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PLATFORM

Industry Classifications in the Context of Impact Management

Uses, challenges and recommendations

November 2024

The Impact Management Platform (the "Platform") is a collaboration between the leading providers of sustainability standards and guidance that are coordinating efforts to mainstream the practice of impact management.

As of the time of publication, the Platform Partners comprise:

B Lab; Capitals Coalition; CDP; Global Impact Investing Network (GIIN); Global Reporting Initiative (GRI); Global Steering Group for Impact Investment (GSG); International Finance Corporation (IFC); International Foundation for Valuing Impacts (IFVI); International Organization for Standardization (ISO); Organisation for Economic Co-operation and Development (OECD); Principles for Responsible Investment (PRI); Social Value International; Taskforce on Nature-related Financial Disclosures (TNFD); United Nations Department of Economic and Social Affairs (UN DESA); United Nations Development Progamme (UNDP); United Nations Global Compact (UNGC); United Nations Environment Programme Finance Initiative (UNEP FI); World Benchmarking Alliance (WBA); with the IFRS Foundation as Observer.

The views and opinions expressed do not necessarily represent those of the Platform Partners.

Acknowledgements

This paper is the product of a collaborative effort by a working group convened by the Impact Management Platform (hereafter referred to as the Platform), comprising representatives of the Platform Partner and Observer organisations as well as representatives of other organisations with substantial experience in applying industry classifications within the context of managing sustainability issues. This working group held several discussions throughout 2023 and 2024, providing valuable insights and expertise that have been instrumental in shaping the content and conclusions of this paper.

While this paper reflects a collective effort, the views and opinions expressed do not necessarily represent those of the participating institutions and their representatives.

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Acronyms and abbreviations

ANZSIC	Australian and New Zealand Standard Industrial Classification
BICS	Bloomberg Industry Classification Standard
CO2	Carbon Dioxide
CSRD	Corporate Sustainability Reporting Directive
EFRAG	European Financial Reporting Advisory Group
ENCORE	Exploring Natural Capital Opportunities, Risks and Exposure
ESRS	European Sustainability Reporting Standards
EU	European Union
GICS	Global Industry Classification Standard
GIIN	Global Impact Investing Network
GRCS	Green Revenues Classification System
GRI	Global Reporting Initiative
ICB	Industry Classification Benchmark
IFRS	International Financial Reporting Standards
ISIC	International Standard Industrial Classification of All Economic Activities
ISSB	International Sustainability Standards Board
LSEG	London Stock Exchange Group
MSCI	Morgan Stanley Capital International
NACE	Nomenclature statistique des Activités économiques dans la Communauté Européenne
NAICS	North American Industry Classification System
OECD	Organisation for Economic Cooperation and Development
SASB	Sustainability Accounting Standards Board
SDG	Sustainable Development Goal
SICS	Sustainable Industry Classification System
TNFD	Taskforce on Nature-related Financial Disclosures
TRBC	The Reference data Business Classification
UNEP FI	United Nations Environment Programme Finance Initiative
UNEP-WCMC	United Nations Environment Programme World Conservation Monitoring Centre
UNSD	United Nations Statistics Division

Executive summary

This paper explains the significance of industry classifications in the context of impact management, explores current challenges faced by users of industry classifications for impact management purposes and offers a series of recommendations to address them.

Industry classifications categorise economic activities based on a set of definitions, principles and classification rules. They are used across both public and private sectors for multiple purposes including economic analysis and policy development, corporate reporting and business development, financial market analysis and investor portfolio management.

Because they help define what a company is and does, these classifications have also become indispensable for managing sustainability issues, particularly in the context of impact management. Industry classifications are referenced and used in various ways across a range of sustainability related standards, norms and resources. Specifically, they are used to define sustainable practices, identify sustainability-related issues, organise sustainability-related disclosures and analyse sustainability-related data.

Multiple challenges related to the use of industry classifications exist in the context of impact management. These challenges arise from a number of limitations presented by existing industry classifications, which broadly fall under four main categories: insufficient consideration of value chains, lack of granularity, gaps linked to the evolving nature of the economy and incomplete coverage of the economy.

These limitations may result in inaccurate or incomplete resources for impact management, which ultimately impede the effective management of organisations' impacts. Despite various approaches adopted by users to compensate for these limitations, none fully resolve the challenges encountered.

To fully address these challenges and ultimately promote more effective impact management, this paper argues that impact management considerations would need to be embedded directly into the design of industry classifications. In particular, two high-level principles are recommended to guide future reviews of existing industry classifications. Firstly, to align high-level sector groupings with distinct impact-relevant human and societal demands; secondly, to adapt the granular sector groupings based on relevant value chain components. Applying these principles would not only enable more efficient and effective impact management practices, but it would also promote the interoperability of industry classifications overall.

Finally, the paper makes the following recommendations to three main stakeholder categories:

- **Developers of official and market-based industry classifications** should take inspiration from the two principles to guide the revision process of their classifications.
- **Standard-setters and international organisations providing impact management resources** should work together to exchange on the specific needs and challenges they face with industry classifications in the context of their resource development, to further pilot the two principles and to engage developers of industry classifications and practitioners alike with their findings. They should also aim to converge on the industry classifications used, to enhance comparability across resources and provide greater transparency and relevance for users.
- **Enterprises, investors and financial institutions** should engage in on-going dialogue with both standard-setters and classification developers to provide feedback on the practical challenges of using current classifications for their impact management practices and suggest improvements.

If your organisation is interested in supporting this work, please get in touch with us: info@impactmanagementplatform.org

1. Introduction

Industry classifications categorise economic activities based on a set of definitions, principles and classification rules. They are used across both public and private sectors for multiple purposes including economic analysis and policy development, corporate reporting and business development, financial market analysis and investor portfolio management. Because they help define what a company is and does, these classifications have also become indispensable for managing sustainability issues.

Several Platform Partners and further organisations came together as a working group to explore how industry classifications are applied in the management of sustainability issues, particularly focusing on impact management. The group also sought to shed light on the challenges faced by standard setters and practitioners in this context and to examine the root causes of these challenges, as well as approaches to overcome them.

This paper captures the working group's findings and proposes a set of principles that could guide the further development of industry classifications in a manner that is fit for purpose for impact management. By applying such principles multiple benefits could be achieved:

- More granular and accurate impact management resources, including impact materiality mappings, sustainability indexes and ratings, ultimately resulting in better impact management
- Ability of industry classifications to be more reactive to the evolving economy, especially in the context of the fourth industrial revolution
- Enhanced interoperability between industry classifications, while also retaining the ability to reflect the specific realities and needs of different geographies
- Progress towards a common language between public (macro-economic) players and private (micro-economic) actors, currently relying on different sets of classifications, ultimately resulting in more effective policy and regulatory implementation

Key terms and concepts

This paper uses a number of terms that may be used and/or interpreted slightly differently by different players in various contexts. We have outlined below the usage made in the context of this paper.

Economic activity: this paper follows the definition of the OECD Glossary of Statistical Terms which describes it as a *process, i.e. the combination of actions that result in a certain set of products [and services].*

Sector: according to the OECD Glossary of Statistical Terms, this is *a general term used to describe a group of establishments that engage in similar kinds of economic activity. A sector can be a subgroup of an economic activity—as in "coal mining sector"—or a group of economic activities—as in "service sector"—or a cross-section of a group of economic activities—as in "informal sector"*. In this paper "sector" is used interchangeably with "economic activity" to indicate the broadest categories of activities within the economy.

Industry: a harmonised definition for this term does not exist in business statistics due to its wide usage in different circumstances. In the context of industry classifications, industries usually represent more detailed categories within sectors detailing the specific nature of the economic activities. In this paper, "industry" is used accordingly to indicate a more specific category within sectors.

Management of sustainability issues: this term is used in the paper to designate all forms of actions taken by organisations in relation to sustainability issues, regardless of the nature and scope of their motivations or the objectives they may be pursuing.

Impact management: when referring to impact management, this paper alludes to the collective definition of the Platform Partners (as per the Platform's Key Terms and Concepts*)* which describes it *as the process by which an organisation understands, acts on and communicates its impact(s) on people and the natural environment, in order to reduce negative impacts, increase positive impact(s) and ultimately to achieve sustainability and increase well-being*.

2. Industry classifications

Industry classifications categorise and organise economic activities based on a set of definitions, principles and classification rules. They are usually characterised by a hierarchical structure in which the highest tiers of the hierarchy consist of broad categories that aggregate economic activities based on fundamental distinctions. Moving down the levels, the classifications become more specific, disaggregating economic activities (or sectors) into more narrow categories such as industries, subindustries and beyond. Each sector and industry is assigned a code to identify and place it within the classification.

Exhibit 1 is an extract from the International Standard Industrial Classification of All Economic Activities Revision 5 (ISIC Rev.5)[1], the international standard for industry classifications developed by the United Nations Statistics Division (UNSD). This classification categorises all economic activities using a hierarchical four-level structure, beginning with "Section" at the top level (marked by letters) and descending through "Division", "Group" and "Class", each distinguished by two, three, and four-digit codes, respectively.

Section	Division	Group	Class	ISIC Rev.5 Title
A				Agriculture, forestry and fishing
	01			Crop and animal production, hunting and related service activities
		011		Growing of non-perennial crops
			0111	Growing of cereals (except rice), leguminous crops and oil seeds
			0112	Growing of rice
			0113	Growing of vegetables and melons, roots and tubers
			0114	Growing of sugar cane
			0115	Growing of tobacco
			0116	Growing of fibre crops
			0119	Growing of other non-perennial crops
		012		Growing of perennial crops
			0121	Growing of grapes
			0122	Growing of tropical and subtropical fruits
			0123	Growing of citrus fruits
			0124	Growing of pome fruits and stone fruits

Exhibit 1: Structure of ISIC Rev.5

Numerous classifications exist; some align closely with the ISIC standard, while others diverge from it. While industry classifications share a set of common characteristics, such as the hierarchical structure and the presence of mutually exclusive categories, significant elements distinguish one classification from another, namely their **source, purpose, methodology, scope** and **coverage**.

1 ISIC Rev.5 is a forthcoming UN publication. This exhibit, along with the others in the document, reflects the version of the documents available on the UN Statistics Division website, dated 11 March 2024.

Industry classifications can be developed by governmental and intergovernmental organisations or by market players like data providers for various purposes and users, ranging from economic analysis by government statistical offices to portfolio building for investors. Consequently, the methodologies for developing industry classifications differ; some focus on the type of business activity a company engages in, while others are centred around the markets and consumers that a company targets. Additionally, the scope of each industry classification varies, since some are designed to be global, while others are tailored to specific regions or countries. Finally, the extent of industries and sub-industries encompassed by each classification varies. Some cover the entire economy, while others focus only on sectors relevant to their intended audiences.

These characteristics are intricately linked, with the source and purpose standing out as key factors that significantly influence all the other elements. This relationship is illustrated in Figure 1 below.

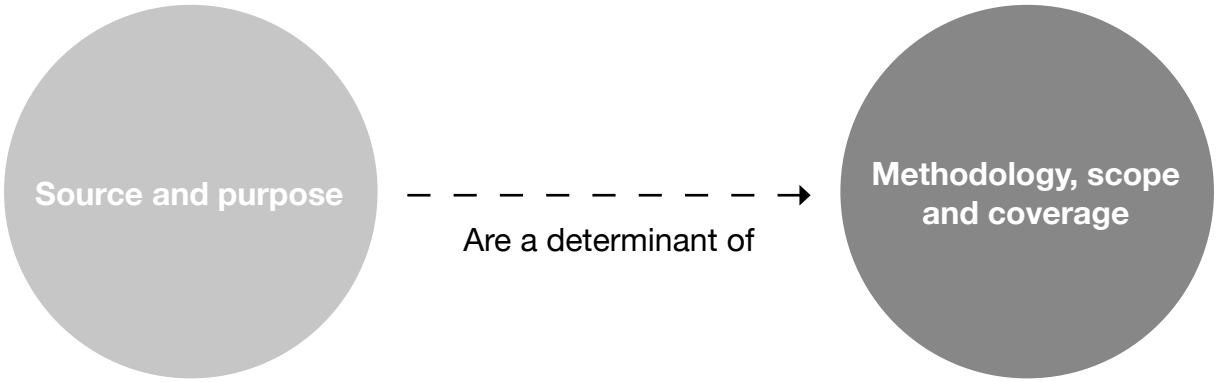


Figure 1: Relationship between characteristics of industry classifications

Although these elements manifest themselves differently in each classification, two broad groups of industry classifications are usually identified that tend to share similar characteristics:

- Official industry classifications
- Market-based industry classifications

Official industry classifications are primarily developed by governmental statistical agencies or intergovernmental organisations for national accounts and other economic analysis, but also for administrative and statistical purposes. Additionally, they are increasingly used by companies for financial reporting. These classifications follow an "activity-oriented"[2] approach, grouping industries based on similar economic activities. They consider the inputs, process and technology of production[3], as well as the characteristics and end use of the outputs. Official industry classifications tend to include all economic activities and, apart from ISIC (the international standard), their use is usually limited to the jurisdiction in which they apply. This category of classifications includes the ISIC and a multitude of region- or country-specific classifications, which adapt the international

2 Others commonly refer to this type of classifications as "production-oriented" (see for example Phillips and Ormsby, 2016, Industry classification schemes: An analysis and review, *Journal of Business and Finance*).

3 In this context, "technology of production" encompasses the methods, processes, equipment and techniques used by companies within an industry to produce goods or services.

standard in accordance with the local economic landscape. Examples of region- and country-specific classifications are NACE, NAICS and ANZSIC.

Market-based industry classifications are developed by capital market participants (such as data providers) for market analysis and investment decision-making and are used by the global financial community. These classifications usually follow a "demand-oriented"[4] approach, in which similar products that serve related markets are grouped together. They consider the type, value, end use and customer base of a product or service. Most market-based industry classifications are global in scope and their coverage is usually restricted to the sectors commonly associated with capital markets, while generally excluding activities like the public sector. This category of classifications includes, among others, BICS, GICS, ICB and TRBC.

Table 1 provides a non-exhaustive list of most widely used official and market-based industry classifications.

Table 1: Non-exhaustive list of most widely used official and market-based industry classifications

Official Industry Classifications (activity-oriented approach)	
Name	**Source**
ISIC	United Nations
NACE	Eurostat
NAICS	United States of America, Canada and Mexico statistical agencies
ANZSIC	Australia and New Zealand statistical agencies

Market-based Industry Classifications (demand-oriented approach)	
Name	**Source**
BICS	Bloomberg
GICS	MSCI and Standard & Poor's
ICB	FTSE Russell
TRBC	LSEG

References to these types of industry classifications and other related classifications are made throughout this paper, with further details of their characteristics to be found in Annex 1.

4 Others commonly refer to this type of classifications as "market-oriented" (see for example, Phillips and Ormsby, 2016, Industry classification schemes: An analysis and review, *Journal of Business and Finance*).

3. Uses of industry classifications for impact management

As explained in Chapter 2, official and market-based industry classifications were not originally developed for impact management purposes. Nevertheless, market participants and standard setters are increasingly recognising their importance and applicability in this context, notably due to the critical role that sectors and sectoral characteristics play in driving impacts.

The *types* of impact an organisation might have strongly depend on the economic activities (or sectors) in which it primarily engages. In particular, sectors determine the specific *drivers* of these impacts (based on their inputs, activities and outputs), as well as the organisation's distance or proximity to its impacts and hence the *levers* available to it to manage them.

Figure 2 shows how impact drivers, impacts and impact management levers are distinct and specific to different sectors. It is illustrative and not intended to provide a comprehensive overview of the example sectors included.

Because industry classifications are used to organise all economic and financial activities, from registries to listing requirements, lending books and financial disclosures, they have inevitably become foundational to sustainability processes as well, many of which are attached to these activities (e.g. sustainability criteria integrated into listing requirements, lending and investment criteria, corporate disclosures).

Looking more closely at the example of financial and investment activities, financial institutions use industry classifications for client categorisation and portfolio building. Although this use case is not specifically directed at the management of sustainability issues, it helps create a useful foundation for it. In fact, understanding portfolio composition is crucial for financial institutions to identify relevant sustainability issues based on the impact associations that each sector in the portfolio drives. Financial institutions can shift their portfolios or steward clients in specific sectors to foster transitions (to new technologies, socially acceptable business practices or others).

Table 2 provides an overview of the primary uses of industry classifications and uses for sustainability purposes. Users are organised into two main groups: market players and the standard setting community.

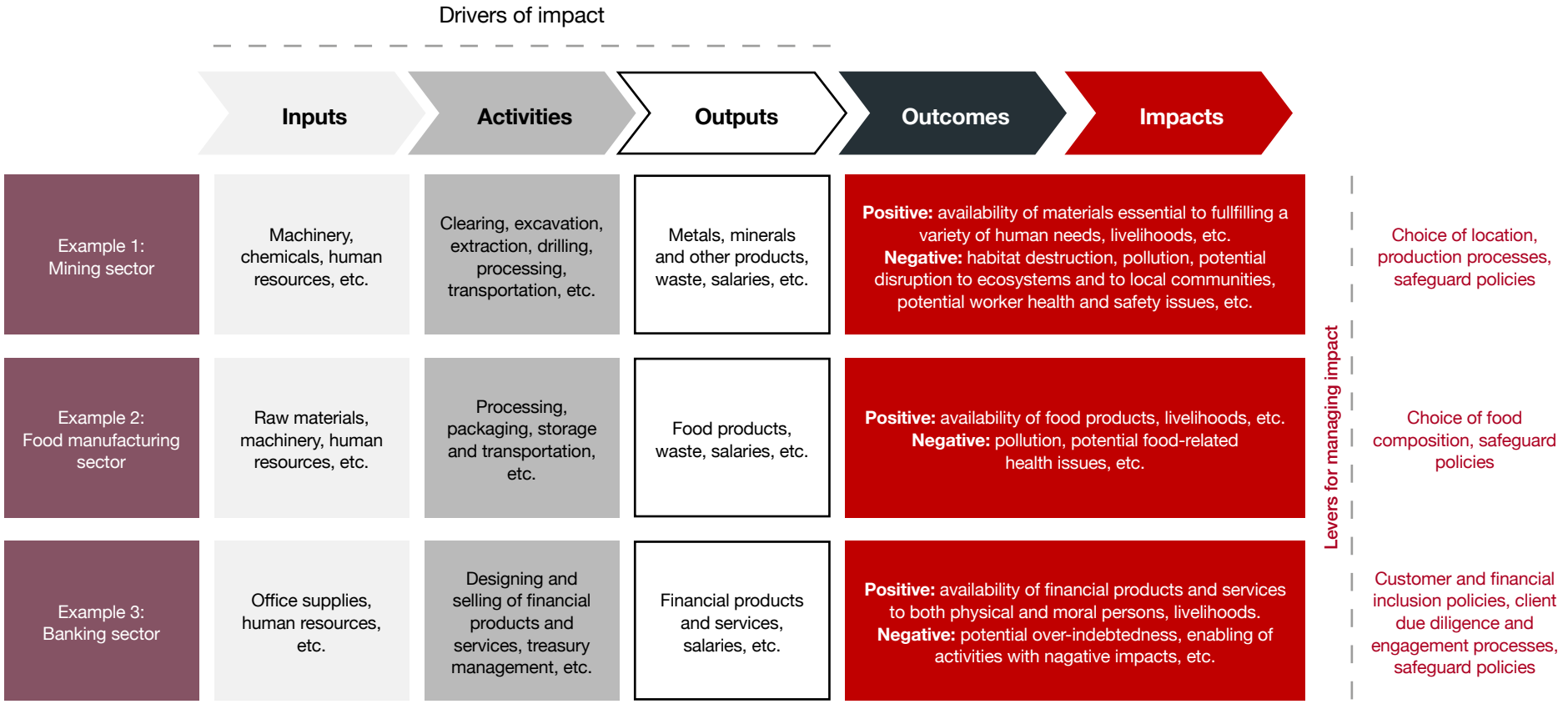


Figure 2: Sector specificity of organisations' impact drivers, impacts and impact management levers[5]

5 This figure is based on the Impact Pathway as per the Impact Management Platform Key Terms and Concepts.

Table 2: Users and uses of industry classifications

		Primary uses of industry classifications		Uses of industry classifications for sustainability purposes
		Official industry classifications	**Market-based industry classifications**	
Market players	**Enterprises**	▪ Financial disclosures	▪ Stock exchange listings	▪ Sustainability disclosures
	Financial institutions	▪ Financial disclosures ▪ Portfolio/client classification	▪ Stock exchange listings ▪ Portfolio/client classification	▪ Sustainability disclosures ▪ Mappings and related sustainability resources for impact management purposes
	Investors	▪ Portfolio/investee company classification	▪ Portfolio/investee company classification	▪ Mappings and related sustainability resources to assess and/or compose portfolios/funds, etc.
	Data providers & analysts		▪ Presentation of listings, rankings for financial purposes	▪ Presentation of listings, rankings for sustainability purposes
Standard setting community	**Regulators**	▪ Corporate registries ▪ Financial disclosure regimes (e.g. prudential)		▪ Sustainability disclosure regimes (e.g. CSRD/ESRS) ▪ Other corporate regulation (e.g. taxonomies)
	Policy-makers	▪ Building and referral to sector based statistical data sets (e.g. economic analysis)		▪ Development of industrial policies and sectoral transition plans
	Norm-builders	▪ Directing standard users to relevant standards		▪ Directing preparers of sustainability disclosures to relevant disclosures (e.g. GRI sector classification tables) ▪ Sustainability disclosures (e.g. ISSB) ▪ Sectoral reviews/impact mappings and associated tools/guidance (e.g. UNEP FI, UNEP-WCMC, TNFD, GIIN)

Overall, industry classifications are instrumental in four key sustainability use cases:

- They help define sustainable practices
- They support the identification and management of sustainability-related issues
- They enable effective disclosure of sustainability-related data
- They assist with sustainability-related data analysis

These different uses contribute to the majority, if not all, of the actions an organisation can take to manage its impacts, showing the significance of sectoral considerations throughout the entire impact management process. Figure 3 below outlines how the four use case categories relate to the Platform's Actions of Impact Management. The ensuing sections explore each category individually, providing illustrations for each.

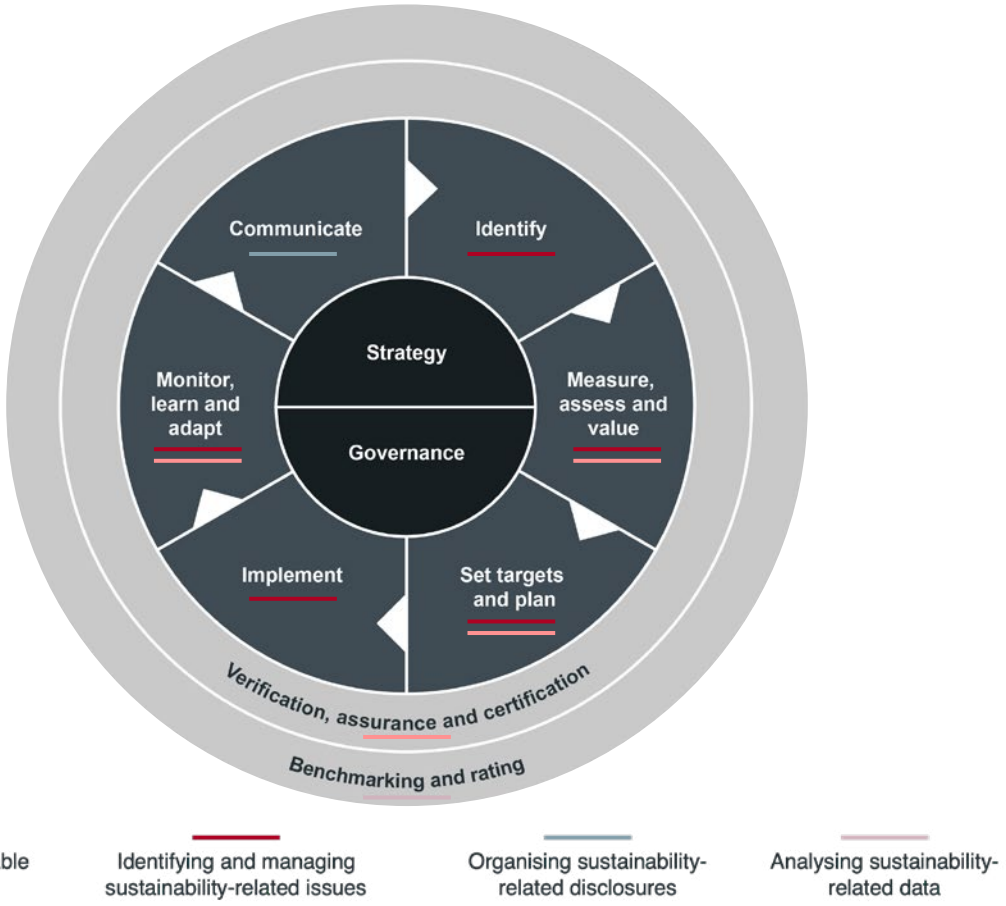


Figure 3: Sustainability use cases of industry classifications and their relevance to impact management

3.1 Defining sustainable practices

A key use of industry classifications is to support the definition of sustainable practices, primarily through the development of sustainability taxonomies.

Sustainability taxonomies categorise economic activities based on sustainability criteria to help investors, policymakers and companies identify and promote sustainable practices. The starting point for developing this type of resource is usually an industry classification. This provides a comprehensive overview of all sectors of the economy, offering a foundation from which to identify environmentally or socially sustainable activities.

In some cases, sustainability taxonomies use a subset of an industry classification, listing only eligible (potentially sustainable) activities along with criteria and thresholds. These are used to assess the alignment of an organisation's activities with the taxonomy. For example, the European Union (EU) Taxonomy for Sustainable Activities[6] uses NACE codes to categorise and define which economic activities can be considered environmentally sustainable. The Taxonomy also includes additional activities that are not captured by NACE codes. An extract of the EU Taxonomy can be found in Exhibit 2.

NACE	Sector	Activity	Contribution type	Description
C25, C27, C28	Manufacturing	Manufacture of renewable energ	Enabling	Manufacture of renewable energy tecl
C25, C27, C28	Manufacturing	Manufacture of equipment for th	Enabling	Manufacture of equipment for the prc
C29.1, C30.1, C30.2, C30.9, C33.	Manufacturing	Manufacture of low carbon techn	Enabling	Manufacture, repair, maintenance, ret
C27.2, E38.32	Manufacturing	Manufacture of batteries	Enabling	Manufacture of rechargeable batteries
C23.51	Manufacturing	Manufacture of cement	Transitional	Manufacture of cement clinker, cemer
C24.42, C24.53	Manufacturing	Manufacture of aluminium	Transitional	Manufacture of aluminium through pr
C24.10, C24.20, C24.31, C24.32,	Manufacturing	Manufacture of iron and steel	Transitional	Manufacture of iron and steel. The ecc
C20.11	Manufacturing	Manufacture of hydrogen		Manufacture of hydrogen and hydroge
C20.13	Manufacturing	Manufacture of carbon black	Transitional	Manufacture of carbon black. The eco
C16.23, C23.11, C23.20, C23.31,	Manufacturing	Manufacture of energy efficiency	Enabling	Manufacture of energy efficiency equi
C22, C25, C26, C27, C28	Manufacturing	Manufacture of other low carbon	Enabling	Manufacture of technologies aimed at
A2	Forestry	Afforestation		Establishment of forest through planti
A2	Forestry	Rehabilitation and restoration of forests, including re		Rehabilitation and restoration of fores
A2	Forestry	Forest management		Forest management as defined by nati
A2	Forestry	Conservation forestry		Forest management activities with the
	Environmental pro	Restoration of wetlands		Restoration of wetlands refers to econ

Exhibit 2: Extract from the EU Taxonomy (Compass)[7]

In other cases, sustainability taxonomies use existing industry classifications as a reference but then develop categories that diverge from traditional classifications to better align with sustainability goals. For example, these taxonomies include subcategories for sustainable products or cross-cutting activities that span multiple traditional industry categories. An illustration is the LSEG's Green Revenues Classification System (GRCS)[8],

6 The EU Taxonomy is a classification system that helps companies and investors identify "environmentally sustainable" economic activities to make sustainable investment decisions. Environmentally sustainable economic activities are described as those which "make a substantial contribution to at least one of the EU's climate and environmental objectives, while at the same time not significantly harming any of these objectives and meeting minimum safeguards".

7 The EU Taxonomy Compass is a tool that allows to visualise the sectors, activities and criteria included in the EU Taxonomy.

8 LSEG's Green Revenues Classification System (GRCS) identifies companies that generate revenue from green products and services and categorises green revenues across 10 green sectors, 64 subsectors and 133 micro sectors.

which defines the proportion of green revenues a company derives from green activities. This resource includes high-level sector groupings that overlap with existing industry classifications but offers more detailed granular levels than traditional classifications. An extract of the GRCS can be found in Exhibit 3.

Sector EG **Energy Generation**		Revenue generating activities from the generation of power from renewable and alternative energy sources.		
Sub-Sector	**Micro-sector**	**Green Tier**	**Code**	**Description**
Bio Fuels	Bio Fuels (General)	TIER 3	EG.01.0	Revenue generating activities related specifically to the operation and supply of power generation facilities that utilizes non-fossilized organic material, with the exception of peat.
	Bio Gas	TIER 2	EG.01.1	Revenue generating activities related specifically to the operation and supply of power generation facilities that utilizes gas generated through the active decomposition of organic matter, typically during landfill processes.
	Bio Mass (Grown)	TIER 3	EG.01.2	Revenue generating activities related specifically to the operation and supply of electricity from power generation facilities that utilizes crops grown as a fuel source.
	Bio Mass (Waste)	TIER 2	EG.01.3	Revenue generating activities related specifically to the operation and supply of electricity from power generation facilities that utilizes organic byproducts of the agricultural and other systems.
Cogeneration	Cogeneration (General)	TIER 2	EG.02.0	Revenue generating activities related specifically to the operation and supply of power generation where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Biomass)	TIER 1	EG.02.1	Revenue generating activities related specifically to the operation and supply of power generation where primary source is biomass-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Renewable)	TIER 1	EG.02.2	Revenue generating activities related specifically to the operation and supply of power generation where primary source is renewables-based, and where the waste heat is utilized for large-scale heating and/or cooling purposes.
	Cogeneration (Gas)	TIER 2	EG.02.3	Revenue generating activities related specifically to the operation and supply of power generation where the primary source is natural gas, but where the waste heat is utilized for large-scale heating and/or cooling purposes.

Exhibit 3: Extract from the LSEG's Green Revenues Classification System

As the examples above suggest, existing industry classifications pose **challenges** for **developers of sustainability taxonomies**; indeed, they must often customise categories or create entirely new classifications for taxonomies, since traditional classifications lack the granularity needed to accurately identify sustainable activities and frequently omit newer and emerging sectors.

The challenges faced by developers can also create obstacles for **companies using these resources** who, in turn, may face an increased burden in data collection and reporting. Companies operating across multiple jurisdictions need to navigate multiple taxonomies which are not only based on different (usually jurisdictional) industry classifications; these also present additional variations as each developer reaches slightly different solutions to include additional or more granular sectors. This challenge is further exacerbated by the fact that, in addition to the sustainability taxonomies developed jurisdictionally, further taxonomies and sector-specific guidance are sometimes developed by industry associations seeking to address unique sectoral characteristics.

3.2 Identifying sustainability-related issues

Another major application of industry classifications is the identification of sustainability-related issues through a range of impact management resources. Many of these resources rely on industry classifications for various steps of the impact management process, ranging from identifying sustainability impacts that are relevant for an organisation to manage based on their sector(s), to providing indicators that organisations can use to set target and develop action plans.

For example, ENCORE[9], a resource maintained by Global Canopy, UNEP FI and UNEP-WCMC, uses the ISIC Rev.4 to set out how different sectors depend on and impact nature. More specifically, the ENCORE knowledge base includes 271 economic activities, drawing from ISIC level three (Group) and level four (Class) and identifies nature-related dependencies and pressures for each of them. Exhibit 4 illustrates the pressure links for a few selected ISIC codes.

	Economic activity					Pressures	
ISIC Unique code	ISIC Section	ISIC Division	ISIC Group	ISIC Class	ISIC level used for analysis	Emissions of GHG	Emissions of toxic soil and water pollutants
A_1_11_112	Agriculture, forestry and fishing	Crop and animal production, hunting and related service activities	Growing of non-perennial crops	Growing of rice	Class	Growing of rice can release significant greenhouse gases emissions - the paddy rice fields release methane and nitrous oxide emissions. The amount of N20 emissions increases with higher use of synthetic fertilisers. Some agricultural machinery and equipment use combustion engines, which also release greenhouse gas emissions.	Conventional rice fields use pesticides and herbicides such as propanil, quinclorac, sulfonylurea, fipronil, cartap, niclosamide, and formaldehyde. These toxic pollutants accumulate in the soil and the runoff can lead to pollution of soil and water in nearby areas.
C_20_201_2013	Manufacturing	Manufacture of chemicals and chemical products	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms	Manufacture of plastics and synthetic rubber in primary forms	Class	Manufacturing of plastics and synthetic rubber in primary forms can release greenhouse gases through energy use to achieve the high temperatures required for this economic activity. Where the factories are powered using on-site energy generators, these produce significant greenhouse gas emissions	Chemical discharge, improper waste disposal, and landfill practices from the manufacture of plastics and synthetic rubber in primary forms, can contaminate the soil and water with toxic substances and contribute to pollution.

Exhibit 4: Extract from the ENCORE knowledge base

The UNEP FI Sector-Impact Map and Impact Analysis Tools[10] have a similar application. They rely on ISIC Rev.4 to help practitioners identify the potential impacts of their sector(s) on different sustainability topics, determine significant impact topics and assess their current impact management practice and performance. Another resource built on ISIC Rev.4, the UNEP FI Indicator Library, compiles a range of practice and impact indicators from various organisations, mapping them to each combination of sector and sustainability topic. Exhibit 5 provides an extract of the "Sector-Impact Map". It shows the positive and negative impacts of a few selected ISIC classes on different sustainability topics, making a distinction between regular impact associations (identified through a "1") and key impact associations (identified through a "2").

9 Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE) is a key tool supporting financial institutions, businesses and regulators to meet the Taskforce on Nature-related Financial Disclosures Recommendations (TNFD) by helping them understand how the economy is exposed to natural capital-related risks.

10 The UNEP FI Impact Analysis Tools are open-source Tools designed for banks, investors and their corporate clients and investee companies to conduct holistic impact analysis and management across their business activities.

				LIVELIHOOD		HEALTHY ECONOMIES		CIRCULARITY	
Level4 Code	Level4 Name (ISIC Class)	ImpactType	Key sectors	Social protection	Social protection C	Flourishing MSMEs	Flourishing MSMEs C	Waste	Waste C
0115	Growing of tobacco	Positive	x						
0115	Growing of tobacco	Negative	x	2	potentially informal labour. Potentially little or no social protection			2	e.g. chemicals containers, old machinery
0510	Mining of hard coal	Positive	x						
0510	Mining of hard coal	Negative	x	1	potentially informal labour. Potentially little or no social protection	1	big mining companies' dominance	2	waste from extraction process & old machinery
1410	Manufacture of wearing apparel, except fur apparel	Positive				1	manufacturing providing opportunities for MSMEs		
1410	Manufacture of wearing apparel, except fur apparel	Negative	x	1	potentially informal labour. Potentially little or no social protection			2	On average, less than 1% of used textiles and clothing are brought back into the manufacturing process, waste from processing &

Exhibit 5: Extract from the UNEP FI Sector-Impact Map

As with sustainability taxonomy developers, the main **challenges** faced by **developers of impact management resources** usually relate to the lack of granularity and the absence of some sectors in existing industry classifications. These limitations affect developers' ability to map comprehensive and accurate impact associations and dependencies and to define sector-specific impact indicators accordingly.

In turn, **organisations using these resources** may find that their impact identification and their impact management practices are negatively affected. If the impact associations of different sectors cannot be properly mapped due to the limitations pointed out above, some sustainability topics may be over- or under-represented. This can result in organisations focusing their efforts on impact topics that are less significantly related to their business or omitting some which, on the contrary, they are well positioned to address.

3.3 Organising sustainability-related disclosures

Industry classifications are also used in the context of sustainability reporting. Sustainability-related reporting standards tend to offer a combination of sector-agnostic and sector-specific disclosures, with the latter organised around a concise set of sector groupings established by the standard-setter. Industry classifications ensure that companies report on the sustainability topics most pertinent to their sector and that they comply with applicable requirements. Additionally, they facilitate consistency and comparability of disclosures within and across sectors.

In some cases, standard-setters use industry classifications to guide the implementation of sector-specific reporting standards rather than applying them directly. For example, the GRI Sector Program[11] has identified a list of priority sectors for developing their sector standards. For this purpose, GRI has divided the economy into 40 sectors and auton-

11 The GRI's Sector Program developed the GRI Sector Standards, a set of sector-specific GRI Standards. They are designed to identify the most significant impacts of various sectors and align with stakeholders' expectations for sustainability reporting.

omously determined the placement of various activities within these sectors. Each GRI Sector Standard includes references to corresponding industries in some of the existing industry classifications (ISIC, GICS, ICB and SICS). For example, Exhibit 6 provides an extract from the GRI list of prioritised sectors and Exhibit 7 shows the correspondences of GRI 14: Mining across different classifications.

Sector	Description of activities
Group 1: Basic materials and needs	
Oil and gas	Exploration and production of oil and gas; suppliers of equipment and services to oil and gas fields; storage and transportation; refining and marketing of oil and gas products.
Coal	Exploration and extraction of coal; suppliers of equipment and services to coal mines; storage and transportation; refining and marketing of coal products.
Agriculture, aquaculture, and fishing	Agriculture, animal husbandry, aquaculture, and fishing. Including rubber but excluding hunting and forestry.
Mining	Exploration and extraction of minerals, except coal; suppliers of equipment and services to mining; storage and transportation; refining and marketing of minerals.
Food and beverages	Manufacturing of food, beverages and tobacco.
Textiles and apparel	Manufacturing and retail of textiles, apparel, footwear, and accessories.

Exhibit 6: Extract from the GRI list of prioritised sectors

GRI 14: Mining Sector 2024

CLASSIFICATION SYSTEM	CLASSIFICATION NUMBER	CLASSIFICATION NAME
GICS®	151040	Metals and Mining (excluding manufacturers of aluminum and steel, and metal recycling)
ICB	551020000	General Mining
	55102010	Iron and Steel (excluding manufacturers of steel and metal recycling)
	55102035	Aluminum (excluding manufacturers of aluminum and metal recycling)
	55102040	Copper (excluding smelters and metal recycling)
	55102050	Nonferrous Metals (excluding smelters and metal recycling)
	55103020	Diamonds and Gemstones
	55103025	Gold Mining (excluding smelters and metal recycling)
	55103030	Platinum and precious metals (excluding smelters and metal recycling)
ISIC	07	Mining of metal ores
	08	Other mining and quarrying
	099	Support activities for other mining and quarrying
SICS®	EM-3	Metals and Mining (excluding manufacturers of aluminum and steel, and metal recycling)

Exhibit 7: Mapping of GRI 14: Mining 2024 across different industry classifications

In other cases, industry classifications are a building block for the development of sector standards. For example, both IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures require an entity to disclose industry-based metrics. IFRS S2 requires an entity to refer to and consider the IFRS S2 Industry-based Guidance on implementing Climate-related Disclosures[12], which is built on the Sustainability Accounting Standards Board (SASB) Standards and categorised pursuant to the Sustainable Industry Classification System (SICS)[13], which adopts a sustainability-related approach for industry groupings. Exhibit 8 shows the sustainability disclosure topics and metrics for the "Construction Materials" industry, within the "Extractives & Minerals Processing" sector.

Extractives & Minerals Processing Sector

Volume 8—Construction Materials

Industry Description

Construction Materials entities have global operations and produce construction materials for sale to construction entities or wholesale distributors. These primarily include cement and aggregates, but also glass, plastic materials, insulation, bricks and roofing material. Materials producers operate their own quarries, mining crushed stone or sand and gravel. They may also purchase raw materials from the mining and petroleum industries.

Note: Entities producing wood-building products are included the Building Products & Furnishings (CG-BF) industry, Forestry Management industry (RR-FM), and Pulp & Paper Products industry (RR-PP) under the Sustainable Industry Classification System (SICS) and are not included in the Construction Materials standard.

Sustainability Disclosure Topics & Metrics

Table 1. Sustainability Disclosure Topics & Metrics

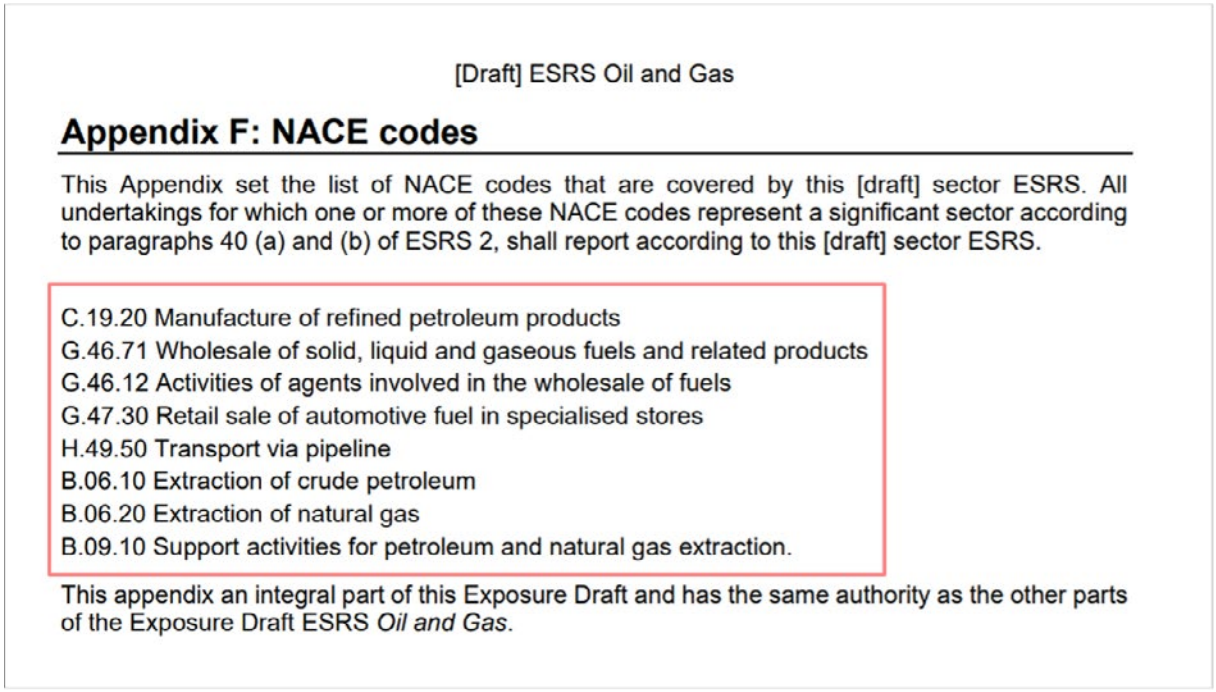
Topic	Metric	Category	Unit of Measure	Code
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tons (t) CO_2-e, Percentage (%)	EM-CM-110a.1
	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	EM-CM-110a.2
Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM_{10}), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs) and (7) heavy metals	Quantitative	Metric tons (t)	EM-CM-120a.1

Exhibit 8: Description of the SICS Construction Materials industry and related Sustainability Disclosure Topics & Metrics

12 The IFRS S2 Industry Based-Guidance on implementing Climate-related Disclosures issued by the International Sustainability Standards Board (ISSB) accompanies IFRS S2 Climate-related Disclosures to integrate sector specific insights and best practices for comprehensive and effective reporting of financially material sustainability-related information.

13 SICS is an industry classification system which categorises companies under a sustainability lens. SICS builds on and complements traditional classification systems by grouping companies into sectors and industries in accordance with a fundamental view of their business model, their resource intensity and sustainability impacts and their sustainability innovation potential. This industry classification system was originally developed by the SASB, which is now under IFRS Foundation stewardship, having been merged into the organisation.

Similarly, the EFRAG[14] Sustainability Reporting Board is developing a sector classification system (SEC 1)[15], based on NACE Rev. 2.1, to provide disclosure preparers with a clear reference on how to report their sector activities. This will be the starting point for the application of sector-specific disclosures under the European Sustainability Reporting Standards (ESRS). Exhibit 9 shows the NACE codes covered by the draft sector standard on Oil and Gas[16], defined as such based on SEC 1.



[Draft] ESRS Oil and Gas

Appendix F: NACE codes

This Appendix set the list of NACE codes that are covered by this [draft] sector ESRS. All undertakings for which one or more of these NACE codes represent a significant sector according to paragraphs 40 (a) and (b) of ESRS 2, shall report according to this [draft] sector ESRS.

C.19.20 Manufacture of refined petroleum products
G.46.71 Wholesale of solid, liquid and gaseous fuels and related products
G.46.12 Activities of agents involved in the wholesale of fuels
G.47.30 Retail sale of automotive fuel in specialised stores
H.49.50 Transport via pipeline
B.06.10 Extraction of crude petroleum
B.06.20 Extraction of natural gas
B.09.10 Support activities for petroleum and natural gas extraction.

This appendix an integral part of this Exposure Draft and has the same authority as the other parts of the Exposure Draft ESRS *Oil and Gas*.

Exhibit 9: Extract from Exposure Draft of ESRS for Oil and Gas (as of 4 September 2024)

Developers of sustainability-related standards that do not directly apply industry classifications can face fewer **challenges**. These primarily relate to mapping sector standards to existing classifications, which are often structured differently due to their different purposes and therefore hinder comparability. Those who do build their standards on industry classifications are often confronted with industry groupings that combine companies from sectors with vastly different sustainability characteristics and business models. This forces them to adjust existing classifications or create new ones.

The challenges for the **organisations using these standards** can be more significant. Preparers of sustainability disclosures whose activities focus on very specific sectors or span multiple sectors may face difficulties with disclosures that are not always in alignment with the nature of their business, given the high level at which the mapping to industry classifications is kept.

14 The European Financial Reporting Advisory Group (EFRAG) is the EU-mandated technical body that supports the development of the ESRS.

15 SEC 1 is the ESRS sector classification which will be enacted as an ESRS delegated act after the public consultation and subsequent changes to inform the development and implementation of sector-specific ESRS.

16 The exhibit is an extract from the ESRS Oil and Gas Exposure Draft, dated 4 September 2024. This document, along with others on the EFRAG website, is part of the ongoing standard development process carried out by EFRAG.

3.4 Analysing sustainability-related data

Industry classifications are also used by data providers to collect, analyse and categorise sustainability-related data on individual companies, with the companies' sector(s) being an important determinant of the various data points to consider. This information is used by investors for equity benchmarking and selection and by a variety of other players, including companies, with an interest in comparing corporate sustainability practices and profiles.

Specifically, industry classifications are fundamental in determining the architecture of data providers' datasets. They help group companies within similar industries, facilitating a more nuanced and accurate analysis and ensuring meaningful and actionable comparison within and across sectors for investors and analysts.

Many data providers are themselves the source of the industry classifications they use; for instance, Bloomberg employs BICS while MSCI and Standard & Poor's issue analytics based on GICS.

Examples of products developed based on these market-based classifications include the Bloomberg SDG methodology[17] which aims to identify the potential SDG impacts of companies. The resource maps more than 500 sectoral activities (according to BICS), to 38 impact topics and to the SDGs, distinguishing between positive and negative impacts a company may have on the environment, people and economic development. By linking SDG impacts by industry to segment revenues as reported by the company, the product aims to provide investors with objective and comparable insights into potentially material positive or negative SDG impacts. As an illustration, an investor can choose from the universe of chemical companies by filtering for health linkages (pharma), environmental impact (plastics, automotive) or agricultural impacts (fertiliser production). Each of these activities has varying material impacts and aligns with different sustainable investment objectives.

Developers of data analytics and benchmarks often own and manage their industry classifications (the market-based classifications) and build their products upon them. Although these players have more leverage to adapt their classifications, the extent to which these present limitations for impact management purposes varies. A common **challenge** they face, regardless of the nature of their classifications, is that of mapping official classifications to their own market-based classifications and identifying correspondences.

Most challenges are faced by the **users of analytics and benchmarks**, who rely on various datasets, built with different industry classifications and varying levels of granularity. This often results in inconsistent company assessment from one dataset to another. Additionally, companies operating in the same sector but with varying levels of integrated business models (a food manufacturer that also produces its own crops versus one that focuses solely on food transformation) are often grouped together, despite their inherently different impact profiles. As a result, they may be either under- or over-rated by best-in-class scorings.

17 For more information, see the press announcement.

3.5 Key take-aways

The key take-aways regarding the uses and challenges of industry classifications in the context of impact management can be summarised as follows:

- Industry classifications are fundamental for impact management and its associated components.
- In some cases, such as for organising sustainability-related disclosures, industry classifications are used at a high-level to inform broad sector categorisation; in other instances, such as for defining sustainable practices, identifying sustainability-related issues and analysing sustainability-related data, classifications are applied at a more granular level using detailed sector categorisation.
- The higher the level of granularity applied by the user of industry classifications, the more significant the challenges can be.

The next chapter explores these challenges in further detail.

4. Limitations of industry classifications for impact management purposes

As seen in the previous chapter, industry classifications play an important role in the management of sustainability-related issues, particularly as regards impact management; however, users of these classifications face multiple challenges that, ultimately, impede effective impact management practices. The challenges encountered are linked to four main limitations of industry classifications:

- Insufficient consideration of value chains
- Lack of granularity
- Gaps linked to the evolving nature of the economy
- Incomplete coverage of the economy

This chapter elaborates on each limitation more thoroughly.

4.1 Insufficient consideration of value chains

The analysis of official and market-based industry classifications demonstrates that, in defining and grouping sectors, they don't always take into account sectors' value chain characteristics[18] or do so inconsistently.

In the case of **market-based industry classifications**, this results from their typical "demand-oriented" approach[19]. Since they mainly put emphasis on consumers rather than producers, market-based classifications are usually biased towards the output side of the value chain, showing less consideration of characteristics such as inputs and production processes.

As an illustration (see Exhibit 10), the transportation sector under GICS partially accounts for the production processes and outputs but lacks detail on the inputs. Indeed, distinctions are made among water, air and land transportation, but not in a comprehensive manner. For example, while marine transportation is included, inland water transportation is excluded. Similarly, the purpose of the transport (individuals, communities, goods) is

18 These characteristics include inputs, activities and production processes as well as the characteristics and use of the outputs.

19 As explained in Chapter 2, industry classifications following a "demand-oriented approach" group industries based on similarity of products and markets. These classifications consider the type, value, end use, customer base and end-user of a product or service.

only partially represented and in an inconsistent way. For ground and air transportation, a distinction between goods and passengers is clearly made, with the former categorised as a subindustry and the latter as a separate industry. However, marine transportation does not follow this differentiation, treating both goods and passenger services under a unified category.

Finally, the fuels that power the different modes of transportation are not taken into consideration, despite their significance from an impact management perspective. Indeed, the transportation sector is one of the most energy-intensive sectors and, therefore, plays a key role in climate change mitigation. Particularly, petroleum-based transportation emits significant amounts of carbon dioxide (CO2) because of the combustion of fossil fuels. Electric vehicles produce little to no direct emissions; however, upstream in the value chain, the production of batteries, such as lithium-ion batteries commonly used in electric vehicles, involves mining and processing activities that release significant greenhouse gas emissions and can introduce toxic substances into the soil and water, thereby affecting ecosystems.

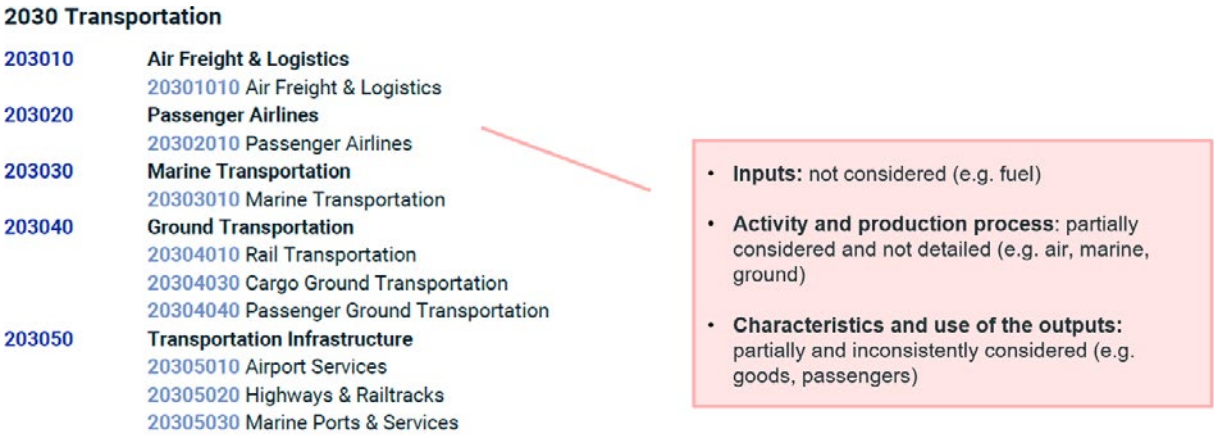


Exhibit 10: Value chain considerations in GICS (transportation sector)

Official industry classifications should, in principle, cover value chains in a more comprehensive manner, in alignment with the "activity-oriented"[20] approach that characterises them. However, an analysis of these classifications demonstrates that the integration of value chain characteristics varies significantly across sectors, resulting in gaps for certain portions of the value chain.

For instance, ISIC Rev.5 details the characteristics of the mining sector's outputs but overlooks the inputs and production processes. As shown in Exhibit 11, ISIC does not make a distinction between different types of mining processes and technologies (underground, open pit, placer, in-situ, deep sea mining), even though these are fundamentally different activities with significant implications from an impact management standpoint.

Open pit mining causes extensive land disruption and community displacement, impacting local populations and livelihoods. Meanwhile, underground mining has a smaller surface footprint but poses significant workforce health and safety risks since these mines

20 As explained in Chapter 2, industry classifications following an "activity-oriented approach" group industries based on similarities of economic activities. These classifications take into account the inputs, process and technology of production, as well as the characteristics and end use of the outputs.

are more prone to collapse or fire compared to open pit mines. In situ mining, involving the use of aggressive chemicals, can result in severe groundwater contamination and environmental degradation, as well as potential health risks to nearby communities. Deep-sea mining poses serious risks to marine ecosystems, with social implications for communities relying on marine resources.

Section	Division	Group	Class	ISIC Rev.5 Title
B				Mining and quarrying
	05			Mining of coal and lignite
		051		Mining of hard coal
			0510	Mining of hard coal
		052		Mining of lignite
			0520	Mining of lignite
	06			Extraction of crude petroleum and natural gas
		061		Extraction of crude petroleum
			0610	Extraction of crude petroleum
		062		Extraction of natural gas
			0620	Extraction of natural gas
	07			Mining of metal ores
		071		Mining of iron ores
			0710	Mining of iron ores
		072		Mining of non-ferrous metal ores
			0721	Mining of uranium and thorium ores
			0729	Mining of other non-ferrous metal ores
	08			Other mining and quarrying
		081		Quarrying of stone, sand and clay
			0810	Quarrying of stone, sand and clay
		089		Mining and quarrying n.e.c.
			0891	Mining of chemical and fertilizer minerals
			0892	Extraction of peat
			0893	Extraction of salt
			0899	Other mining and quarrying n.e.c.
	09			Mining support service activities
		091		Support activities for petroleum and natural gas extraction
			0910	Support activities for petroleum and natural gas extraction
		099		Support activities for other mining and quarrying
			0990	Support activities for other mining and quarrying

- **Inputs:** not considered
- **Activity and production process**: not considered (e.g. underground, open pit, placer, in-situ mining)
- **Characteristics and use of the outputs:** partially considered (e.g. some metal mining missing)

Exhibit 11: Value chain considerations in ISIC Rev.5 (mining sector)

While official industry classifications generally take a broader view of value chains compared to market-based classifications, value chain considerations remain a significant limitation of both types of industry classifications.

Capturing value chain considerations more effectively within industry classifications is crucial because omitting value chain segments with distinct impact characteristics creates blind spots in the standards and resources that rely on these classifications. For example, some companies in the power sector that rely on fossil fuels to produce electricity, may choose to outsource power generation to external suppliers as a strategy to reduce their direct environmental impact, instead of investing in cleaner technologies and processes within their own operations. If industry classifications and the resources developed from them considered the entire sector value chain and its impact characteristics, these companies would still need to account for the negative impacts of their fossil fuel energy production.

4.2 Lack of granularity

Related to the above point on value chain considerations, both market-based and official industry classifications tend to lack the granularity needed for a comprehensive assessment of sector impacts.

For example, GICS makes a differentiation between “Electric Utilities”, which includes companies that produce or distribute electricity and “Renewable Electricity”, which includes companies that generate and distribute electricity using renewable sources (see Exhibit 12). No further distinction is made within these two categories, despite the impact specificities that each type of electricity has.

Exhibit 12: Utilities sector in GICS

Similarly, ISIC Rev.5 makes a high-level differentiation between renewable and non-renewable electric power generation, but it does not distinguish between the types of sources within the two categories and, as a result, neglects the different inputs of the activities (see Exhibit 13).

Section	Division	Group	Class	ISIC Rev.5 Title
D				Electricity, gas, steam and air conditioning supply
	35			Electricity, gas, steam and air conditioning supply
		351		Electric power generation, transmission and distribution activities
			3511	Electric power generation activities from non-renewable sources
			3512	Electric power generation activities from renewable sources
			3513	Electric power transmission and distribution activities

3511 Electric power generation activities from non-renewable sources

This class includes:
- Operation of generation facilities that produce electricity from non-renewable sources, e.g. natural gas, coal, petroleum products, peat and other fossil fuels, and emission-free non-renewable sources such as nuclear.

This class excludes:
- production of electricity from renewable sources, see 3512
- production of electricity through incineration of waste, see 3821

3512 Electric power generation activities from renewable sources

This class includes:
- Operation of generation facilities that produce electricity from renewable sources, e.g. gaseous biofuels, hydropower, on-shore and off-shore wind, solar photovoltaic, and thermal, geothermal and tide, wave and ocean energy.

This class excludes:
- production of electricity from non-renewable sources, see 3511
- production of electricity through incineration of waste, see 3821

Exhibit 13: Electric Power Generation, Transmission and Distribution sector in ISIC Rev.5

From an impact management perspective, distinguishing between renewable and non-renewable electric power generation is critical, since a coal-fired or oil-fired power plant has significant negative environmental impacts compared to a solar or hydroelectric power plant.

However, distinguishing between types of renewable electricity is also important. While both solar and hydroelectric power generation rely on renewable energy sources and therefore have lower environmental impacts compared to electric power generation through fossil fuels, they are fundamentally different activities with unique characteristics and impacts. Solar power primarily impacts land and habitat due to the space required for solar farms. In contrast, hydroelectric power has a significant impact on water ecosystems, including altering water flow, thereby affecting species and potentially displacing communities.

While official industry classifications tend to go into greater detail compared to market-based ones, both types of classifications fail to provide the granularity needed to accurately assess the impact of a sector or industry. Sector granularity in industry classifications is crucial because it enables the differentiation between economic activities that seem similar but are fundamentally different. This distinction is vital for accurately identifying and assessing the impacts of these activities and ensuring that impact management resources and practices are effectively tailored to the unique characteristics of each.

4.3 Gaps linked to the evolving nature of the economy

The nature and breadth of economic activities are dynamic and the fast pace of change within the economy can be difficult to keep up with for industry classifications. As a result, new and emerging sectors are often missing or not fully represented. Examples of such sectors are those that have emerged because of globalisation and digitalisation, as well as multiple technological developments, including those driven by environmental sustainability concerns such as energy and resource efficiency.

For example, GICS does not include remote healthcare services within the broader category of “Health Care Services”, despite the crucial role they play in today’s economy (see Exhibit 14). From an impact perspective, online medical services improve access to medical care for patients in remote or underserved areas, reducing the need for travel and lowering healthcare costs.

Health Care

HEALTH CARE EQUIPMENT & SERVICES

351020	35102015	Providers of patient health care services not classified elsewhere. Includes dialysis centers, lab testing services, and pharmacy management services. Also includes companies providing business support services to health care providers, such as clerical support services, collection agency services, staffing services and outsourced sales & marketing services.
Health Care Providers & Services	Health Care Services	

Exhibit 14: Health Care Services sector in GICS

In the case of ISIC, a number of adjustments made under Rev.5 have recently enabled the inclusion of emerging activities such as remote education, ride-sharing platforms under the transportation sector, artificial intelligence and environmental management activities. However, while these industries have been acknowledged, they remain comparatively less prominent and visible than sectors and industries that are arguably less decisive in the current economy. For instance, machine learning and artificial intelligence are captured under "Other Computer Programming Activities" rather than being recognised as distinct industries (see Exhibit 15).

6219 Other computer programming activities

This class includes:
- designing the structure and content of, and/or writing, modifying (including updates and patches), customizing, testing and supporting of the computer code necessary to create and implement:
* systems software
* business, finance, and other software applications (other than video game applications)
* machine learning applications
* artificial intelligence/machine vision applications
* cybersecurity applications
* distributed ledger applications
* databases
* web pages

This class excludes:
- development of video game applications, see 6211
- software publishing, see 582
- planning and designing computer systems that integrate computer hardware, software and communication technologies, even though providing software might be an integral part, see 6220
- blockchain/distributed ledger technology (DLT) data processing activities, see 6310

Exhibit 15: Other Computer Programming Activities sector in ISIC Rev.5

While both types of industry classifications present gaps linked to the evolving nature of the economy, market-based classifications undergo more frequent reviews compared to official classifications, which have longer revision periods; this makes it easier for market-based classifications to add new sectors as the economy evolves. In either case, accurately identifying emerging sectors in industry classifications is critical. Without proper

identification, the unique impact characteristics of these sectors cannot be captured, as the sectors will instead be subsumed into other sectors with potentially very different impact characteristics.

4.4 Incomplete coverage of the economy

A final limitation, which concerns mostly market-based industry classifications, is the incomplete coverage of the economy. Indeed, these classifications tend to focus on a subset of sectors relevant to the audience they serve, namely investors.

For example, market-based industry classifications tend to lack governmental activities normally carried out by the public administration as well as social work activities. Moreover, they provide fewer distinct categories for sectors that have less access to capital markets, such as agriculture. This is illustrated in GICS, where agriculture-focused activities are grouped as a single undifferentiated item under the "Consumer Staples" sector, specifically within the "Food, Beverage & Tobacco" industry group and "Food Products" sub-industry (see Exhibit 16).

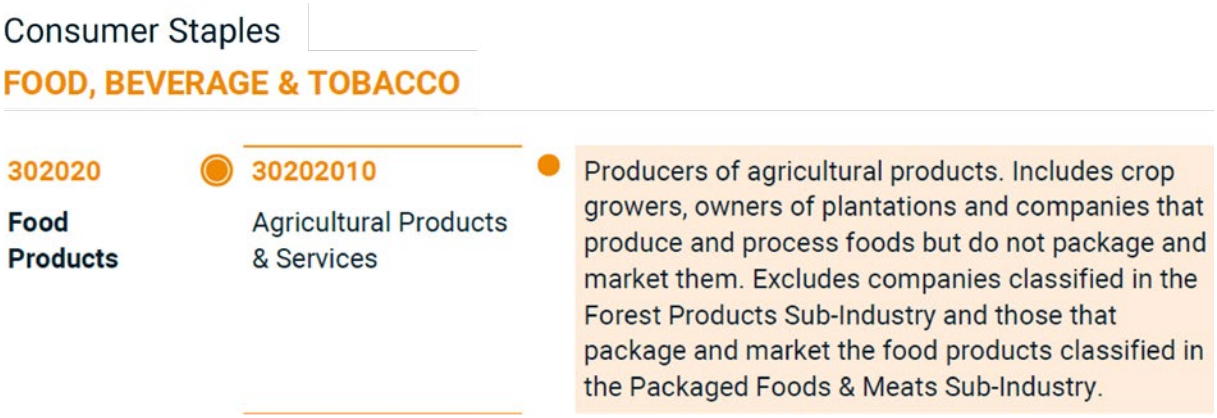


Exhibit 16: Agricultural Products & Services sector in GICS

Some of these gaps may be attributed to the nature of capital markets themselves; generally, only larger, privately held companies are publicly listed while smaller companies or those with different ownership structures (e.g. government-owned companies, cooperatives, etc.) are typically absent in capital markets. In some cases, sectors may initially be overlooked but later integrated, as seen with the digital economy, whose significance and integration into the wider economy took time to be recognised.

A comprehensive coverage of sectors is important because every sector of the economy, regardless of its access to capital markets, affects sustainability. The incomplete coverage in market-based industry classifications limits the use of these classifications and hinders the evaluation of sectors that are not included. Therefore, standard-setters need to be mindful of their target audience when selecting an industry classification to base their resources on; unless resources are specifically aimed at investors, official industry classifications will be more appropriate. Users of impact management resources need to be similarly conscious of their choice of resources.

4.5 Key take-aways

The analysis of existing industry classifications reveals that both official and market-based industry classifications present limitations that may impede effective impact management.

Market-based industry classifications:

- Do not sufficiently consider the underlying nature of the different economic activities, since they are more focused on products than on production processes
- Fail to offer detailed segmentation that reflects the specific characteristics of each industry
- Do not provide a complete coverage of all the productive sectors of an economy, since they tend to mirror the composition of capital markets and miss some emerging sectors

Official industry classifications:

- Implement value chain considerations inconsistently across different sectors
- Lack granularity for certain industries
- Overlook some emerging sectors, which are eventually incorporated only after long revision processes

All of these limitations ultimately get in the way of impact management. The insufficient consideration of value chains, the lack of granularity and the omission of certain industries mean that not all sustainability impacts are correctly identified, assessed and managed. A comprehensive and detailed view across all industries is crucial as each industry within a sector has its specific impact characteristics.

5. Towards impact-ready classifications

Because official and market-based industry classifications only partially meet the needs of impact management, new classifications have emerged, in an attempt to address their limitations.

In some cases, standard-setters and market players have amended existing industry classifications to make them suitable for impact management and, in other cases, they have developed new ones. The introduction of these classifications has resulted in further proliferation and fragmentation of industry classifications and, ultimately, interoperability challenges. Even with correspondence tables, equivalences between new and established classifications remain partial. This has proven particularly challenging for those who work with classifications at the most granular level, such as developers of taxonomies, impact management resources, data analytics and benchmarks.

This chapter first provides an overview of the attempts of current users of industry classifications to address their limitations, while also highlighting the shortcomings of their solutions. It then details a set of principles proposed by the Platform Working Group that could inform and support future revisions of existing industry classifications, making them better suited for impact management.

5.1 Attempts to work around the limitations

To address the limitations identified in Chapter 4, several standard setters have **adjusted existing industry classifications** for the development of their resources, for instance by adding some sectors or making others more granular and visible in the classification.

One example of adjustments to existing industry classifications is the 2018 version of the ENCORE knowledge base, which classified sectors using GICS (see Exhibit 17). ENCORE's developers decided to further disaggregate subindustries by production processes to capture dependencies within each process which may not have been included at the subindustry level. For example, the chemicals sector included several processes, such as fractional distillation, each with potentially different ecosystem service dependencies.

ENCORE

Sector	Subindustry	Process	GHG emissions	Soil pollutants
Materials	Commodity Chemicals	Catalytic cracking, fractional distillation and crystallization	Greenhouse gases are emitted through energy use to achieve high temperatures required for this production process, as well as from large amounts carbon formed on catalysts, which is converted to carbon dioxide. When energy is produced on-site this directly contributes to global emissions. When energy is sourced from utilities, this constitutes an impact under the relevant energy production processes. Sulphur dioxide and nitrogen dioxide are emitted during the cracking process.	Large amounts of coke contaminated by high levels of sulphur form in the catalytic cracking process and are combusted in regenerators, resulting in the emission of sulphur dioxide into the atmosphere. This can in turn increase levels of acid rain. The process therefore impacts atmosphere, water and soil. Accidental spillage of oil based products results in soil contamination.
Materials	Specialty Chemicals	Catalytic cracking, fractional distillation and crystallization	Greenhouse gases are emitted through energy use to achieve high temperatures required for this production process, as well as from large amounts carbon formed on catalysts, which is converted to carbon dioxide. When energy is produced on-site this directly contributes to global emissions. When energy is sourced from utilities, this constitutes an impact under the relevant energy production processes. Sulphur dioxide and nitrogen dioxide are emitted during the cracking process.	Large amounts of coke contaminated by high levels of sulphur form in the catalytic cracking process and are combusted in regenerators, resulting in the emission of sulphur dioxide into the atmosphere. This can in turn increase levels of acid rain. The process therefore impacts atmosphere, water and soil. Accidental spillage of oil based products results in soil contamination.
Materials	Diversified Chemicals	Incomplete combustion	Carbon dioxide and other indirect greenhouse gases are emitted in combustion processes.	ND
Materials	Diversified Chemicals	Polymerization	ND	Toxic and harmful chemicals such as nickel, ethylbenzene, ethylene oxide and benzene contained in wastewater can lead to contamination of nearby soils.

Exhibit 17: Additions to GICS in the ENCORE knowledge base 2018–2023 (chemical sector)

The updated version of the ENCORE knowledge base transitioned from GICS to ISIC Rev.4 to capture in more detail the potential dependencies and pressures associated with economic activities that are closely related to nature. Despite the enhanced granularity offered by ISIC Rev.4 compared to GICS, the developers of the updated resource found it necessary to make additions and adjustments to ISIC as well.

For example, in the ISIC Rev.4 electricity sector, the different methods by which electricity can be generated are all included in one "class" called "Electric Power Generation, Transmission and Distribution". The developers of ENCORE decided to break this "class" into more specific categories to better capture the granularity of impacts and dependencies associated with different energy production sources. Furthermore, they decided to separate generation from transmission and distribution activities, since ENCORE users pointed out that some companies only focus on electricity distribution. Grouping generation, transmission and distribution activities would have resulted in an inaccurate representation of their impacts and dependencies. Exhibit 18 provides an extract from the updated knowledge base.

	Economic activity			
ISIC Unique code	ISIC Section	ISIC Division	ISIC Group	ISIC Class
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Biomass energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Geothermal energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Hydropower energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Fossil fuels energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Ocean energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Nuclear power production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Solar energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Wind energy production
D_35_351_3510	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	Electric power generation, transmission and distribution	Transmission and distribution of electricity

Exhibit 18: Additions to ISIC Rev.4 in ENCORE (electricity sector)

Another illustration is UNEP FI adjustment of ISIC Rev.4 for the development of its impact management resources, in particular the Sector-Impact Map, which identifies impact associations between sectors and sustainability topics. The organisation created a variation of ISIC (referred to as ISIC+) to incorporate additional activities to the classification, enhancing the granularity and precision of specific sectors and, therefore, of their corresponding impact associations. Exhibit 19 below shows the example of the electricity sector. Similarly to ENCORE, UNEP FI divided "Electric Power Generation, Transmission and Distribution" into distinct industries, further broken down by the type of electricity source.

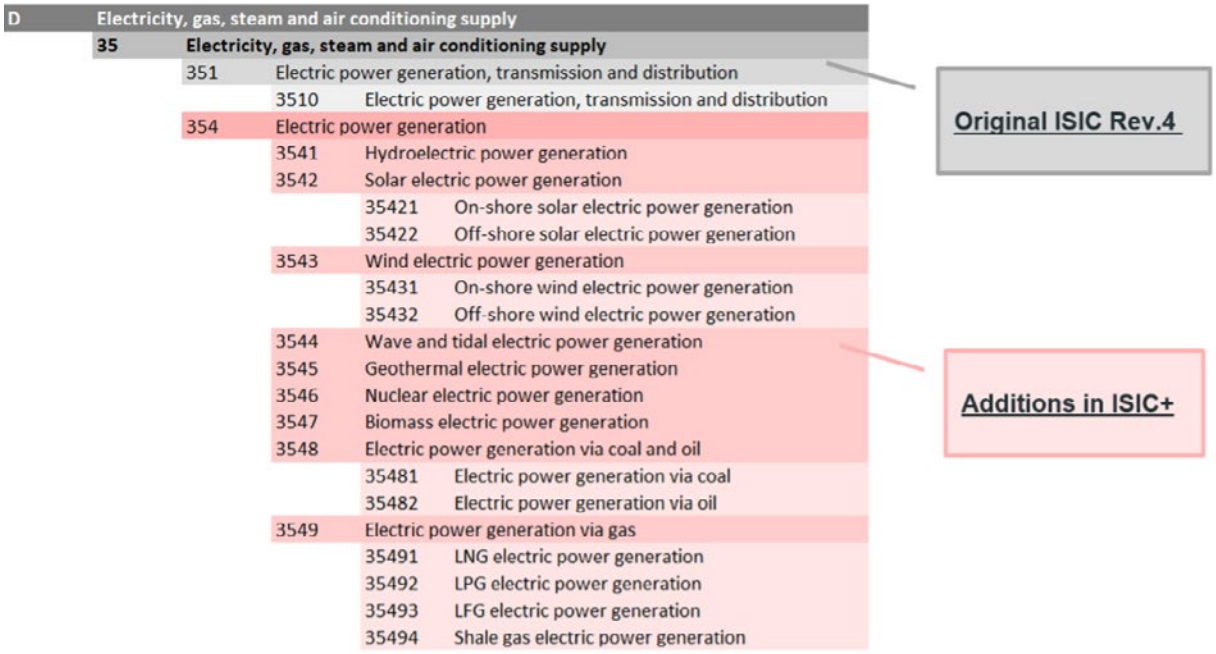


Exhibit 19: Additions to ISIC Rev.4 in the UNEP FI Sector-Impact map (electricity sector)

Other organisations have adopted the alternative approach of developing **wholly new industry classifications**. One notable example is SICS[21], developed based on market-based classifications such as BICS and GICS to serve the same audience of global capital markets. Unlike these other market-based industry classification systems, which use common financial and market characteristics, SICS is a market-based industry classification that groups entities based on similar sustainability-related activities, characteristics, risks and opportunities. Exhibit 20 shows an extraction from SICS.

21 SICS was developed by the SASB Standards (now part of the IFRS Foundation).

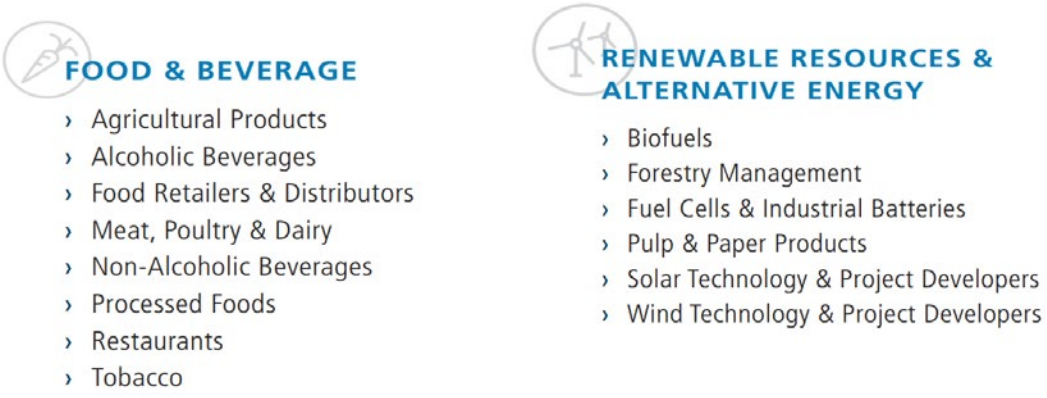


Exhibit 20: Extraction from SICS

While all these efforts (adjustments to existing classifications and development of wholly new classifications) have improved industry classifications from an impact management perspective, they still present shortcomings.

In the examples of the ENCORE and UNEP FI tools, changes to market-based and official classifications were kept minimal to preserve the integrity of the original classifications. Specifically, adjustments were limited to additions within certain categories, without altering the higher-level groupings or the names of pre-existing sectors, which in certain cases would have been desirable from an impact perspective. One illustration is the electricity sector in ISIC+, where electricity might helpfully have been separated from gas, steam and air conditioning supply (grouped together at the highest level of ISIC Rev.4), so as not to mix electricity and heating considerations.

In the example of SICS, building a classification system based on shared sustainability-related characteristics has sometimes resulted in a primary focus on specific subsets of sustainability-related issues rather than a holistic consideration of all three dimensions of sustainability (environmental, social and economic). This is also due to the bespoke focus of SICS on traditional investor information needs (i.e. financially material information), as financially material information may not concern all three dimensions equally. Financially material sustainability-related information correlates to improved investor returns, but each sustainability-related dimension correlates differently to those returns. The varying magnitude of the correlation results in a prioritisation of the topics, which may be sub-optimal from an impact management perspective. One illustration of this is the Food & Beverage sector. While the industries in the sector captured by SICS share similar environmental impacts, they have very different social impacts. For example, while access to food and beverage generally contributes positively to health, tobacco and alcoholic beverages (both captured under Food & Beverage) have significant negative impacts on health and safety, leading also to increased healthcare costs.

5.2 High-level principles for impact-ready classifications

As the above analysis shows, several attempts have been made to address the challenges posed by official and market-based industry classifications in the context of impact management; however, the solutions remain partial. This suggests that the use-case of industry classifications for impact management purposes should be considered during the review and development processes of industry classifications themselves.

Based on the analysis of both categories of industry classifications and the attempts to address their limitations, two high-level principles (illustrated in Figure 4) were identified to guide the future review and development of classifications. Adhering to these principles would help ensure that industry classifications are fit for purpose for impact management while still performing their current roles.

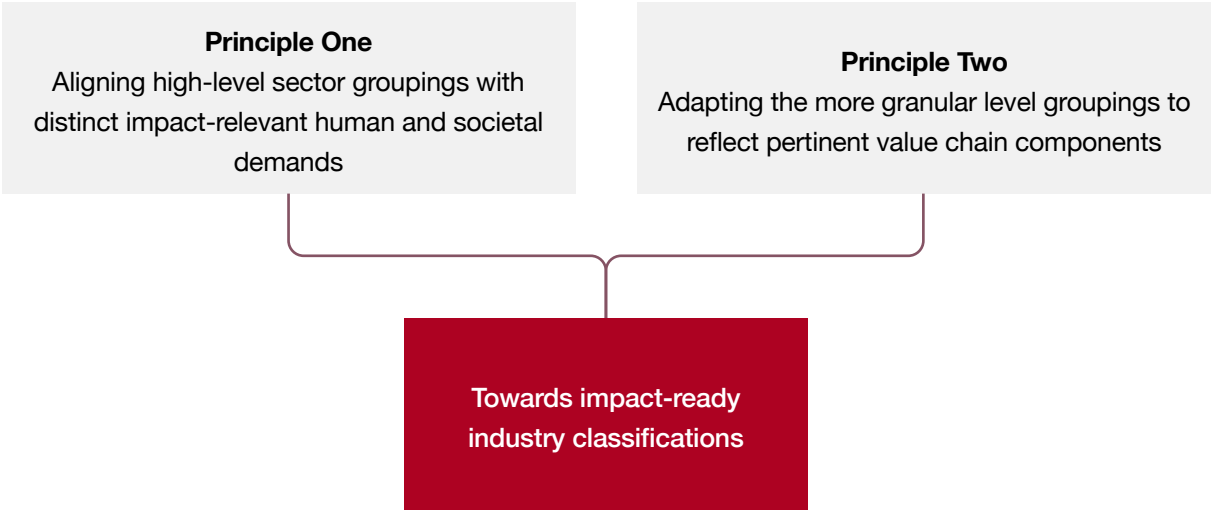


Figure 4: Principles for impact-ready classifications

The following sections expand on Principle One and Two respectively and explain how they can be combined and applied in practice to build more impact-ready industry classifications.

Principle One: Aligning high-level sector groupings with distinct impact-relevant human and societal demands

The first principle is the alignment of the high-level sector groupings with distinct impact-relevant human and societal demands (including needs, desires and aspirations) that sectors' products and services can help meet. This approach helps ensure a comprehensive representation of human activity, covering public or private, for profit or not for profit entities. This in turn facilitates the inclusion of new sectors that may emerge as economies continue to evolve, effectively helping to "future-proof" classifications.

The alignment of the high-level sectors with human and societal demands is inherent to the classification of economic activities, as these are ultimately human activities driven by human demands. Both official and market-based classifications generally follow this logic; however, there are instances where this is not entirely adhered to.

For example, as we have seen in Chapter 4, market-based industry classifications tend to present gaps where certain activities are less present on capital markets, such as in the fields of agriculture, education and scientific activities. These gaps make it more difficult to absorb novel activities such as organic farming, remote learning or research and development activities aimed at driving environmental performance.

In the case of official industry classifications, the split and formulation of the high-level sector categories are inherently designed to describe all economic activities and therefore speak to all human and societal demands; however, some categories conflate various types of demands while the nomenclature of others makes the underlying purpose of such activities less apparent.

For instance, in ISIC Rev.4 electricity is grouped together with heating and cooling related activities, which may be undertaken by the same companies but respond to separate categories of demands, namely access and availability of electricity overall and the specific ability to control the temperature of one's surroundings. Treating these activities separately would make it easier to reflect the diversity of electricity production and storage technologies that have been developed to address environmental and health concerns, as well as to absorb the growing field of energy efficiency, green construction, retrofitting and building management.

In a similar way, the high-level sector categories focused on transportation could more accurately accommodate novelties such as ride-sharing platforms if the notion of "mobility" were directly embedded in the nomenclature of the sector.

To effectively establish the high-level sector groupings based on human and societal demands, one could draw from frameworks that seek to paint a holistic picture of human and societal demands, including but not limited to frameworks such as the UN SDGs and OECD Well-being framework. Based on such frameworks, an overview of human and societal demands (including needs, desires and aspirations) can be gained and subsequently, the contents of industry classifications mapped to them and screened for gaps and structural improvements.

Principle Two: Adapting the granular sector groupings based on relevant value chain components

The second principle is to ensure that the granular level groupings of economic activities reflect pertinent value chain considerations. In other words, granular groupings can be used to distinguish economic activities not only by the nature of the products or services they result in, but also by the production process and sourcing mechanisms, as well as the uses of the products and services, where this is relevant.

To build the granular sector groupings, the value chains of the high-level groupings need to be mapped and the value chain stages and characteristics that are critical from an impact perspective need to be identified. This analysis will help identify industries and sub-industries along with their distinct impacts. It will also help differentiate between impact features that are critical to reflect in industry classifications and those that, while important to capture in impact management frameworks, do not need to be reflected in the classifications themselves.

Figure 5 provides an overview of the electricity sector value chain. For each step of the value chain, the diagram identifies key factors that might determine the impacts associated with it, be it from an environmental, social or economic perspective (referred to hereafter as impact determinants). The figure does not consider local variations of the impact associations, because the impact value chain developed to determine the granular sector groupings should ideally be based on common impact associations, i.e. those applicable to sectors and industries, regardless of where they occur.

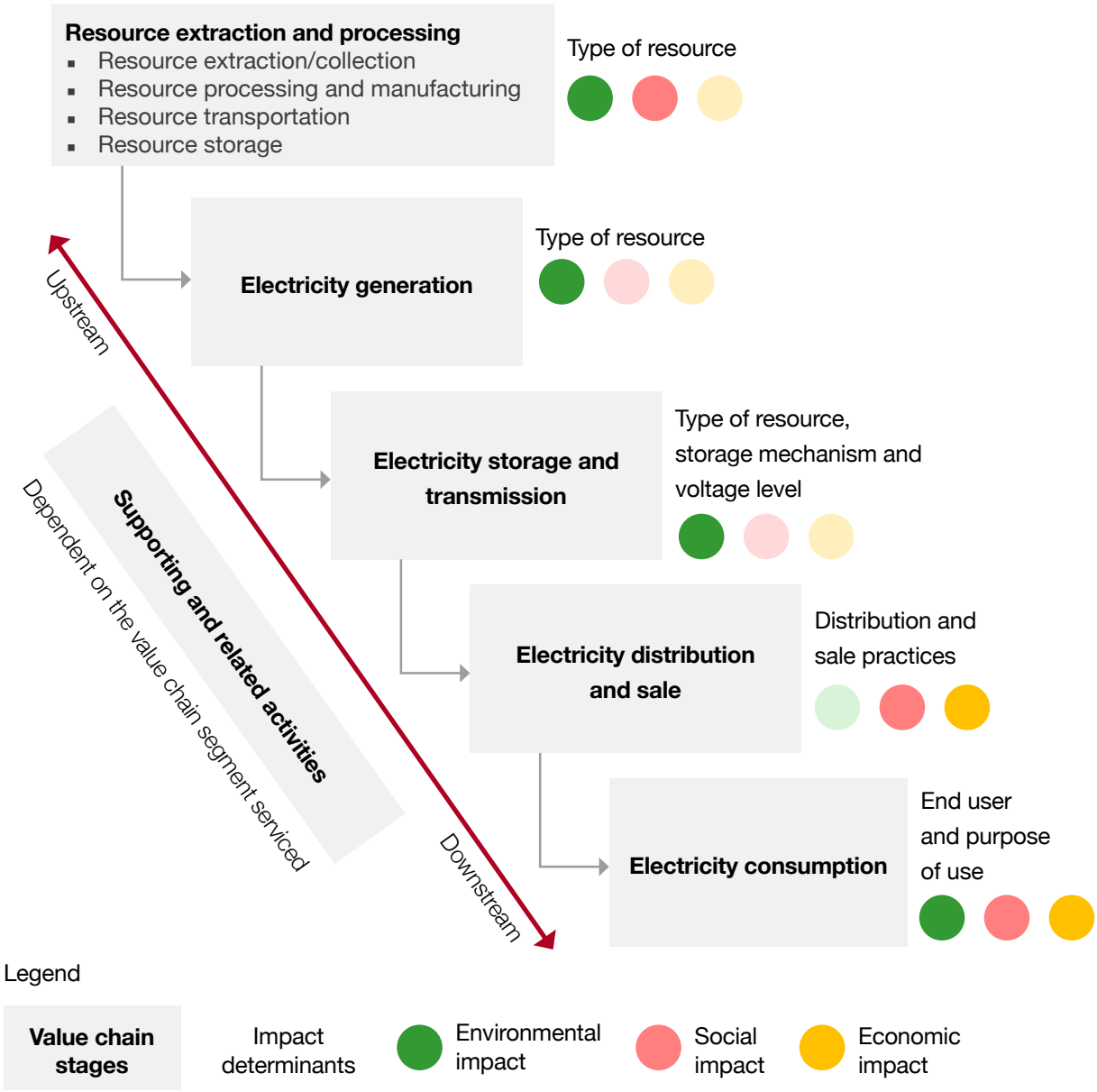


Figure 5: Overview of electricity sector value chain

Upstream, at the **resource extraction and processing** stage, the key impact determinant is the type of resource. This determines the impacts associated with the extraction or collection of the resource, as well as those associated with the processing, manufacturing, transportation and storage of the resource. Indeed, a closer examination of the resource extraction and collection step reveals different impacts depending on whether the resource is a fossil fuel, nuclear or a renewable resource.

Fossil fuel extraction can have significant negative direct environmental impacts, including habitat destruction and water contamination from mining, drilling and fracking processes, as well as through the transportation of fossil fuels through pipelines or shipping. Additionally, it contributes to air pollution and greenhouse gas emissions through practices such as flaring, exacerbating climate change. Finally, it can pose significant workforce health and safety risks as well as community displacements.

Uranium mining also poses significant negative impacts on the environment, workers and surrounding communities, primarily due to the radioactive nature of the material. Environmental degradation includes habitat destruction and the potential contamination of soil and water with radioactive materials, which can persist for thousands of years. Health risks are also substantial, with miners and nearby communities facing increased exposure to radiation, leading to heightened risks of cancer, respiratory problems and other serious health issues.

Finally, while there is no extraction and processing process for renewable resources per se, the extraction and collection of materials is nevertheless needed for renewable power installations. For example, all types of solar and wind power generation require a significant amount of metals and rare earth elements for the production of solar panels and wind turbines, the mining of which can have severe environmental and social impacts.

At the stage of **electricity generation**, the main impact determinant remains the type of resource used. Differences emerge not only between non-renewable and renewable energy sources, but also among different types of resources within the two categories.

Within the non-renewable energy sources, fossil fuel-based electricity generation is characterised by significant greenhouse gas emissions, air and water pollution, leading to adverse environmental and health effects. Nuclear-based electricity generation produces minimal greenhouse gas emissions, but it involves significant hazardous waste management risks and the risk of catastrophic accidents, which can release harmful radiation into the environment and have long-lasting effects on human health and ecosystems. Nuclear power generation also requires large amounts of water for cooling, which can lead to thermal pollution when warm water is released back into the rivers, harming the living organisms and disrupting habitats.

Within the renewable-energy sources, onshore solar power installations can lead to habitat loss and soil erosion, while offshore solar installations may disrupt marine ecosystems, affecting water quality and local marine life. Wind turbines, on the other hand, can affect bird life and cause noise pollution. Finally, hydroelectric power relies on building damns which can disrupt natural habitats and lead to the displacement of local communities.

At the electricity **storage and transmission** stage, additional impact determinants emerge, namely the storage mechanism used and voltage level involved.

For example, pumped hydro storage can alter water levels, affecting ecosystems while batteries can generate toxic waste if not properly managed. Furthermore, each voltage level has specific trade-offs between energy efficiency, capacity and environmental impact. Indeed, small voltage systems, used mainly in residential settings, have minimal environmental effects but limited capacity. Medium voltage systems, suitable for commercial uses, offer a balance between energy efficiency and environmental impact linked to the infrastructure required. High voltage systems, essential for long-distance transmission, involve significant infrastructure and can disrupt land and habitats but minimise energy loss over distances.

At the **electricity distribution and sale** stage, the impact is primarily determined by whether prices are regulated or subject to market fluctuations, which can influence affordability and consumption patterns. Market speculation may cause price volatility, affecting stability and efficiency. Additionally, the availability of counselling and support programs for energy efficiency and consumption reduction plays a crucial role in guiding consumer behaviour and optimising energy use.

Finally, downstream at the **electricity consumption** stage, the main impact determinants are the end user and purpose of use. Indeed, while all users and uses contribute to greenhouse gas emissions and air pollution to varying degrees, residential use is the lowest emitter and industrial use the highest. From a social and economic perspective, electricity consumption by individual consumers supports essential needs such as heating, cooling, lighting, as well as mobility for electric motor vehicles and access to IT services, thereby enhancing quality of life. On the other hand, commercial and industrial electricity use are crucial drivers of economic activity.

As demonstrated above, building a value chain map makes it possible to identify the main impact determinants at each stage of the sector value chain and understand the implications for how the sector might be captured in an industry classification.

When the impact determinants relate to the *characteristics* of the economic activity, such as its inputs, production processes or outputs, it might be possible to capture them directly within an industry classification, thereby improving its usability from an impact management use-case perspective. However, when the impact determinants and drivers are related to the *practices* of individual companies rather than their intrinsic characteristics, these cannot be captured within industry classifications and instead need to be identified and assessed as part of the broader impact management process. Figure 6 illustrates the stages of the electricity sector value chain that might be captured within an industry classification based on the review of associated impacts and impact determinants.

Value chain stage	Impact determinant	Inclusion within an industry classification
Resource extraction and processing ▪ Resource extraction/collection ▪ Resource processing and manufacturing ▪ Resource transportation ▪ Resource storage	Type of resource	✓
Electricity generation	Type of resource	✓
Electricity storage and transmission	Type of resource, storage mechanism and voltage level	✓
Electricity distribution and sale	Distribution and sale practices	✗
Electricity consumption	End user and purpose of use	✗
Supporting and related activities	Dependent on the value chain segment serviced	✓

Figure 6: Stages of the electricity sector value chain that might be captured within an industry classification

Building more impact-ready industry classifications by applying Principle One and Two

By applying the two principles described above, industry classifications can better reflect economic activities and the differences between them, thereby making them more fit for purpose for impact management (i.e. impact-ready).

As illustrated by Figure 7, while Principle One helps establish future-proof high-level sector groupings within an industry classification, Principle Two helps break down the high-level sectors into more granular economic activities (i.e. industries), taking into account the impact characteristics of their value chains. The application of these two principles is further illustrated below, using the electricity sector as an example.

Apply Principle One to establish the high-level sector groupings and set the boundaries of what each sector should include

→

Apply Principle Two to identify industries that correspond to the various impact determinants, taking into account:

a) Industries that can be grouped together based on similar impact determinants and market realities

b) Industries that should be excluded because they are not exclusive to the sector

Figure 7: Applying the two principles to build more impact-ready industry classifications

Applying Principle One is the starting point for defining and classifying the more granular industries as this provides the boundaries of what needs to be included in the sector. For example, “electricity” and “energy” are often used interchangeably but they have distinct meanings and encompass different activities: “energy” refers to the involvement in the production, distribution and management of various energy forms; “electricity” is narrower than “energy” as it focuses solely on the electrical energy, excluding for example fuels.

Once the sector boundaries are defined, Principle Two can be applied to determine the categorisation of specific industries.

For example, a key impact determinant at the “electricity generation” step of the value chain is the type of resource used to generate electricity (renewable or non-renewable). Additionally, there are companies in the market that specialise exclusively in specific types of electricity generation, such as nuclear or solar power. As such, the different types of electricity generation activities need to be visible within the classification to ensure that companies and their impacts can be properly identified without conflating activities and impacts that should not be.

With regard to “electricity storage and transmission”, the impact determinants are the type of resource (common to both activities) but also the storage mechanism (relevant to electricity storage) and the voltage level (relevant to electricity transmission), therefore they could be treated as separate industries. However, it is common for companies in the market to handle both the storage and transmission of electricity. The decision to categorise them as separate industries or a single industry, is guided by a balance between impact determinants and market realities. Since the primary purpose of industry classifications is to categorise companies, it is essential to ensure that the classification structure is designed to make it easy for companies to accurately identify themselves within it. In this case, “electricity storage and transmission” could possibly be a single industry, with further distinct subindustries.

Finally, it is also important to cross-check which industries could be captured elsewhere in the industry classification, recognising that they might be part of the value chain of other sectors. This is particularly relevant for primary sectors, which, by definition, provide essential inputs to many other sectors of the economy. For example, the extraction of fossil fuels typically falls into the category of industries that are not exclusive to the electricity sector. Since extractive industries provide inputs to many sectors, grouping them exclusively within the electricity sector and excluding them from other sectors for which they are a critical stage of the value chain would be inappropriate. Similarly, repeating extractive industries under multiple sectors would undermine the principle of discreteness, which is key to the usability of industry classifications.

Figure 8 shows how the electricity sector could potentially be portrayed by applying the principles outlined above. This figure serves as an illustration based on the analysis of one human and societal demand (electricity demand) in isolation. A more comprehensive review covering all human and societal demands could reveal the need for additional nuancing in the granular sector groupings.

- **Electricity**
  - Electricity generation
    - **Renewable electric power generation**
      - Hydroelectric power generation
        - Hydroelectric power generation via maxi dams
        - Hydroelectric power generation via mini dams
      - Solar electric power generation
        - On-shore solar electric power generation
        - Off-shore solar electric power generation
      - Wind electric power generation
        - On-shore wind electric power generation
        - Off-shore wind electric power generation
      - Wave and tidal electric power generation
      - Geothermal electric power generation
      - Biomass electric power generation
    - **Non-renewable electric power generation**
      - Nuclear electric power generation
      - Electric power generation via coal
      - Electric power generation via oil
      - Electric power generation via gas
    - **Support activities to electricity generation**
      - Support activities to electricity generation
  - Electricity storage and transmission
    - **Electric power storage**
      - Electric power storage via pumped hydro
      - Electric power storage via batteries
    - **Electric power transmission**
      - High voltage electric power transmission
      - Lower voltage electric power transmission
    - **Support activities to electricity storage and transmission**
      - Support activities to electricity storage and transmission
  - Electricity distribution and sale
    - **Electric power distribution**
      - Electric power distribution
    - **Electric power sale and associated services**
      - Electric power sale
      - Services associated with electric power sale
    - **Support activities to electricity distribution and sale**
      - Electric power trade
      - Other support services

Figure 8: Classification of the electricity sector based on the proposed principles for impact-ready classifications

A structure built in this way would ensure a more accurate representation of the electricity sector. More specifically, organisations developing impact management resources could develop more precise impact mappings for the sector, because the specific impacts across the electricity industries could be better captured thanks to the value chain considerations embedded in the structure itself. Similarly, they could develop more tailored indicators and metrics for each subindustry.

Consequently, organisations operating in the electricity sector would benefit from resources that are more accurate and tailored to their industry and hence be able to better manage their impacts. For example, a solar power company, producing electricity mostly through off-shore facilities, would have a specific industry to select, namely "'off-shore solar electric power generation", therefore capturing not only the impacts common to all renewable electric power sources but also those specific to this industry. This would be different from a traditional GICS or ISIC classification (see Exhibit 21), where the company would be categorised in the renewable electricity section together with all the other renewable power companies.

ISIC	GICS
3512 Electric power generation activities from renewable sources Includes: - Operation of generation facilities that produce electricity from renewable sources, e.g. gaseous biofuels, hydropower, on-shore and off-shore wind, solar photovoltaic, and thermal, geothermal and tide, wave and ocean energy.	**55105020 Renewable Electricity** Includes: Companies that engage in the generation and distribution of electricity using renewable sources, including, but not limited to, companies that produce electricity using biomass, geothermal energy, solar energy, hydropower, and wind power. Excludes companies manufacturing capital equipment used to generate electricity using renewable sources, such as manufacturers of solar power systems, installers of photovoltaic cells, and companies involved in the provision of technology, components, and services mainly to this market.

Exhibit 21: Renewable electricity production under ISIC and GICS

In sum, a more granular categorisation of sectors, reflecting pertinent value chain components would enable more accurate and transparent impact assessment and management. This is of particular importance for companies with highly integrated business models, such as food companies that produce their own raw materials (vertically integrated) or for conglomerates or holding companies, that straddle multiple and unrelated activities (horizontally integrated).

5.3 Key take-aways

Different attempts have been made to address the challenges posed by industry classifications in the context of impact management, including the addition of content to existing classifications and the development of entirely new classifications.

However, these solutions have not proved sufficient to address the inherent limitations of existing classifications and point to the need to embed impact management considerations directly within the development and review process of the main industry classifications.

Two principles—aligning high-level sector groupings with distinct impact-relevant human and societal demands and adapting the granular sector groupings to reflect pertinent value chain components—have been explored to address the limitations.

Table 3 summarises the limitations encountered and how these principles can help make classifications impact-ready across the use cases identified in Chapter 3.

If industry classifications are built with greater granularity and accuracy, taking more fully into account human and societal demands as well as the value chain components that matter the most from an impact management perspective, impact management resources can become more accurate. In turn, companies could be better guided in managing their impacts, thereby fostering more sustainable practices across the board.

Table 3: Issues addressed and benefits achieved by applying the two principles

	Issues addressed			
Implications for	**Value chain considerations** *Principle 2 enables to identify the value chain elements that are critical for impact management*	**Granularity** *Principle 2 enables to determine the appropriate level of granularity for impact management purposes*	**New activities in the economy** *Principle 1 facilitates the inclusion of new sectors as the economy evolves*	**All of the economy** *Principle 1 ensures that all sectors of the economy are duly considered*
Defining sustainable practices	▪ **Resource developers:** a common language to define sustainable practices ▪ **Resource users:** increased comparability across taxonomies in different regions			
Identifying sustainability-related issues	▪ **Resource developers:** more accurate mapping of impact associations, dependencies and indicators ▪ **Resource users:** identification and management of the most relevant impacts			
Organising sustainability-related disclosures	▪ **Resource developers:** alignment in companies' sector assignment ▪ **Resource users:** easier navigation and application of different reporting standards			
Analysing sustainability-related data	▪ **Resource developers:** more accurate companies' categorisation ▪ **Resource users:** more accurate peer groups for comparison			

6. Recommendations and next steps

This paper has highlighted the importance of industry classifications to support the mainstreaming of impact management practices and has provided two high-level principles to help move towards more impact-ready classifications.

These findings and proposals have implications for a range of players, all of which are important to fulfilling the potential of industry classifications to enable better impact management. Below are summary recommendations for some of the key players:

- **Developers of official and market-based industry classifications** should take inspiration from the principles illustrated above to guide the revision process of their classifications. While existing classifications were originally designed for purposes other than impact management, standard-setters and practitioners rely on them for these practices. Aligning these classifications with impact management needs could lead not only to more effective impact management practices but also help enhance the interoperability between industry classifications overall.
- **Standard-setters and international organisations providing impact management resources** should work together to exchange on the specific needs and challenges they face with industry classifications in the context of their resource development, to further pilot the two principles and to engage developers of industry classifications and practitioners alike with their findings. They should also aim to converge on the industry classifications used, to enhance comparability across resources and provide greater transparency and relevance for users.
- **Enterprises, investors and financial institutions** should engage in on-going dialogue with both standard-setters and classification developers to provide feedback on the practical challenges of using current classifications for their impact management practices and suggest improvements.

Working together towards more impact-ready industry classifications is key to facilitating widespread and quality impact management by enterprises and the shift to a sustainable economic model.

If your organisation is interested in supporting this work, please get in touch with us: info@impactmanagementplatform.org

Annexes

Annex 1: Examples of industry classifications

Table A.1: Official industry classifications

Industry classification	Source	Purpose	Users	Methodology	Scope and structure	Geographic coverage
ISIC Rev.4	United Nations Statistics Division (UNSD)	Used for classifying data according to kind of economic activity in the fields of economic and social statistics, such as for statistics on national accounts, demography of enterprises, employment and others. Increasingly used for non-statistical purposes.	Corporations, researchers, intergovernmental organisations, public bodies	Activity-oriented approach	All economic activities organised into: ▪ 4 levels ▪ 21 sections ▪ 88 divisions ▪ 238 groups ▪ 419 classes	Global
Regional/ national industry classifications (e.g. NACE, NAICS, ANZSIC)	Regional/ national statistical offices	Used primarily for statistical and economic analysis.	Corporations, researchers, intergovernmental organisations, public bodies	Activity-oriented approach	NACE Rev. 2 is organised into: ▪ 4 levels ▪ 21 sections ▪ 88 divisions ▪ 272 groups ▪ 615 classes NAICS classifies all economic activities into: ▪ 5 levels ▪ 20 sectors ▪ 1012 industries ANZSIC is organised into: ▪ 4 levels ▪ 19 divisions ▪ 86 subdivisions ▪ 214 groups ▪ 506 classes	Different regions/ countries

Table A.2: Market-based industry classifications

Industry classification	Source	Purpose	Users	Methodology	Scope and structure	Geographic coverage
BICS	Bloomberg	Used to categorise and organise companies and industries for financial analysis and investment purposes.	Mainly global financial community	Demand-oriented approach	Economic activities relevant to investors organised into: ▪ Seven-tier structure ▪ 2294 Sectors	Global
GICS	MSCI and Standard & Poor's (S&P)	Used for sector and industry analysis and portfolio management.	Market participants across all major groups involved in the investment process (asset managers, brokers, custodians, consultants, research teams and stock exchanges)	Demand-oriented approach	Economic activities relevant to investors organised into: ▪ 11 sectors ▪ 25 industry groups ▪ 74 industries ▪ 163 subindustries	Global
ICB	FTSE Russell	Used for investment research, portfolio management, and benchmarking.	Global financial community	Demand-oriented approach	Economic activities relevant to investors organised into: Four-tier structure ▪ 11 industries ▪ 20 super-sectors ▪ 45 sectors ▪ 173 subsectors	Global
SICS	SASB (now IFRS Foundation)	Used to identify sustainability-related risks and opportunities for different industries and provide financially material information to global capital markets.	Primarily investors and other stakeholders interested in sustainability-related financial prospects and performance	Sustainability-oriented approach	Economic activities relevant to primary users of general purpose financial reports organised into: ▪ 2 levels ▪ 11 sectors ▪ 77 industries	Global

Industry classification	Source	Purpose	Users	Methodology	Scope and structure	Geographic coverage
TRBC	LSEG	Used for investment research, market analysis and benchmarking.	Global financial community	Demand-oriented approach	Economic activities relevant to investors organised into: Five-tier structure ▪ 13 economic Sectors ▪ 33 business Sectors ▪ 62 industry Groups ▪ 154 industries ▪ 898 activities	Global

Table A.3: Other related classifications

Industry classification	Source	Purpose	Users	Methodology	Scope and structure	Geographic coverage
International Classification for Standards (ICS)	International Organization for Standardization (ISO)	Designed to cover every sector where technical standards are used.	Corporations, researchers, organisations	Document (activity/topic)-oriented approach	All economic activities organised into: ▪ 40 fields of activity ▪ 392 groups ▪ 909 sub-groups	Global
UNSPSC (United Nations Standard Products and Services Code)	GS1 US (owned by UNDP)	Designed to classify products and services to streamline commerce, notably online.	Corporations, suppliers, public bodies	Product-oriented approach	All products and services are organised into: ▪ 4 levels (5 optional) ▪ 57 segments	Global
North American Product Classification System (NAPCS)	US Census Bureau, Statistics Canada and Mexico's National Institute of Statistics and Geography (INEGI)	Designed to collect information and analyse data on the value and prices of products.	Public bodies, corporations, researchers	Product-oriented approach	All products and services are organised into: ▪ 6 levels ▪ 24 sections ▪ Over 1100 trilateral products (with further national detail)	United States, Canada and Mexico
European Classification of Products by Activity (CPA)	Eurostat	Designed to categorise products for data collection and statistics according to activities defined by NACE.	Public bodies, corporations, researchers, international organisations	Product-oriented approach	All products and services are organised into: ▪ 6 levels ▪ 21 sections ▪ 88 divisions ▪ 272 groups ▪ 615 classes ▪ 1383 categories ▪ 3218 sub-categories	European Union

Annex 2: Examples of impact management resources using industry classifications

Resources defining sustainable practices

- China's Green Bond Endorsed Project Catalogue
- Climate Bonds Taxonomy
- EU Taxonomy for sustainable activities
- LSEG's Green Revenues Classification System

Resources identifying sustainability-related issues

- SBTN Materiality Assessment Tool
- Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE)
- UNEP FI Impact Mappings and Tools

Resources organising sustainability-related disclosures

- CDP Disclosure System
- ESRS Sector Standards
- GRI Sector Standards
- IFRS S1 , IFRS S2 and IFRS Industry-based guidance
- SASB Materiality Map

Resources analysing sustainability-related data

- Bloomberg SDG Methodology
- LSEG data and analytics
- MSCI Sector Indices
- S&P Dow Jones Sector and Industry Indices
- WBA Benchmarks

References

Publications

Dodsworth, C., Bourne, E., Schlich, B. L., & Kooroshy, J., 2023. Financial, Double, or Dynamic? Theories of ESG Materiality and Practitioner Approaches. *The Journal of Impact & ESG Investing*, 4(2), pp. 109–131.

ICMA, 2021. *Taxonomies and Nomenclatures: A guidance document for capital market participants*. International Capital Market Association.

ITU, 2022. *Global Connectivity Report 2022*, Geneva: International Telecommunication Union.

OECD, 2024. *Toolkit to measure well-being in mining regions*, Paris: Organisation for Economic Co-operation and Development.

Phillips, P., & Ormsby, J., 2016. Industry classification schemes: An analysis and review. *Journal of Business and Finance Librarinaship*, 21, pp. 1–25.

UNCTAD, 2020. *Commodities at a Glance: Special issue on strategic battery raw materials*, Geneva: United Nations Conference on Trade and Development.

UNECE, 2021. *Nuclear Power Technology Brief*, s.l.: United Nations Economic Commission for Europe.

UNEP FI, 2022. *Harmful marine extractives: Deep-Sea Mining*, Geneva: UNEP FI.

UNEP, 2017. *Green Technology Choices: The Environmental and Resource Implications of Low-Carbon Technologies*, Nairobi: United Nations Environment Programme.

UNEP, 2022. *Pollution Action Note – Data you need to know*, s.l.: United Nations Environment Programme.

UNEP, 2024. *Global Resource Outlook 2024*, Nairobi: United Nations Environment Programme.

United Nations Global Compact, 2023. *Net-Positive Biodiversity in Offshore Renewable Energy: Minimum Criteria and Recommendations for Action*, s.l.: United Nations Global Compact.

United Nations, n.d. *Atomic Energy*. Online.

UN Human Rights Office, 2021. *The right to privacy in the digital age*, s.l.: UN Human Rights Office.

United Nations, n.d. *Renewable energy – powering a safer future*, s.l.: United Nations.

WWF, 2020. *An Analysis of Water Risk in the Mining Sector*, s.l.: World Wildlife Fund.

WWF and BCG, 2023. *Building a Nature-Positive Energy Transformation: Why a Low-Carbon Economy is Better for People and Nature*, Washington, DC: World Wildlife Fund.

WHO, 2024. *Global status report on alcohol and health and treatment of substance use disorders*, s.l: World Health Organization.

Industry classifications

Australian Bureau of Statistics and Statistics New Zealand, 2006. *Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006* (Revision 2.0), Canberra: Australian Bureau of Statistics.

Bloomberg L.P., 2023. *Bloomberg Industry Classification Standard (BICS): 2024 Changes*, New York: Bloomberg L.P.

Eurostat, 2022. *NACE Rev. 2.1—Statistical classification of economic activities in the European Community*, Luxembourg: Office for Official Publications of the European Communities.

Executive Office of the President, Office of Management and Budget, 2022. *North American Industry Classification System*, Washington, D.C.: Executive Office of the President, Office of Management and Budget.

FTSE Russell, 2024. *Industry Classification Benchmark (ICB) Ground Rules*, London: FTSE Russell.

MSCI and S&P Global, 2023. *Global Industry Classification Standard (GICS®) Methodology*, s.l.: MSCI Inc. and S&P Global Inc.

LSEG, 2024. *The Reference data Business Classification (TRBC).* Online.

Sustainability Accounting Standards Board (SASB), 2018. *Sustainable Industry Classification System*, San Francisco: SASB Foundation.

United Nations Statistics Division, 2008. *International Standard Industrial Classification of All Economic Activities (ISIC)*, Revision 4, New York: United Nations.

IMPACT MANAGEMENT PLATFORM

The Impact Management Platform is a collaboration between the leading providers of sustainability standards and guidance that are coordinating efforts to mainstream the practice of impact management.

These Partners are working together to identify opportunities to consolidate existing sustainability resources, collectively address gaps, and coordinate with policymakers and regulators.

November 2024