underwriting, but also for other reasons:

- No direct link to the client
- Business partner on transaction unwilling to seek information
- Lack of understanding from the client/intermediary

Therefore, it is also possible to take an approach where you provide a conditional acceptance subject to further engagement with the client/business partner, or review of information prior to renewal. This might provide the reassurance that an issue was a one-off, or more time is allowed for a more informed decision-making process to judge the transaction profile. All parties should be clear that it could lead to business being declined in certain cases.

Some example decisions which could be taken include:

- Proceed
- Proceed, subject to further monitoring/information prior to renewal
- Proceed, subject to engagement with client/business partner prior to renewal
- Decline.

Seeking further information from the client/intermediary/business partner can be part of a wider client engagement strategy which can be approached in a positive partnership manner. While raising ESG issues can be sensitive, many companies are very willing to share their views as they may not be accurately represented in the media or in the public information that ESG tools capture. The information exchange between a client and an insurance company happens on a strictly confidential basis. This can benefit client relationships and support wider risk mitigation on the transaction and open up risk consulting opportunities.

Due to an increasing focus on human rights and the UN Guiding Principles on Business and Human Rights, there is an expectation to ensure that human rights due diligence occurs. The definition focuses on where you might be complicit or have leverage within a transaction. These are concepts which are not strictly defined, but companies, at a minimum, are required to check exposure, and where detected, attempt to remedy in relation to the amount of leverage you have with the client. For example, a lead (re)insurer would have a greater responsibility and leverage with the intermediary or client than if you had a following share of the risk. This highlights the important role of the intermediary, ensuring that this due diligence occurs with clients. This also presents an additional opportunity to support clients in proactively managing their ESG risks.

Key questions

- Have you reviewed the severity of ESG risks that your business is willing to tolerate?
- Have you reviewed what you would consider acceptable risk mitigation requirements on an ESG risk?
- Have you reviewed the due diligence requirements for human rights in the UN Guiding Principles on Business and Human Rights?
- If an ESG risk is detected with a client, do you already have an engagement process where issues could be raised?
- Is the intermediary or lead (re)insurer willing to engage on ESG issues?
- Have you decided on how you will treat different transactions (e.g. project-based, a single subsidiary, global parent company)?

6.10. Reporting on ESG risks

As your ESG approach develops, tracking your ESG risk assessments and referrals is important to monitor the effectiveness and implementation internally. Understanding the balance between the number of risks referred and the number which present an ESG risk for the organisation should help determine if your materiality thresholds are set appropriately (e.g. too sensitive with too many risks being escalated by underwriting). This review should form part of a regular process to check the appropriateness of your ESG risk management.

In more complex organisational structures, and where escalations occur over a number of levels, it can become an issue when trying to asses and report on risks. There is the potential to double-count the decisions as they escalate up or down different business levels, and when you aggregate this data to an organisation-wide level. To avoid this issue, identifiers can be used alongside client names and risks. These can help avoid duplication, but in case of doubt, you can start with recording/reporting the decisions taken at the top level.

As organisations become more mature or as external stakeholders look for evidence of a robust ESG risk management system, external reporting on ESG issues can be implemented. This approach is common in the banking industry and some insurance companies are already active in publishing their annual screening of transactions.

The actual number of transactions is not an indicator in itself as it is only a reflection of the thresholds for risk detection. The amount of transactions subjected to further due diligence or declined can be an indication of effectiveness. However, there is a limitation on reporting on transactions declined due to ESG concerns. The transaction might not have proceeded for a variety of reasons, of which ESG concerns were only one part of the wider decision-making process. It will not always be possible to have a clear view of the specific or causal reason for declining the transaction. Therefore, external reporting should be clear that it is on the basis of decisions in relation to a specific body of the insurance organisation.

Key questions

- Is the reporting mature enough to be communicated externally?
- Are you sure there is no double-counting of risks between functions?
- Will the reporting process benefit from external auditing?
- Are you clear on the role ESG issues have played in the decision-making and communicated this accurately?

7. ESG risks and economic sectors heat map

This heat map is a guidance tool for organisations to get an indication of levels of potential ESG risks across economic sectors. Each organisation should determine its own risk appetite and risk management approach to these ESG risks.

For ease of interpretation, each economic sector is cross-referenced with GICS and NAICS industry classification codes for organisations managing their insurance business in this manner. A separation between construction and operation in energy-related sectors was done due to differing ESG risk profiles.

The following is a description of classifications of the columns and rows of the heat map:

- **Risk:** A specific negative risk which might materialise in a transaction
- **Risk mitigation examples and good practice:** Further information which can be sought or checked with regard to the transaction which might help mitigate the risk
- **Colour codes:** White means “not applicable”, yellow indicates a “potential risk”, orange an “elevated risk”, and red a “high or direct risk”
- **Principles:** Links to the UN Global Compact Principles, Principles for Sustainable Insurance, Principles for Responsible Investment, as well as the UN Sustainable Development Goals, are included

				ECONOMIC SECTORS																						PRINCIPLES			
CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE	Agriculture/ Livestock	Agriculture/Fishing	Agriculture/Paper & Forestry	Chemicals	Defense	Electronics/ Technology	Energy Operation	Construction/Coal	Construction/Hydro Dams	Construction/ Nuclear	Exploration & Construction/Oil & Gas	Production of Fuels/Derivatives from Oil & Gas	Finance (depending on client and/or transaction)	Gambling	Healthcare/ Pharma/Biotech/ Life Science	Infrastructure/ Construction	Food/Beverage Manufacturing	Garment Manufacturing	Real Estate	Utilities (Waste & Water)	Mining	Transport/Shipping	SDG	UNGC	PSI	PRI
Environment	Climate change	Air pollution, greenhouse gas emissions, and transition risks	Disclosure of climate-related emissions in operations and/or products (e.g. CO2, CH2, N20, HFCs, PCFs, SF6)																							13	8	4	6
			Breakdown of fuel/material/carbon intensity mix relevant to the client or transaction (e.g. power generating mix or by economic sector intensity)																							7, 12	7, 8, 9	1, 2, 3	3
			Environmental & social impact assessment (ESIA) covering negative health impacts, mitigation and decommissioning where relevant																							3.1	7, 8, 9	1, 2, 3	1, 5
			Decarbonisation transition plan/targets																							7	7, 8, 9	1, 2, 3	1, 5
		Physical risks (e.g. heat, wildfire, extreme precipitation, flood, windstorm, tropical cyclones, sea level rise, water stress)	Nature-based solutions (e.g. sustainable flood or coastal defence management, broader climate resilience adaptation plans)																							9, 13	7, 8, 9	1, 2, 3	2
	Environmental degradation	Exposure to unconventional mining practices (e.g. mountain top removal, riverine tailings dumping, deep sea mining)	Involvement in initiatives: Extractive Industries Transparency Initiative, International Council on Mining & Metals, Kimberley Process (diamonds)																							7, 9, 12, 13	7, 8	1, 2	2, 5
		Deforestation or controversial site clearance (e.g. palm oil on peatlands or fragile slopes, illegal fire clearance/logging, biodiversity loss, dam construction)	Certification for palm oil, paper, etc. Dam construction standards: IHA Hydropower Sustainability Assessment Protocol, UNEP Dams & Development, Equator Principles																							12, 15	7, 8	1, 2	4, 5, 6
		Soil pollution	ESIA covering possible negative health impacts, mitigation measures and decommissioning plans where relevant																							3.1	7, 8	1, 2, 3	1.5
		Water pollution	Water management practices (e.g. quality, scarcity, overconsumption). Effective ESIA process covering water pollution. External audits/certification																							6, 13	7, 8	1, 2, 3	3, 6
	Protected sites/species	Impacts on World Heritage Sites or other protected areas	ESIA that covers impacts on endangered species and sites including mitigation. Specialist lists: Ramsar, UNESCO World Heritage Sites																							11, 15	7, 8	1, 2, 3	2, 5
		Impacts on species on IUCN Red List of Threatened Species	ESIA that covers impacts on endangered species and sites including necessary mitigation measures																							14, 15	7, 8	1, 2, 3	2, 5
	Unsustainable practices	Exposure to unconventional energy practices (e.g. Arctic oil, hydraulic fracturing, tar sands, deep sea drilling)	Various energy initiatives: IPIECA, IFC EH&S Guidelines, Energy & Biodiversity Initiative for Oil & Gas, Arctic Council, Oil Sands Leadership Initiative																							9	7, 8, 9	1, 2, 3	4
		Illegal fishing vessels, controversial fishing practices or aquaculture techniques	PSI-Oceana guide on illegal, unreported & unregulated (IUU) fishing, IUU fishing lists, Aquaculture Stewardship Council certification																							12, 14, 17	7, 8	1, 2, 3	5, 6
	Animal welfare/testing	Live transport over 8 hours or poor conditions	Live transport over 8 hours must hold certificate including training on ventilation/temperature. Good conditions on food, water, spacing, lighting, etc																							2, 12, 15	7, 8	1, 2, 3	2
		Controversial living conditions or use of chemicals/medicines (e.g. overuse of antibiotics)	Relevant certification for farming or ethical animals treatment during clinical treatments																							12, 15	7, 8	1, 2, 3	2, 5
		Lack of anaesthetic or distress reducing techniques	Compliance with Guiding Principles on Replacement, Reduction & Refinement																							12, 15	7, 8	1, 2, 3	2, 5
		Use of wild subjects or Great Apes in testing																								12, 15	7, 8	1, 2, 3	2, 5

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE	ECONOMIC SECTORS																						PRINCIPLES			
				Agriculture/ Livestock	Agriculture/Fishing	Agriculture/Paper & Forestry	Chemicals	Defense	Electronics/ Technology	Energy Operation	Construction/Coal	Construction/Hydro Dams	Construction/ Nuclear	Exploration & Construction/Oil & Gas	Production of Fuels/Derivatives from Oil & Gas	Finance (depending on client and/or transaction)	Gambling	Healthcare/ Pharma/Biotech/ Life Science	Infrastructure/ Construction	Food/Beverage Manufacturing	Garment Manufacturing	Real Estate	Utilities (Waste & Water)	Mining	Transport/Shipping	SDG	UNGC	PSI	PRI
Social	Human Rights	Child labour	Policy/statement on protecting and promoting human rights, prohibits child labour, shared with suppliers, regular audits and public findings	High	High	High	Potential	Potential	High	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	High	Elevated	High	High	Potential	High	High	4, 8, 10, 12	1, 2, 5	1, 2, 3	2, 3, 5
		Human trafficking	Human rights policy that includes a statement on protecting and promoting human rights and prohibits human trafficking	High	High	High	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Elevated	Elevated	Elevated	Elevated	Potential	Potential	Potential	High	8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Forced labour	Human rights policy that includes a statement on protecting and promoting human rights and prohibits forced labour	High	High	High	Potential	Potential	High	Potential	Elevated	Elevated	Elevated	Elevated	Potential	Potential	Elevated	Potential	High	Elevated	High	High	Potential	High	High	8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Forced resettlement (including land/water rights for native people, land grabbing)	Free, prior & informed consent (FPIC) achieved. Effective environmental & social impact assessment (ESIA) process covering consultation, resettlement, compensation aspects	High	Potential	High	Potential	Potential	Potential	Potential	High	High	Potential	High	Potential	Potential	Potential	Potential	High	Potential	Potential	Elevated	Potential	High	Elevated	3, 16	1, 2	1, 2, 3	6
		Poor worker safety record (e.g. worse than sector average record on accidents)	Effective occupational health & safety policy that defines safety responsibilities and prevention measures to minimise fatalities, injuries and health impacts	Elevated	Elevated	Elevated	High	Elevated	High	High	High	High	High	High	Elevated	Potential	Elevated	Elevated	High	Elevated	High	Elevated	Elevated	High	Elevated	3, 12, 16	1, 3	1, 2, 3	2, 3, 5
		Violation of worker rights (e.g. discrimination, collective bargaining)	Code of conduct that outlines company's commitment to respect workers' rights	Potential	Potential	Potential	Elevated	Potential	High	High	High	High	Elevated	Elevated	Elevated	Potential	Elevated	Elevated	High	Elevated	High	Elevated	Potential	High	Elevated	8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Misconduct of security personnel (e.g. physical harm to people, human rights abuses)	Whistle-blower channel to report such violations	Elevated	Potential	Potential	Potential	High	Potential	Potential	Elevated	High	Elevated	High	Potential	Potential	Potential	Potential	High	Potential	Potential	Potential	Potential	High	Potential	3, 16	1	1, 2, 3	6
	Controversial Weapons	Controversial weapons exposure (e.g. UN conventions)	Anti-Personnel Mine Ban Convention, Convention on Cluster Munitions					High	Potential	Potential					Potential	Potential			Potential			Potential		Potential	High	11	1	1, 3, 4	2, 3
Governance	Bribery & corruption	Illegal and unethical payments	Code of conduct and anti-bribery training programme for all employees. Whistle-blower channel to report cases of bribery & corruption	Elevated	Elevated	Elevated	Potential	High	Elevated	Potential	Elevated	Elevated	Elevated	Elevated	Potential	Elevated	Elevated	Elevated	High	Potential	Potential	Elevated	Potential	Elevated	Potential	16, 17	10	4	3, 4
	Poor corporate governance	Anti-competitive practices, violations of antitrust laws, unethical conduct	Code of conduct that outlines compliance with antitrust laws	Potential	Potential	Potential	Potential	Elevated	High	Potential	Potential	Potential	Potential	Potential	Potential	High	Potential	Elevated	Potential	Potential	Potential	Potential	Potential	Potential	Potential	10, 16, 17	10	4	2, 5
	Poor product safety & quality	Unethical conduct or negative health impact on customers		Elevated	Elevated	Potential	High	Potential	High	Potential	Potential	Potential	Potential	Potential	Potential	High	High	High	Potential	High	High	Potential	Potential	Potential	Potential	3, 16	1, 7	1, 2, 3	2, 5

Legend	
(white)	Not applicable
(yellow)	Potential risk
(orange)	Potential elevated risk
(red)	Potential high or direct risk

8. ESG risks and lines of business heat map

This heat map is a guidance tool for organisations to get an indication of levels of potential ESG risks across lines of business. Each organisation should determine its own risk appetite and risk management approach to these ESG risks.

The lines of business were identified based on the 2018 PSI global survey on ESG in underwriting and the assessment by the PSI project team. Each ESG risk could trigger a claim or reputation risk in various lines of business.

The description of classifications of the columns and rows of the ESG risks and economic sectors heat map in item 7 above is also applicable to this heat map.

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE	Agribusiness	Property	Liability	Product Liability	Worker Compensation	Construction & Engineering	Credit & Surety	Cyber	D&O	Financial Lines	Marine	P&I	Aviation	Cargo	PRINCIPLES			
																		SDG	UNGC	PSI	PRI
Environment	Climate change	Air pollution, greenhouse gas emissions, and transition risks	Disclosure of climate-related emissions in operations and/or products (e.g. CO2, CH2, N20, HFCs, PCFs, SF6)															13	8	4	6
			Breakdown of fuel/material/carbon intensity mix relevant to the client or transaction (e.g. power generating mix or by economic sector intensity)															7, 12	7, 8, 9	1, 2, 3	3
			Environmental & social impact assessment (ESIA) covering negative health impacts, mitigation and decommissioning where relevant															3.1	7, 8, 9	1, 2, 3	1, 5
			Decarbonisation transition plan/targets															7	7, 8, 9	1, 2, 3	1, 5
		Physical risks (e.g. heat, wildfire, extreme precipitation, flood, windstorm, tropical cyclones, sea level rise, water stress)	Nature-based solutions (e.g. sustainable flood or coastal defence management, broader climate resilience adaptation plans)															9, 13	7, 8, 9	1, 2, 3	2
	Environmental degradation	Exposure to unconventional mining practices (e.g. mountain top removal, riverine tailings dumping, deep sea mining)	Involvement in initiatives: Extractive Industries Transparency Initiative, International Council on Mining & Metals, Kimberley Process (diamonds)															7, 9, 12, 13	7, 8	1, 2	2, 5
		Deforestation or controversial site clearance (e.g. palm oil on peatlands or fragile slopes, illegal fire clearance/logging, biodiversity loss, dam construction)	Certification for palm oil, paper, etc. Dam construction standards: IHA Hydropower Sustainability Assessment Protocol, UNEP Dams & Development, Equator Principles															12, 15	7, 8	1, 2	4, 5, 6
		Soil pollution	ESIA covering possible negative health impacts, mitigation measures and decommissioning plans where relevant															3.1	7, 8	1, 2, 3	1.5
		Water pollution	Water management practices (e.g. quality, scarcity, overconsumption). Effective ESIA process covering water pollution. External audits/certification															6, 13	7, 8	1, 2, 3	3, 6
	Protected sites/ species	Impacts on World Heritage Sites or other protected areas	ESIA that covers impacts on endangered species and sites including mitigation. Specialist lists: Ramsar, UNESCO World Heritage Sites															11, 15	7, 8	1, 2, 3	2, 5
		Impacts on species on IUCN Red List of Threatened Species	ESIA that covers impacts on endangered species and sites including necessary mitigation measures															14, 15	7, 8	1, 2, 3	2, 5
	Unsustainable practices	Exposure to unconventional energy practices (e.g. Arctic oil, hydraulic fracturing, tar sands, deep sea drilling)	Various energy initiatives: IPIECA, IFC EH&S Guidelines, Energy & Biodiversity Initiative for Oil & Gas, Arctic Council, Oil Sands Leadership Initiative															9	7, 8, 9	1, 2, 3	4
		Illegal fishing vessels, controversial fishing practices or aquaculture techniques	PSI-Oceana guide on illegal, unreported & unregulated (IUU) fishing, IUU fishing lists, Aquaculture Stewardship Council certification															12, 14, 17	7, 8	1, 2, 3	5, 6
	Animal welfare/ testing	Live transport over 8 hours or poor conditions	Live transport over 8 hours must hold certificate including training on ventilation/temperature. Good conditions on food, water, spacing, lighting, etc															2, 12, 15	7, 8	1, 2, 3	2
		Controversial living conditions or use of chemicals/medicines (e.g. overuse of antibiotics)	Relevant certification for farming or ethical animals treatment during clinical treatments															12, 15	7, 8	1, 2, 3	2, 5
		Lack of anaesthetic or distress reducing techniques	Compliance with Guiding Principles on Replacement, Reduction & Refinement															12, 15	7, 8	1, 2, 3	2, 5
		Use of wild subjects or Great Apes in testing																12, 15	7, 8	1, 2, 3	2, 5

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE	Agribusiness	Property	Liability	Product Liability	Worker Compensation	Construction & Engineering	Credit & Surety	Cyber	D&O	Financial Lines	Marine	P&I	Aviation	Cargo	PRINCIPLES			
																		SDG	UNGC	PSI	PRI
Social	Human rights	Child labour	Policy/statement on protecting and promoting human rights, prohibits child labour, shared with suppliers, regular audits and public findings															4, 8, 10, 12	1, 2, 5	1, 2, 3	2, 3, 5
		Human trafficking	Human rights policy that includes a statement on protecting and promoting human rights and prohibits human trafficking															8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Forced labour	Human rights policy that includes a statement on protecting and promoting human rights and prohibits forced labour															8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Forced resettlement (including land/water rights for native people, land grabbing)	Free, prior & informed consent (FPIC) achieved. Effective environmental & social impact assessment (ESIA) process covering consultation, resettlement, compensation aspects															3, 16	1, 2	1, 2, 3	6
		Poor worker safety record (e.g. worse than sector average record on accidents)	Effective occupational health & safety policy that defines safety responsibilities and prevention measures to minimise fatalities, injuries and health impacts															3, 12, 16	1, 3	1, 2, 3	2, 3, 5
		Violation of worker rights (e.g. discrimination, collective bargaining)	Code of conduct that outlines company's commitment to respect workers' rights															8, 10, 12	1, 4	1, 2, 3	2, 3, 5
		Misconduct of security personnel (e.g. physical harm to people, human rights abuses)	Whistle-blower channel to report such violations															3, 16	1	1, 2, 3	6
	Controversial weapons	Controversial weapons exposure (e.g. UN conventions)	Anti-Personnel Mine Ban Convention, Convention on Cluster Munitions															11	1	1, 3, 4	2, 3
Governance	Bribery & corruption	Illegal and unethical payments	Code of conduct and anti-bribery training programme for all employees. Whistle-blower channel to report cases of bribery & corruption															16, 17	10	4	3, 4
	Poor corporate governance	Anti-competitive practices, violations of antitrust laws, unethical conduct	Code of conduct that outlines compliance with antitrust laws															10, 16, 17	10	4	2, 5
	Poor product safety & quality	Unethical conduct or negative health impact on customers																3, 16	1, 7	1, 2, 3	2, 5

Legend	
	Not applicable
	Potential risk
	Potential elevated risk
	Potential high or direct risk

9. Risk mitigation and good practices

There are numerous standards and technical guidelines available to identify, assess and mitigate ESG risks. Our intention is to provide links to some of these, not an exhaustive list. A reference is not an indication of support or endorsement, but an indication of a source to support decision-making.

While many organisations may wish to use third party tools or research for their ESG due diligence, for listed companies, a wealth of information should be available on company websites and on the internet (e.g. sustainability reports, financial accounts, media stories). For non-listed companies (e.g. smaller or state enterprises), a manual assessment might be required. In many cases, there will be sector-specific standards which can guide insurance of these businesses or provide risk-specific guidance.

There are certain overarching standards which can address ESG risks across many of these focus areas. Clients or transactions using or complying with these sources can be positive.

9.1. General guidance

- Environmental and social impact assessments
- Equator Principles
- Global Reporting Initiative (GRI) sector-based reporting guidance
- International Finance Corporation (IFC) guidance on environmental and social issues in projects
- ISO certification
- OECD Guidelines for Multinational Enterprises

9.2. Climate change

- Greenhouse Gas Protocol
- PSI guidance on the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) (forthcoming)
- RE 100 Initiative
- Science Based Targets Initiative

9.3. Environmental degradation

- Extractive Industries Transparency Initiative (EITI)
- Forest Stewardship Council (FSC)
- International Council on Mining and Metals (ICMM)
- International Hydropower Association (IHA) Hydropower Sustainability Assessment Protocol
- Kimberley Process (diamonds)
- Roundtable on Sustainable Palm Oil (RSPO)
- UNEP Dams and Development guidance
- World Commission on Dams

9.4. Protected sites

- PSI-WWF-UNESCO guide to protect World Heritage Sites (forthcoming)
- Ramsar List
- UNESCO World Heritage List

9.5. Protected species

- IUCN Red List of Threatened Species

9.6. Unsustainable practices

- Aquaculture Stewardship Council (ASC)
- Illegal, unreported and unregulated (IUU) fishing lists
- PSI-Oceana guidelines to control or mitigate the risk of insuring vessels or companies associated with IUU fishing

9.7. Animal welfare/testing

- EU Directive on the protection of animals used for scientific purposes
- Guiding Principles on Replacement, Reduction and Refinement
- Various farm accreditation schemes (e.g. Beter Leven ("Better Life"), Royal Society for the Prevention of Cruelty to Animals (RSPCA), Farm Animal Investment Risk and Return (FAIRR)

9.8. Human rights

- Freedom House
- Global Slavery Index
- International Labour Organization (ILO) standards
- International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA): State Sponsored Homophobia report
- Minority Rights Group: Peoples Under Threat report
- Pew Research Government Restrictions Index
- UN Declaration of Human Rights
- UN Global Compact Principles
- UN Guiding Principles on Business and Human Rights
- UNDP Gender Inequality Index
- UNICEF Child Labour Database
- US State Department (agriculture and mining commodity specific risks)

9.9. Controversial weapons

- UN conventions on various weaponry (e.g. Anti-Personnel Mine Ban Convention, Convention on Cluster Munitions)

9.10. Bribery and corruption

- Transparency International Corruption Index
- UN Global Compact Principles

10. The Principles for Sustainable Insurance

PRINCIPLE 1

We will embed in our decision-making environmental, social and governance issues relevant to our insurance business

Company strategy
- Establish a company strategy at the Board and executive management levels to identify, assess, manage and monitor ESG issues in business operations
- Dialogue with company owners on the relevance of ESG issues to company strategy
- Integrate ESG issues into recruitment, training and employee engagement programmes

Risk management and underwriting
- Establish processes to identify and assess ESG issues inherent in the portfolio and be aware of potential ESG-related consequences of the company's transactions
- Integrate ESG issues into risk management, underwriting and capital adequacy decision-making processes, including research, models, analytics, tools and metrics

Product and service development
- Develop products and services which reduce risk, have a positive impact on ESG issues and encourage better risk management
- Develop or support literacy programmes on risk, insurance and ESG issues

Claims management
- Respond to clients quickly, fairly, sensitively and transparently at all times and make sure claims processes are clearly explained and understood
- Integrate ESG issues into repairs, replacements and other claims services

Sales and marketing
- Educate sales and marketing staff on ESG issues relevant to products and services and integrate key messages responsibly into strategies and campaigns
- Make sure product and service coverage, benefits and costs are relevant and clearly explained and understood

Investment management
- Integrate ESG issues into investment decision-making and ownership practices (e.g. by implementing the Principles for Responsible Investment)

PRINCIPLE 2

We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions

Clients and suppliers
- Dialogue with clients and suppliers on the benefits of managing ESG issues and the company's expectations and requirements on ESG issues
- Provide clients and suppliers with information and tools that may help them manage ESG issues
- Integrate ESG issues into tender and selection processes for suppliers
- Encourage clients and suppliers to disclose ESG issues and to use relevant disclosure or reporting frameworks
- Insurers, reinsurers and intermediaries
- Promote the adoption of the Principles
- Support the inclusion of ESG issues in professional education and ethical standards in the insurance industry

PRINCIPLE 3

We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues

Governments, regulators and other policymakers
- Support prudential policy, regulatory and legal frameworks that enable risk reduction, innovation and better management of ESG issues
- Dialogue with governments and regulators to develop integrated risk management approaches and risk transfer solutions

Other key stakeholders
- Dialogue with intergovernmental and non-governmental organisations to support sustainable development by providing risk management and risk transfer expertise
- Dialogue with business and industry associations to better understand and manage ESG issues across industries and geographies
- Dialogue with academia and the scientific community to foster research and educational programmes on ESG issues in the context of the insurance business
- Dialogue with media to promote public awareness of ESG issues and good risk management

PRINCIPLE 4

We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the Principles

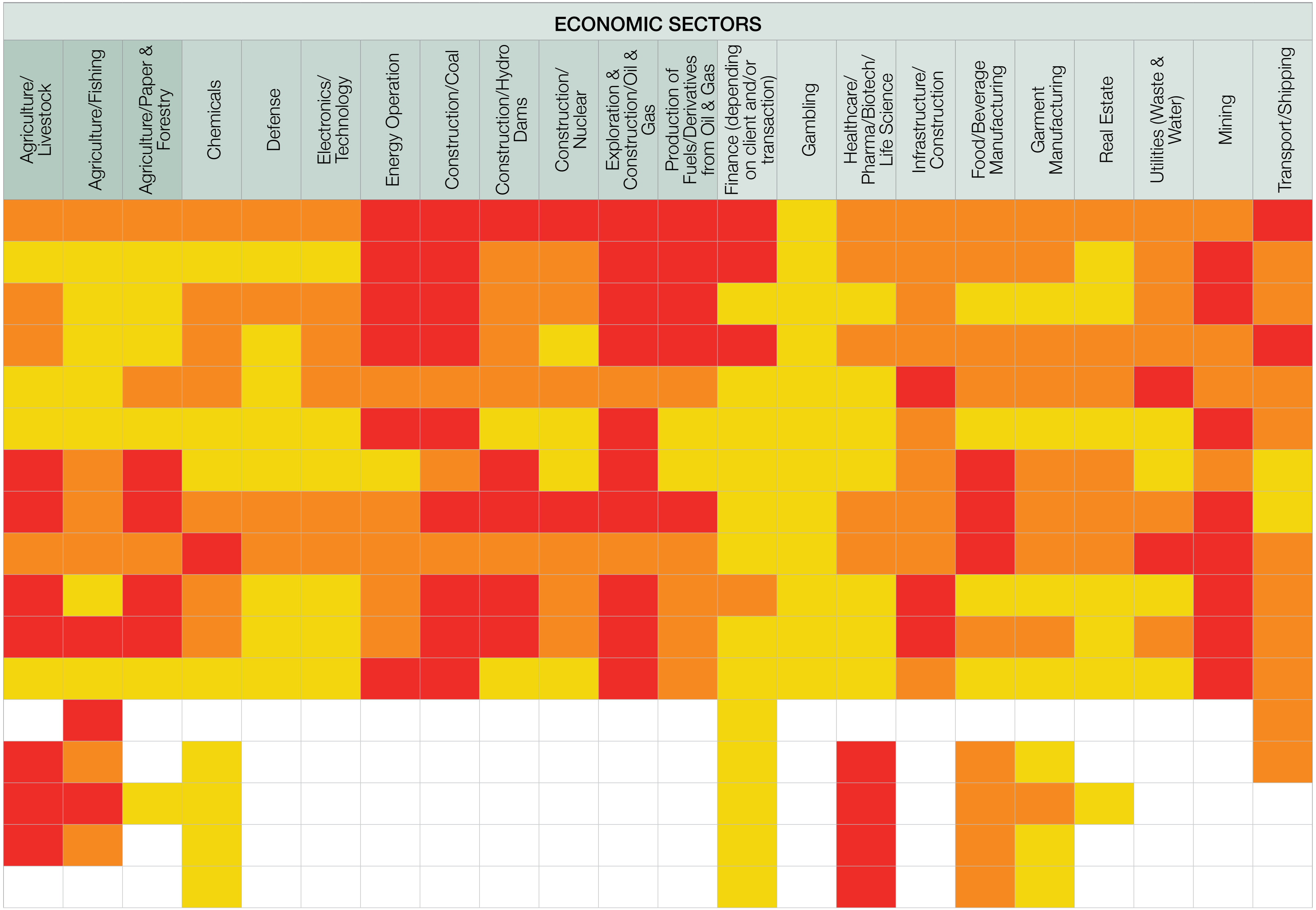
- Assess, measure and monitor the company's progress in managing ESG issues and proactively and regularly disclose this information publicly
- Participate in relevant disclosure or reporting frameworks
- Dialogue with clients, regulators, rating agencies and other stakeholders to gain mutual understanding on the value of disclosure through the Principles

Annex

In the following pages you will find print-friendly versions of the heat maps.

a. ESG risks and economic sectors heat map

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE
Environment	Climate change	Air pollution, greenhouse gas emissions, and transition risks	Disclosure of climate-related emissions in operations and/or products (e.g. CO2, CH2, N20, HFCs, PCFs, SF6)
			Breakdown of fuel/material/carbon intensity mix relevant to the client or transaction (e.g. power generating mix or by economic sector intensity)
			Environmental & social impact assessment (ESIA) covering negative health impacts, mitigation and decommissioning where relevant
			Decarbonisation transition plan/targets
		Physical risks (e.g. heat, wildfire, extreme precipitation, flood, windstorm, tropical cyclones, sea level rise, water stress)	Nature-based solutions (e.g. sustainable flood or coastal defence management, broader climate resilience adaptation plans)
	Environmental degradation	Exposure to unconventional mining practices (e.g. mountain top removal, riverine tailings dumping, deep sea mining)	Involvement in initiatives: Extractive Industries Transparency Initiative, International Council on Mining & Metals, Kimberley Process (diamonds)
		Deforestation or controversial site clearance (e.g. palm oil on peatlands or fragile slopes, illegal fire clearance/logging, biodiversity loss, dam construction)	Certification for palm oil, paper, etc. Dam construction standards: IHA Hydropower Sustainability Assessment Protocol, UNEP Dams & Development, Equator Principles
		Soil pollution	ESIA covering possible negative health impacts, mitigation measures and decommissioning plans where relevant
		Water pollution	Water management practices (e.g. quality, scarcity, overconsumption). Effective ESIA process covering water pollution. External audits/certification
	Protected sites/species	Impacts on World Heritage Sites or other protected areas	ESIA that covers impacts on endangered species and sites including mitigation. Specialist lists: Ramsar, UNESCO World Heritage Sites
		Impacts on species on IUCN Red List of Threatened Species	ESIA that covers impacts on endangered species and sites including necessary mitigation measures
	Unsustainable practices	Exposure to unconventional energy practices (e.g. Arctic oil, hydraulic fracturing, tar sands, deep sea drilling)	Various energy initiatives: IPIECA, IFC EH&S Guidelines, Energy & Biodiversity Initiative for Oil & Gas, Arctic Council, Oil Sands Leadership Initiative
		Illegal fishing vessels, controversial fishing practices or aquaculture techniques	PSI-Oceana guide on illegal, unreported & unregulated (IUU) fishing, IUU fishing lists, Aquaculture Stewardship Council certification
	Animal welfare/testing	Live transport over 8 hours or poor conditions	Live transport over 8 hours must hold certificate including training on ventilation/temperature. Good conditions on food, water, spacing, lighting, etc
		Controversial living conditions or use of chemicals/medicines (e.g. overuse of antibiotics)	Relevant certification for farming or ethical animals treatment during clinical treatments
		Lack of anaesthetic or distress reducing techniques	Compliance with Guiding Principles on Replacement, Reduction & Refinement
		Use of wild subjects or Great Apes in testing	


ECONOMIC SECTORS
Agriculture/ Livestock
Agriculture/Fishing
Agriculture/Paper & Forestry
Chemicals
Defense
Electronics/ Technology
Energy Operation
Construction/Coal
Construction/Hydro Dams
Construction/ Nuclear
Exploration & Construction/Oil & Gas
Production of Fuels/Derivatives from Oil & Gas
Finance (depending on client and/or transaction)
Gambling
Healthcare/ Pharma/Biotech/ Life Science
Infrastructure/ Construction
Food/Beverage Manufacturing
Garment Manufacturing
Real Estate
Utilities (Waste & Water)
Mining
Transport/Shipping

a. ESG risks and economic sectors heat map

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE
Social	Human Rights	Child labour	Policy/statement on protecting and promoting human rights, prohibits child labour, shared with suppliers, regular audits and public findings
		Human trafficking	Human rights policy that includes a statement on protecting and promoting human rights and prohibits human trafficking
		Forced labour	Human rights policy that includes a statement on protecting and promoting human rights and prohibits forced labour
		Forced resettlement (including land/water rights for native people, land grabbing)	Free, prior & informed consent (FPIC) achieved. Effective environmental & social impact assessment (ESIA) process covering consultation, resettlement, compensation aspects
		Poor worker safety record (e.g. worse than sector average record on accidents)	Effective occupational health & safety policy that defines safety responsibilities and prevention measures to minimise fatalities, injuries and health impacts
		Violation of worker rights (e.g. discrimination, collective bargaining)	Code of conduct that outlines company's commitment to respect workers' rights
		Misconduct of security personnel (e.g. physical harm to people, human rights abuses)	Whistle-blower channel to report such violations
	Controversial Weapons	Controversial weapons exposure (e.g. UN conventions)	Anti-Personnel Mine Ban Convention, Convention on Cluster Munitions
Governance	Bribery & corruption	Illegal and unethical payments	Code of conduct and anti-bribery training programme for all employees. Whistle-blower channel to report cases of bribery & corruption
	Poor corporate governance	Anti-competitive practices, violations of antitrust laws, unethical conduct	Code of conduct that outlines compliance with antitrust laws
	Poor product safety & quality	Unethical conduct or negative health impact on customers	

ECONOMIC SECTORS

Agriculture/ Livestock	Agriculture/Fishing	Agriculture/Paper & Forestry	Chemicals	Defense	Electronics/ Technology	Energy Operation	Construction/Coal	Construction/Hydro Dams	Construction/ Nuclear	Exploration & Construction/Oil & Gas	Production of Fuels/Derivatives from Oil & Gas	Finance (depending on client and/or transaction)	Gambling	Healthcare/ Pharma/Biotech/ Life Science	Infrastructure/ Construction	Food/Beverage Manufacturing	Garment Manufacturing	Real Estate	Utilities (Waste & Water)	Mining	Transport/Shipping
Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential high or direct risk	Potential high or direct risk
Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk
Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential risk	Potential risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential high or direct risk	Potential high or direct risk
Potential high or direct risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential elevated risk
Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential elevated risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk
Potential risk	Potential risk	Potential risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential elevated risk
Potential elevated risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential elevated risk	Potential high or direct risk	Potential elevated risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk
Not applicable	Not applicable	Not applicable	Not applicable	Potential high or direct risk	Potential risk	Potential risk	Not applicable	Not applicable	Not applicable	Not applicable	Potential risk	Potential risk	Not applicable	Not applicable	Potential risk	Not applicable	Not applicable	Potential risk	Not applicable	Potential risk	Potential high or direct risk
Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential elevated risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential risk	Potential elevated risk	Potential elevated risk	Potential elevated risk	Potential high or direct risk	Potential risk	Potential risk	Potential elevated risk	Potential risk	Potential elevated risk	Potential risk
Potential risk	Potential risk	Potential risk	Potential risk	Potential elevated risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential risk	Potential elevated risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk
Potential elevated risk	Potential elevated risk	Potential risk	Potential high or direct risk	Potential risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential risk	Potential high or direct risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential high or direct risk	Potential high or direct risk	Potential risk	Potential risk	Potential risk	Potential risk

Legend	
(white)	Not applicable
(yellow)	Potential risk
(orange)	Potential elevated risk
(red)	Potential high or direct risk

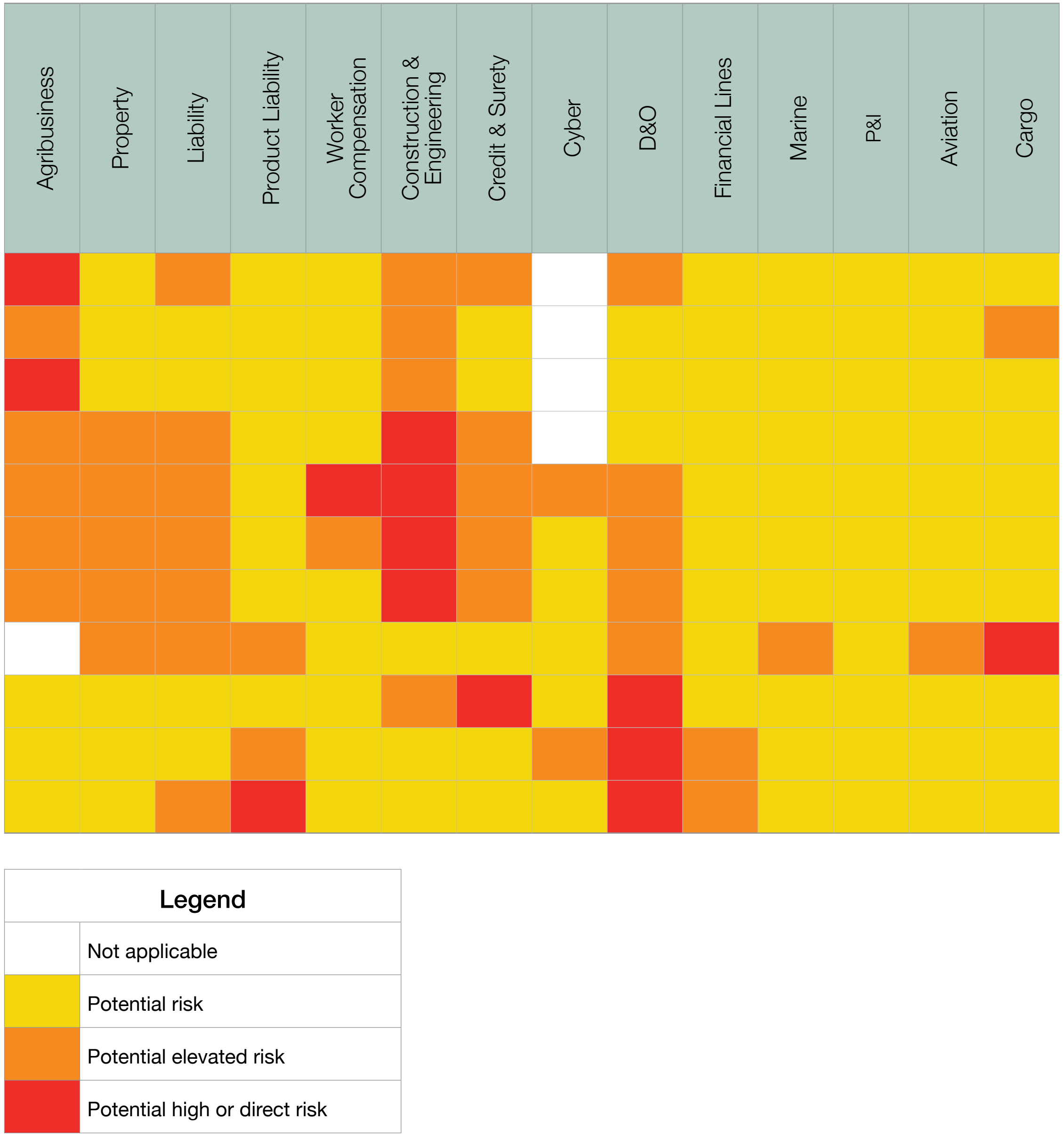
b. ESG risks and lines of business heat map

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE
Environment	Climate change	Air pollution, greenhouse gas emissions, and transition risks	Disclosure of climate-related emissions in operations and/or products (e.g. CO2, CH2, N20, HFCs, PCFs, SF6)
			Breakdown of fuel/material/carbon intensity mix relevant to the client or transaction (e.g. power generating mix or by economic sector intensity)
			Environmental & social impact assessment (ESIA) covering negative health impacts, mitigation and decommissioning where relevant
			Decarbonisation transition plan/targets
		Physical risks (e.g. heat, wildfire, extreme precipitation, flood, windstorm, tropical cyclones, sea level rise, water stress)	Nature-based solutions (e.g. sustainable flood or coastal defence management, broader climate resilience adaptation plans)
	Environmental degradation	Exposure to unconventional mining practices (e.g. mountain top removal, riverine tailings dumping, deep sea mining)	Involvement in initiatives: Extractive Industries Transparency Initiative, International Council on Mining & Metals, Kimberley Process (diamonds)
		Deforestation or controversial site clearance (e.g. palm oil on peatlands or fragile slopes, illegal fire clearance/logging, biodiversity loss, dam construction)	Certification for palm oil, paper, etc. Dam construction standards: IHA Hydropower Sustainability Assessment Protocol, UNEP Dams & Development, Equator Principles
		Soil pollution	ESIA covering possible negative health impacts, mitigation measures and decommissioning plans where relevant
		Water pollution	Water management practices (e.g. quality, scarcity, overconsumption). Effective ESIA process covering water pollution. External audits/certification
	Protected sites/ species	Impacts on World Heritage Sites or other protected areas	ESIA that covers impacts on endangered species and sites including mitigation. Specialist lists: Ramsar, UNESCO World Heritage Sites
		Impacts on species on IUCN Red List of Threatened Species	ESIA that covers impacts on endangered species and sites including necessary mitigation measures
	Unsustainable practices	Exposure to unconventional energy practices (e.g. Arctic oil, hydraulic fracturing, tar sands, deep sea drilling)	Various energy initiatives: IPIECA, IFC EH&S Guidelines, Energy & Biodiversity Initiative for Oil & Gas, Arctic Council, Oil Sands Leadership Initiative
		Illegal fishing vessels, controversial fishing practices or aquaculture techniques	PSI-Oceana guide on illegal, unreported & unregulated (IUU) fishing, IUU fishing lists, Aquaculture Stewardship Council certification
	Animal welfare/ testing	Live transport over 8 hours or poor conditions	Live transport over 8 hours must hold certificate including training on ventilation/ temperature. Good conditions on food, water, spacing, lighting, etc
		Controversial living conditions or use of chemicals/medicines (e.g. overuse of antibiotics)	Relevant certification for farming or ethical animals treatment during clinical treatments
		Lack of anaesthetic or distress reducing techniques	Compliance with Guiding Principles on Replacement, Reduction & Refinement
		Use of wild subjects or Great Apes in testing	


Agribusiness
Property
Liability
Product Liability
Worker Compensation
Construction & Engineering
Credit & Surety
Cyber
D&O
Financial Lines
Marine
P&I
Aviation
Cargo

b. ESG risks and lines of business heat map

CRITERIA	THEME	RISK CRITERIA	RISK MITIGATION EXAMPLES & GOOD PRACTICE
Social	**Human rights**	Child labour	Policy/statement on protecting and promoting human rights, prohibits child labour, shared with suppliers, regular audits and public findings
		Human trafficking	Human rights policy that includes a statement on protecting and promoting human rights and prohibits human trafficking
		Forced labour	Human rights policy that includes a statement on protecting and promoting human rights and prohibits forced labour
		Forced resettlement (including land/water rights for native people, land grabbing)	Free, prior & informed consent (FPIC) achieved. Effective environmental & social impact assessment (ESIA) process covering consultation, resettlement, compensation aspects
		Poor worker safety record (e.g. worse than sector average record on accidents)	Effective occupational health & safety policy that defines safety responsibilities and prevention measures to minimise fatalities, injuries and health impacts
		Violation of worker rights (e.g. discrimination, collective bargaining)	Code of conduct that outlines company's commitment to respect workers' rights
		Misconduct of security personnel (e.g. physical harm to people, human rights abuses)	Whistle-blower channel to report such violations
	Controversial weapons	Controversial weapons exposure (e.g. UN conventions)	Anti-Personnel Mine Ban Convention, Convention on Cluster Munitions
Governance	**Bribery & corruption**	Illegal and unethical payments	Code of conduct and anti-bribery training programme for all employees. Whistle-blower channel to report cases of bribery & corruption
	Poor corporate governance	Anti-competitive practices, violations of antitrust laws, unethical conduct	Code of conduct that outlines compliance with antitrust laws
	Poor product safety & quality	Unethical conduct or negative health impact on customers	


Agribusiness
Property
Liability
Product Liability
Worker Compensation
Construction & Engineering
Credit & Surety
Cyber
D&O
Financial Lines
Marine
P&I
Aviation
Cargo
Legend
Not applicable
Potential risk
Potential elevated risk
Potential high or direct risk

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UNEP FINANCE INITIATIVE

PSI Principles for Sustainable Insurance

"The Principles for Sustainable Insurance provide a global roadmap to develop and expand the innovative risk management and insurance solutions that we need to promote renewable energy, clean water, food security, sustainable cities and disaster-resilient communities."

UN Secretary-General (June 2012)

About UN Environment's Principles for Sustainable Insurance Initiative

Endorsed by the UN Secretary-General and insurance industry CEOs, the Principles for Sustainable Insurance (PSI) serve as a global framework for the insurance industry to address environmental, social and governance (ESG) risks and opportunities—and a global initiative to strengthen the insurance industry's contribution as risk managers, insurers and investors to building resilient, inclusive and sustainable communities and economies.

Developed by UN Environment's Finance Initiative, the PSI was launched at the 2012 UN Conference on Sustainable Development (Rio+20), and has led to the largest collaborative initiative between the UN and the insurance industry.

The vision of the PSI Initiative is of a risk-aware world, where the insurance industry is trusted and plays its full role in enabling a healthy, safe, resilient and sustainable society. Its purpose is to better understand, prevent and reduce ESG risks, and to better manage opportunities to provide quality and reliable risk protection.

www.unepfi.org/psi

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