Human Capital and Environmental, Social, and Governance (ESG)

Founded in 1939, AIHA is an association of scientists and professionals committed to preserving and ensuring occupational and environmental health and safety (OEHS) in the workplace and community. Numerous members of AIHA have practiced in aspects of Human Capital/ESG/Sustainability for decades, and AIHA co-founded the Center for Safety and Health Sustainability (CSHS) in 2010.

Purpose and Overview

With the growing scope and impact of human capital (HC) and environmental, social, and governance (ESG) initiatives today, the purpose of this primer is to help occupational and environmental health and safety (OEHS) practitioners understand fundamentals to ensure that their programs anticipate and, at a minimum, meet current expectations of their organizations and other stakeholders. The following includes an overview of key terminology, organizations, and evolving standards. Standards that include occupational health and safety (OHS)-related requirements and guidance are highlighted. Beyond HC/ESG fundamentals, AIHA’s HC/ESG Task Force chose to focus on baseline metrics. This is because metrics play a central role in disclosures and reporting. It is anticipated that OEHS practitioners will review and rely on additional relevant resources beyond this primer that focus on specifics, such as HC/ESG integration with existing management systems, auditing, leadership, and training.

Outline

1. Introduction
2. Terminology: Sustainability, ESG, CSR
3. Terminology: Materiality and Double/Impact Materiality
4. Human Capital
5. Reporting and Performance Criteria
6. Standards-Developers
7. Rating Agencies for Sustainability and/or ESG
8. OEHS/IH Reporting and Metrics
9. Summary
10. Resources and Suggested Readings
11. Glossary

Introduction

OEHS professionals are increasingly involved in HC/ESG activities within their employer organizations and professional practices. Involvement includes assisting in the decision-making process to determine reporting parameters and providing both traditional and non-traditional OEHS metrics and performance data for use in HC/ESG reporting.

ESG has historically been an investment and finance-driven activity. As ESG’s intersection with public policy and social issues has increased, tensions between stakeholders have increased as well. The subset of human capital has historically been a human resources (HR) department management function within organizations but now includes aspects that directly impact OEHS professionals.

The HC/ESG space is complex, and many terms are used to describe its numerous elements. The sheer number of acronyms included in this primer is indicative of the current complexity and evolution of the issues. Clarity on key distinctions and definitions, as well as an understanding about the types of organizations and range of stakeholders involved, is important. Organizations include standards-developers, ESG rating agencies, non-governmental organizations (NGO), and regulatory agencies. Numerous

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1 The term “space” is used to capture the totality of issues, dynamics, reporting, standards, expectations, organizations, etc. related to human capital and ESG.
stakeholders are also important participants within this space. These include shareholders of public companies, workers, consumers, both upstream and downstream value chain organizations, investors in private companies, communities near company operations, and even society at large. Although the central focus is on private and public companies and the public reporting of their ESG performance, there is a large and increasing number of communities, counties, states, and other governmental organizations that encourage reporting in the ESG and sustainability space.

In the early 2020s, numerous ESG entities were consolidated to form the International Sustainability Standards Board (ISSB). In the United States, the Securities and Exchange Commission (SEC) has also been active—it has promulgated a human capital management (HCM) and ESG reporting requirement for public companies. In the European Union (EU), the Corporate Sustainability Reporting Directive (CSRD; EU 2022/2464) came into force on January 5, 2023. This directive defined corporate reporting requirements on sustainability for certain EU companies and non-EU parent companies with significant EU revenues and EU branches and/or subsidiaries. Although more fundamental changes are certain to occur, the good news for OEHS practitioners is that many of these initiatives further our professional goals of worker and community wellbeing.

**Terminology: Sustainability, ESG, CSR**

The terms sustainability, ESG, and CSR are often used interchangeably. For this primer, ESG is used to capture all three. Within any reporting organization, it is important to understand how these three terms might be otherwise defined and used by the board of directors, C-suite, operation managers, OEHS staff, and other organizational departments such as human resources, public relations/communications, and legal counsel.

**Sustainability**

Sustainability is the broadest of the three terms. Its classic definition, which originated from the United Nations World Commission on Environmental Development (Brundtland Commission) in 1987, is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). The senior topic currently associated with sustainability is climate change. In 2015, the United Nations formulated an agenda of 17 sustainable development goals (SDGs) for 2030 that is “designed to serve as a shared blueprint for peace and prosperity for people and the planet now and into the future” (United Nations, “SDGs,” n.d.).

**ESG (Environmental, Social, and Governance)**

ESG has roots in numerous areas such as social responsibility; the triple bottom line (TBL) of people, planet, and profit; and sustainability in general. However, its formalization is pegged to a 2004 United Nations-led initiative to “better integrate environmental, social, and corporate governance issues in asset management, securities brokerage services, and associated research functions” (The Global Compact, 2004).

The historical focus of ESG has been on financial asset decision-making, specifically on placing investments that are aligned with sustainability and TBL goals. Although ESG’s financial orientation continues to dominate, there is increased pressure to impact organizational governance through ESG. The term “stakeholder capitalism” is increasingly used to describe such increasing emphasis on additional aspects of ESG, including social and human capital.

There is a wide range of NGOs, financial advisories, and third-party rating agencies offering HC/ESG frameworks and reporting schemes to “score” companies’ ESG performance relative to other companies. The goal is to assist investors and stakeholders in making financial and management decisions. All
of these schemes include social and human capital aspects, including OHS. Today, OHS can be considered a subset of human capital, which is a subset of social responsibility that is a subset of ESG.

**CSR (Corporate Social Responsibility)**

Of the three terms (ESG, sustainability, and CSR), CSR is the oldest. CSR tends to focus externally as opposed to ESG’s inclusion of internal organizational focus (e.g., governance). Corporate philanthropy and support of social causes date back to the 1800s. The term “corporate social responsibility” was coined in 1953 by Howard Bowen, who is often cited as the “father of CSR” (Bowen, 1953). The idea of a “social contract” in a business context was advanced by The Conference Board’s Committee for Economic Development in 1971. Central to this was the idea of a business obligation to serve the needs of society, which is embedded in the notion of “license to operate” (Committee for Economic Development, 1971).

**Terminology: Materiality and Double/Impact Materiality**

**Materiality**

Perhaps the most important concept in the sustainability/ESG space from the primary investment and finance-driven perspective is materiality. For the layperson, materiality can be thought of as what is important for creating and maintaining a significant portion of value of an organization. Financial materiality is a key distinction in sustainability/ESG reporting—matters that historically focus on events that significantly impact the reporting entities’ value. Current examples of such events are climate, fatalities, toxic spill cleanup costs, and health litigation.

Harvard’s Law School Forum on Corporate Governance offers the following explanation:

> Materiality is an accounting principle which states that all items that are reasonably likely to impact investors’ decision-making must be recorded or reported in detail in a business’s financial statements using GAAP standards. Essentially, materiality is related to the significance of information within a company’s financial statements. If a transaction or business decision is significant enough to warrant reporting to investors or other users of the financial statements, that information is “material” to the business and cannot be omitted (Harvard Business School, “Business Insights,” n.d.).

The International Financial Reporting Standards (IFRS) Foundation also states the following:

> Information is material if omitting, misstating, or obscuring it could reasonably be expected to influence decisions that the primary users of general-purpose financial statements make on the basis of those financial statements which provide financial information about a specific reporting entity. —IAS 1 Presentation of Financial Statements (IFRS Foundation, 2020).

Frances Schwartzkopff, writer for Bloomberg, posits:

> What is materiality? At the basic level it’s an accounting principle, referring to something that may have an impact on—be material to—how a company performs. A material risk can threaten targets or goals—something of keen interest to investors. In the context of ESG, this is known as single materiality and means mainly ESG factors that may pose a threat or opportunity to a business and its bottom line, such as extreme weather. It doesn’t tell you anything about how “green” a company’s business practices are, but rather how vulnerable its earnings may be to ESG risks (Schwartzkopff, 2022).

A question that lurks when considering materiality and the phenomenon referred to as stakeholder capitalism is, “Value to whom?” Historically, the focus
has been and continues to be on value to the organization or entity from an investment and shareholder perspective. However, as the sustainability/ESG space has evolved, so have concepts of materiality. There has been movement from strictly a shareholder focus to a broader stakeholder focus. Shifts in materiality concepts are evolving and dynamic; they are at the center of debate on topics like stakeholder capitalism and ESG-related political tensions. Terms used to describe these shifts are **double materiality** and impact materiality.

**Materiality Beyond Financial Reporting: Double/Impact Materiality**

Concepts of double and impact materiality have grown, with increased attention on meeting sustainability/ESG reporting needs beyond enterprise valuation issues. Specifically, topics include the external impact that an enterprise has on the climate, environment, society, humans, or any of the numerous aspects of sustainability—broadly including and beyond ESG.

The difference between financial and impact materiality is described by the Sustainability Accountability Standards Board (SASB), which is now part of the ISSB. SASB explains:

> Financial materiality in the context of sustainability information represents the sustainability factors that are material to short, medium, and long-term enterprise value. Impact materiality captures the significant impacts an organization has on the economy, environment, and people that are not captured by enterprise value. There are a variety of users with a range of objectives who want to understand an organization’s positive and negative contributions to sustainable development (SASB, “SASB Standards,” n.d.).

Frances Schwartzkopff writes:

> What is double materiality? That’s where greenness comes in. “Double materiality” adds the risks a company’s activities pose to the environment and society to those that it potentially faces internally. How such things should be accounted for in corporate reports remains the subject of intense debate. For now, reports vary wildly, making it hard for investors to compare one company or fund with another and make informed decisions (Schwartzkopff, 2022).

European Commission guidelines and regulations introduced a double materiality perspective beginning in 2017 with the Commission’s Non-Binding Guidelines on Non-Financial Reporting, which became binding in 2019. In addition to assessing “financial materiality in the broad sense of affecting the value of a company,” impacts of the company’s activities that affect environmental and social materiality beyond the fence line need to be included (European Commission, 2019, p. 6).

Double materiality is a critically important concept to understand, as many sustainability/ESG reporting tensions originate from it. With the shareholder/stakeholder dynamic mentioned, there are increased expectations regarding what is in financial statements, what is reported, and how materiality is addressed. Mattias Tager at the London School of Economics observes, “[a]ccounting standards are not neutral, but they systematically affect capital allocation and market dynamics. Decades of global harmonisation have veiled the fact that accounting practices are simply social conventions and not exact or objective measures” (Tager, 2021). Figure 1 graphically depicts the double materiality perspective presented in the EU’s Non-Financial Reporting Directive (European Commission, 2019).

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2 The EU’s requirements around sustainability reporting continue to evolve. In addition to the aforementioned CSR Directive, a first draft set of European Sustainability Reporting Standards (ESRS) was submitted in November 2022. A second draft is expected in 2023.
### FINANCIAL MATERIALITY

To the extent necessary for an understanding of the company’s development, performance and position...

### ENVIRONMENTAL & SOCIAL MATERIALITY

...and impact of its activities

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>CLIMATE</th>
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<tbody>
<tr>
<td>Climate change impact on company</td>
<td>Company impact on climate can be financially material</td>
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</table>

Primary audience: **INVESTORS**

Primary audience: **CONSUMERS, CIVIL SOCIETY, EMPLOYEES, INVESTORS**

### RECOMMENDATIONS OF THE TCFD

### NON-FINANCIAL REPORTING DIRECTIVE

* Financial materiality is used here in the broad sense of affecting the value of the company, not just in the sense of affecting financial measures recognised in the financial statements.

Figure 1: The double materiality perspective of the Non-Financial Reporting Directive in the context of reporting climate-related information. Source: European Commission (2019). Guidelines on Reporting Climate-Related Information. Reprinted with permission from the European Union under Creative Commons Attribution 4.0 International (CC-BY 4.0).
Human Capital

Ideas about human capital have been around at least since the writings of the 18th-century economist Adam Smith. OHS, an element of human capital, has been included in the earliest corporate sustainability reports published in the 1990s. In recent years, there has been increased attention on human and social capital within ESG. Although this primer is for OEHS professionals managing OHS programs and systems, it is important to consider human capital (of which OHS is becoming a subset) as it pertains to ESG reporting.

The application of “capitals thinking” in ESG is relatively new. The term “natural capital” was first used in the 1970s and adopted into environmental economics in the late 1980s. The application of natural capital thinking in the ESG space led to the formation of The Economics of Ecosystems and Biodiversity (TEEB) for Business Coalition in 2012, which became the Natural Capital Coalition in 2014. In 2018, the Social and Human Capital Coalition was founded, and in 2020, the two coalitions joined to form the Capitals Coalition. The new entity characterizes itself as a “global collaboration transforming the way decisions are made by including value provided by nature, people, and society.” The Capitals Coalition presents a common conceptualization of capital as natural, social, human, and produced capital. The coalition defines human capital as “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being” (Capitals Coalition, 2019).

The advent of “One Report” and the formation of the International Integrated Reporting Committee (IIRC) in 2010 introduced and began to formalize ideas of integrated thinking in the ESG space. “Capitals thinking” is reflected in the IIRC framework, which identifies six capitals as financial, manufactured, intellectual, human, social and relationship, and natural. The IIRC defines human capital as “the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services, or ideas in market circumstances” (IIRC, 2016).³

In August 2020, the U.S. SEC published a rule that, beginning in November 2020, required public companies to provide the following:

[3] a description of the registrant’s human capital resources, including the number of persons employed by the registrant, and any human capital measures or objectives that the registrant focuses on in managing the business (such as, depending on the nature of the registrant’s business and workforce, measures or objectives that address the development, attraction, and retention of personnel) (SEC, 2020).

Studies indicate wide variation in what companies report pertaining to human capital. One study that looked at 100 company reports identified “six key themes that emerged that broadly defined different facets of human capital” (Omens, 2021). These themes are as follows:

1) Employment and Labor Type
2) Job Stability
3) Wages, Compensation, and Benefits
4) Workforce Diversity, Equity, and Inclusion
5) Occupational Health and Safety
6) Training and Education

Two metrics identified in the study for OHS were absenteeism rate and total recordable incidence rate

³ Note, the IIRC is now part of the International Sustainability Standards Board (ISSB).

⁴ Example leading indicators include an entity’s management system (e.g., ISO 45001) and elements within the system, such as leadership, participation, policies, exposure assessment, and training.
Human Capital and Environmental, Social, and Governance (ESG)

Reporting and Performance Criteria

ESG, sustainability, CSR, and human capital performance and reporting criteria are developed and established by both governmental agencies and NGOs. These are in the form of non-mandatory standards companies can use as well as criteria developed by ESG Rating Agencies that are used to help assess and compare company performance.

In the 2020–2022 timeframe, there was significant consolidation of NGO standards-developers. During this time, the ISSB has evolved as the dominant entity in this space. Entities that have merged or been consolidated with ISSB include:

- **Sustainability Accounting Standards Board (SASB):** Formed in 2011 in the context of U.S. securities disclosures; merged with ISSB in August 2022.
- **Climate Disclosure Standards Board (CDSB):** Formed in 2007 as part of the Carbon Disclosure Project that started in 2002; merged with ISSB in January 2022.
- **International Integrated Reporting Committee (IIRC):** Formed in 2010 and merged with SASB in 2021 to form the Value Reporting Foundation, which merged with ISSB in August 2022.

The Global Reporting Initiative (GRI) was formed in 1997 by the Coalition for Environmentally Responsible Economies (CERES) and Tellus Institute, with support from the United Nations Environmental Programme (UNEP). GRI and ISSB executed an agreement (MoU) in March 2022 "seeking to coordinate work programmes and standard-setting activities" (IFRS, “press release,” 23 June 2022; IFRS “ISSB Update December 2022”).

Standards-Developers

**International Sustainability Standards Board**

The ISSB was established under the IFRS Foundation in 2021, and the board’s first meeting was held in July 2022. The group’s initial focus has been on the development and promulgation of two standards. The term “Exposure Draft” refers to the draft documents that lead up to an actual standard. The two issues (standards) continuing under discussion from their inception are:

1) General Requirements for Disclosure of Sustainability-related Financial Information (S1)
2) Climate-related Disclosures (S2)

At its meeting on February 16, 2023, ISSB discussed the Exposure Drafts for these two items, set a goal to ballot them by the end of Q2 2023, and made plans to promulgate them on January 1, 2024. The Board tentatively decided to introduce a requirement to permit, but not require, preparers to consider the GRI Standards and the European Sustainability Reporting Standards (ESRS) when identifying disclosures about sustainability-related risks and opportunities.

As of early 2023, occupational health and safety has not appeared in ISSB documents. In ISSB’s current two-year planning process regarding human capital, only an initial focus on diversity, equity, and inclusion is mentioned (IFRS, “ISSB Update December 2022”). Because SASB has fully merged into the ISSB organization, there is at least the possibility that the OHS metrics previously developed by SASB for a wide range of industry sectors will serve as a baseline in the development of future ISSB standards. More information on the SASB industry sector-specific metrics is noted below. Unless and until industry-specific OHS metrics are incorporated by ISSB, perhaps the

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5 Rationale for this consolidation can be found in an analysis and subsequent paper by the Impact Management Project, World Economic Forum, and Deloitte (2020).
best available OHS measurement criteria is the GRI sustainability reporting criteria for OHS noted below.

**Global Reporting Initiative**

In 1989, the Coalition for Environmentally Responsible Economies (CERES) was formed in Boston. This NGO pushed for companies to provide standardized public reporting on their environmental and sustainability efforts and progress. This was followed by the first United Nations conference on the environment and development in Rio de Janeiro in 1992. The RIO conference officially promoted social and economic development done in a sustainable manner.

In 1997, the Global Reporting Initiative (GRI) was formed. GRI has become the gold standard for sustainability reporting at all levels, particularly for occupational health and safety (GRI 403: Occupational Health and Safety 2018). The GRI framework has undergone several changes in organization and has expanded its scope. The second UN conference (called RIO+10) was held in Johannesburg, South Africa in 2002. During this conference, GRI published a recommended set of metrics for companies to include in their sustainability reporting.

Additional conferences on sustainability were held by the UN—one in 2012, again in Rio (RIO+20), and one in 2015 in New York City. At the New York conference, goals were published for 2030, which were adopted by 193 member nations. The major focus of these goals is on social, economic, and environmental concerns such as protecting habitats and oceans and addressing issues related to climate change (United Nations, 2015).

On a parallel path, Paul Hawken published the “Ecology of Commerce” in 1993 that outlined a restorative path for business. Industrial ecology developed concurrently with the UN Environmental Program, GRI, and footprint methodologies (Batty and Hallberg, 2010; Boons and Howard-Greenville, 2009; Graedel and Allenby, 2010). Life cycle analysis grew out of the ISO 14001 standard, an international agreement on environmental management first published in the mid-1990s. The global footprint network, founded in 2003, relied on input-output tables to characterize environmental impacts. Input-output tables have been selectively used to measure the effects of industrial activity on the environment (Hendrickson, Lave, and Matthews, 2006; Murray and Wood, 2010). They have also been suggested as a potential method for measuring industrial activity on worker health and well-being (Kijko et al., 2015; Scanlon et al., 2013). The Global Resource Footprint of Nations describes water, land, and materials embodied in trade and final consumption (Tukker et al., 2014). The development of these tools has informed consumers to act on behalf of the environment and in the future may aid worker safety and health initiatives. One result has been that fair trade groups and consumer advocates have increasingly lobbied to improve environmental and occupational health.

GRI standards are grouped into two categories: universal standards and three topic-specific standards as well as some sector-specific standards (e.g., oil and gas). Topic-specific standards include economic (series 200), environmental (series 300), and social (series 400) considerations. Within the social series, occupational health and safety is addressed in GRI 403, which has 10 disclosure categories (GRI, 2018).

**Topic Specific Disclosures**

- 403-1 Occupational health and safety management system
- 403-2 Hazard identification, risk assessment, and incident investigation
- 403-3 Occupational health services
- 403-4 Worker participation, consultation, and communication on occupational health and safety
- 403-5 Worker training on occupational health and safety
- 403-6 Promotion of worker health
- 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships
- 403-8 Workers covered by an occupational health and safety management system
- 403-9 Work-related injuries
- 403-10 Work-related ill health

Each disclosure category contains reporting requirements, recommendations, guidance, and references. The GRI occupational health and safety (GRI 403: Occupational Health and Safety 2018) reporting criteria can be considered the current gold standard for sustainability reporting now and for the foreseeable future, unless significant industry-specific metrics as developed by SASB are incorporated into standards by ISSB.

**Sustainability Accounting Standards Board**

SASB was founded in 2011, with the primary aim of developing standards for use in corporate filings to the U.S. SEC. The intent was to provide investors with comparable, non-financial information about the companies whose stocks they or their investment funds owned. This would allow investors and financial analysts to compare performance on critical ESG issues within an industry.

SASB states that its standards focus on “financially material issues because our mission is to help businesses around the world report on the sustainability topics that matter most to their investors.” This focus has been recognized by firms such as BlackRock, as referenced in Larry Fink’s 2020 letter to CEOs. He writes, “BlackRock believes that the Sustainability Accounting Standards Board (SASB) provides a clear set of standards for reporting sustainability information across a wide range of issues, from labor practices to data privacy to business ethics” (Fink, 2020). SASB did indeed develop a range of meaningful industry-specific OHS metrics.

There are 77 industry-specific SASB standards organized within 11 sectors. The sectors are Consumer Goods; Extractive & Materials Processing; Financials; Food & Beverage; Health Care; Infrastructure; Renewable Resources & Alternative Energy; Resource Transformation; Services; Technology & Communications; and Transportation.

SASB identifies 26 material areas as follows.

**ENVIRONMENT**
- GHG Emissions
- Air Quality
- Energy Management
- Water & Wastewater Management
- Waste & Hazardous Materials Management
- Ecological Impacts

**SOCIAL CAPITAL**
- Human Rights & Community Relations
- Customer Privacy
- Data Security
- Access & Affordability
- Product Quality & Safety
- Customer Welfare
- Selling Practices & Product Labeling

**HUMAN CAPITAL**
- Labor Practices
- Employee Health & Safety
- Employee Engagement, Diversity & Inclusion

**BUSINESS MODEL & INNOVATION**
- Product Design & Lifecycle Management
- Business Model Resilience
- Supply Chain Management
- Materials Sourcing & Efficiency
- Physical Impacts of Climate Change
LEADERSHIP AND GOVERNANCE
Business Ethics
Competitive Behavior
Management of the Legal & Regulatory Environment
Critical Incident Risk Management
Systemic Risk Management

Employee health and safety is included within the human capital grouping and is defined as follows:

[This] category addresses a company’s ability to create and maintain a safe and healthy workplace environment that is free of injuries, fatalities, and illness (both chronic and acute). It is traditionally accomplished through implementing safety management plans, developing training requirements for employees and contractors, and conducting regular audits of their own practices as well as those of their subcontractors. The category further captures how companies ensure physical and mental health of workforce through technology, training, corporate culture, regulatory compliance, monitoring and testing, and personal protective equipment (SASB, “Materiality Finder,” n.d.).

An example for Electric Utilities & Power Generators is provided in Figure 2.

Rating Agencies for Sustainability and/or ESG

A robust yet still developing industry has emerged to provide reports and ratings of company ESG performance to institutional investors, asset managers, financial institutions, and other potential stakeholders. Report and ratings methodology and scope vary widely among providers (Huber and Comstock, 2017). The industry is currently fragmented with dozens of rating agencies and data providers. Current firms in this space include MSCI ESG Research; ISS ESG; Sustainalytics; Refinitiv; Bloomberg ESG; Dow Jones Sustainability Index; and FTSE Russell, to name a few (Huber and Comstock, 2017).

Some of the criticisms and tensions in this industry relate to the extent that double materiality is captured in reports and ratings. MSCI’s CEO reflects on the current tensions and “concedes [that] ordinary investors piling into such funds have no idea that [these]...”
ratings, and ESG overall, gauge the risk the world poses to a company not the other way around. ‘No, they for sure don’t understand that’…” (Tayan, 2022).

There is considerable disagreement about the broader societal wisdom of the investment of crucial public and private retirement funds in stocks and organizations, based on still unsettled ESG ratings, rather than simply the financial expectations of return on investment.

**OEHS/IH Reporting and Metrics**

*Meaningful measurement of OHS performance is critical to OHS reporting.*

OEHS professionals have long been involved in sustainability/ESG measurement and reporting of OHS metrics. Although the GRI framework has become the gold standard for sustainability reporting, the current emphasis on ESG has resulted in the rapid growth of reporting criteria. Some institutional asset managers, such as BlackRock, require ESG reporting that meets their various groups of standards. The Value Reporting Foundation (VRF), previously the SASB and IIRC, had likewise developed standards for broad industrial sectors with the intent of measuring factors of materiality; however, it is unclear how broadly these factors have been adopted by various institutional asset managers. The IFRS has now assumed responsibility for SASB/VRF standards.6

A plethora of measurement criteria currently exist. Those most relevant for OHS can currently be found in professional standards documents from AIHA, ASSP, ANSI, and ISO (AIHA 2020, 2023; ANSI/ASSP Z10:2019, Z16.1-2022, 2022; ISO/DIS 45004, 2023).7 These OHS metrics represent best practice within the OEHS professions and may go well beyond minimum regulatory compliance and/or reporting requirements.

To be most useful, Human Capital/ESG metrics need to be measurable, meaningful, actionable, evidence-based indicators that can be used to monitor, predict, influence, or manage exposures, hazards, actions, and conditions of work that may impact worker health and well-being (AIHA, 2020). Metrics that are unrelated to process or performance improvement can be interesting but have limited value in ESG decisions. For example, reporting in sustainability reports of results without context (i.e., percentage of reduction of chemical incidents without including a definition of incident) could be considered environmental “greenwashing.”

Similarly, when metrics are reported in non-standard formats or without the source data, it may be impossible to evaluate and compare program performance. With standardized formats and raw data, it is more likely possible to determine how an organization is performing compared to its peers. This ability is essential to the continuous improvement goal that is at the heart of Human Capital/ESG initiatives.

**ESG Reporting and the OEHS Profession**

The current emphasis on ESG reporting goes well beyond OHS and traditional aspects of industrial hygiene. However, it is refreshing that traditional environmental health and safety issues managed by industrial hygienists and safety professionals remain near the top of the concerns of industrial organizations implementing ESG reporting. Our OEHS professions are on firm ground with our evolved practices. According to a survey by PwC (PricewaterhouseC-

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6 In August 2022, the IFRS Foundation assumed responsibility for SASB Standards when it merged with the Value Reporting Foundation, which previously maintained these Standards. SASB Standards identify the subset of environmental, social, and governance issues most relevant to financial performance and enterprise value for 77 industries. Refer to [www.sasb.org/standards/](http://www.sasb.org/standards/).

7 ISO 45004 is a Draft International Standard (at the time this document was prepared in 2023).
In the United States, the National Institute for Occupational Safety and Health (NIOSH) that is part of the Centers for Disease Control and Prevention (CDC) operates the National Occupational Mortality Surveillance (NOMS) program. NOMS is “a federal-state partnership that monitors changes in cause of death by usual occupation or industry in the United States.” Broader information is also available on the broad causes of death in human populations internationally (IHME, n.d.). The Bureau of Labor Statistics (BLS) has estimated that nearly 300,000 occupational illnesses occurred in 2020. While estimates vary, the World Health Organization (WHO) estimates that almost two million people die from work-related causes each year, with occupational injuries causing 360,000 of these deaths and workplace exposure associated with 450,000 deaths. Fatality rates and lost-time injury rates are among the most common metrics utilized. However, such outcome metrics are not sufficient to gauge prevention of occupational incidences and disease arising from the workplace.

Traditional industrial hygiene methodologies can be used to not only report but also better anticipate, recognize, evaluate, control, and confirm actions relative to the control of exposures associated with increased risk of occupational incidents and disease. Such traditional methodologies can be used, as needed, by almost any organization (AIHA, 2022).

The reporting of such traditional industrial hygiene methodologies can be straightforward. If the anticipation phase does not yield any suggestion of increased risk, such can be reported without successive steps being considered appropriate. Only upon the recognition finding of a specific occupational disease risk in an industry would further steps be considered appropriate to report pertaining to a specific organization within such an industry. Evaluation of industrial hygiene issues is frequently a long-term process, of which interim progress reports can be made before final analysis is complete. Controls are also ongoing and frequently continuous processes, and metrics such as the use of personal protective equipment, maintenance of industrial ventilation, and use of other controls can be reported as confirmed to be in place within organizations.

Perhaps the best practice and the most comprehensive industrial hygiene and safety management performance metrics incorporate measures of the continuing operation and efficacy of an environmental health and safety management system in the workplace. A robust management system includes industrial hygiene efforts aimed at “total worker health.”
The existence of such a management system (evidenced by certifications or annual self-reported information with periodic, validated, random audit results) appears to be currently among the most valuable of metrics for internal and external verification of continuing industrial hygiene management controls (ISO 45001:2018; NIOSH, 2016; ANSI/ASSP Z10:2019; ISO 26000:2010; ISO 31000:2018).

Summary
The complex nature of current HC/ESG reporting and debates around the subject will continue to evolve and mature, leading to the development of standardized requirements and methodologies. Although more fundamental changes are certain to occur, the good news for OEHS practitioners is that many of these global initiatives further our professional goals of worker and community health and wellbeing.

With the growing scope and impact of ESG initiatives today, the goal of this primer is to help OEHS practitioners understand the fundamentals of this complex topic to ensure that their OHS programs anticipate and—at a minimum, meet—current expectations of their organizations and other stakeholders.

Effective processes are currently available to generate the data and measure outcomes for organizations’ internal use regarding continuous improvement of OHS management systems and OHS-related ESG external reporting as appropriate.

In the interim and in anticipation of continuing evolution of ESG expectations of society at large, OEHS professionals can aid their organizations by assuring the implementation of effective metrics and performance measurement systems for OHS.
Resources and Suggested Readings


About AIHA

AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety (OEHS) in the workplace and community. Founded in 1939, the organization supports its members with expertise, networks, comprehensive education programs, and other products and services that help them maintain the highest professional and competency standards. More than half of AIHA’s nearly 8,500 members are Certified Industrial Hygienists, and many hold other professional designations. AIHA serves as a resource for those employed across the public and private sectors and the communities in which they work.

OEHS professionals (also known as industrial hygienists) practice the science of anticipating, recognizing, evaluating, controlling, and confirming protection from hazardous workplace conditions that may cause workers injury or illness. Through a continuous improvement cycle of planning, doing, checking, and acting, OEHS professionals make sure workplaces are healthy and safe.

Industrial and occupational hygiene professional organizations like AIHA exist around the world, and 35 organizations are members of the International Occupational Hygiene Association (IOHA) that represents over 20,000 industrial and occupational hygienists worldwide. IOHA is recognized as an NGO by both the International Labour Organization (ILO) and World Health Organization (WHO).

Industrial hygienists are employed in all sectors, including industry, construction, medical fields, research organizations, governments, and many other areas involving consulting.

AIHA’s Human Capital/ESG Task Force

The task force was formed and approved by the AIHA Board in 2021 to assist the association with impacting standards-development and educating its membership in human capital/ESG.

Task Force Charter

The terms “human and social capitals” have been gaining increasing visibility and importance in sustainability and corporate governance activities. A significant aspect in developing frameworks and reporting schemes in these spaces is the occupational and environmental health and safety (OEHS) and well-being of workers. AIHA has been actively contributing to the HC/ESG space for several decades and serving as a co-founder of the Center for Safety and Health Sustainability (CSHS) in 2010.

This task force has been established as part of AIHA’s ongoing leadership in HC/ESG to serve as a strategic advisor to the AIHA Board, contribute to framework/standards development, and assist with increasing the knowledge, skills, and abilities of the OEHS professional.

In addition to providing strategic direction, the task force will help the association:

1. Demonstrate a lead role and communicate to our members how we are helping to guide market-influencing developments in the sustainability field.
2. Educate and engage our members in ongoing developments in the evolving ESG field and the connections between OEHS and ESG/sustainability.
3. Influence the future direction of the sustainability field by giving feedback to SASB and others (e.g., GRI, International Financial Reporting Standards Foundation, World Economic Forum) on how they develop key performance indicators (metrics), frameworks, and technical protocol development centered on human health, well-being, and human capital management.

4. Liaise with and provide input to ESG rating bodies (those that evaluate companies based on their ESG performance).

**Task Force Members**
Charles Redinger (Chair, Editor), Zack Mansdorf (Editor), Kyle Dotson (Editor), Kalie Boot, Tom Fuller, Alyse Grumbles, Frank Hearl, Stephen Hemperly, Mary O’Reilly, and Marcos Sanchez.

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Organizational Glossary

CC: Capitals Coalition
CDP: Climate Disclosure Project
CDSB: Climate Disclosure Standards Board
CERES: Coalition for Environmentally Responsible Economies
ESRS: European Sustainability Reporting Standards
FLAG: Forest, Land, and Agriculture
GRI: Global Reporting Initiative
IASB: International Accounting Standards Board
IFRS: International Financial Reporting Standards
IIRC: International Integrated Reporting Committee
ISO: International Organization for Standardization
ISSB: International Sustainability Standards Board
NIOSH: National Institute for Occupational Safety and Health
NOMS: National Occupational Mortality Surveillance
SASB: Sustainability Accounting Standards Board
SEC: Securities and Exchange Commission
TCFD: Task Force on Climate-Related Financial Disclosures
TEEB: The Economics of Ecosystems and Biodiversity
UNDESA: United Nations Department of Economic and Social Affairs
UNEP: United Nations Environmental Program
VRF: Value Reporting Foundation

Acronyms

CSR: Corporate social responsibility
EHS: Environmental, health, and safety
ESG: Environmental, social, and governance
GAAP: Generally accepted accounting practices
HC: Human capital
HCM: Human capital management
NGO: Non-governmental organization
OEHS: Occupational and environmental health and safety
OHS: Occupational health and safety
SDG: Sustainable development goals
TBL: Triple bottom line—profit, people, and the planet
WE ARE AIHA

This is what we do.

Every single day, we work to empower those who apply scientific knowledge to protect all workers from occupational hazards.

This is how we do it.

We are experts in what we do. We use our knowledge to better protect people and the environment.

We are supportive. We exist to serve Occupational Health and Safety professionals, and are constantly searching for new ways to do so.

We are inclusive. We know we are all stronger when knowledge is shared among people coming from diverse backgrounds and across our allied professions.

We are forward-looking. We are growing and evolving with the industry, always looking ahead.

This is why we do it.

Working together, we all share one goal:
A world where all workers are healthy and safe.

The AIHA brand is evolving. To learn more about the process and find FAQs and more, please visit us at aiha.org