

1. INTRODUCTION

The ESG Data Cartography is the **first** mapping proposition of **all** conventional and alternative entities (**ESG data providers, specialized providers, startups, open-source platform, NGOs, ...**) having relevant data for dealing with **main green and sustainable finance use cases**. It is composed of two main sections based on an underlying dataset of information about them.

It is a **free tool** accessible to everyone, under **continuous development** and **dynamically updated** by the data providers. Any feedback shall be sent to thibaud.barreau@institutlouisbachelier.org.

This project was developed by the [Institut Louis Bachelier Datalab](#) and the research program [Green and Sustainable Finance \(GSF\)](#), within the [Pladifes](#) project, financed by the [French National Agency of Research \(ANR\)](#). This tool can be complemented by the [French research map on green and sustainable finance](#), a cartography of the research actors in this field.

2. CONTENT

2.1 ESG data providers visualization by use cases

This “**packed bubbles**” plot is an interactive way look for the relevant data providers by focusing on a **single use case**, with potentially multiple level of detail. Click on a data provider to be redirected to its page, giving you a **standardized overview** of the data they have related to sustainable finance.

For some use cases, there are too many entities (when above 30 providers), resulting in name display issues. Hover your mouse above the empty bubble to see the associated name or use the table for smoother research.

2.2 ESG data providers summary table

This interactive table allows everyone access to all the providers in the database. For user-friendly reasons, only four kinds of information are available (and **searchable**) in the table:

- **Data provider:** the name of the entity, with eventually the acronym and/or the parent company (for subsidiaries). It is clickable and redirects the provider page.
- **Provider type:** the type of provider, among a predefined list.
- **Associated use cases:** the list of use cases that the entity has data related to.
- **Accessibility:** providers’ data can be **proprietary/partially free/free/open source**.

3. FOR DATA PROVIDERS ONLY

The tool is based on the providers’ answers to a **survey** (available [here](#)) and/or information from their websites. Please contact us to be **added to the cartography** or to **request access to the tool** to keep your content up to date.

When providing content updates, please respect the predefined categories regarding the *provider types*, the available *use cases* and the *accessibility* of the data. All contributions and/or involvement in the sharing of this tool are highly valuable. The utility and usability of this tool depends on you!

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4. CURRENT LIST OF USE CASES

Alignment

- Climate Alignment
 - Commitments
 - Country, Corporate and Intermediary-level Targets
 - Metrics
 - Implied Temperature Rise
 - Overshoot
 - Other Metrics
- EU Taxonomy
 - Eligibility
 - 6 objectives
 - DNSH
 - 6 objectives
 - Minimum Social Safety Guard
- Macro Scenarios

Impact

- Environmental Impact
 - EU Taxonomy 6 main objectives
- Social Impact
 - Employment
 - Impact on workers
 - Impact on consumers
 - Impact on communities
 - Basic human needs accesses
- SDGs Contribution
 - 17 SDGs possible
 - Unprecised
 - All

Governance

- Shareholder's Engagement
- Social Safeguards
- Business Ethics
 - Anti-competitive Practices
 - Corruption and Instability
 - Financial Transparency
 - Tax Transparency
 - Product Liability
 - Minimum Social Safeguards
- Corporate Governance
 - Remuneration
 - Board Composition
 - Shareholder Rights
 - Stakeholder Dialogue
 - Accounting Transparency

Risk

- Physical Risk
 - Chronic Risk
 - Temperature Rise
 - Sea-level Rise
 - Biodiversity Loss
 - Ocean Acidification
 - Acute Risk
 - Heatwaves
 - Tornados/Hurricanes
 - Floods
 - Oil spill
 - Wildfires
- Transition Risk
- Climate Stress Tests
- Legal/liabilities Risk
- ESG Risk Assessment

Sustainability tools

- Sustainability Rating
 - Corporate Rating
 - Best-in-class
 - Best-in-universe
 - Best-effort
 - Country rating
- Footprints
 - Carbon Footprint
 - Scope 1, 2, 3 and 4 (avoided)
 - Carbon Credits
 - Forest Footprint
 - Water Footprint
 - Biodiversity Footprint
 - Air pollution Footprint
- Reporting
 - PAI
 - TCFD
 - CSRD
 - Other
- Controversies
 - Environmental, Social and Governance controversies
 - Real Time Controversies
 - Static/Sectorial
- Sustainable finance products
 - ESG Bonds
 - Green, Social and Sustainability
 - ESG Loans
 - Green, Social and Sustainability
 - Securitized Products
 - Green Asset Backed Securities
 - Impact finance
 - Social Impact Bonds
 - Environmental Impact Bonds
 - Development Impact Bonds

5. GLOSSARY (WORK IN PROGRESS)

5.1 Alignment

- **Climate Alignment:** This section refers to countries, companies, and intermediary -level structure alignment with climate scenarios. If a new meaning for alignment was to arise, like alignment to biodiversity scenarios for example, a clear distinction would be added in the cartography.
 - **Commitments:** pledges made by institution to follow a given decarbonization path and/or being carbon neutral by a given date (usually 2050).
 - **Country Targets:** targets set by countries.
 - **Company Targets:** targets set by companies.
 - **Intermediary-level Targets:** targets set by regions, cities, organization...
 - **Metrics**
 - **Implied Temperature Rise:** a forward-looking metric, usually expressed in Celsius (ex: 1.5°C, 2°C ...)
 - **Overshoot:** a forward-looking metric, usually expressed in T/CO2e above a given benchmark.
 - **Other Metrics:** other alignment metrics like PACTA.

- **EU Taxonomy:** A classification of activities having a substantial contribution to the environmental transition. An [online tool](#) is also available to help visualizing the taxonomy in a more practical way.
 - **Eligibility:** If a given business line is a potential candidate for “substantial contribution” to a given objective.
 - Climate Change Mitigation.
 - Climate Change Adaptation.
 - Water Resource Sustainable Management.
 - Circular Economy Transition.
 - Pollution Prevention & Control.
 - Biodiversity Preservation & Restoration.
 - **DNSH:** Do No Significant Harm, if an eligible business line is not “significantly harmful” for any other objectives.
 - Climate Change Mitigation.
 - Climate Change Adaptation.
 - Water Resource Sustainable Management.
 - Circular Economy Transition.
 - Pollution Prevention & Control.
 - Biodiversity Preservation & Restoration.
 - **Minimum Social Safety Guard:** If an eligible business line satisfies given social constraints.

- **Macro Scenarios:** Scenarios forecasting the evolution of both climate and the economy, used as a basis for other analysis. So far, no distinction has been made among Integrated Assessment models, Climate scenarios, Climate impact scenarios and Transition scenarios but there are possibilities for future specifications.

5.2 Impact

- **Environmental Impact:** Data/methodologies to assess the environmental consequences of countries/companies/plans/policies/projects/programs.
 - Climate Change Mitigation.
 - Climate Change Adaptation.
 - Water Resource.
 - Waste.
 - Pollution.
 - Biodiversity.

- **Social Impact:** Data/methodologies to review the social effects of infrastructures/projects. Can be applied to planned/unplanned events.
 - Employment.
 - Impact on workers.
 - Impact on consumers.
 - Impact on communities.
 - Basic human needs accesses.

- **SDGs Contribution:** The Sustainable Development Goals are the United Nations blueprint to achieve a better and more sustainable future for all, with a 2030 horizon.
 - Unprecised: When the provider claims having SDG related data but do not precise about which one(s).
 - All: When the provider claims having data related to all SDGs.
 - No Poverty.
 - Zero Hunger.
 - Health Well-being.
 - Quality Education.
 - Gender Equality.
 - Water Access.
 - Energy Access.
 - Labor Condition / Growth.
 - Industry, Innovation, Infrastructure.
 - Reduced Inequalities.
 - Sustainable Cities.
 - Responsible Consumption / Production.
 - Climate Action.
 - Underwater Biodiversity.
 - Land Biodiversity.
 - Peace, Justice, Institutions.
 - Partnerships.

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5.3 Governance

- [Shareholder's Engagement](#): Processes by which the organization involves the stakeholders in the decision-making process and try to influence it, particularly considering ESG aspects.
- [Social Safeguards](#): Social safeguards refer to the policies, procedures and measures intended to prevent, reduce, mitigate and/or compensate for the unintended negative impacts of development projects. They also help prevent social exclusion. The role of social safeguards has evolved beyond the “do no harm” approach.
- [Business Ethics](#): The examination of ethical/moral principles/problems that can arise in a business environment.
 - Anti-competitive Practices
 - Corruption and Instability
 - Financial Transparency
 - Tax Transparency
 - Product Liability
 - Minimum Social Safeguards
- [Corporate Governance](#): It involves a set of relationships between a company's management, its board, its shareholders and other stakeholders.
 - Remuneration
 - Board Composition
 - Shareholder Rights
 - Stakeholder Dialogue
 - Accounting Transparency

5.4 Risk

- [Physical Risk](#): Physical manifestations of the environmental risks, resulting in financial losses (short term and long term).
 - Chronic Risk: The certain/almost certain long-term effects of climate change, usually associated with a high inertia.
 - Temperature Rise
 - Sea-level Rise
 - Biodiversity Loss
 - Ocean Acidification
 - Acute Risk: The punctual unpredictable extreme events, which frequency may increase due to climate change.
 - Heatwaves
 - Tornados/Hurricanes
 - Floods
 - Oil spill
 - Wildfires
- [Transition Risk](#): Business-related risks implied by a societal and economic shift toward a low-carbon and more climate-friendly future. They can include policy and regulatory risks, technological risks, market risks and reputational risks.
- [Legal/liabilities Risk](#): Sometimes included in Transition Risk, it refers to the regulation and litigation risks that can come up with a low carbon transition.
- [Climate Stress Tests](#): Forward looking tests to assess the stability of the financial system to future extreme climate evolution (worst case scenarios).
- ESG Risk Assessment: Data/methodologies to assess a business/corporate/country exposure to extra financial risks, mainly coming from Environmental, Societal and/or Governance issues.

5.5 Sustainability tools

- Sustainability Rating
 - Corporate Rating: ESG rating that measures a company's exposure to long-term environmental, social, and governance risks, involving a wide range of issues like energy efficiency, worker safety, board independence, etc. Can also be done at high frequency using AI.
 - Best-in-class: Comparison of a company with its industry/sector peers.
 - Best-in-universe: Comparison of a company with the whole universe.
 - Best-effort: Comparison of a company past effort to improve its ESG performances.
 - Country rating: ESG rating that measures a country's exposure to long-term environmental, social, and governance risks, involving a wide range of indicators like energy mix, worker safety, gender inequalities, corruption, etc.

- Footprints: Quantitative raw data about main environmental topics.
 - Carbon Footprint: GHG emission, usually converted in tons of CO2 equivalent.
 - Scope 1: Direct emissions from owned or controlled sources.
 - Scope 2: Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed.
 - Scope 3: All other indirect emissions that occur within an organization's wider value chain.
 - Scope 4: Avoided emissions, not standardized yet.
 - Carbon Credits: all kind of tradable certificate or permit representing the right to emit a set amount of equivalent carbon dioxide gas (tCO2e)
 - Forest Footprint: Data measures relative to reforestation/deforestation.
 - Water Footprint: Data measures on the evolution of the water quality.
 - Biodiversity Footprint: Data measures relative to biodiversity evolutions.
 - Air pollution Footprint: Data measures of particles in the air (other than GHG emission)

- Reporting: All regulatory disclosures related to environmental and sustainability issues.
 - [PAI](#): Principal Adverse Impact, negative and/or material effects on sustainability factors that are caused by/linked to investment decisions/advices.
 - [TCFD](#): Task Force on Climate-related Financial Disclosures.
 - [CSRD](#): European Corporate Sustainability Reporting Directive, an amendment to [NFRD](#) (Non-Financial Reporting Disclosure), the previous extra financial european mandatory reporting for companies with 500 employees or more.
 - Other.

- Controversies: Any sectors/activities/business practices subject to contentions. Some can be illegal, depending on the country. They are often used for performing exclusions during asset selection.
 - Environmental controversies
 - Real Time Controversies: Examples: A factory polluting water/air, deforestation, usage of fertilizers.
 - Static/Sectorial: Examples: Oil/Coal based industries.
 - Social controversies
 - Real Time Controversies: Examples: Income gaps, unethical business practices, misleading advertising.
 - Static/Sectorial: Examples: Tobacco, Alcohol sectors.

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- Governance controversies
 - Real Time Controversies: Examples: Money laundering, terrorism financing.
 - Static/Sectorial: Examples: Armament sector

- Sustainable finance products: financial products tied with extra financial objectives.
 - ESG Bonds: fixed-income financial instruments which are used to fund projects that have positive extra financial benefits. They follow the Principles stated by the [International Capital Market Association](#) (ICMA), and the proceeds from the issuance of which are to be used for the pre-specified types of projects.
 - [Green Bonds](#) (or climate bonds): Bonds to fund projects that have positive environmental and/or climate benefits.
 - Social Bonds: Bonds to fund projects that have positive social benefits.
 - [Sustainability Bonds](#): Bonds exclusively used to finance or re-finance a combination of Green and Social Projects and which are aligned with the four core components of the [ICMA](#) Green Bonds Principles and Social Bonds principles.
 - [Sustainability-linked Bonds](#): fixed income instrument where its financial and/or structural characteristics are tied to predefined Sustainability/ESG objectives. These are measured through predefined Key Performance Indicators (KPIs) and evaluated against Sustainability Performance Targets (SPTs).

 - [ESG Loans](#): loans that exclusively fund projects that make a substantial contribution to an environmental and/or social objective. Contrary to bonds, they are usually smaller and done in private operations.
 - Green Loans: loans that fund projects that make a substantial contribution to an environmental objective.
 - Social Loans: loans that fund projects that make a substantial contribution to a social objective.
 - Sustainability Loans: loans that fund projects that make a substantial contribution to environmental and social objectives

 - [Securitized](#) Products: Securitization is the financial practice of pooling various types of contractual debt and selling their related cash flows to third party investors as securities
 - Green Asset Backed Securities (Green ABS): aggregation of low carbon transition related products (like loans). It can facilitate investments by helping managing associated risks.

 - Impact finance: Outcome based financial products, where a pre-identified impact is expected (usually considering the [GIIN](#) impact definition, based on intentionality, additionality, and measurability).
 - [Social Impact Bonds](#) (SIBs, or Pay for Success (US), Social Benefit Bond (ASTL), *Contrat à Impact* (FR)): it is a partnership between the public and the private sector to foster the emergence of innovative social projects.
 - Environmental Impact Bonds (EIBs): Similarly to SIBs, it is a partnership between the public and the private sector to foster the emergence of innovative environmental projects. Sometimes, they are associated with SIBs by automatic linkage do to SIBs precedence.
 - [Development Impact Bonds](#) (DIBs): Performance-based investment instrument intended to finance development programs in low resource countries. Similar to SIBs, the difference being that external organizations intervene in the payment, to support emerging governments with limited resources.