



SOLVING SUSTAINABLE DEVELOPMENT GOALS RUBIK'S CUBE

AN IMPACT-BASED TOOLKIT
FOR ISSUERS AND INVESTORS



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FOREWORD

THIS REPORT, THE FIRST OF NATIXIS GREEN & SUSTAINABLE HUB' CENTER OF EXPERTISE, AIMS AT MULTIPLE AUDIENCES AND WAS DESIGNED AS A "SWISS ARMY KNIFE" TO ADDRESS SUSTAINABLE DEVELOPMENT GOALS CONTRIBUTION ASSESSMENT

With a sustainable finance mindset and building on the ongoing work of several actors – namely the IMCA, the Global Compact, the UN SDSN –, we have formulated a conceptual approach declined into an actionable methodology. We identified existing tools and proposed new ones. Our proposals are anchored into the conviction that contribution claims must be evidenced. From the early stages of this collective piece of work, we stick to the irrefutable fact that the SDGs were designed and agreed by and for governments, and that their adaption into actionable tools for businesses requires to build upon the territorial ties companies or projects have. Although all the UN States are equal in their commitment to the SDGs, they are unequal in the distance to reach them, requiring to factor in achievement gaps.

To be realistic in our approach and proposals, we started by surveying investors to understand their SDG commitments and expectations. These first-hand insights came from 42 investors accounting a total AuM of ~USD14tn. Two takeaways of this poll are that their expectations in terms of SDG contribution from companies are far from being met. Meanwhile, they are all committed to further integrate the SDGs in their portfolio management and a large portion of them already has SDG funds.

Our methodology in 2 phases split into 10 steps really flourishes when used at strategy or project design stages. However, as disclosure and reporting are the hothouse for innovation and breakthrough approaches, it can be used ex post, to assess the contribution of a project or a program already commissioned. Our approach is asset-class agnostic. It can be used as template for impact reporting, as "tips box" to help companies identify, prio-

ritize and improve their SDG footprint, as an outline for designing SDG bonds or loans framework, as a canvas to design fixed-income and equity investment solutions.

In the end, this report is mostly a call for action, and efforts. We, collectively, -companies, banks, ESG agencies, governments- are not delivering yet what is needed to achieve the 2030 Agenda. Above all, we should retain ourselves from claiming SDG progresses that we cannot decently prove. Integrity is at the heart of Natixis Green & Sustainable Hub value proposition, intertwined with innovation. Thereupon, I would like to thank the numerous contributors to this report, first and foremost, the Region Ile-de-France, ICADE and Essilor, who collaborated to the forging of granular case-studies that test our methodology. Our report also presents and uses extensively the solutions developed by ISS-Oekom, Vigeo Eiris, Beyond Ratings, MSCI, Trucost, with whom we had very beneficial exchanges along the way. I would also like to thank experts from Global Compact France, IDDRI and the SDSN, whose insights enriched the perspective. Lastly, the work carried by the SDSN is very valuable, and the indexes and dashboards they propose is instrumental in our proposed context-based approach.



Orith Azoulay

Natixis, Global Head of Green & Sustainable Finance

France has been playing a pioneering role in the field of non-financial disclosure and reporting for the last years. Article 173 of the Law on energy transition set up in 2015 an obligation of non-financial disclosure on their climate related strategy for all investors and asset owners. This obligation now sets the path for other initiatives such as the TCFD (Task force on climate related financial disclosure); the European Commission is proposing to extend it at the European Union level. Also, in 2017, with the Green OAT, France was the first country to issue a sovereign green bond for a benchmark size. The inaugural transaction amounted to 7 bn€; the current outstanding amounts to 14,8 bn€. The transaction was a success, and it is worth mentioning that the level of commitment the French authority took in terms of reporting greatly contributed to this landmark transaction. France has committed to provide three reports to investors: an annual report on allocation, an annual report on performance indicators and a report on ex post impacts at an appropriate frequency. The ex-post impact reports are reviewed by an independent Evaluation Council, composed of international experts in environmental policies and sustainable finance.

The experiences we have as French authorities both as a regulator and as an issuer reporting to its investors nurture our view on non-financial disclosure and reporting practices. We see all the advantages they bring to an organization, raising awareness across all parties, and creating new opportunities for dialog, both inside the organization (between financial and technical or ESG experts) and outside the organization with clients and other stakeholders. They also increase the level of transparency of the organization. We also see the challenges these practices face, such as their lack of comparability. No harmonization of the practices across the market is currently sought at the regulatory level, as it was a political choice to leave room for innovation when enacting article 173 of the Law on energy

transition. Yet we observe with great interest practices trying to converge, with a view to improving the reporting quality. We also see as a key challenge of the years to come the improvement of impact measurement tools.

Among initiatives trying to help practices harmonize, several use UN's Sustainable Development Goals as a common basis. There's indeed a rationale in resorting to the SDGs: they tackle a wide array of sustainable topics, and they define measured targets for 2030 in all these fields; they are globally shared across a great number of organizations; all national authorities follow them closely and measure their progress towards them already. The European Commission, for example, proposes in the draft regulation defining a European taxonomy, currently negotiated between Member States and at the European Parliament, to use them as a reference. Of course, there are some challenges lying ahead. For example: how do you compare and classify differing and sometimes diverging goals? How do you turn a 2030 goal into a short-term impact measurement? The work carried out by Natixis, and presented today, will with no doubt bring an interesting contribution in the field.

September 16, 2018



Élise Calais, Ministry for an Ecological and Solidarity Transition, Division for environmental responsibility of economic players, Assistant Director

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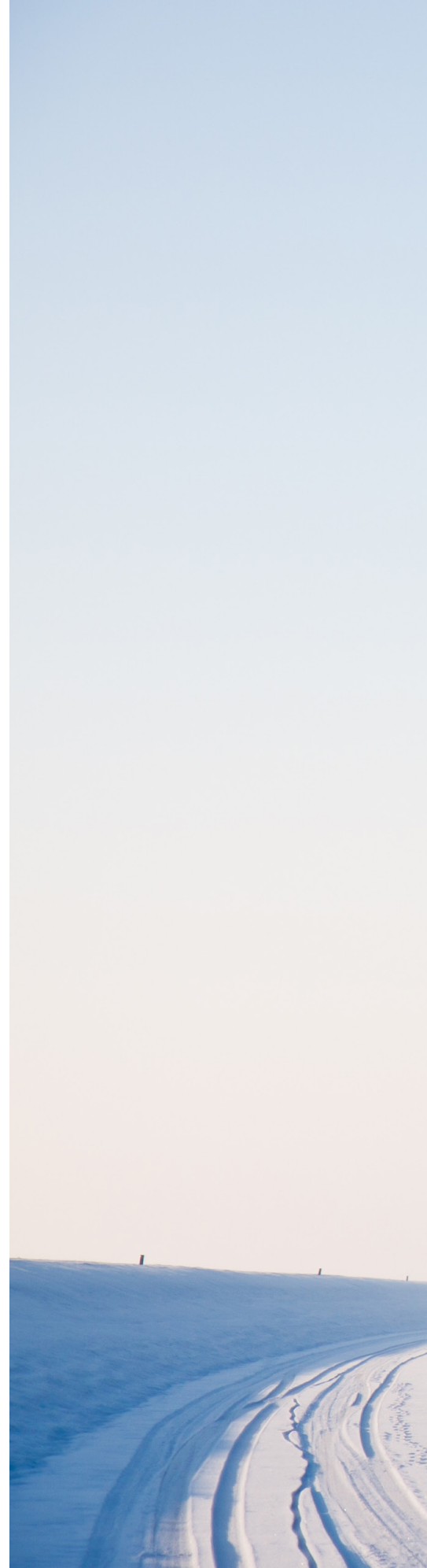
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WHO WE ARE

CREATION OF A “GREEN & SUSTAINABLE HUB” WITHIN NATIXIS’ CIB DIVISION

Natixis Corporate and Investment Banking (CIB) decided to capitalize on the various franchises it has already established in the Green & Sustainable Finance space (e.g. renewable energy finance, Social Responsible Investment (SRI) research, green bonds structuration, climate-related equity investment solutions) by adapting and shoring up its organization so that it can tap into these “green” opportunities more effectively.

In July 2017, Natixis CIB created a “Green & Sustainable Hub” (GSH) within its CIB division managed by Orith Azoulay, previously Head of SRI Research, and reporting to Global Markets and Investment Banking, under the joint responsibility of Mohamed Kallala and Luc François.

■ Innovation, utility & transformation

Natixis GSH consists of a dedicated, expert and resolutely cross-asset task force.

The Hub’s purpose is to develop CIB’s Green & Sustainable franchise and revenue generation in Europe but also in the Asia Pacific and Americas platforms. It has two main missions:

- I) **Generate, develop and steer green & sustainable revenues and product innovation, but also exploit cross-selling potential.**
- II) **Enhance the syndication and distribution bases, leveraging its intimate knowledge of “green driven” investors to promote a “Green O2D” business model.**

The Hub is composed of **five teams**:

On the private side:

- 1) **Center of Expertise;**
- 2) **Financing Solution & Advisory specialits;**
- 3) **Specialized Distribution Function.**

On the public side:

- 4) **Green & Sustainable Investment Solutions (Equity & Fixed Income) Specialist;**
- 5) **Green & Sustainable Thematic Analyst.**



From the left to the right :
Julien Duquenne (Director,
Green & Sustainable

Solutions), Thomas Girard (Director, Green & Sustainable Business Development), Orith Azoulay (Global Head of Green & Sustainable Finance), Thomas Garnier (Green & Sustainable Solutions), Cédric Merle (Center of Expertise), Hong-My Nguyen (Strategist, Green & Sustainable Hub Investment Solutions) and below on the right, Chaoni Huang (Director, APAC Green & Sustainable Solutions), based in Hong Kong.



The Banker
Investment Banking
Awards 2018

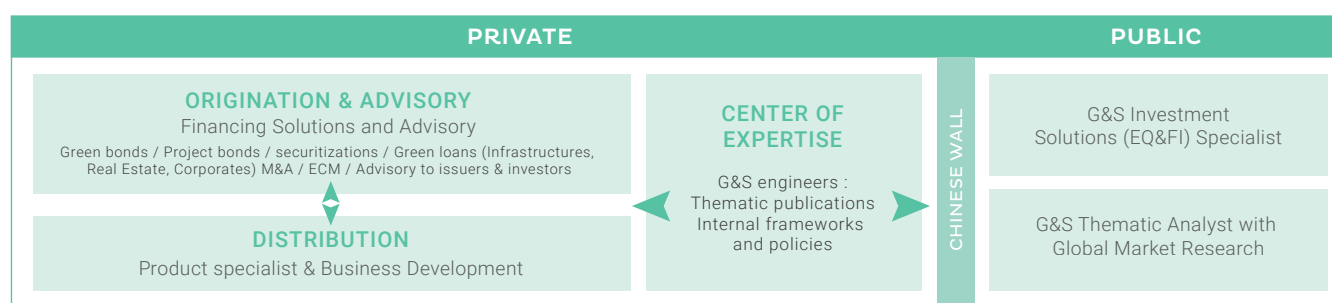
**MOST INNOVATIVE
INVESTMENT BANK
FOR CLIMATE CHANGE
AND SUSTAINABILITY**

**#1 Best Credit
Research Green
Bonds / ESG**

Source: Euromoney - Fixed
Income Survey 2018

CIB Green & Sustainable Hub (GSH)

A dedicated team of experts for the CIB



Constant interactions...

G&S “captains” network within CIB’s business lines and platforms

Bond Chain (DCM, Syndication, Sales)
Coverage
ECM
Fixed income solutions

APAC Platform
Equity Solutions (engineering, sales, platforms)
Real Estate Finance
M&A
Fixed income Sales

Americas Platform
Global Finance – Syndication
GSCS - ABS
Global Infrastructure projects & Renewables
Global Portfolio Management

Global Transaction Banking
Global Markets – Senior Relationship
Managers

The Hub is the operational partner of all CIB’s business lines (BLs) but also aims at circulating green & sustainable market intelligence as well as training the BLs and green captains to empower and foster business ideas and product innovations.

■ Center of Expertise: thoughts for innovation and business

Our center of expertise is the safeguard of our green integrity, expert legitimacy and key factor for competitive differentiation and to avoid backlash from green washing.

It is proposing:

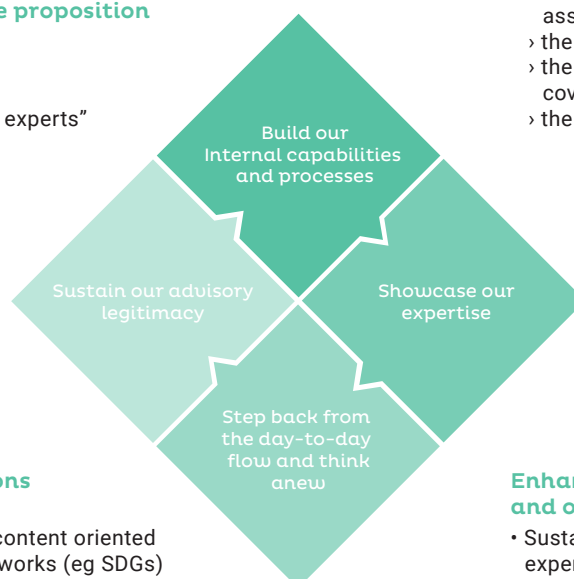
- A Scientific “stamp” to our products & solutions offering.
- Flagship expert publications tackling sustainability issues of Natixis’ core sectors (Energy and Natural Resources; Infrastructure; Real Estate Finance; Aviation) and/or core green & sustainable emerging trends and tools.
- Extensive clients’ roadshows & events.

Robustness of the value proposition

- Our “Scientific stamp”
- Ensure Green integrity
- Market intelligence
- Agility of “private industry experts”

Feed products & solutions innovation

- Structuring of innovative content oriented financing solutions frameworks (eg SDGs)
- Develop thematic and fundamental raw material for investment solutions (incl. EQ & FI solutions)
- Decrypt new market trends and future cornerstone topics



Process, Train, Onboard

- Scientific contribution to :
 - › the internal methodologies for green asset tagging & loan frameworks
 - › the bonus / malus project
 - › the internal training for business lines & coverage
 - › the Green captain network animation

Enhance our influence and outreach

- Sustain our intimate relationship and expert dialogue with investors and corporate clients
- Showcase our expertise
- Engage with think tanks, universities, international organization, public authorities : to forge new partnerships (open innovation) and attract talents

INTRODUCTION

September 2018 marks the 3rd anniversary of the 2030 Agenda for Sustainable Development that was agreed upon in September 2015 by 193 countries. A common commitment that applies abroad and domestically for governments, inwardly and outwardly for companies. It has since proven to be a rallying point for governments, businesses and investors. It is on this occasion that Natixis Green & Sustainable Hub's Center of Expertise has chosen to release its first flagship report titled "Solving the Sustainable Development Goals Rubik's Cube – An impact-based toolkit for issuers and investors".

Under conditions we have tried to clarify, the 2030 Agenda could serve as unifying framework to tie together the disparate actions of governments, corporations, entrepreneurs, investors, and NGOs on sustainability. This publication aims at spurring methodical innovation. It identifies and proposes actionable tools for embedding SDG footprint assessment into corporate strategy and funding or portfolio management and avoid evidence-less contribution claims.

To strengthen the legitimacy of green and sustainable finance instruments, we believe the market urgently needs to factor in territorial anchorages, baselines and stakeholders' situations. We are stepwise shifting from a situation where impacts were once considered as a by-product of investments, mostly for reporting purposes, to a situation where impact is at the heart of investment strategies and even more where investments are instrumental to delivering impacts. Over the last year, pension and sovereign wealth funds, major banks and wealth managers, have declared their alignment with the SDGs. In this context, we have launched a survey of investors to better understand their expectations. It was answered by 42 investors with an estimated total of assets under management of ~USD14tn. The report presents and discusses the results of this survey and our recommendations are built on it to address financial community' needs and demands.

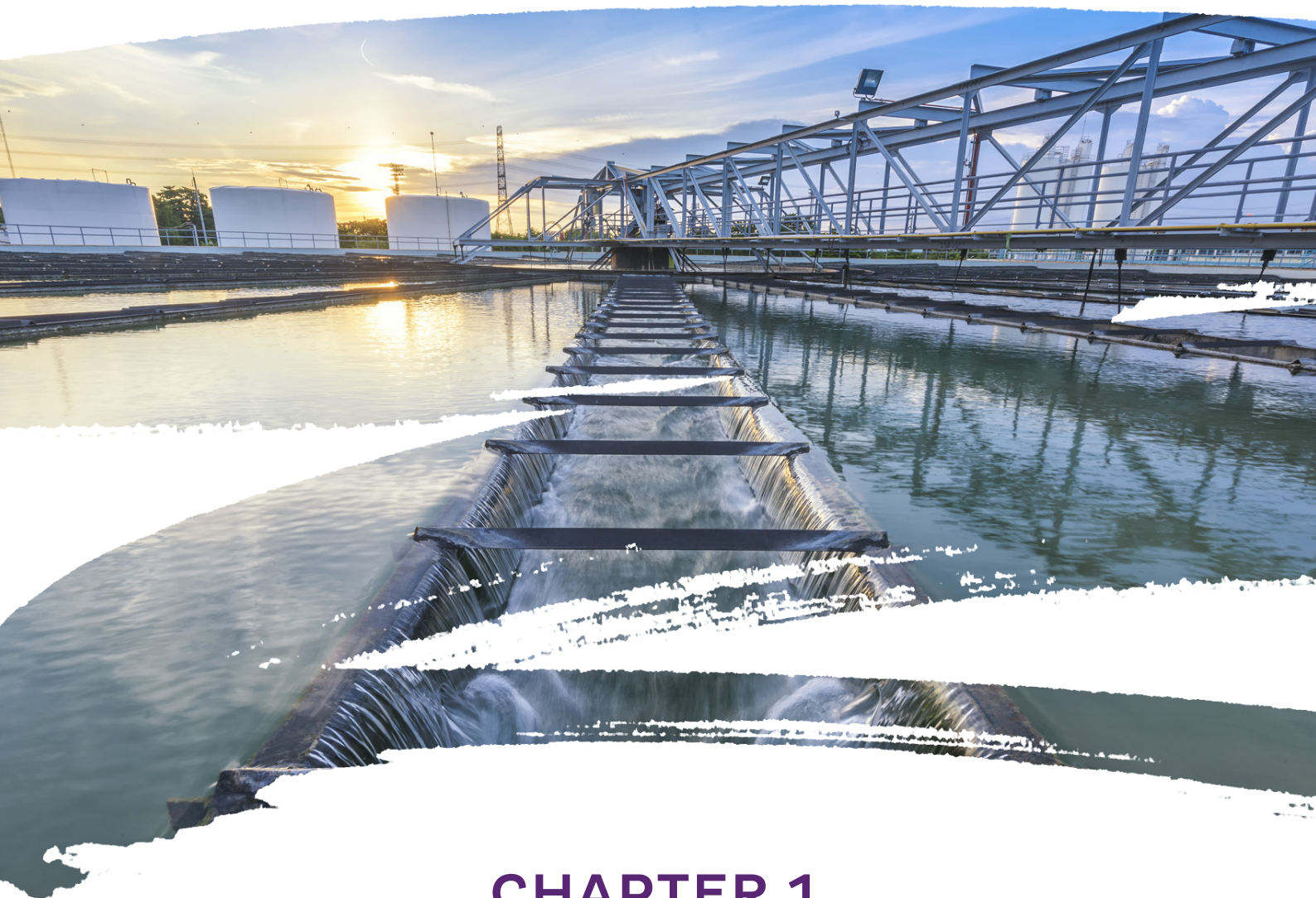
The SDG paradigm is plunging us into the era of geospatial investing that pays attention to impact intentionality, intensity, additionality and transformative spill-over. An investment displayed as theoretically "making a difference" is no longer enough. There are questions that need answers: "as compared to what", "where", "upon whom" and "how much". The SDGs are a formidable tool to apprehend those yardstick concerns. While all the UN States are equal in their commitment to the SDGs, they are unequal in the distance to reach them.

We have tried to dissipate the "fog of SDG washing" and clarify terminologies, to do so we have distinguished three shades of impact / contribution - relate to, align with, contribute to the SDGs - with their subsequent levels and natures of claim and likelihood. There is a long journey to go from the superficial use of the SDG stickers to the grail of evidence-based causation. Measuring impact in the strict technical sense of being able to attribute causality is complex, often inconclusive, and costly. Is my input trickling down to outcome and impact? Are there other change dynamics or pathways at work that obstruct SDG achievement? Moreover, the question of the negative impacts of my actions, activities or projects, what is called in interlinkages in SDG terminology, is often eluded.

Through our asset-class agnostic methodology and approach, we try, whenever possible to stick to SDG spatial achievement gaps, either where a project occurs or where a company has a strong foothold. Case studies and guidelines to design frameworks are proposed. We would like to thank the participants, especially the Region Ile de France, ICADE and Essilor. Other experts and SDG protagonists gave us their views on specific questions, such as SDG fiscal budgeting and sovereign bonds, and we wish to thank them as well. Lastly, our products engineers formulated some investment solutions applying our methodology, both on fixed-income (SDG 4 education and sovereign debt) and on equity (cluster of the SDG 2 end hunger, 3 good health and well-being, and 6 clean water and sanitation).

**Natixis Green & Sustainable Hub
(GSH)**





CHAPTER 1.

UNTANGLING THE SUSTAINABLE DEVELOPMENT GOALS' RUBIK CUBE

A. THE 2030 AGENDA: HOW RELEVANT AND ACTIONABLE FOR ISSUERS AND INVESTORS?

The 2030 Agenda in a nutshell

In 2015, the UN Member States reached major agreements which set the course of global development for a generation – across the 2030 Agenda, the Paris Climate Agreement, the Sendai disaster risk reduction framework, and the Addis Ababa Action Agenda on financing for development.

Precisely, the UN General Assembly adopted **the 2030 Agenda setting out 17 Sustainable Development Goals (SDGs) and 169 targets** of varying degrees of precision and are accompanied by more than 200 indicators intended to monitor progress, for the 2015-2030 period. They cover areas as diverse as **poverty reduction, education, health, the protection of natural heritage and international cooperation** Unlike the **Millennium Development Goals (MDGs)**, the SDGs are universal, applying to countries at all levels of development and income, abroad and at home (i.e. for high-income countries, it is not limited to foreign policies and development aid agencies but also applies to domestic policies).



The SDGs are based on two fundamental principles. Firstly, **the principle of universality**: all countries are committed to undertaking action to contribute – both home and abroad - to the achievement of the SDGs, whether they are developing, emerging or already industrialized. The second principle lies in **indivisibility**: **all the objectives must be chased together**, to ensure a “coherent” answer. Consequently, a country’s agricultural and food policies is supposed to ensure its food security, but also preserve natural resources and health, guarantee a decent standard of living for farmers, and not have harmful impacts on the farming systems of other countries.

Investment needs

Worldwide investment needs to achieve the SDGs have been assessed by the UNEP-Fi (2018, “Rethinking impact to finance the SDGs) **and stand at \$6tn per year on average**. Of this amount, advanced countries represent \$1.5tn per year while emerging markets and developing countries represent \$4.5tn. Africa alone represents one third or \$1.5tn of the emerging markets and developing countries’ investment needs. In parallel, according to the Business & Sustainable Development Commission (BSDC, 2017) advancing the SDGs may represent \$12tn of new market opportunities (60 sustainable and inclusive market “hotspots” have been identified, including Energy \$4.3tn; Cities: \$3.7tn trillion; Food & Agriculture \$2.3tn; Health & Well-being \$1.8tn.).

■ What role and appropriation by businesses

The article 67 of the 2030 Agenda states: ***"Private business activity, investment and innovation are major drivers of productivity, inclusive economic growth and job creation. We acknowledge the diversity of the private sector, ranging from micro-enterprises to cooperatives to multinationals. We call on all businesses to apply their creativity and innovation to solving sustainable development challenges. We will foster a dynamic and well-functioning business sector, while protecting labour rights and environmental and health standards in accordance with relevant international standards and agreements and other on-going initiatives in this regard, such as the Guiding Principles on Business and Human Rights and the labour standards of ILO, the Convention on the Rights of the Child and key multilateral environmental agreements, for parties to those agreements."***

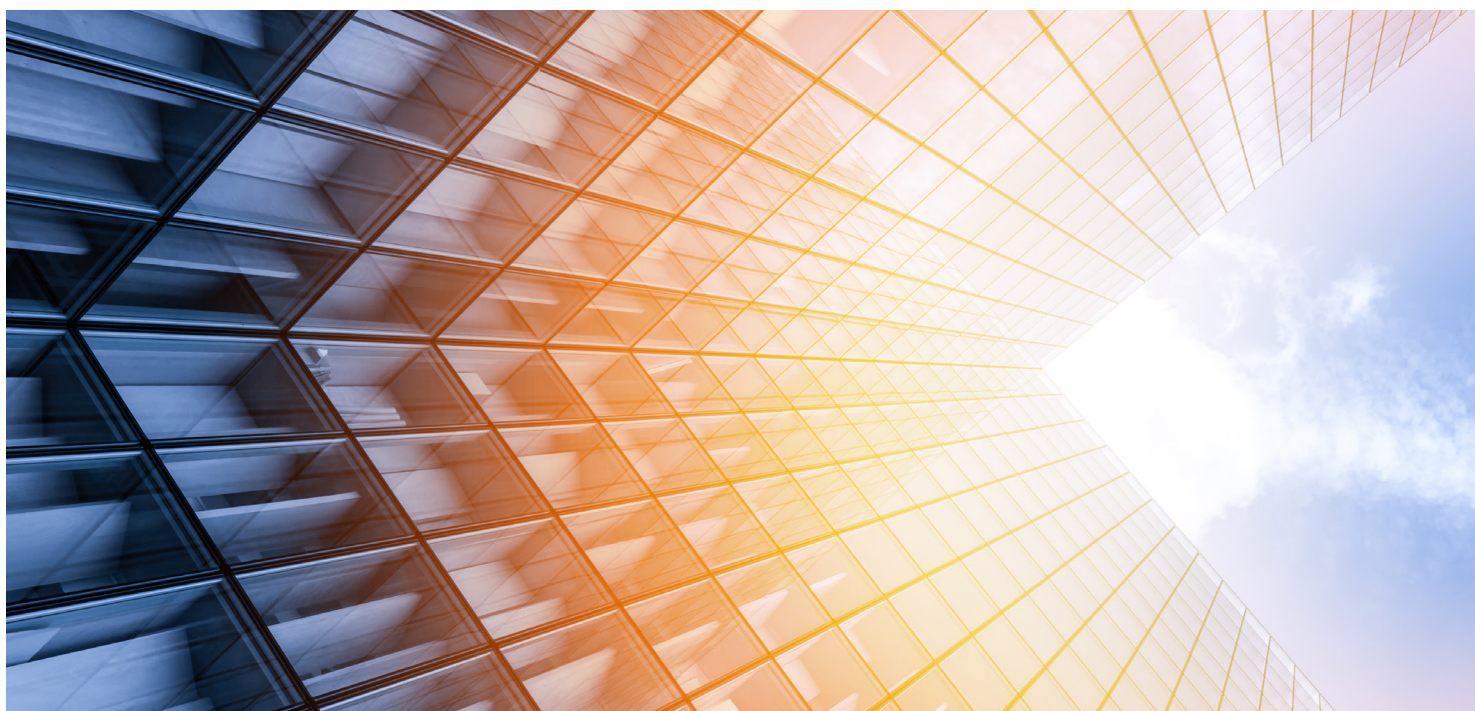
In the chapter "Means of Implementation" of the 2030 Agenda, it is said: "39. The scale and ambition of the new Agenda requires a revitalized Global Partnership to ensure its implementation. [...] This Partnership will work in a spirit of global solidarity, in particular solidarity with the poorest and with people in vulnerable situations. It will facilitate an intensive global engagement in support of implementation of all the Goals and targets, bringing together Governments, the private sector, civil society, the United Nations system and other actors and mobilizing all available resources".

The 2030 Agenda and the SDGs may offer this common yardstick against which companies can be assessed and accordingly classify as a sustainable issuer or not depending of their foothold and SDG footprint. We witness that **a 2030 Agenda section starts to become a "must-have" of CSR reporting**. According to KPMG¹, four in ten of the world's largest companies already reference the UN SDGs in their corporate reporting. 62% of the 470 companies analyzed by PWC in 2017 mentioned the SDGs in their reporting. Harmonization of reporting data requirements is critical as highlighted in our survey, the lack of standardization, especially for social topics, appears as a major hurdle.

In the debate about sustainable taxonomies initiated by the European Union, SDG could appear as an operational toolkit to assess sectors or activities contribution to policy objectives (see interview of Elisabeth Hege in Chapter 3). They especially might be this common language looked for with China and Asian investors. Among their strength is their interlinkages and emphasis on tradeoff and synergies.

In France, the decree-law of July 2017 on the publication of non-financial information by large companies (over 500 employees, net turnover over €40m or balance sheet total over €20m) and its transposition of August 2017 have enriched the non-financial reporting system. These texts have introduced the notion of "materiality" or "relevance". Companies would be well advised to apply it to their SDGs foot-printing or contribution claim.

Furthermore, the "SDG lens" could help both government and companies to navigate trade tensions and de-escalate protectionist measures by addressing in a consistent way criticism of social or environmental dumping.



¹ KPMG (February 2018), How to report on the SDGs. What good looks like and why it matters

■ Interview of Global Compact France

Q1. What roles can the private sector perform to advance the SDGs?

Anthony Ratier: The private commercial sector is a major player in the success of the 2030 Agenda: the SDGs are a common language for businesses to meet global challenges. Even more than for the Millennium Development Goals (MDGs), companies have taken from the very beginning a decisive role in the implementation of the 2030 Agenda. This role was reaffirmed by UN Secretary-General, Antonio Guterres during the World Economic Forum in Davos in 2017: «It is absolutely crucial to strengthen a new generation of partnerships, not only with governments, civil society and academia, but also with the private sector [...] Without the private sector, we will lack the necessary innovation, the necessary skills to explore new markets, new products, new services, and to develop new sectors in the economy. Without the private sector, we will not create enough jobs, we will not bring enough dynamism and stability to societies that need to be strengthened by the implementation of the Sustainable Development Goals.»

Q2. The Global Compact France is involved in different work streams to identify and disseminate good SDG integration practices. What are your main recommendations?

Anthony Ratier: We made several recommendations in the appropriation report led by the Comité 21 that remain relevant today. For public authorities, the private sector expects a

clear line from public authorities on the SDGs. Communication aimed at companies is too fragmented and the main ministries and the movers and shakers are not providing enough information about the 2030 Agenda.

Q3. Specifically, for companies, how to avoid cherry picking and just stickers-dropping? Are the SDG also relevant for SMEs and midcap companies?

Anthony Ratier: First, it is crucial to mobilize all services and departments within the company: The 2030 Agenda can be a powerful driver for responsible innovation to develop new products or services that can contribute to the SDGs through its core business. As a cohesive factor in the company and at a time of debates on the company and the collective interest, the SDGs can provide a real answer to the redefinition of the company's objectives with a real operational phase.

Second, this appropriation can also involve the creation of a strategic tool to be defined, a management tool with guidelines to provide better consideration of all the external factors affecting a company about the SDGs and to measure its impact (positive and negative) and the follow up.

Lastly, regarding the appropriation of the SDGs by SMEs/midcap companies: the 2 million SMEs in France can be mobilized through chambers of trade and commerce, professional bodies and local authority development programs as well as public purchasing.



Anthony Ratier, Human Rights/SDGs Manager at Global Compact France



Q4. The Global Compact recently published a practical guide titled “integrating the SDGs into corporate reporting”. Can SDG reporting better take into account different geographical distances to reach the goals and stakeholders’ situation? Can it be more material?

Anthony Ratier: Finally - and this is the expectation of many companies - there is a real need to provide a better framework for reporting on the SDGs. This reporting can be carried out from country and sector data in order to identify priority targets to be defined according to geographical distribution and to assist in the SDG materiality analysis. This study and methodology from Natixis could really help companies. We are currently bringing these recommendations to the High-Level Steering Committee for the French government’s SDG roadmap.

Q5. One of the respondents of our survey of investors answered that the “SDGs are far from French retail clients”. How can we educate and raise awareness citizens about the SDGs?

Anthony Ratier: The promotion of the SDGs must be conducted more concretely in relation to citizens and the general public: the issues of global warming are now very present in the collective imagination, why wouldn’t it be the same with the SDGs? This is particularly the responsibility of the media, which has done a remarkable job of popularizing and raising awareness on climate in 2015 and could do the same on the new 2030 Agenda roadmap.



B. ISSUERS AND INVESTORS' APPETITE FOR SDG CONTRIBUTION MEASUREMENT

The investors' willingness to demonstrate impact

ESG issuer level assessments have historically been based on ratings, widely used by the investment community, which are useful tools to assess strategies and their deployment but above all their disclosure.

In the meantime, because of accountability and evidence-based results growing demand, SRI & ESG investors have reached the phase 2 of their evolution: measuring the environmental & social impact of their investment is now their primary goal. It This trend anchors into the dynamics of impact investing while massively widening its scale by bringing it into the world of listed financial instruments.

Rootless or "blind" ESG finance has reached its limits and "supposedly making a difference" is no longer enough. "As compared to what?" and "where?" are now questions systematically asked. Importantly, while the lack of comparable data is always an impediment, SDG performance dashboards do already exist for more than 190 countries and city-levels versions are currently investigated (see the section on SDG achievement gaps and the different analysis and data providers).

"Not only must sustainability be done, it must also be seen to be done"

To "be seen to be done", sustainability needs comparability, opposability, accountability against a harmonized impact-oriented framework.

The 2030 Agenda and the Sustainability Development Goals may offer this common yardstick against which companies can be tested and accordingly classified as a sustainable issuer or not.

"A gift to investors"?

CalPERS' chief investment officer, Mr. Ted Eliopoulos described the 17 SDGs as a "gift to investors" at the board's retreat meeting on January 16, 2018. "It is definitely a nascent area and the taxonomy that the UN has provided through the SDGs provides a framework for investors that have long tried to consider what subject matters fall under the environmental and social" categories, Mr. Ted Eliopoulos reportedly declared after the meeting. He highlighted that "for investors, it's a new development and it's going to take time to digest and understand" how it might be integrated in portfolios management.

As said before, unlike the Millennium Development Goals, the UN SDGs are universal, applying to countries at all levels of development and income. Over the last years, they have proven to be a rallying point for governments, businesses and investors. However, **translating them into investible decisions is not straightforward and requires extra work**. Several SDG self-labeled bonds have been issued so far but the approach often remains superficial and limited to "cherry picking" and non-substantiated claims.

Reference to SDG is becoming a “must have” of green, social and sustainable bonds frameworks and external reviews (SPO)

As reported by Environmental Finance, 34% (according to value) of all the issuances between January 1, 2018 and July 31, 2018 are “aligned” to SDG within the meaning self-labeling (i.e. “those that have indicated that they contribute to a specific Sustainable Development Goals (SDG) in their framework or external review”).

This figure aggregates both self-supposed alignment in the framework and alignment according to the external reviewers (this second source is preponderant). Note that there is no quality assessment of the SDG reference (just naming the goals, numbers and stickers), while we know the approaches vary significantly in terms of depth and quality.

The expected allocation of proceeds by goals is often not given at issuance, i.e. the ‘in abstracto’ alignment is usually presented at the theoretical level of . Thus, Environmental Finance has broken down these issuances by the number of goals mentioned. By doing so, some goals are mechanically artificially overrepresented (the reporting of proceeds allocation, if made by goals, will allow to correct). The goals 7, 11 and 13 are unsurprisingly the most referenced (our survey of investors confirms their higher “investability”, see the results section).



Source: EF Green, Social and Sustainability bond database

■ OVERVIEW OF SEVERAL SELF-LABELED “SDG BONDS”

ISSUER	HSBC	ANZ	BBVA	NAB	WORLD BANK	
Sector	Banks	Banks	Banks	Banks	Supranationals	
Category	Sustainability	Sustainability	Green	Green	Sustainability	
Country	UK	Australia	Spain	Australia	SNAT	
ISIN	US404280BM	XS1774629346	XS1820037270	XS1872032369	XS1579356079	XS1579354611
Issue date	22/11/2017	21/02/2018	14/05/2018	30/08/2018	21/03/2017	21/03/2017
Currency	USD	EUR	EUR	EUR	EUR	EUR
Size (in CCYm)	1 000	750	1 000	750	106,8	56,8
Maturity	6	5	7	5	15	20
Cpn	FRN	0,625%	1,375%	0,625%	FRN	1,2% then ILC
SDG reportedly addressed	3,4,6,7,9,11,13	3,4,6,7,9,10,11,13	Green: 7,9,11,12,13 Social: 3,4,8,10	2,7,9,11,12,15	No framework. SDGs addressed include “gender equality, health and sustainable infrastructure”	
Selection process	Precise eligibility criteria for each SDG addressed, as well as examples of eligible projects. Relevant projects are assessed against standards, compared to feasible alternatives, in a life-cycle approach, by an internal 'Group Sustainability	Precise eligibility criteria for each SDG addressed, as well as examples of eligible projects. Relevant projects are selected by the Head of Sustainable Finance and reviewed by an internal 'Green Bond Working Group'	List of 'Prospective Projects' is reviewed by an internal 'Sustainable Finance Group' that provides impact metrics in line with the SDGs. An additional review is given by an internal SDGs Bond Committee.	Projects that fall under the eligible categories are reviewed by an internal 'Socially Responsible Investment (SRI) Bond Committee'	No framework	
KPI for reporting disclosed in the framework	Yes	Yes	Yes	Yes	No	
Second Party Opinion and certifications	Sustainalytics	Sustainalytics	DNV-GL	DNV-GL CBI certified	No	

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The Stockholm Declaration

In 2017, GRI, the UN Global Compact and PRI co-convened an investor meeting in Stockholm to discuss financial markets' expectations of business reporting on the SDGs. The meeting led to the adoption of the Stockholm Declaration. The 30 signatories with a combined total of over \$1,3tn of AUM agreed to:

- Consider the SDGs a relevant framework as part of company dialogue
- Contribute to a set of well-defined and relevant reporting disclosures linked to the SDGs to support investors and companies in achieving the Goals
- Work with the "Action Platform Reporting on the SDGs," co-led by the UN Global Compact and GRI, and the investor stream supported by PRI.

Note that six of Sweden's biggest investors including Alecta, Folksam and The Church of Sweden announced they will integrate the SDGs into their investment decisions.

Signatories of the Stockholm Declaration include major Green / Sustainable bond buyers : Affirmative Investment Management, Alecta, AMF, Första AP-Fonden (AP 1), Andra AP-fonder (AP 2), AP3, Afjärde AP-Fonden (AP 4), AP7, Arabesque Partners, Bridges Fund Management, Church of Sweden, Domini Impact investments, East Capital, Eurosif, Folksam, Handelsbanker Asset Management, Länsförsäkringar, Neuberger Berman, Ownersip Capital, Pegasus Capital Advisors, PKA, Sarona Asset Management, Sida, Storebrand / SPP, Standard Life Investments, Swedbank Robur, Swedfund, TKP investments, VBDQ, Walden Asset Management/ Boston Trust








The Sustainable Finance Platform

The Sustainable Finance Platform is a cooperative chaired by the Dutch Central Bank (DNB), the Dutch Banking Association, the Dutch Association of Insurers, the Federation of the Dutch Pension Funds, the Dutch Fund and Asset Management Association, the Netherlands Authority for the Financial Markets, the Ministry of Finance, the Ministry of Infrastructure and the Environment, and the Sustainable Finance Lab.

It created a Working Group on SDG Impact Measurement to suggest a limited number of impact indicators per SDG for use by investors. The deliverables of this Working group is a document titled "SDG impact indicators – a guide for investors and companies". This guide provides investors with options for measuring the contribution of their assets (investments or loans) to the SDGs.



SDG impact indicators
A guide for investors and companies

	Product (or service) Impact indicator (PI) or Operational Impact indicator (OI, in italics)	Breakdown to gender (G), vulnerability (V), income group (I) or location (L), according to UN () or Working Group ()				Unit of measurement for aggregation
		G	V	I	L	
	1.1 % of revenue from products serving low income groups					€
	1.2 Number of people provided with access to financial services, incl. microfinance	18				# people
	2.1 Number of people provided with safe, nutritious and sufficient food					# people
	2.2 Ecologically sustainable agricultural production per hectare					tonnes
	2.3 % avoided harvest, transport, storage losses					tonnes
	2.4 % products with certified improvements in nutritional value					€ (from % revenues)
	3.1 Number of people reached with improved health care	19				# people
	3.2 Cost reduction for standard treatments and medicines					€
	4.1 Number of people receiving education services (split pre-school, primary, secondary, tertiary, vocational)	20				# people
	4.2 % students attaining standard for education level					# people
	4.3 Education facilities for inclusive and effective learning environments					m2
	5.1 % women in workforce (fulltime equivalent), employed at equal pay (OI)					# people

« SDG impact indicators, A guide for investors and companies », The Sustainable Finance Platform working group on SDG Impact Measurement
https://www.dnb.nl/en/binaries/SDG%20Impact%20Measurement%20FINAL%20DRAFT_tcm47-363128.PDF?2018091810

C. THE RESULTS OF OUR SDG SURVEY OF INVESTORS: HIGH BUT UNMET EXPECTATIONS

■ Why, what and who

In our efforts to tackle the issue of a consistent and non-superficial integration of the Sustainable Development Goals (SDGs) in capital markets, we wished to thoroughly take into account the appetite and expectations from the actors positioned upstream in the investment chain, and that have a considerable leverage in setting integrity standards: investors.

Over the last year, pension and sovereign wealth funds, major banks and wealth managers, have declared their alignment with the SDGs. However, little information was available about their satisfaction when it comes to investees' SDG contribution demonstration.

Our survey of investors thus aimed at knowing how, in practice, SDGs are used or could be used for portfolio management. This survey was conducted online from August 1st 2018 to September 13th 2018, and gathered 42 respondents, whose firms account for a total AuM of ~USD14tn.

Amongst the firm respondents, the following institutions have kindly accepted to disclose their participation to our survey: Affirmative Investment Management, AlphaFixe Capital, Amundi, ASN Bank, AXA Investment Managers, BlackRock, BlueBay Asset Management, CM-CIC Asset Management, Degroof Petercam Asset Management, Ecofi Investments, Erste Asset Management, Humanis Gestion d'Actifs, Impax Asset Management, Kempen Capital Management, La Financière de l'Echiquier, La Française Group, Legal & General Investment Management, Mandarin Gestion, Mirova, Newton Investment Management, NN Investment Partners, OFI Asset Management, Robeco, Schroders, SCOR Investment Partners, Trusteam Finance, Sycomore Asset Management, UBS Asset Management, WHEB Asset Management, Zurich Insurance.

The first question allowed us to gain specific information on our respondents (location, name of the firm, etc.), but we wished to keep this survey anonymous, which is why that information will not be disclosed and the results presented below start from Question 2.



■ Key takeaways

If 50% of our respondents (survey answered by 42 investors representing a total AuM of ~USD14tn) declared to have formal commitments to the SDGs, the range of options to integrate them varies greatly. Around 40% of them reportedly have SDG funds and/or mandate. Practices are diverse in terms of maturity and ambition, from *“adopting SDG to report on CSR policy”*, *“mapping of environmental sub-sectors and portfolios to the SDGs”*, to *“the reweighting of indicators across sectors according to the SDGs in investor’s proprietary tool”* and *“incorporation of living wage, climate change and other SDG related agenda for decision making”*.

All the SDGs are not equal in the heart of investors, the SDGs 7, 13, 3, 9, 6, (in descending order) are considered as “highly investable” by more than 40% of the respondents versus less than 10% for the goals 4, 10, 5, 1, 2. Moreover, despite for instance a strong interest for the SDG 15 life on land, few investment opportunities seem to exist *“(…) as it does not fit so well in market mechanisms. Land restoration and organic farming could be two options but for the first one, it usually comes with biodiversity damaging activities, for the second one, impacts are not clear”*.

To overcome superficial usage of the SDGs, it seems pivotal to address the lack of disclosure from investees, on both activity indicators (% of turnover, geographical breakdown of sales of products, segmentation of the customer base) and extra-financial impacts. An investor wisely declared *“there is no Stern report for SDGs, nor a Kyoto Protocol for how to measure them.... nor a CDP to gather all the data”*. SDG contribution reporting varies in quality, and when data is, in fact available, there is often no disclosure of calculation methodology, in such a way that contribution is only “presumed”. According to one respondent of our survey *“most companies disclose [their impact] at input level, the most advanced at the output level, but it is getting better”*. Another one estimates that around 40% of companies in their portfolio do not report on impact.

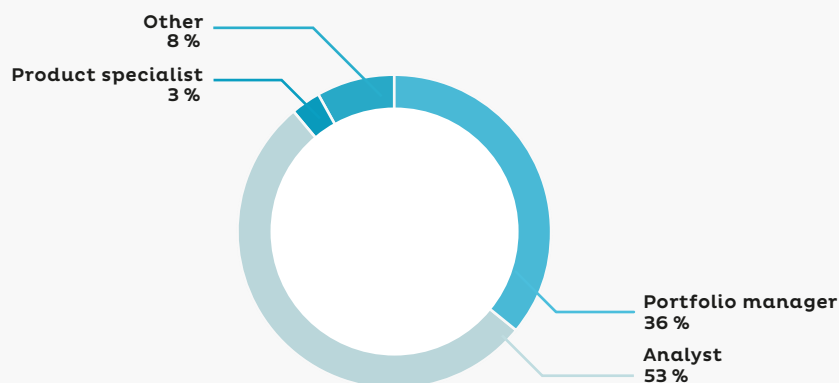
The investors unanimously pointed out the challenges of creating common standards for measuring SDG footprint: overlaps, double-counting, lack of comparable data, diversity of topics and situation covered... But, ironically (?), for almost 60% of the respondents, the use of SDGs as a measure of contribution would encourage impact-reporting harmonization. As one respondent even said: *“SDGs is [arguably] one of the best way to report about impact at a portfolio level”*. Meanwhile, the voice is quite unanimous on the importance of ex-post reporting. There is a growing demand for comparison between ex ante plans (intended objectives) and effective results. An investor stated: *“goals and objectives are only providing a roadmap but impact at are the very end of the chain. Reporting is ex post and should reflect what has been achieved”*. Another difficulty pinpointed by our respondents is the way to aggregate data at portfolio level. When it comes to the SDG 7, one of our respondents asked mischievously: *“Do you compare BP to Shell, or to Orsted?”*. At portfolio level, most investors declared that they have metrics for environmental impact reporting (except for biodiversity where the demand is not addressed), but no social impact KPIs. Still, some of our respondents mentioned some initiatives of impact-scoring using the SDGs.

The concern of SDG-washing (on both corporate and investor side) is as present as the green-washing concerns with green-bonds, if not more. One respondent asserted that *“SDGs are not quantitative enough and too exposed to green washing by companies”*. Another one stated that *“SDGs have been signed by countries, not by companies. Although it is clear that companies have their share in contributing in the achievement of the SDGs it is much more the countries/states that should be in the forefront”*. This in fact makes sense, as “green or environmental” SDGs (goals 6, 7, 11, 14, 15) only represent roughly 30% of the SDGs. This leaves significant room in other social and sustainable fields for vague and evidence less good intentions. As one respondent pointed out, *“would companies that are engaged in GMOs contribute to fight hunger?”* Interlinkages are not really considered despite acknowledgement that it’s an issue: *“BP- the company helps one SDG but detracts from another”*. The base-line and spatial dimension seems promising for investors but largely unaddressed, as stated: *“SDGs highlights gaps identified as of current state and everybody is claiming to be already aligned with the ultimate goals! Market player should first perform their own gap analysis to identify then how / where to act efficiently.”* Another investor responded that *“listed companies offer very few options to actually fight against hunger as defined by the gap analysis behind the SDGs”*.

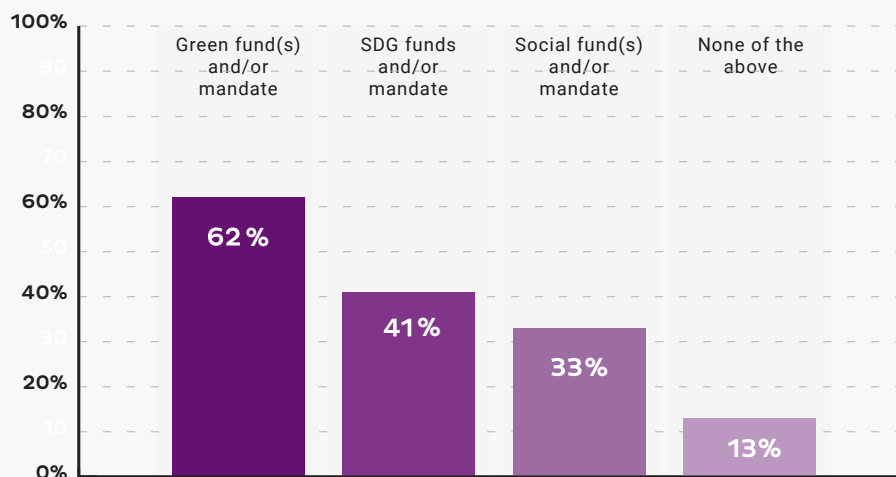
In the end, SDGs could offer effective tools to change the way impact is commonly apprehended. Using SDGs as more than just tools for reporting, but for outright strategy purposes, would prompt companies to have, as one respondent of our survey accurately phrased, *“a holistic value chain view”*, considering both inward (operational footprint) and outward impacts (outbound related to products and services), that are comprised in the SDGs.

■ The quantitative results and open-ended answers

■ Q2 | OUR RESPONDENT'S POSITIONS



■ Q3 | WHICH TYPE OF FUND/MANDATE DO YOU HAVE ?



› Contrary to what we might have presumed, self-labelled “SDG funds” are already *widespread* in our sample of investors, surprisingly more than “Social Funds”. However, what exactly is involved is unclear. Most of the time, SDG funds are the *new name* of sustainable funds, which mix both green and social assets.

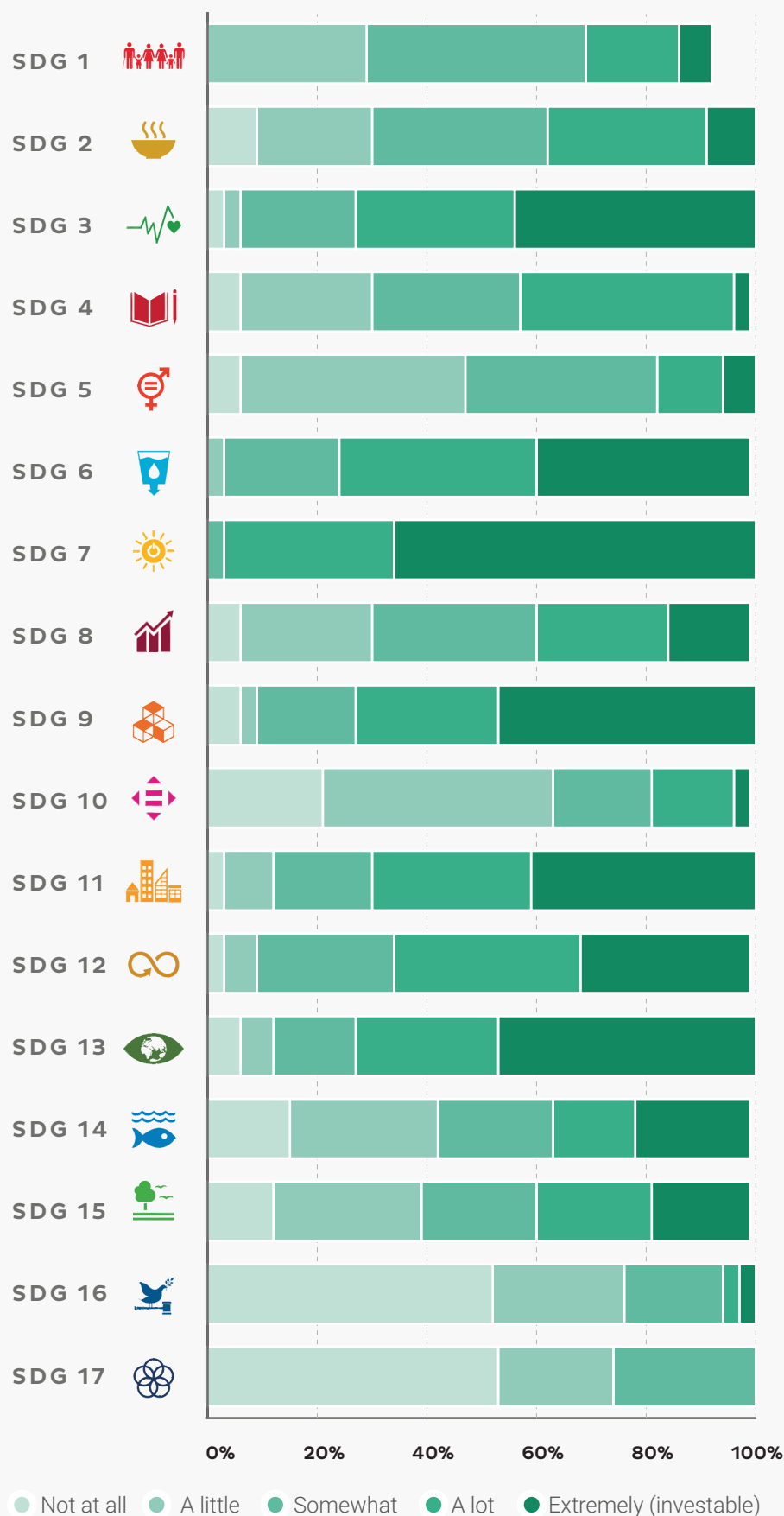
■ Q4 | HAVE YOU MADE ANY FORMAL COMMITMENTS (E.G. INVESTOR STATEMENT) OR ANNOUNCEMENTS REGARDING THE USE OF THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) ?



› If a remarkable share of our respondents declared to have formal commitments regarding the SDGs, the practices are diverse in terms of maturity and ambition, from “adopting SDG to report on CSR policy”, “mapping of environmental sub-sectors and portfolios to the SDGs”, to “the reweighting of indicators across sectors according to the SDGs in investor’s proprietary tool” and to the “incorporation of living wage, climate change and other SDG related agenda for decision making”. Note that for most of the “no” answers to this question, the respondents indicated that integrating SDGs in their sustainability policies/ portfolio reporting was a work in progress.



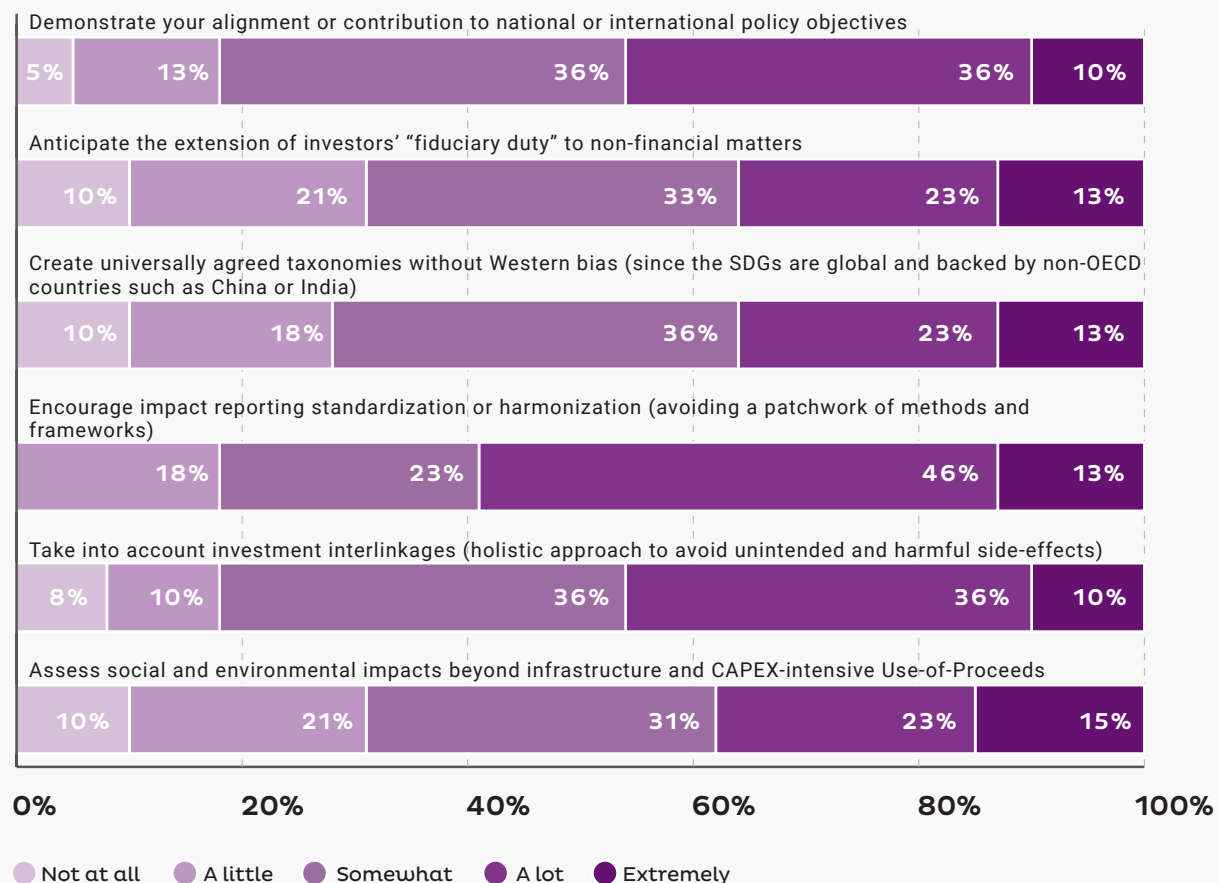
Q5 | HOW INVESTABLE IS EACH GOAL IN YOUR VIEW ?



› All the SDGs are clearly not equal in the heart of investors, their best picks are the SDGs 7, 13, 3,9 and 6. Only the goal 17, which is strongly state-oriented, is deemed very non-investable by investors. For many SDGs, it was interesting to compare our respondents views on which sectors of activities could be investable. A good example would be the SDG 1 – “No poverty”, for which comments gauge it is not investable for for-profit companies that *“need to make returns/been sustainable, cannot give away products for free”*. Several respondents pinpointed micro finance as an enabler for this goal 1. As expected, the ambivalence surrounding the SDG 3 – *No hunger’s* investability was strong. One respondent pointed out, *“would companies that are engaged in GMOs contribute to fight hunger?”*

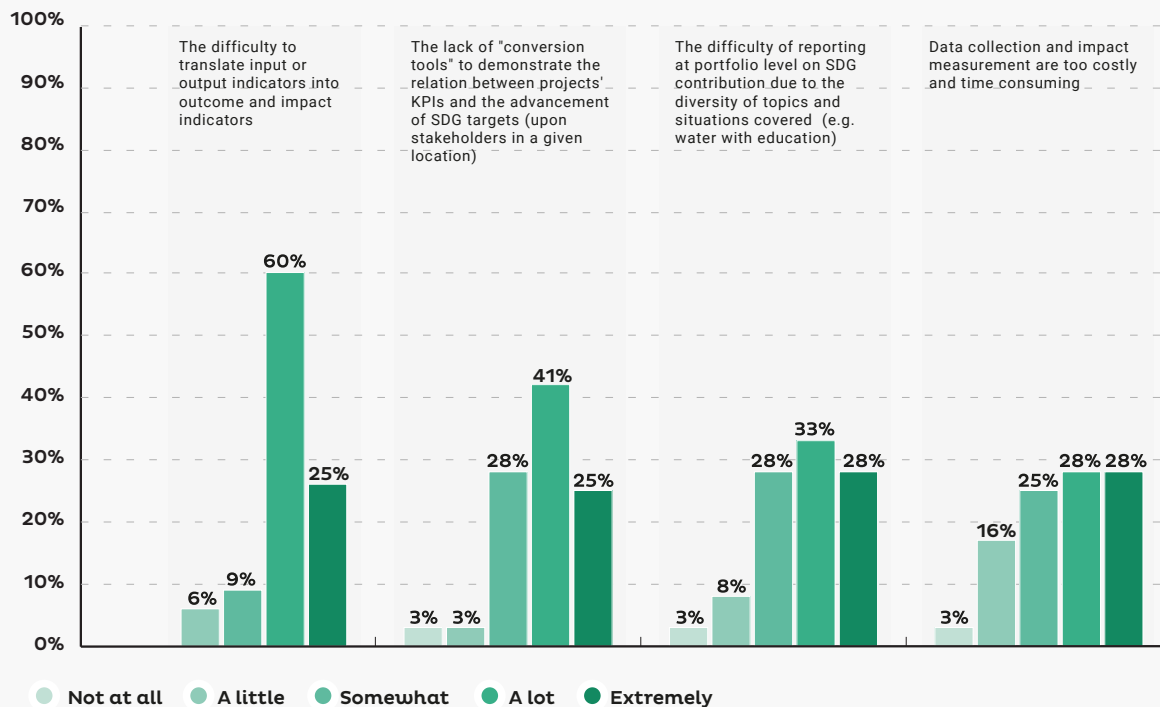
Furthermore, there is a balance between investability and a willingness to address an issue. Witness, for example, the strong interest for the SDG 15 life on land. According to one respondent, this does not necessarily materialize in investment opportunities *“(…) as it does not fit so well in market mechanisms. Land restoration and organic farming could be two options but for the first one, it usually comes with biodiversity damaging activities, for the second one, impacts are not clear”*.

■ Q6 | FOR YOU, THE SDGS ARE USEFUL AND RELEVANT TOOLS IN ORDER TO :



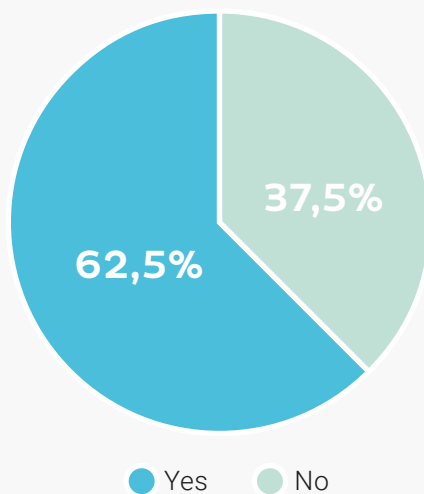
› If impact reporting standardization is among the best picks, doubts are however voiced, an investor for instance stated: "So far a lot of «greenwashing» about SDGs in reporting both from the [corporates and the investors]. SDGs highlights gaps identified as of current state and everybody is claiming to be already aligned with the ultimate goals! Market player should first perform their own gap analysis in order to identify then how / where to act efficiently."

■ Q7 | HOW WOULD YOU ASSESS THE FOLLOWING IMPEDIMENTS TO USE SDGS IN YOUR OPERATIONAL ACTIVITIES ?



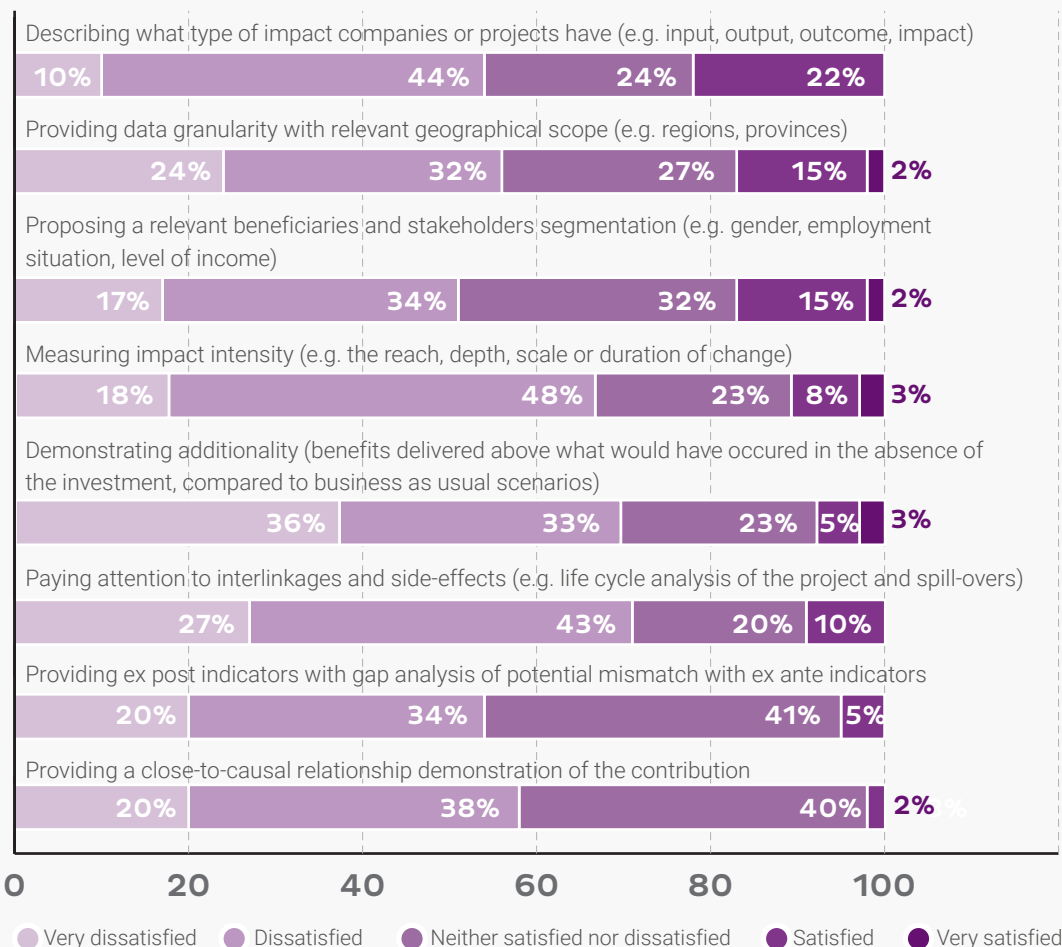
› The difficulty to translate input or output indicators into outcome and impact indicators appears as the main hurdle. To address it, we have developed a special book and criteria grid to navigate indicators' nature and usage intricacies. One respondent phrased adroitly the complexity of using SDGs as operational tools: *"SDGs are not an investment framework or even a business strategy framework. Attempts to use them as such are therefore challenging. The gap between the SDGs and business drivers needs to be bridged in a way that is not clear given their different audiences and goals. The issue resides less in data availability and required investment of time/resources but more in the difference in the underlying goals and the levers of investors vs. policy makers. They can be useful to communicate performance and outcomes, but this is different"*.

■ Q8 | IN YOUR INVESTMENT STRATEGY, ARE YOU USING IMPACT METRICS ?



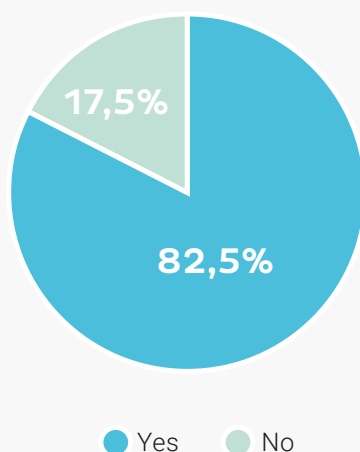
› Once again, we were surprised by the share of investors that reportedly have impact metrics (few of them are sectorial), however, many of them conceded that they are not specific to the SDGs, *"we have impact metrics for specific asset classes such as green bonds, but we have not developed SDG specific KPIs yet, just a general mapping and «y/n» tagging of assets as contributing to the SDGs"*. A respondent declared to use the KPIs developed in the Dutch DNB sustainable finance group. In the absence of a common set of indicators, another investor is reportedly developing a scoring system related to SDG, that's not really impact in our view but still welcome. It consists in the aggregation of solution score (% of sales contributing to 1 or several SDG) and initiative score (sum of initiatives around the 17 SDG).

■ Q9 | AS OF NOW, ARE YOU SATISFIED WITH THE IMPACT REPORTING PROVIDED BY COMPANIES WHEN IT COMES TO:



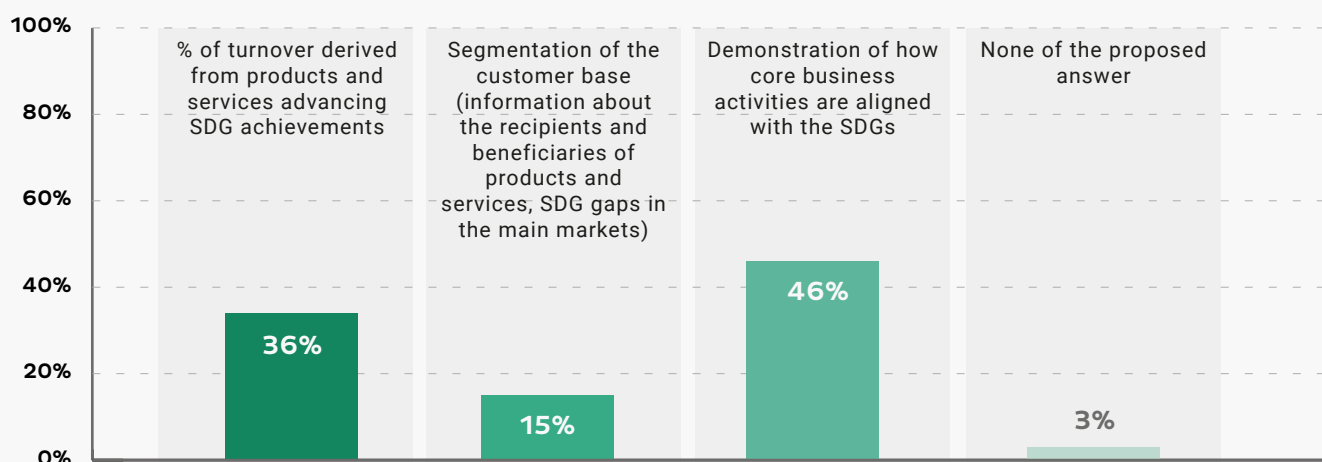
› It is probably the main takeaway of this report. Expectations from investors are high but clearly unmet. They are massively dissatisfied, especially for demonstrating additionality, and attention to interlinkages, SDG contribution reporting varies in quality, and when data is in fact available, there is often no disclosure of calculation methodology, in such a way that contribution is only "presumed". According to one respondent *"most companies disclose [their impact] at input level, the most advanced at the output level, but it is getting better"*.

■ Q10 | AS OF TODAY, ALMOST ONLY EX ANTE IMPACT INDICATORS ARE PROVIDED. ARE YOU INTERESTED IN EX POST VERIFICATION ONCE THE PROJECTS ARE COMMISSIONED ?



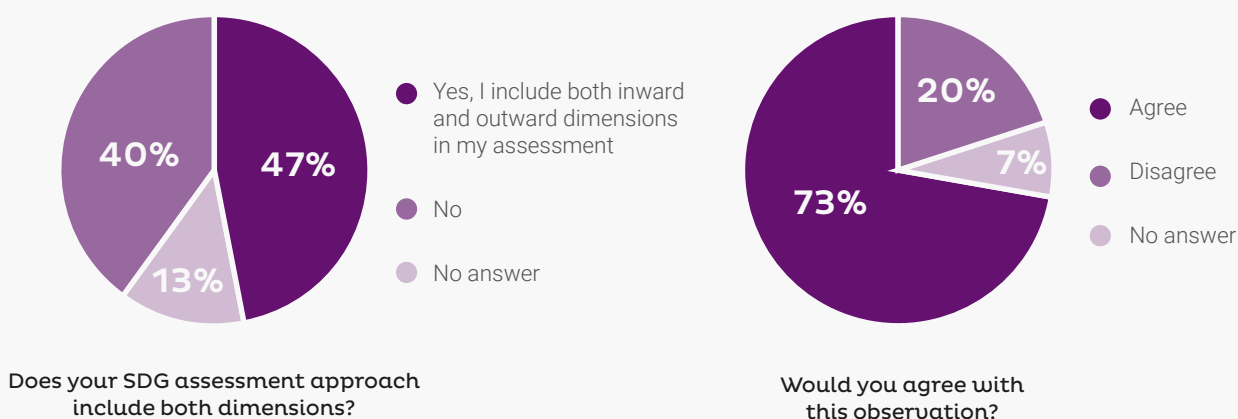
› Investors are dubious as to the possibility of reporting ex-post at portfolio level across a large variety of sectors. Aggregation of impacts is challenging. One respondent stated: *"Not sure how to integrate them at the reporting level unless the ex post indicators are streamlined and can be aggregated at a portfolio level ..."*

■ **Q11 | TO ASSESS SDG CONTRIBUTION AT A CORPORATE LEVEL, WHAT INDICATORS OR INFORMATION WOULD YOU USE OR WOULD YOU LIKE TO SEE COVERED BY ESG RATING AGENCIES ?**



› There is a real demand for materials enabling investors to analyze the actual impact companies have on the SDGs. Respondents did however underline that just adding new indicators would not be sufficient *“to change the way companies approach big issues”*. Core business alignment demonstration is the first choice of investors. *“It is not about keeping the current conditions, markets and business models how they are and trying to fit them in the SDGs boxes. Companies should rethink / adapt their business models in order to fill the gaps identified by SDGs and deliver positive impacts in the SDGs fields”*.

■ **Q12 | THE SDG CONTRIBUTION ASSESSMENTS ARE FOCUSING ON OUTWARD IMPACTS (SERVICES OR PRODUCTS SOLD BY THE COMPANY) AND MUCH LESS ON INWARD IMPACTS (UPSTREAM PROCESS AND INTERNAL ACTIVITIES SUCH AS GENDER WAGE GAP, RAW MATERIAL SOURCING).**



› It is noteworthy that a respondent asserted that *“outward impacts have typically been under addressed and so the SDGs are helpful in redressing this imbalance”*. SDGs could offer effective tools to change the way impact is commonly apprehended. Using SDGs as more than just tools for reporting, but for outright strategy purposes, would prompt companies to have, as one respondent of our survey accurately phrased, *“a holistic value chain view”*, considering both inward (operational footprint) and outward impacts (outbound related to products and services), that are comprised in the SDGs.



CHAPTER 2.

THE CONTEXT-BASED APPROACH PROPOSED BY NATIXIS GSH

A. A SPECTRUM OF APPROACHES SPLIT INTO 3 CATEGORIES

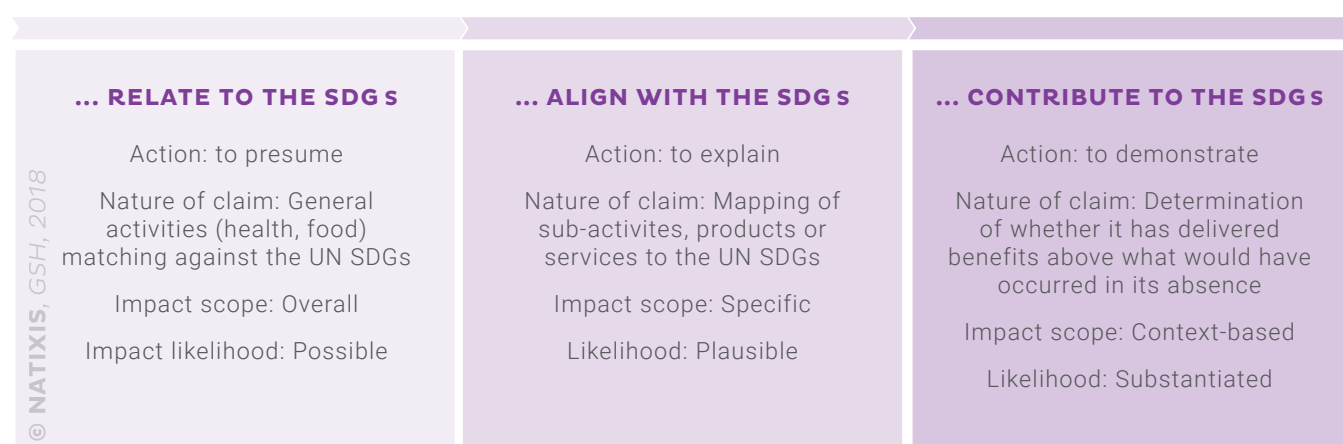
One's impact likelihood on advancing the Sustainable Development Goals (SDGs) is in ascending order: possible, plausible or substantiated. Simply put, it is not the same to claim you are a food company that has a range of self-proclaimed low-fat yogurts than it is to actually disclose the nutrient certification and sales figure of those yogurts. Let alone to disclose the results, methodology and sample underlying a customers' survey concluding their body mass index (BMI) has improved after having consumed your low-fat yogurts over a certain period.

There is a myriad of expression used by enterprises and investors to describe their action towards the achievement of the Sustainable Development Goals. Among them, the most recurrent are: "to be consistent with", "to echo", "to relate to", "to be connected with", "to align with", "to contribute to".

We tried to solve this lexical confusion by distinguishing three main categories although it is more a sort of continuum with porosity among them. In a nutshell, you can either presume, explain or demonstrate your intended impact on / contribution to the SDGs.

■ TOOL 1: NATIXIS GSH THREE SHADES OF SDG APPROACHES

A company, a project or a product could...



For instance, to effectively demonstrate your activity increase the access to a basic service, you should try to disclose the number of unique client individuals who were served by your organization and provide access, during the reporting period, to products/services they were unable to access prior to the reporting period. To the least, you could publish affordability metrics (cost reduction expressed in % for your products and services as compared to a benchmark or the original situation). This demonstration approach touches a number of long debated notions / aspirations in responsible and green finance: imputability, additionality, accountability.

The example of child labor

For a sovereign state that wants to objectivize its contribution and/progress towards the achievement of the UN SDG target 8.7 – "Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms" – solely ratifying the ILO Convention No. 182 on the worst forms of child labour (1999) will not consist in a "demonstration".

Specific budgets, programs to increase the number of onsite controls and lawsuits against infringers will add to the demonstration.

If in the aftermath of those measures, a decrease of child labor is evidenced by statistics from third party or independent institutions, the contribution will be substantiated.

This seems obvious but in practice, the contribution claims, both from the public and the private sector, are rarely applying this type of self-explanatory rigor.

B. OUR OVERARCHING GOAL

Cherry picking is a widespread practice when it comes to the SDGs. It refers to selecting goals and targets based on what is the most obvious for companies rather than what accounts for the highest priorities and is the most material. Be it at asset or at organizational levels, considering potential obstruction to the SDGs is vital (see the section on interlinkages). Boilerplate disclosure and nice SDG stories are not enough to use the incredibly rich tool that are SDGs. The shortcomings of focusing on few projects that belong to philanthropy are obvious. SDG contribution reporting should not be anecdotal but rather reflect strategy decision and realities for a significant portion of resources (investments, HR) allocated by a company. More systematic evidence of results is asked as demonstrated in our survey of investors.

How to overcome the challenge of non-superficiality and avoid SDG Washing?

A large portion of investors are in the process of “aligning” themselves with the SDGs—namely publicly committing that a share of their investments addresses the issues outlined in one or more of the goals. Nevertheless, few have attempted to measure whether they are meaningfully contributing to their progress. Indeed, albeit some investors report how their investments relate to specific SDGs, they are often not attempting to delineate and pinpoint specific and contextualized influence towards achievement of the goals or measuring the effectiveness of such attempts.

Often, SDG contribution claiming is an afterthought box ticking exercise and a post-deployment reconstitution. Within the three shades of impact afore-identified, we single out existing tools and propose new ones to implement the third shade, the more demanding and ambitious of the three: demonstrate contribution to the SDGs. It involves at some point paradigm shift whereby it does not involve assessing ex post the consequences of virtuous actions (afterthought approach), but rather to start with a diagnosis, and then express a clear intention / objective of contribution. In the first case, it is a reporting focused approach, in the second case, it is a strategical approach.

We propose to start from what the SDGs are by essence: An Agenda agreed by states and for states, even if it calls on the private sector for implementation. Thus, we bear in mind that the SDGs are attached to populations and territories, whose governments are held accountable for their progress, and are monitored as such. Geospatial foot printing is key to identify the SDG achievement gaps wherever there is a significant foothold (to consider a specific context) and clout, either a project level (project' location) or corporate level (customer base and/or workforce). Segmentation of stakeholders is whenever relevant and possible necessary. Nevertheless, we are aware of the limits of this approach, as acknowledged by NWB Bank in its Social Bonds Newsletter 2017: *“Most indicators are output and outcome-based. Direct evidence of socio-economic impact effects are difficult to claim because they are hard to isolate and correlate directly with investments at this macro-level.”*

In our view, it is preferable to use the term “assessment” rather than measurement. Indeed, assessment insists on capturing the whole process of contribution, from setting goals and benchmark targets (intention and planning), to measuring impact against the expectations defined at investment, to sharing the results of that measurement with investors and key actors and informing future allocations.

For Natixis Green & Sustainable Hub, legitimately and robustly claiming a contribution to SDGs achievement requires

To demonstrate the **progress over a lapse of time** [*insofar as targets are time-bound and it is a dynamic process, which requires a comparison from a baseline to an end line*] **in a given location and upon specific stakeholders** [*employees, riverside population, end-customers*] of **SDGs and sub-targets** [*evidenced by outcome or impact KPIs, ideally third-certified*] **imputable with a certain degree of attribution** [*demonstration of a link to correlation and ideally causality*] **to** the operational activities of **a company**, its services, products, or a specific project, that was **non-detrimental** to the **achievement of other SDG and sub-targets** [*attention paid to interlinkages and tradeoffs*]



C. OUR GENERIC APPROACH IN 2 PHASES SPLIT INTO 10 STEPS

In an attempt to build a measure of impact that was solid and differentiated from other more superficial approaches we established a sequence of steps that, in our opinion, would be a consistent way to demonstrate contribution to the Sustainable Development Goals.

Our two-phase and ten-steps methodology can be a useful tool to design a reporting that demonstrates real impact as we understand it, meaning gaps-oriented, taking into account location and population, and demonstrating real additionality.

However, we think that **the optimal use of this canvas for organisations is upfront : use it as a monitoring tool**, to build a robust theory of contribution, for business / operational strategy purposes or even green or sustainable financing framework designs.

The key principles at the heart of our methodology are materiality analysis, stakeholders factoring, localizing SDG gaps, interlinkages, baselines, attribution and claim.

■ THE SIMPLIFIED VERSION OF OUR GENERIC 2 PHASES APPROACH SPLIT INTO 10 STEPS

Phase 1 – diagnosis

• WHAT AND HOW

1. Screen the material positive and negative SDG hotspots of your core business activities across your entire value chain (up until end-users, end-of-life products or projects decommissioning)

• WHO

2. Identify your stakeholders under 2030 Agenda main socio-economic categories

• WHERE / HOW NEEDED

3. Map SDG achievement gaps and needs in the location where your organization has a strong foothold (assets, workforce, customer base) or where you plan a project, if possible upon specific stakeholder

Phase 2 – contribution

• WHAT OBJECTIVES

4. Determine the ultimate benefits your organization or project expects to achieve

• HOW TO ACHIEVE THEM

5. Identify the main features of the project considered or specific actions or programs to reach those objectives

• HOW TO GET THERE

6. Be explicit as to the causal cascade between projects features, actions or programs and expected benefits : from input, activity, output, outcome and finally impact

• HOW TO FOLLOW THE EXECUTION

7. Over the project or program's lifetime, collect data to feed the KPIs and monitor distance to targets and trajectories, as well as anticipated and unanticipated negative externalities

• HOW TO DEMONSTRATE AND CLAIM

8. Publish output and outcome results and shortlist external factors, broader socio-economic trends and actors influencing SDG gap progress status
9. Identify what SDG progresses would have happened anyway, without your intervention (imputability and additionality evaluation)

• HOW TO DO BETTER TOMORROW

10. Feed the future: ways of improvement for ongoing SDG contribution optimizing

■ TOOL 2: NATIXIS GSH GENERIC APPROACH IN 2 PHASES SPLIT INTO 10 STEPS

PHASE 1 : DIAGNOSIS

		STEPS	TOOLS	DELIVERABLES
Generic and in abstracto analysis	WHAT	1. Screen the material positive and negative SDG hotspots of your core business activities across your entire value chain (up until end-users, end-of-life products product or projects decommissioning)	<ul style="list-style-type: none"> • United Nations. Transforming our World: The 2030 Agenda for Sustainable Development. 2015 • SDG Compass - UN Global Compact • ICMA - Green and Social Bonds: A High-Level Mapping to the SDGs • Natixis GSH's SDG sectorial matrix • Industry Classification Benchmark (ICB) from FTE Russell, GICS (Global Industry Classification Standard) from MSCI and S&P • Services and products portfolios SDG analysis (ESG providers, e.g. Sustainalytics, Vigeo Oekom, etc.) For SDG interlinkages analysis : <ul style="list-style-type: none"> • Stockholm Environment Institute's seven-point typology of SDG interactions 	<ul style="list-style-type: none"> • Identification of the 17 SDGs, 169 sub-targets, and 232 indicators the most related to and/or impacted either by your operational activities or by your products and services • Identification of your main interlinkages (e.g. tradeoffs, spill overs, side-effects, etc.) and possible attenuation measures • Estimate of gross revenue % in support of one or more SDG
	WHO	2. Identify your stakeholders under 2030 Agenda main socio-economic categories	<ul style="list-style-type: none"> • Natixis GSH' Stakeholders segmentation analysis (employees, suppliers, riverside population, customers, by sex, age, employment situation, level of income) • Reference documents, sustainability reports • Customer's surveys • Impact studies for the project considered 	<ul style="list-style-type: none"> • Description of the scale of your organization or project : total number of employees and operations, net sales, total capitalization, quantity of products or services provided • Related SDG controversies mapping and management: possible incidents, the nature of actual/potential opposition (reasons and intensity) • Nature of potential support (reasons and intensity) of your different stakeholders • Controversies mapping and management
				End result : in abstracto materiality analysis with on the horizontal axis the "business materiality" and on the vertical axis the "stakeholders materiality" with a cluster of 2 to 3 SDG and 4 to 7 sub-targets, with explanations
Context-based and in concreto analysis	WHERE	3. Map SDG achievement gaps and needs in the location where your organization has a strong foothold (assets, workforce, customer base) or where you plan a project, if possible upon specific stakeholders	<ul style="list-style-type: none"> • UN Sustainable Development Solutions Network (SDSN) SDG Index and individual country dashboards published in partnership with the Bertelsmann Stiftung • The EU regional Social Progress Index • Eurostat, the World Bank, the OECD • National Statistics Institute : INSEE : Indicators for monitoring sustainable development objectives in France Statistics Netherlands (CBS) • Customers or inhabitants Survey • The website "localizingthesdgs.org" • Natixis GSH SDG indicators book (the criteria "stocktaking / situation") 	<ul style="list-style-type: none"> • Disclosure of the number of countries where your organization operates or where your project occurs, and the names of countries where you have significant operations and/or that are relevant to the SDG previously identified • Geographical breakdown of your workforce • Geographical breakdown of your customer base
	HOW NEEDED			<ul style="list-style-type: none"> • Overview of your organization or project SDG footprint and gaps • Information on your employees and other workers related to their SDG situation (wage, health insurance coverage, work accidents frequency, etc.) • Detailed information relative to your customer base (access to SDG-related basic services, affordability, etc.) "
				End result : in concreto materiality analysis of the SDG gaps between your actual stakeholders (employees, target customers, project beneficiaries) and where your organization operates or where your project occurs

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| Tools adapted and/or designed by Natixis Green & Sustainable Hub

PHASE 2 : CONTRIBUTION

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		STEPS	TOOLS	DELIVERABLES
Strategy and action plan	WHAT OBJECTIVES	4. Determine the ultimate benefits your organization or project expects to achieve Prioritization of the SDGs you want to address on the basis of, <i>i) business and stakeholders materiality, ii) strategic choices that could also reflect your societal commitments</i>	<ul style="list-style-type: none"> • In concreto materiality analysis of the SDG gaps • SDG-related content within CSR policies, strategies, and commitments 	<ul style="list-style-type: none"> • An SDG contribution statement, explicitly or implicitly endorsed by the board/top management of a company or project sponsors, that could be used for the general presentation of the issuer or of the project and referred to in a potential second party opinion (SPO)
	HOW TO ACHIEVE THEM	5. Identify the main features of the project considered or specific actions or programs to reach those objectives	<ul style="list-style-type: none"> • Review of your portfolio of services and activities • Project design and cost benefits analysis (externalities management) • Baseline assessment • Natixis GSH's SDG contribution chain : model that specifies the underlying logic, assumptions, influences, causal linkages and expected outcomes 	<ul style="list-style-type: none"> • A short list of the highlighted projects features or actions with the greatest potential to deliver the expected benefits
	HOW TO GET THERE	6. Be explicit as to the causal cascade between projects features, actions or programs and expected benefits : from input (\$ or HR), activity, output, outcome and finally impact.	<ul style="list-style-type: none"> • Impact Reporting and Investment Standards (IRIS) • Natixis GSH SDG contribution chain • Natixis GSH's SDG indicators book • Guidance document : "SDG impact indicators. A guide for investors and companies" • Initiative of the Sustainable Finance Platform, chaired by the Dutch Central Bank • ICMA (June 2018) - Green and Social Bonds: A High-Level Mapping to the SDGs 	<ul style="list-style-type: none"> • A contribution roadmap that includes a basket with a few indicators/KPIs credibly available and that defines ex ante (intermediary) targets and trajectories, such as : Gross revenue percentage in support of one or more SDG Disclosure of the CAPEX disbursed % of budget/PIB allocated to programs linked to the intended SDG • List of mitigation processes or measures to tackle negative interlinkages and unintended consequences • KPIs' definition and calculation methodology
Implementation	HOW TO FOLLOW THE EXECUTION	7. Over the project or program's lifetime, collect data to feed the KPIs and monitor distance to targets and trajectories, as well as anticipated and unanticipated negative externalities	<ul style="list-style-type: none"> • Ongoing project or business' reviews • Incidents / controversies / grievance mechanisms reports • Intermediary and provisional KPIs assessments 	<ul style="list-style-type: none"> • KPIs monitoring dashboards • If necessary, a list of the adjustment measures to the project or program
Reporting	HOW TO DEMONSTRATE AND CLAIM	8. Publish output and outcome results	<ul style="list-style-type: none"> • Yearly KPIs dashboards • Potential gaps analysis compared to ex ante claims • Global Compact - "In Focus: Addressing Investor Needs in Business Reporting on the SDGs" • GRI standards 	<ul style="list-style-type: none"> • Outcomes recurrent impact reporting • Third-party assurance (KPI robustness and accuracy)
		9. Identify what SDG progress would have happened anyway, without your intervention (additionality evaluation)	<ul style="list-style-type: none"> • Longitudinal comparison • Test group, surveys • Consultation of beneficiaries • Answers to those questions : Are there other change dynamics or pathways at work? Are there actors and factors who promote or hinder benefits achievement? 	<ul style="list-style-type: none"> • Timely SDG Contribution impact reporting aiming at disentangling outcomes unequivocally attributable to your actions from changes on the population or environment that are not under your single control • Short list of external factors, broader socio-economic trends and other actors influencing SDG gap progress status • SDG contribution scorecard or ranking: highlighting SDGs progress (KPI) with the highest imputable claim in consistency with your "in concreto SDG materiality analysis" and "strategy & action plan" • When imputability is too difficult to demonstrate, try to explain for example via tracking SDG evolutions at macro levels and assess whether your actions are in line with them • Involvement of external third parties (auditors) for contribution claims verification"
Progress outlook	HOW TO BETTER TOMORROW	10. Feed the future : ways of improvement for ongoing SDG contribution optimizing	Review of contribution demonstration obstacles and mapping of how those hurdles could be minimized or eliminated through a more SDG cautious planning at the earliest phases possible	Sort efficient vs inefficient actions / programs / projects features in their SDG contribution in order to integrate the lessons acquired in future strategic planning sessions or projects' designs

| Tools adapted and/or designed by Natixis Green & Sustainable Hub

D. OUR INGREDIENTS

■ Geospatial analysis: localization matters

Localizing the SDG gaps and needs is necessary to assess additionality and transformative intensity. An impact is defined by a change, which itself requires a baseline in the sense of an initial situation. Geospatial information and the identification of baselines are critical to demonstrating additionality. It is a determinant as **to whether an investment has delivered benefits above what would have occurred in absence of the investment.** Indeed, a wind farm unleashes more transitioning spill-over in Poland (where the renewable energy in final consumption stands at 11.9%), than in Portugal (renewable energy in final consumption: 27.2%). Similarly, a wastewater treatment plant brings more disruption and benefits in Romania (wastewater treated: 22.8%), than in Denmark (86.7%).

For the SDG 6 gaps in Europe, the countries where the population using safely managed water services are below 90%, are Hungary, Estonia, Latvia. For wastewater treatment below 50%, the countries are: Bosnia and Herzegovina, Macedonia, Serbia, Ukraine, Albania, Montenegro, Moldova, Romania, Croatia, Slovenia, Slovak Republic, Ireland and Poland

To calculate the avoided CO2 emissions, a yardstick is used, with more or less granularity. For instance, for housing in Netherlands, the average CO2 emissions of residential buildings (in kg/m2) financed through the loans, will be compared to the average CO2 emissions of residential buildings in the Netherlands (based on the carbon intensity of the Dutch energy mix). What seems obvious for calculating CO2 emissions (against a baseline/yardstick) is not yet applied to the UN SDGs contribution.

Almost 70% of the targets linked with the SDGs are directly related to local basis service provision, including water and sanitary, elementary education, energy consumption, and whose spatial and local dimension are preponderant. If not largely available at that moment, several SDG indexes at local levels are under preparation (in Spain, Italy, Canada, and other countries, see table infra). **The website localizing the SDGs** offers an articulated set of tools to support local stakeholders and their networks, under the leadership of local, regional and national governments. It is promoted by the Global Taskforce of Local and Regional Governments, the United Nations Human Settlements Program and the United Nations Development Program. This website is based on the premises that tools and strategies for 'localizing' the SDGs are critical to the design, implementation, review and success of the 2030 Agenda for Sustainable Development.

This section presents several of the SDG data analysis providers, at different levels and for different countries.

■ SDG gaps data providers

Below are the front pages of SDG progress reports from the United Kingdom, Germany, Netherlands and France. They are updated regularly to provide new information on the position of the countries with respect to the SDG indicators and the policies aiming at filling SDG gaps.

The UN Sustainable Development Solutions Network (SDSN)



Website available here: <http://localizingthesdgs.org/>

Measuring up: How the UK is performing on the UN Sustainable Development Goals (2018) Available here: <https://www.ukssd.co.uk/Handlers/Download.ashx?ID=MF=62c71dd6-d83b-4b3b-b98b-e7f9f1e21907>

Sustainable Development in Germany (2016) Published every two years. Available here: https://www.destatis.de/EN/Publications/Specialized/EnvironmentalEconomicAccounting/Sustainability/Indicators2016.pdf?__blob=publicationFile

The SDGs: the situation for the Netherlands (2018) Available here: <https://www.cbs.nl/-/media/pdf/2018/22/the-sustainable-development-goals.pdf>

Point d'étape de la France sur la mise en œuvre de l'Agenda 2030 (2018) https://www.ecologique-solidaire.gouv.fr/sites/default/files/ODD_Point%20d%27C3%A9tape%20HLPF%202018.pdf













Launched by UN Secretary-General Ban Ki-moon in August 2012, the Sustainable Development Solutions Network (SDSN) mobilizes scientific and technical expertise from academia, civil society, and the private sector in support of sustainable development problem solving at local, national, and global scales.

The SDSN co-produced the 2018 SDG Index and Dashboard Report. It presents regional dashboards of SDG achievement and trends towards the goals. Country-level data on SDG implementation is consolidated in two-page country profiles for every UN member states, available in the “Country Profiles” section. It provides a visual representation of countries’ performance by SDGs to identify priorities for action. The “traffic light” color scheme (green, yellow, orange and red) illustrates how far a country is from achieving a particular goal. Data profiles for each SDG Indicator are presented online. The methodology is described in Part 3 and in an annex available on www.sdgindex.org. We have chosen the dashboards of France, Spain and Burkina Faso as examples (see infra).

Absolute performance gaps for achieving the SDGs

The countries that account for the largest absolute performance gaps for selected SDGs are identified by the SDSN. The results are obtained by multiplying SDG Index scores, which range from 0 to 100, with population. Nigeria alone accounts for 19% of the global gap to meeting SDG 1. Together with the Democratic Republic of Congo and India, the three countries account for more than one third of the global achievement gap for SDG 1. Altogether, China, India and the United States account for more than 40% of the world’s gap on achieving sustainable consumption and production (SDG12).

■ THE SDG INDEX

	Rank	Country	Score	Rank	Country	Score
	1	Sweden	85.0	41	Israel	71.8
	2	Denmark	84.6	42	Cuba	71.3
	3	Finland	83.0	43	Singapore	71.3
	4	Germany	82.3	44	Romania	71.2
	5	France	81.2	45	Azerbaijan	70.8
	6	Norway	81.2	46	Ecuador	70.8
	7	Switzerland	80.1	47	Georgia	70.7
	8	Slovenia	80.0	48	Greece	70.6
	9	Austria	80.0	49	Uruguay	70.4
	10	Iceland	79.7	50	Cyprus	70.4
	11	Netherlands	79.5	51	Kyrgyz Republic	70.3
	12	Belgium	79.0	52	Uzbekistan	70.3
	13	Czech Republic	78.7	53	Argentina	70.3
	14	United Kingdom	78.7	54	China	70.1
	15	Japan	78.5	55	Malaysia	70.0
	16	Estonia	78.3	56	Brazil	69.7
	17	New Zealand	77.9	57	Vietnam	69.7
	18	Ireland	77.5	58	Armenia	69.3
	19	Korea, Rep.	77.4	59	Thailand	69.2
	20	Canada	76.8	60	United Arab Emirates	69.2
	21	Croatia	76.5	61	Former Yugoslav Republic of Macedonia (FYROM)	69.0
	22	Luxembourg	76.1	62	Albania	68.9
	23	Belarus	76.0	63	Russian Federation	68.9
	24	Slovak Republic	75.6	64	Peru	68.4
	25	Spain	75.4	65	Kazakhstan	68.1
	26	Hungary	75.0	66	Bolivia	68.1
	27	Latvia	74.7	67	Suriname	68.0
	28	Moldova	74.5	68	Algeria	67.9
	29	Italy	74.2	69	Montenegro	67.6
	30	Malta	74.2	70	Trinidad and Tobago	67.5
	31	Portugal	74.0	71	Bosnia and Herzegovina	67.3
	32	Poland	73.7	72	Paraguay	67.2
	33	Costa Rica	73.2	73	Tajikistan	67.2
	34	Bulgaria	73.1	74	Colombia	66.6
	35	United States	73.0	75	Dominican Republic	66.4
	36	Lithuania	72.9	76	Nicaragua	66.4
	37	Australia	72.9	77	Morocco	66.3
	38	Chile	72.8	78	Tunisia	66.2
	39	Ukraine	72.3			
	40	Serbia	72.1			

Rank	Country	Score	Rank	Country	Score
79	Turkey	66.0	119	Kenya	56.8
80	Bahrain	65.9	120	Rwanda	56.1
81	Jamaica	65.9	121	Cameroon	55.8
82	Iran, Islamic Rep.	65.5	122	Côte d'Ivoire	55.2
83	Bhutan	65.4	123	Tanzania	55.1
84	Mexico	65.2	124	Syrian Arab Republic	55.0
85	Philippines	65.0	125	Uganda	54.9
86	Panama	64.9	126	Pakistan	54.9
87	Lebanon	64.8	127	Iraq	53.7
88	Cabo Verde	64.7	128	Ethiopia	53.2
89	Sri Lanka	64.6	129	Zambia	53.1
90	Mauritius	64.5	130	Congo	52.4
91	Jordan	64.4	131	Guinea	52.1
92	El Salvador	64.1	132	Togo	52.0
93	Venezuela, RB	64.0	133	Gambia	51.6
94	Oman	63.9	134	Mauritania	51.6
95	Mongolia	63.9	135	Lesotho	51.5
96	Honduras	63.6	136	Burkina Faso	50.9
97	Egypt	63.5	137	eSwatini (fmr Swaziland)	50.7
98	Saudi Arabia	62.9	138	Mozambique	50.7
99	Indonesia	62.8	139	Djibouti	50.6
100	Gabon	62.8	140	Malawi	50.0
101	Ghana	62.8	141	Burundi	49.8
102	Nepal	62.8	142	Mali	49.7
103	Belize	62.3	143	Sudan	49.6
104	Guyana	61.9	144	Angola	49.6
105	Kuwait	61.1	145	Haiti	49.2
106	Qatar	60.8	146	Sierra Leone	49.1
107	South Africa	60.8	147	Benin	49.0
108	Lao PDR	60.6	148	Niger	48.5
109	Cambodia	60.4	149	Liberia	48.3
110	Turkmenistan	59.5	150	Nigeria	47.5
111	Bangladesh	59.3	151	Afghanistan	46.2
112	India	59.1	152	Yemen, Rep.	45.7
113	Myanmar	59.0	153	Madagascar	45.6
114	Namibia	58.9	154	Democratic Republic of Congo	43.4
115	Zimbabwe	58.8	155	Chad	42.8
116	Botswana	58.5	156	Central African Republic	37.7
117	Guatemala	58.2			
118	Senegal	57.2			

Source: Authors' analysis



SPAIN

OECD Countries

■ SPAIN'S SDG DASHBOARD

▼ OVERALL PERFORMANCE

Index score

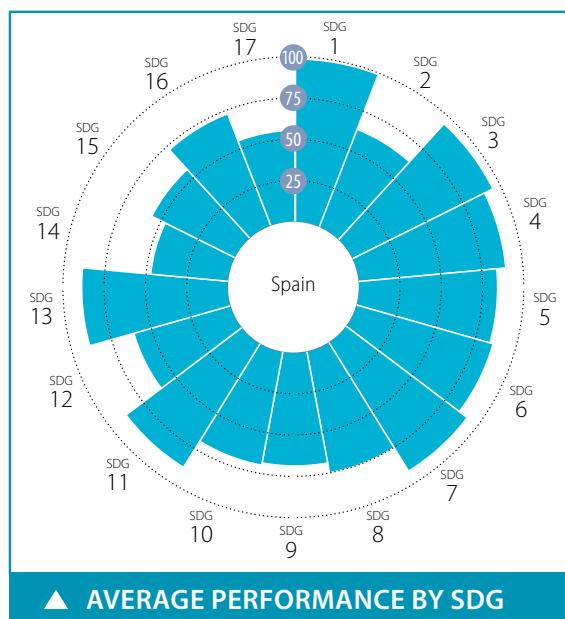


Regional average score



SDG Global rank

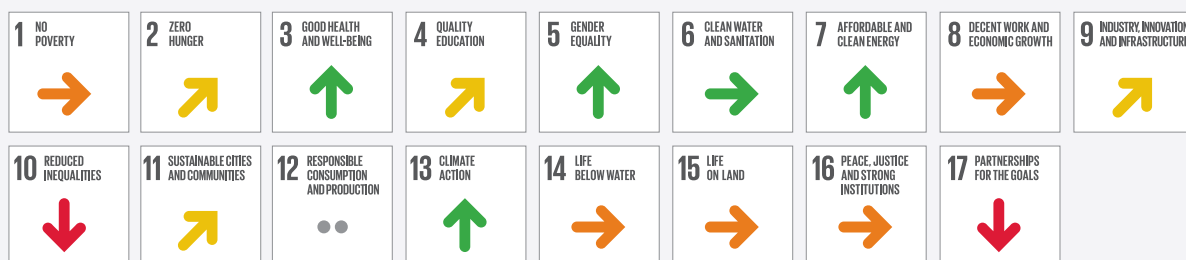
25 (OF 156)



▼ CURRENT ASSESSMENT – SDG DASHBOARD



▼ SDG TRENDS



Notes: The full title of Goal 2 "Zero Hunger" is "End hunger, achieve food security and improved nutrition and promote sustainable agriculture".

The full title of each SDG is available here: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

SPAIN

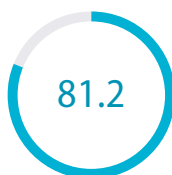
Performance by Indicator

	Value	Rating	Trend		Value	Rating	Trend
SDG1 – End Poverty							
Poverty headcount ratio at \$1.90/day (% population)	0.9	●	→	Quality of overall infrastructure (1= extremely underdeveloped; 7= extensive and efficient by international standards)	5.5	●	→
Projected poverty headcount ratio at \$1.90/day in 2030 (% population)	0.9	●	→	Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high)	3.7	●	→
Poverty rate after taxes and transfers, poverty line 50% (% population)	15.3	●	↓	The Times Higher Education Universities Ranking, Average score of top 3 universities (0-100)	54.4	●	→
SDG2 – Zero Hunger				Number of scientific and technical journal articles (per 1,000 population)	1.1	●	→
Prevalence of undernourishment (% population)	2.5	●	→	Research and development expenditure (% GDP)	1.2	●	→
Prevalence of stunting (low height-for-age) in children under 5 years of age (%)	2.6	●	→	Research and development researchers (per 1,000 employed)	6.6	●	↓
Prevalence of wasting in children under 5 years of age (%)	0.7	●	→	Triadic patent families filed (per million population)	4.9	●	↓
Prevalence of obesity, BMI ≥ 30 (% adult population)	23.8	●	↓	Gap in internet access by income (%)	54.7	●	→
Cereal yield (t/ha)	3.4	●	→	Women in science and engineering (%)	27.1	●	→
Sustainable Nitrogen Management Index	0.9	●	→	SDG10 – Reduced Inequalities			
SDG3 – Good Health and Well-Being				Gini Coefficient adjusted for top income (1-100)	38.4	●	↓
Maternal mortality rate (per 100,000 live births)	5.0	●	→	Palma ratio	1.4	●	↓
Neonatal mortality rate (per 1,000 live births)	2.0	●	→	Elderly Poverty Rate (%)	5.9	●	→
Mortality rate, under-5 (per 1,000 live births)	3.3	●	→	SDG11 – Sustainable Cities and Communities			
Incidence of tuberculosis (per 100,000 population)	10.0	●	→	Annual mean concentration of particulate matter of less than 2.5 microns of diameter (PM2.5) in urban areas (µg/m³)	9.7	●	→
HIV prevalence (per 1,000)	0.1	●	→	Improved water source, piped (% urban population with access)	99.9	●	→
Age-standardised death rate due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease in populations age 30–70 years (per 100,000 population)	10.0	●	→	Satisfaction with public transport (%)	63.0	●	→
Age-standardised death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	6.7	●	→	Rent overburden rate (%)	17.4	●	↓
Traffic deaths rate (per 100,000 population)	3.6	●	→	SDG12 – Responsible Consumption and Production			
Healthy Life Expectancy at birth (years)	82.8	●	→	E-waste generated (kg/capita)	17.7	●	→
Adolescent fertility rate (births per 1,000 women ages 15-19)	8.7	●	→	Anthropogenic wastewater that receives treatment (%)	97.4	●	→
Births attended by skilled health personnel (%)	NA	●	→	Production-based SO ₂ emissions (kg/capita)	25.1	●	→
Surviving infants who received 2 WHO-recommended vaccines (%)	97.0	●	→	Net imported SO ₂ emissions (kg/capita)	8.7	●	→
Universal Health Coverage Tracer Index (0-100)	82.9	●	→	Reactive nitrogen production footprint (kg/capita)	47.4	●	→
Subjective Wellbeing (average ladder score, 0-10)	6.2	●	→	Net imported emissions of reactive nitrogen (kg/capita)	81.2	●	→
Gap in life expectancy at birth among regions (years)	5.1	●	→	Non-Recycled Municipal Solid Waste (MSW in kg/person/day)	1.7	●	→
Gap in self-reported health by income (0-100)	8.8	●	→	SDG13 – Climate Action			
Daily smokers (% population age 15+)	23.0	●	→	Energy-related CO ₂ emissions per capita (tCO ₂ /capita)	5.0	●	→
SDG4 – Quality Education				Imported CO ₂ emissions, technology-adjusted (tCO ₂ /capita)	0.2	●	→
Net primary enrolment rate (%)	98.5	●	→	Climate Change Vulnerability Monitor (best 0-1 worst)	0.1	●	→
Mean years of schooling	9.8	●	→	CO ₂ emissions embodied in fossil fuel exports (kg/capita)	217.0	●	→
Literacy rate of 15-24 year olds, both sexes (%)	99.6	●	→	Effective Carbon Rate from all non-road energy, excluding emissions from biomass (€/tCO ₂)	12.5	●	→
Population age 25-64 with tertiary education (%)	35.7	●	→	SDG14 – Life Below Water			
PISA score (0-600)	491.7	●	→	Mean area that is protected in marine sites important to biodiversity (%)	85.3	●	→
Variation in science performance explained by students' socio-economic status (%)	13.4	●	→	Ocean Health Index Goal-Biodiversity (0-100)	81.0	●	→
Students performing below level 2 in science (%)	18.3	●	→	Ocean Health Index Goal-Clean Waters (0-100)	50.1	●	→
Resilient students (%)	39.2	●	→	Ocean Health Index Goal-Fisheries (0-100)	39.3	●	→
SDG5 – Gender Equality				Fish Stocks overexploited or collapsed by EEZ (%)	35.3	●	→
Unmet demand for contraception, estimated (% women married or in union, ages 15-49)	14.7	●	→	Fish caught by trawling (%)	33.6	●	→
Female to male mean years of schooling, population age 25 + (%)	96.0	●	→	SDG15 – Life on Land			
Female to male labour force participation rate (%)	81.8	●	→	Mean area that is protected in terrestrial sites important to biodiversity (%)	61.0	●	→
Seats held by women in national parliaments (%)	39.1	●	→	Mean area that is protected in freshwater sites important to biodiversity (%)	44.1	●	→
Gender wage gap (total, % male median wage)	11.5	●	→	Red List Index of species survival (0-1)	0.9	●	→
SDG6 – Clean Water and Sanitation				Annual change in forest area (%)	8.5	●	→
High-income countries: population using safely managed water services (%)	98.2	●	→	Imported biodiversity threats (threats per million population)	8.8	●	→
Other countries: population using at least basic drinking water services (%)	NA	●	→	SDG16 – Peace, Justice and Strong Institutions			
High-income countries: population using safely managed sanitation services (%)	97.5	●	→	Homicides (per 100,000 population)	0.7	●	→
Other countries: population using at least basic sanitation services (%)	NA	●	→	Prison population (per 100,000 population)	133.6	●	→
Freshwater withdrawal as % total renewable water resources	49.7	●	→	Population who feel safe walking alone at night in city or area where they live (%)	82.0	●	→
Imported groundwater depletion (m³/year/capita)	6.2	●	→	Government Efficiency (1-7)	3.4	●	→
SDG7 – Affordable and Clean Energy				Property Rights (1-7)	4.6	●	→
Access to electricity (% population)	100.0	●	→	Birth registrations with civil authority, children under 5 years of age (%)	100.0	●	→
Access to clean fuels & technology for cooking (% population)	100.0	●	→	Corruption Perception Index (0-100)	57.0	●	→
CO ₂ emissions from fuel combustion / electricity output (MtCO ₂ /TWh)	0.9	●	→	Children 5–14 years old involved in child labour (%)	0.0	●	→
Share of renewable energy in total final energy consumption (%)	16.3	●	→	Transfers of major conventional weapons (exports) (constant 1990 US\$ million per 100,000 population)	1.7	●	→
SDG8 – Decent Work and Economic Growth				SDG17 – Partnerships for the Goals			
Adjusted Growth (%)	-1.1	●	→	Government Health and Education spending (% GDP)	13.3	●	→
Slavery score (0-100)	100.0	●	→	High-income and all OECD DAC countries: International concessional public finance, including official development assistance (% GNI)	0.2	●	→
Adults (15 years +) with an account at a bank or other financial institution or with a mobile-money-service provider (%)	93.8	●	→	Other countries: Tax revenue (% GDP)	NA	●	→
Employment-to-Population ratio (%)	61.1	●	→	Tax Haven Score (best 0-5 worst)	0.0	●	→
Youth not in employment, education or training (NEET) (%)	21.7	●	→	Financial Secrecy Score (best 0-100 worst)	47.7	●	→
SDG9 – Industry, Innovation and Infrastructure							
Proportion of the population using the internet (%)	80.6	●	→				
Mobile broadband subscriptions (per 100 inhabitants)	89.6	●	→				

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

OVERALL PERFORMANCE

Index score

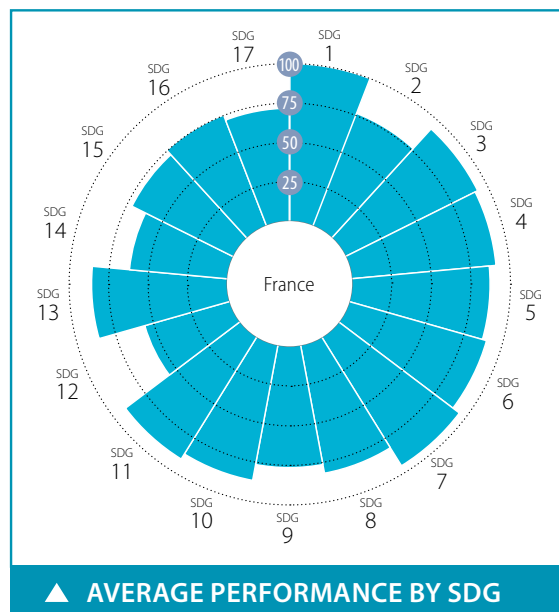


Regional average score



SDG Global rank

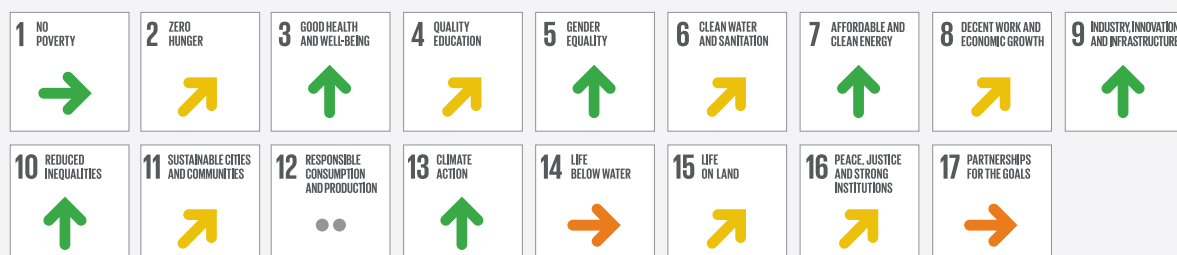
5 (OF 156)



CURRENT ASSESSMENT – SDG DASHBOARD



SDG TRENDS



Notes: The full title of Goal 2 "Zero Hunger" is "End hunger, achieve food security and improved nutrition and promote sustainable agriculture".

The full title of each SDG is available here: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

FRANCE

Performance by Indicator

	Value	Rating	Trend		Value	Rating	Trend
SDG1 – End Poverty							
Poverty headcount ratio at \$1.90/day (% population)	0.1	●	→	Quality of overall infrastructure (1= extremely underdeveloped; 7= extensive and efficient by international standards)	6.1	●	→
Projected poverty headcount ratio at \$1.90/day in 2030 (% population)	0.1	●	→	Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high)	4.0	●	→
Poverty rate after taxes and transfers, poverty line 50% (% population)	8.1	●	→	The Times Higher Education Universities Ranking, Average score of top 3 universities (0-100)	60.9	●	→
SDG2 – Zero Hunger				Number of scientific and technical journal articles (per 1,000 population)	1.1	●	→
Prevalence of undernourishment (% population)	2.5	●	→	Research and development expenditure (% GDP)	2.2	●	→
Prevalence of stunting (low height-for-age) in children under 5 years of age (%)	2.6	●	→	Research and development researchers (per 1,000 employed)	10.1	●	→
Prevalence of wasting in children under 5 years of age (%)	0.7	●	→	Triadic patent families filed (per million population)	39.7	●	→
Prevalence of obesity, BMI ≥ 30 (% adult population)	21.6	●	→	Gap in internet access by income (%)	NA	●	→
Cereal yield (t/ha)	5.7	●	→	Women in science and engineering (%)	29.2	●	→
Sustainable Nitrogen Management Index	0.4	●	→	SDG10 – Reduced Inequalities			
SDG3 – Good Health and Well-Being				Gini Coefficient adjusted for top income (1-100)	32.6	●	→
Maternal mortality rate (per 100,000 live births)	8.0	●	→	Palma ratio	1.1	●	→
Neonatal mortality rate (per 1,000 live births)	2.4	●	→	Elderly Poverty Rate (%)	3.1	●	→
Mortality rate, under-5 (per 1,000 live births)	3.9	●	→	SDG11 – Sustainable Cities and Communities			
Incidence of tuberculosis (per 100,000 population)	7.7	●	→	Annual mean concentration of particulate matter of less than 2.5 microns of diameter (PM2.5) in urban areas (µg/m³)	12.4	●	→
HIV prevalence (per 1,000)	0.0	●	→	Improved water source, piped (% urban population with access)	100.0	●	→
Age-standardised death rate due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease in populations age 30–70 years (per 100,000 population)	10.9	●	→	Satisfaction with public transport (%)	68.0	●	→
Age-standardised death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	8.1	●	→	Rent overburden rate (%)	12.4	●	→
Traffic deaths rate (per 100,000 population)	5.1	●	→	SDG12 – Responsible Consumption and Production			
Healthy Life Expectancy at birth (years)	82.4	●	→	E-waste generated (kg/capita)	22.1	●	→
Adolescent fertility rate (births per 1,000 women ages 15-19)	8.8	●	→	Anthropogenic wastewater that receives treatment (%)	66.4	●	→
Births attended by skilled health personnel (%)	98.3	●	→	Production-based SO ₂ emissions (kg/capita)	7.2	●	→
Surviving infants who received 2 WHO-recommended vaccines (%)	90.0	●	→	Net imported SO ₂ emissions (kg/capita)	13.8	●	→
Universal Health Coverage Tracer Index (0-100)	80.9	●	→	Reactive nitrogen production footprint (kg/capita)	48.1	●	→
Subjective Wellbeing (average ladder score, 0-10)	6.6	●	→	Net imported emissions of reactive nitrogen (kg/capita)	122.4	●	→
Gap in life expectancy at birth among regions (years)	4.0	●	→	Non-Recycled Municipal Solid Waste (MSW in kg/person/day)	1.5	●	→
Gap in self-reported health by income (0-100)	13.1	●	→	SDG13 – Climate Action			
Daily smokers (% population age 15+)	22.4	●	→	Energy-related CO ₂ emissions per capita (tCO ₂ /capita)	4.6	●	→
SDG4 – Quality Education				Imported CO ₂ emissions, technology-adjusted (tCO ₂ /capita)	1.1	●	→
Net primary enrolment rate (%)	98.7	●	→	Climate Change Vulnerability Monitor (best 0-1 worst)	0.0	●	→
Mean years of schooling	11.6	●	→	CO ₂ emissions embodied in fossil fuel exports (kg/capita)	155.9	●	→
Literacy rate of 15-24 year olds, both sexes (%)	NA	●	→	Effective Carbon Rate from all non-road energy, excluding emissions from biomass (€/tCO ₂)	11.8	●	→
Population age 25-64 with tertiary education (%)	34.6	●	→	SDG14 – Life Below Water			
PISA score (0-600)	495.7	●	→	Mean area that is protected in marine sites important to biodiversity (%)	79.7	●	→
Variation in science performance explained by students' socio-economic status (%)	20.3	●	→	Ocean Health Index Goal-Biodiversity (0-100)	92.4	●	→
Students performing below level 2 in science (%)	22.1	●	→	Ocean Health Index Goal-Clean Waters (0-100)	49.2	●	→
Resilient students (%)	26.6	●	→	Ocean Health Index Goal-Fisheries (0-100)	54.1	●	→
SDG5 – Gender Equality				Fish Stocks overexploited or collapsed by EEZ (%)	19.6	●	→
Unmet demand for contraception, estimated (% women married or in union, ages 15-49)	4.8	●	→	Fish caught by trawling (%)	27.8	●	→
Female to male mean years of schooling, population age 25 + (%)	97.5	●	→	SDG15 – Life on Land			
Female to male labour force participation rate (%)	84.1	●	→	Mean area that is protected in terrestrial sites important to biodiversity (%)	81.6	●	→
Seats held by women in national parliaments (%)	39.0	●	→	Mean area that is protected in freshwater sites important to biodiversity (%)	77.9	●	→
Gender wage gap (total, % male median wage)	9.9	●	→	Red List Index of species survival (0-1)	0.9	●	→
SDG6 – Clean Water and Sanitation				Annual change in forest area (%)	5.5	●	→
High-income countries: population using safely managed water services (%)	93.3	●	→	Imported biodiversity threats (threats per million population)	11.3	●	→
Other countries: population using at least basic drinking water services (%)	NA	●	→	SDG16 – Peace, Justice and Strong Institutions			
High-income countries: population using safely managed sanitation services (%)	92.1	●	→	Homicides (per 100,000 population)	1.6	●	→
Other countries: population using at least basic sanitation services (%)	NA	●	→	Prison population (per 100,000 population)	103.5	●	→
Freshwater withdrawal as % total renewable water resources	22.8	●	→	Population who feel safe walking alone at night in city or area where they live (%)	73.0	●	→
Imported groundwater depletion (m³/year/capita)	5.9	●	→	Government Efficiency (1-7)	3.8	●	→
SDG7 – Affordable and Clean Energy				Property Rights (1-7)	5.5	●	→
Access to electricity (% population)	100.0	●	→	Birth registrations with civil authority, children under 5 years of age (%)	100.0	●	→
Access to clean fuels & technology for cooking (% population)	100.0	●	→	Corruption Perception Index (0-100)	70.0	●	→
CO ₂ emissions from fuel combustion / electricity output (MtCO ₂ /TWh)	0.5	●	→	Children 5–14 years old involved in child labour (%)	0.0	●	→
Share of renewable energy in total final energy consumption (%)	13.5	●	→	Transfers of major conventional weapons (exports) (constant 1990 US\$ million per 100,000 population)	2.6	●	→
SDG8 – Decent Work and Economic Growth				SDG17 – Partnerships for the Goals			
Adjusted Growth (%)	-1.4	●	→	Government Health and Education spending (% GDP)	17.1	●	→
Slavery score (0-100)	100.0	●	→	High-income and all OECD DAC countries: International concessional public finance, including official development assistance (% GNI)	0.4	●	→
Adults (15 years +) with an account at a bank or other financial institution or with a mobile-money-service provider (%)	94.0	●	→	Other countries: Tax revenue (% GDP)	NA	●	→
Employment-to-Population ratio (%)	64.8	●	→	Tax Haven Score (best 0-5 worst)	0.0	●	→
Youth not in employment, education or training (NEET) (%)	17.2	●	→	Financial Secrecy Score (best 0-100 worst)	51.7	●	→
SDG9 – Industry, Innovation and Infrastructure							
Proportion of the population using the internet (%)	85.6	●	→				
Mobile broadband subscriptions (per 100 inhabitants)	82.4	●	→				

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

BURKINA FASO

West Africa

▼ OVERALL PERFORMANCE

Index score

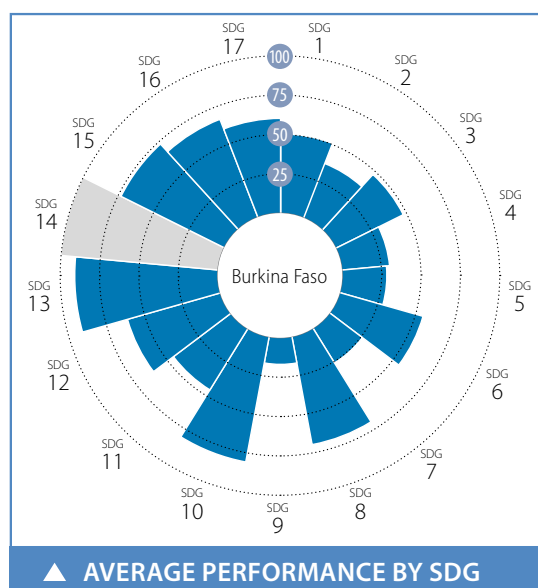


Regional average score



Africa Index Rank

25 (OF 51)



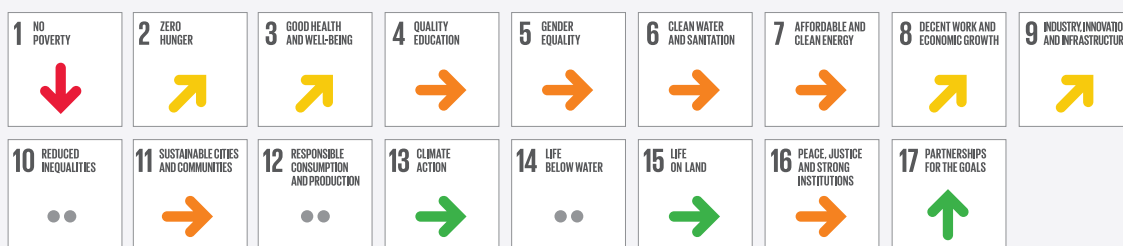
▼ COMPARISON WITH OTHER AFRICAN INDICES

	RANK	SCORE
Africa Gender Equality Index (2015)	22 (of 52)	56.6 / 100
Africa Infrastructure Development Index (2016)	32 (of 54)	17.05 / 100
Africa Regional Integration Index (2016)	19 (of 52)	0.53 / 1
Ibrahim Index on African Governance (2017)	21 (of 54)	53.7 / 100

▼ CURRENT ASSESSMENT – SDG DASHBOARD



▼ SDG TRENDS



Notes: The full title of Goal 2 "Zero Hunger" is "End hunger, achieve food security and improved nutrition and promote sustainable agriculture".

The full title of each SDG is available here: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

BURKINA FASO

Performance by Indicator

SDG1 – End Poverty

	Value	Rating	Trend
Poverty headcount ratio at \$1.90/day (% population)	30.4	●	↓
Projected poverty headcount ratio at \$1.90/day in 2030 (% population)	10.7	●	●
Proportion of population living below the national poverty line	40.1	●	●
Population covered by Social Protection (%)	1.8	●	●

SDG2 – Zero Hunger

Prevalence of undernourishment (% population)	20.2	●	●
Prevalence of stunting (low height-for-age) in children under 5 years of age (%)	35.1	●	↑
Prevalence of wasting in children under 5 years of age (%)	15.4	●	↑
Prevalence of obesity, BMI ≥ 30 (% adult population)	5.6	●	→
Cereal yield (t/ha)	1.2	●	→
Fertilizer consumption (kg per hectare of arable land)	16.3	●	↑

SDG3 – Good Health and Well-Being

Maternal mortality rate (per 100,000 live births)	371.0	●	↑
Births attended by skilled health personnel (%)	65.9	●	●
Neonatal mortality rate (per 1,000 live births)	25.6	●	●
Mortality rate, under-5 (per 1,000 live births)	84.6	●	↑
HIV prevalence (per 1,000)	0.3	●	↓
People living with HIV receiving antiretroviral therapy (%)	60.0	●	●
Incidence of tuberculosis (per 100,000 people)	51.0	●	→
Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs (%)	49.2	●	●
Malaria mortality rate	114.2	●	↑
Coverage of Preventive Chemotherapy for Neglected Tropical Diseases (%)	87.3	●	●
Age-standardised death rate due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease in populations age 30–70 years (per 100,000 population)	23.0	●	↓
Traffic deaths rate (per 100,000 people)	30.7	●	↓
Adolescent fertility rate (births per 1,000 women ages 15-19)	106.5	●	↑
Universal Health Coverage Tracer Index (0-100)	46.6	●	→
Age-standardised death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	212.3	●	●
Percentage of surviving infants who received 2 WHO-recommended vaccines (%)	88.0	●	↓
Healthy Life Expectancy at birth (years)	59.9	●	↑
Subjective Wellbeing (average ladder score, 0-10)	4.6	●	↑

SDG4 – Quality Education

Net primary enrolment rate (%)	75.2	●	↑
Mean years of schooling (years)	1.4	●	→
Literacy rate of 15-24 year olds, both sexes (%)	50.1	●	●

SDG5 – Gender Equality

Proportion of women aged 20-24 years who were married or in a union before age 18	51.6	●	●
Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, by age	75.8	●	●
Seats held by women in national parliaments (%)	11.0	●	↓
Women in ministerial positions (%)	13.0	●	●
Estimated demand for contraception that is unmet (% women married or in union, ages 15-49)	52.5	●	↑
Ratio of female to male mean years of schooling of population age 25 and above	50.0	●	●
Ratio of female to male labour force participation rate	77.4	●	→

SDG6 – Clean Water and Sanitation

Population using at least basic drinking water services (%)	53.9	●	→
Population using at least basic sanitation services (%)	22.5	●	→
Freshwater withdrawal as % total renewable water resources	9.5	●	●
Imported groundwater depletion (m³/year/capita)	7.1	●	●

SDG7 – Affordable and Clean Energy

Access to electricity (% population)	19.2	●	→
Access to clean fuels & technology for cooking (% population)	7.0	●	→
Renewable energy share in the total final energy consumption	76.5	●	→
Consumer affordability of electricity	0.0	●	●

SDG8 – Decent Work and Economic Growth

5-year average GDP growth per capita (%)	2.2	●	●
Employment-to-population ratio	80.8	●	→
Slavery score (0-100)	50.0	●	●
Adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider (%)	43.2	●	→
Starting a Business score	88.2	●	↑

SDG9 – Industry, Innovation and Infrastructure

Infrastructure score (0-100)	24.6	●	●
Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high)	2.7	●	●
Research and development expenditure (% GDP)	0.2	●	●
Number of scientific and technical journal articles (per 1,000)	0.0	●	●
Mobile broadband subscriptions (per 100 inhabitants)	19.6	●	↑
Proportion of the population using the internet (%)	14.0	●	→

SDG10 – Reduced Inequalities

Gini Coefficient adjusted for top income (1-100)	35.3	●	●
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SDG11 – Sustainable Cities and Communities

Proportion of urban population living in slums	65.8	●	●
Improved water source, piped (% urban population with access)	75.8	●	↓
Satisfaction with public transport (%)	35.0	●	↑
Annual mean concentration of particulate matter of less than 2.5 microns of diameter (PM2.5) in urban areas (µg/m³)	40.0	●	↓

SDG12 – Responsible Consumption and Production

Municipal Solid Waste (kg/year/capita)	0.5	●	●
E-waste generated (kg/capita)	0.6	●	●
Natural Resource Value Realization Score	66.5	●	●
Production-based SO ₂ emissions (kg/capita)	0.8	●	●
Anthropogenic wastewater that receives treatment (%)	0.0	●	●
Net imported SO ₂ emissions (kg/capita)	0.7	●	●

SDG13 – Climate Action

Climate Change Vulnerability Monitor (best 0-1 worst)	0.1	●	●
Energy-related CO ₂ emissions per capita (tCO ₂ /capita)	0.2	●	→
Imported CO ₂ emissions, technology-adjusted (tCO ₂ /capita)	0.1	●	●
CO ₂ emissions embodied in fossil fuel exports (kg/capita)	0.0	●	●

SDG14 – Life Below Water

Percentage of inadequately managed plastic waste	NA	●	●
Ocean Health Index Goal - Clean Waters (0-100)	NA	●	●
Ocean Health Index Goal - Biodiversity (0-100)	NA	●	●
Ocean Health Index Goal - Fisheries (0-100)	NA	●	●
Mean area that is protected in marine sites important to biodiversity (%)	NA	●	●
Percentage of Fish Stocks overexploited or collapsed by EEZ (%)	NA	●	●
Fish caught by trawling (%)	NA	●	●

SDG15 – Life on Land

Mean area that is protected in terrestrial sites important to biodiversity (%)	71.8	●	→
Percentage change in forest area (2010-2015)	-1.1	●	●
Red List Index of species survival (0-1)	1.0	●	→
Imported biodiversity threats (threats/capita)	0.7	●	●

SDG16 – Peace, Justice and Strong Institutions

Homicides (per 100,000 people)	0.7	●	●
Conflict-related deaths per 100,000	0.0	●	↓
Proportion of the population who feel safe walking alone at night in the city or area where they live (%)	55.0	●	↓
Children 5–14 years old involved in child labour (%)	39.2	●	●
Property Rights (0-100)	53.1	●	↓
Access to justice (0-100)	71.7	●	↑
Corruption Perception Index (0-100)	42	●	→
Public Sector Accountability & Transparency (0-100)	77.5	●	↑
Birth registrations with civil authority, children under 5 years of age (%)	76.9	●	●

SDG17 – Partnerships for the Goals

Tax revenue (% GDP)	18.6	●	↑
Government Health and Education spending (% GDP)	9.6	●	●
Level of customs duties on imports	5.9	●	●
Visa Requirement score	94.0	●	●
Governmental Statistical Capacity	73.3	●	↑

COUNTRY PROFILES

Source: SDSN, 2018, SDG Index and Dashboards <http://www.sdgindex.org/reports/>

Sub-national dashboards and indexes

Local governments are closest to the people and in a unique position to identify and respond to sustainable development needs and gaps. Indeed, most underlying policies and investments are a shared responsibility across levels of government; according to the SDSN, is estimated that 65% of the 169 targets underlying the 17 SDGs will not be reached without proper engagement of, and co-ordination with, local and sub national governments. Indexes for cities in Spain, Italy and Canada are in preparation. The SDSN is also in discussion with the Tsinghua University in China.

■ OVERVIEW OF SDSN INDEXES (EXISTING AND FORTHCOMING)

INTERNATIONAL	REGIONAL ZONES	PROVINCES/REGIONS	CITIES
Global SDG Index and Dashboards	Africa	United-Sates (by the end of 2018)	United-States
	Latina America (in 2019)		Canada (in 2019)
	Europe (in 2019)		Italy (October 2018)
	South East Asia (early stages)		Spain (October 2018)
			Europe (in 2019)
			China (in 2019)

The 2018 U.S. Cities SDGs index

This 2nd annual report from the Sustainable Development Solutions Network (SDSN) ranks the 100 most populous metropolitan areas in the U.S. on the SDGs. The Index report analyzes 44 indicators for each city to provide a comprehensive assessment of sustainable development challenges related to environmental, social, and economic objectives. It is intended as a planning tool for cities, highlighting areas of strength and weakness.

“The best performing city is solely 68% of the way towards fully achieving the SDGs, and about two-thirds of the cities are less than half-way there. The study highlights widespread inequality in urban areas and that gender, age, race and income all have an impact on a person's likelihood of realizing education, healthcare and economic opportunities”. Investments or loans identified with their MSA FIPS Code (that are used to identify the cities in 2018 USA SDG Cities Index), could help to prioritize the areas where the needs are the most acute.

The SDG in France

A consultation launched in 2017 under the aegis of the National Council for Statistical Information (CNIS) made it possible to propose a dashboard of 98 indicators that constitute the national framework for monitoring France's progress towards the 17 SDGs. This dashboard is available online. In parallel, France will continue its participation in the international reporting of the 232 global indicators to UN agencies. The indicators for national monitoring in France of sustainable development objectives 17 sustainable development objectives have been updated on August 31, 2018 by the INSEE. The list is available here. The official website of the French government on the 2030 Agenda is available here: <https://www.agenda-2030.fr>



In France, the **data base EIDER** includes all of the environmental data available at regional and departmental levels, in the form of statistics on major themes (air, water, waste, flora and fauna, land, etc.). More than 150 areas are covered in 1 650 data sets. The quantified data are annotated (producing institutions, sources, calculation methods, nomenclatures, etc.) to allow clearer and easier interpretation and use. They have been gathered using the same methodologies and with the same degree of reliability

throughout the territory, with the aid of the Directions Régionales de l'Environnement (Diren - regional environmental authorities). This homogeneity and consistency of data give EIDER the major advantage of allowing spatial and temporal comparisons. This database is an essential general statistics tool for all those involved in environmental diagnosis and assessment, for researchers into environmental economics and, more generally, for anyone needing or wanting to describe and understand phenomena that interact with the environment (state of the different compartments of the environment, pressures exerted and responses)

Netherlands

The Statistics Netherlands (CBS) has published in May 2018 [a report on the situation for the Netherlands](#), the second edition after the first report published in 2016. It documents the state of affairs in the country based on these indicators. Statistics already available at CBS were used for this purpose. The report was very well received both nationally and internationally, which was in part the motivation for publishing this second edition.

This second edition was commissioned by the Ministry of Foreign Affairs. It concludes that Netherlands ranks highly among European countries: its gross domestic product (GDP) per capita is one of the highest in the European Union (EU). A newly available indicator shows that there is good access to public transport in the Netherlands: 98.5% of the population lives less than two kilometers away from the nearest public transport stop. In other areas, the Netherlands occupies a low position in the European rankings. Its proportion of renewable energy is among the smallest in Europe, and the number of women in managerial positions is proportionally one of the smallest.

Eurostat

To monitor sustainable development in the European Union, an EU SDG indicator set was developed under the leadership of Eurostat 2017. This set of 100 indicators structured along the 17 goals of the UN 2030 Agenda is intended to measure progress towards SDG achievement at the European level.

The EU Social Progress Index

The European Union Regional Social Progress Index is a tool developed by the European Commission-Directorate General for Regional and Urban Policy in cooperation with the Social Progress Imperative and Orchestra Basque Institute of Competitiveness to measure the social progress in the 272 regions of the European Union. It aims to measure social progress for each region as a complement to traditional measures of economic progress.

Although it is not its initial purpose, the European Social Progress Index provides granular data closely related to SDG achievement at regional levels. It is possible to use it to identify the most acute territorial SDG gaps. [Many indicators given by the EU social Progress index overlap with the UN SDGs.](#)

For example, the EU SPI indicator [“Infant mortality”](#) defined as “the ratio of the number of deaths of children under one year of age during the year to the number of live births in that year” is aligned with the SDG 3 - Good Health and Well-being, through the target 3.1.

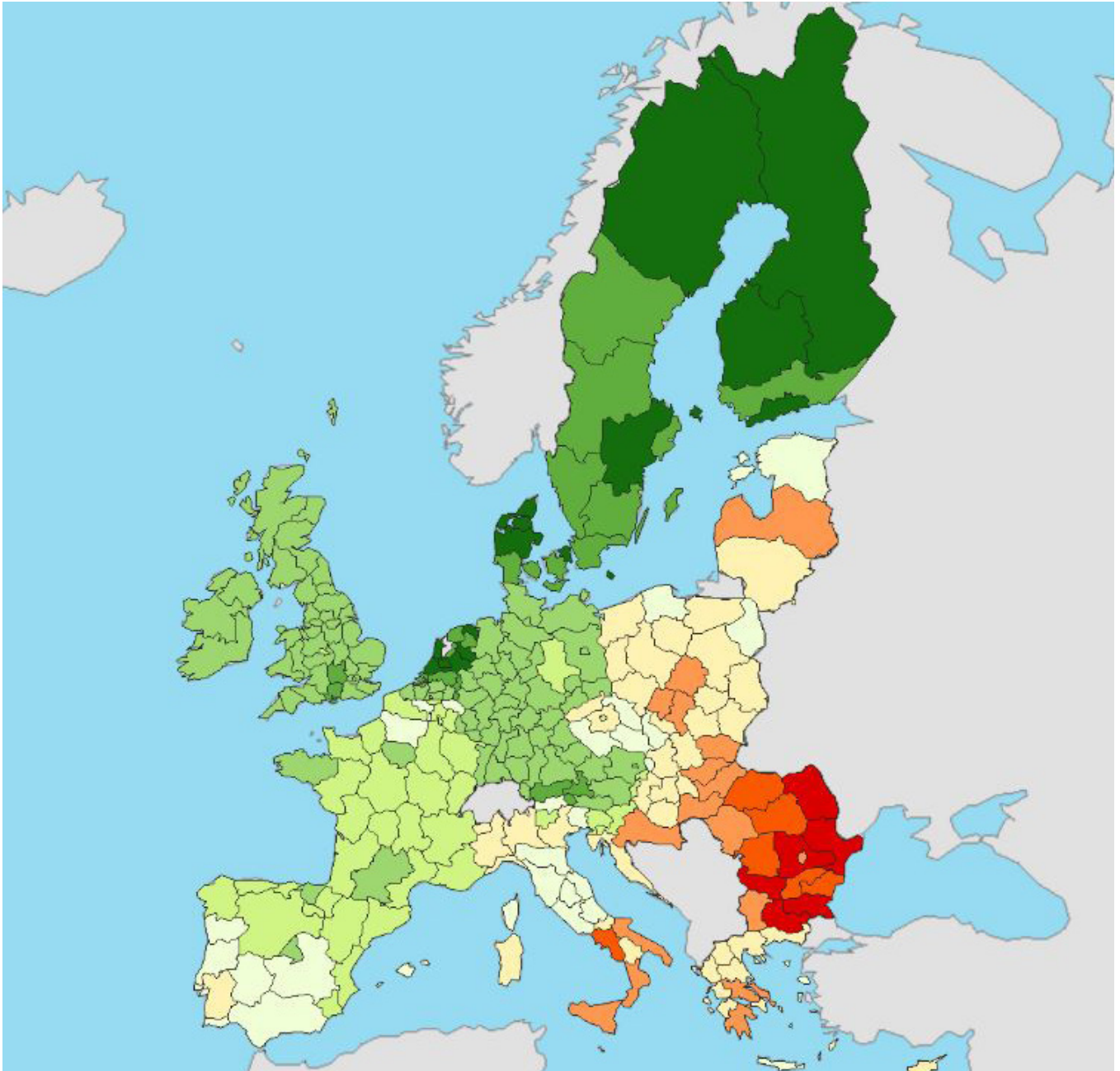
Target 3.1: “By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births”

The indicator “Difference between female and male employment rate” is aligned with both SDGs:
– Reduced Inequalities, and 5 – Gender Equality, through targets 10.3 and 5.1.

Target 10.3: “Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard”

Target 5.1: “End all forms of discrimination against all women and girls everywhere”

Several sustainability bonds framework have started to use geographical data. For instance, ICO's eligibility criteria approach for social bonds is based on INE (Instituto Nacional de Estadística) data. This approach could be expanded to other topics to leverage indicators that go beyond the rate of unemployment.



EU Social Progress Index

Index

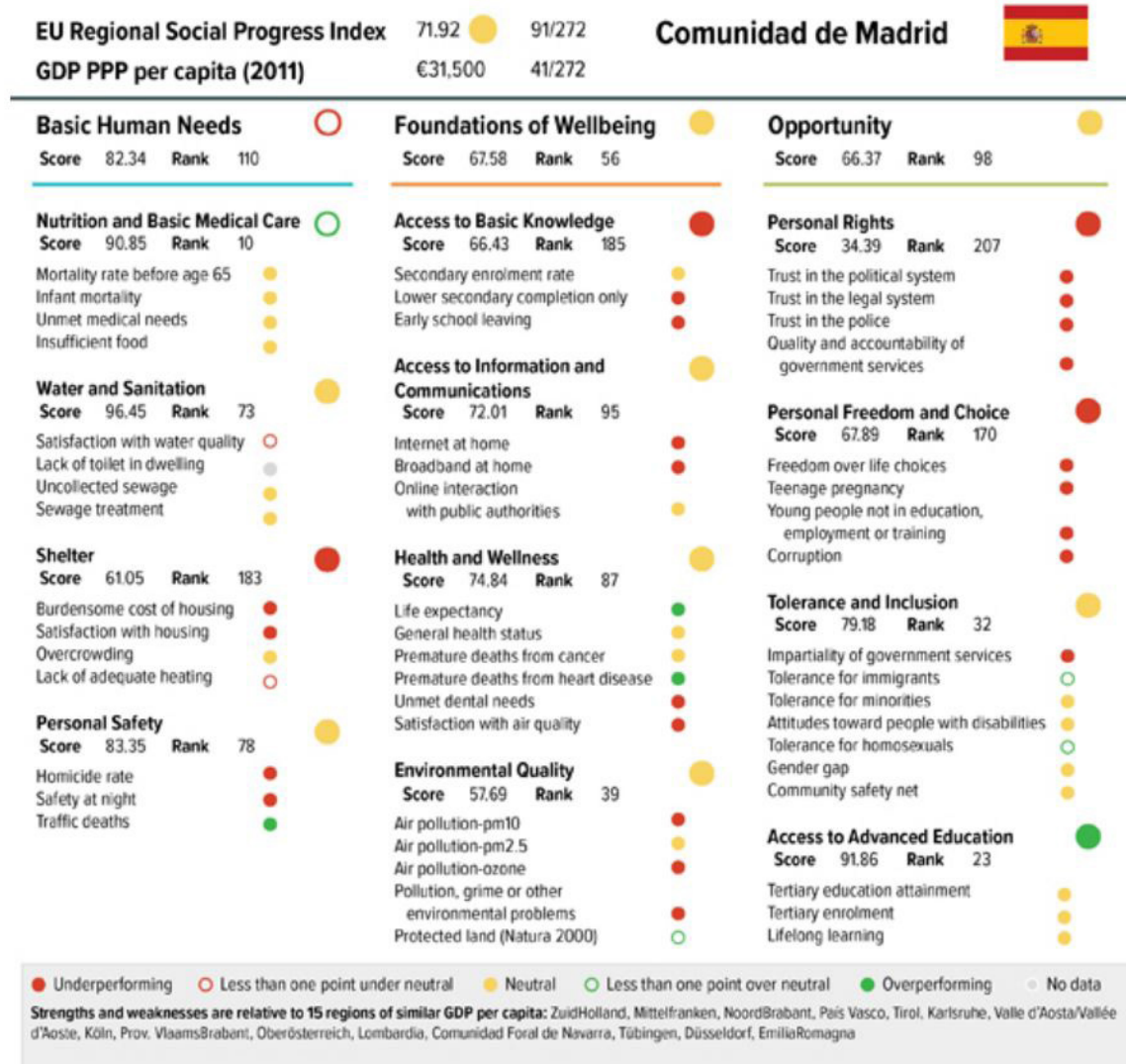


Source: DG REGIO

0 500 Km

© EuroGeographics Association for the administrative boundaries

THE EU REGIONAL SOCIAL PROGRESS INDEX SCORECARD OF COMUNIDAD DE MADRID



Source : European Commission, European Social Progress Index
http://ec.europa.eu/regional_policy/en/information/maps/social_progress

SAMPLE OF REGIONS IN SPAIN	AIR POLLUTION-PM10	AIR POLLUTION-PM2.5	AIR POLLUTION-OZONE
Canarias			
Ciudad Autónoma de Ceuta	34,11	13,26	117,85
Ciudad Autónoma de Melilla	25,86	12,53	115,84
Andalucía	21,97	11,69	117,23
Cataluña	21,79	13,68	117,2
Comunidad de Madrid	20,77	12,71	120,31
Región de Murcia	20,49	12,1	112,84
Comunidad Valenciana	18,33	11,81	114,47
Principado de Asturias	18,07	9,93	112,2
Cantabria	17,84	10,84	109,29

■ THE EUROPEAN SOCIAL PROGRESS INDEX

Even if it is not its initial purpose, the European Social Progress Index provides indicators closely related to SDG achievement at regional levels. Many indicators given by the EU social Progress index overlap with the UN SDGs. We have identified some of them below for the SDGs 3, 5, 6, 11 and 15 that could be used as stocktaking indicators and to gauge SDG related needs within countries.

SDG TARGETS

EXAMPLES OF EU SPI INDICATORS (AND DEFINITION)



target 3.4

Premature deaths from heart disease

Standardised death rate for less than 65 years old due to ischaemic heart diseases (code I) by 100 000 inhabitants. The standardisation adjusts the death rate to a standard age distribution. The standardised death rates are calculated on the basis of a standard European population, as defined by the World Health Organization

Premature deaths from cancer

Standardised death rate rates for less than 65 years old due to cancer (code C) by 100 000 inhabitants. The standardisation adjusts the death rate to a standard age distribution. The standardised death rates are calculated on the basis of a standard European population, as defined by the WHO

target 3.9

Air pollution-pm10

Population weighted average of a 10 by 10km of air concentration ($\mu\text{g}/\text{m}^3$) of particle matter of size 10 micrometers (big particles) interpolated on a grid created by the EEA. Capped to 40 $\mu\text{g}/\text{m}^3$ = limit yearly value of the EU Ambient Air Quality Directive

Air pollution-pm2.5

Population weighted average of a 10 by 10km of air concentration ($\mu\text{g}/\text{m}^3$) of particle matter of size 2.5 micrometers (small particles) interpolated on a grid created by the EEA. Capped to 25 $\mu\text{g}/\text{m}^3$ = limit yearly value of the EU Ambient Air Quality Directive

Air pollution-ozone

Population weighted average of a 10 by 10km of air Ozone O3 concentration ($\mu\text{g}/\text{m}^3$) interpolated on a grid created by the EEA. Capped to 120 $\mu\text{g}/\text{m}^3$ = limit value of the EU Ambient Air Quality



target 5.1

Gender gap

Difference between female and male employment rates
Other relevant SDGs:



target 10.3

SDG TARGETS



target 11.1



targets 15.2
15.3
15.4
15.7
15.8
15.9



targets 6.4

targets 6.3

EXAMPLES OF EU SPI INDICATORS (AND DEFINITION)

Lack of toilet in dwelling

Share of total population not having indoor flushing toilet for the sole use of their household
Other relevant SDGs:



target 6.2

Overcrowding

Percentage of people living in an overcrowded dwelling, as defined by the number of rooms available to the household, the household's size, as well as its members' ages and family situation
Other relevant SDGs:



target 1.4

Lack of adequate heating

Percentage of people who are in the state of enforced inability to keep home adequately warm
Other

Protected land (Natura 2000)

Share of area covered by Natura 2000, an European Union wide network of nature protection areas established under the 1992 Habitats Directive.

Uncollected sewage

Urban wastewater not collected by collecting systems nor treated by individual or other appropriate systems as a % of generated load

Sewage treatment

Urban wastewater with more stringent treatment as a percentage of collected wastewater

Source : European Commission, European Social Progress Index http://ec.europa.eu/regional_policy/en/information/maps/social_progress

■ THE EUROPEAN SOCIAL PROGRESS INDEX PROVIDES GRANULAR DATA CLOSELY RELATED TO SDG ACHIEVEMENT AT REGIONAL LEVELS – HOW CAN IT BE USED?



ICO's second-floor facility lending to SME can contribute to the progress of **SDG 8** through targets **8.1**, **8.3** and **8.10**.



With the EU SPI indicators, we could imagine the following selection of proceeds to address **SDG 6** targets **6.4** and **6.3**

ICO's Social Bonds Framework

Selection of region for the Use of Proceeds (SME loans)

Eligibility criteria

- * Be a small, medium or microenterprise (SME)
- › number of employees and turnover
- * Be located in an economically underperforming region of Spain i.e. GDP per capita in 2013 lower than the Spain's national GDP per capita and unemployment rate unemployment rate of 19% or greater

Exclusion criteria

- * Not in the list of excluded activities (NACE codes list) or have a record of engaging in illegal business practices

Expanding spatial-based approach to the SDG 6 by using the EU SPI indicator and NACE classification

Possible eligibility criteria

Selection of regions in Spain with significant SDG Gaps (low sewage treatment") addressable by the Use of Proceeds loans to SMEs specialized in water treatment.

- * Be a small, medium or microenterprise (SME) **in the sector of wastewater treatment**
- › number of employees and turnover, **and corresponding NACE codes** (3,094 enterprises)

E	Water supply; sewerage, waste management and remediation activities
E36	Water collection, treatment and supply
E360	Water collection, treatment and supply

- * **SMEs located or operating in the regions of Spain underperforming in the EU SPI Indicator "Sewage treatment"** (defined as "urban wastewater with more stringent treatment as a percentage of collected wastewater"), such as Cantabria, Principado de Asturias (see table on the right).

Exclusion criteria : not in the list of excluded activities (NACE codes list) or have a record of engaging in illegal business practices

REGION	Comunidad Foral de Navarra	Cantabria	Principado de Asturias	Extremadura	La Rioja	Andalucía	Canarias	Aragón	Cataluña	Castilla y León	Castilla La Mancha	Comunidad Valenciana	País Vasco	Illes Balears	Galicia	Comunidad de Madrid	Región de Murcia	Ciudad Autónoma de Ceuta	Ciudad Autónoma de Melilla	EU 272 regions average
SEWAGE TREATMENT(%)	00,00	17,37	18,97	25,94	34,0	45,58	46,22	48,77	54,15	56,66	61,47	63,12	74,71	77,71	78,05	93,93	99,08	100	100	68,70

Sources : European Commission, European Social Progress Index http://ec.europa.eu/regional_policy/en/information/maps/social_progress

Sustainalytics, 2014, framework overview and second-party opinion of the Instituto de

Crédito oficial Social bond <https://www.ico.es/documents/19/69769/SECOND+OPINION+ICO+Social+Bond+Framework.pdf/44cfbcad-7f67-4528-ac65-e9eefce8d070>

■ Interlinkages

Tradeoffs, synergies, ripple effects, must be taken into account when trying to advance the SDGs. It is what we called inter-linkages in this report. It consists in disentangling interactions between the SDGs. Tools are needed to anticipate and deal with the unintended consequences of an action or project, it is the only way to guarantee the indivisible nature of the 2030 agenda. Either at the asset or organizational level, considering potential obstruction to the SDGs is vital.

Interlinkages monitoring, and attenuation is somehow another version of ESG management in green and social bonds principles.

The lack of awareness of inter-linkages brings with it the risk that progress towards one goal occurs at the expense of another. In concrete terms, reliance on fossil fuels to expand access to energy (SDG 7) could exacerbate climate change and ocean acidification, undermining progress in climate action (SDG 13) and in ocean conservation (SDG 14), as well as contributing to health problems (SDG 3). Promoting industrialization but without contributing to ocean acidification, matters. Idem, increasing transport opportunities without compromising health outcomes (SDG 3.6 and 3.9). Several SDGs are concerned with protecting biodiversity and the environment but are presented separately from the food security goal. Conversely, there are some SDGs that are key enablers to the achievement of the other goals by laying the right empowering foundations.

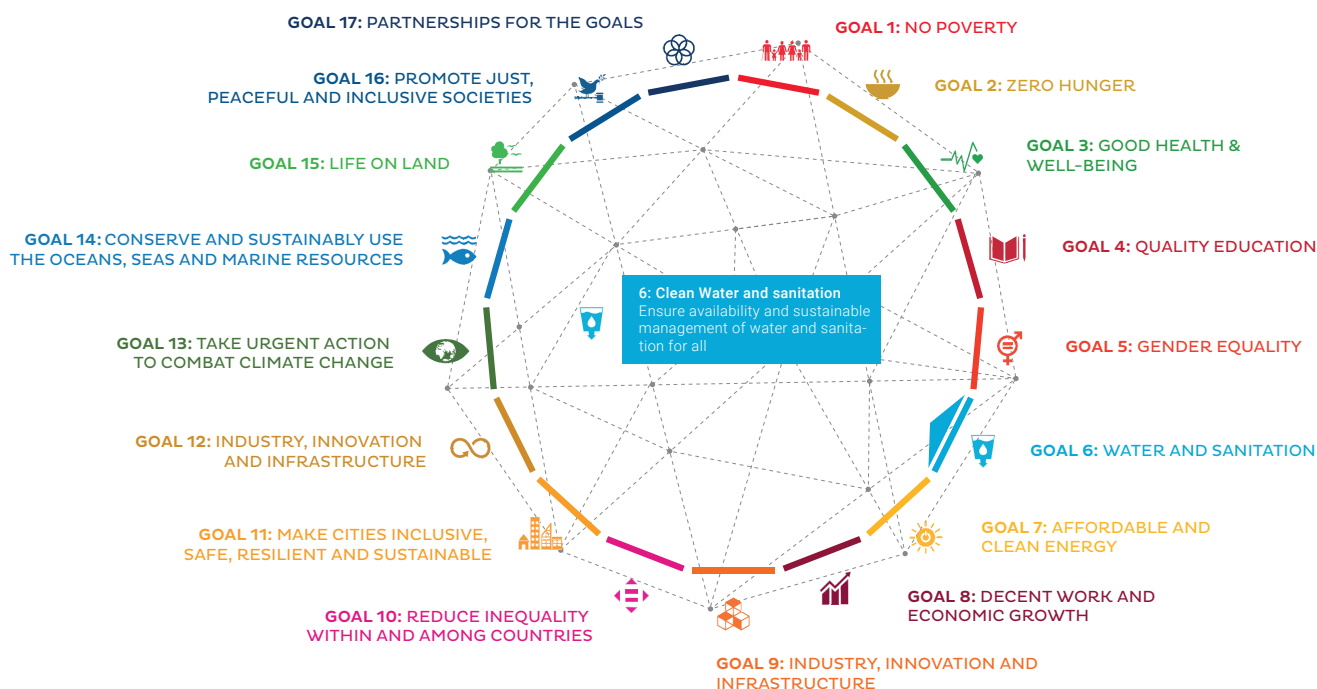
■ THE CASE OF REGENERATIVE AGRICULTURE



Water-related services and issues

Women and girls are responsible for water collection in 8 out of 10 households where water is not accessible in the home across 61 countries. Bringing water sources closer to people reduces the time needed to collect water and makes more time available for educational activities (SDG 4 education), especially for females (SDG 5 gender equality). Poor water, sanitation and hygiene contribute to under nutrition by causing frequent parasite infections and episodes of diarrhea (SDG 3 good health and well being). Wastewater is an undervalued source of water, energy (SDG 7 access to energy), nutrients and other recoverable by-products (SDG 12 responsible consumption and production). Recycling, reusing and recovering waste can alleviate water stress. Furthermore, approximately 70% of water withdrawals are for agriculture (SDG 2 ends hunger). Agricultural water savings can come in many forms, such as increasing productivity of food crops (more crop per drop), improving water management practices and technologies, implementing sustainable agricultural practices, growing fewer water-intensive crops in water scarce regions, reducing food loss and waste, and importing food grown from water-rich countries.

■ THE GOAL 6 AS ENABLER FOR ACHIEVING THE SDGS: FOCUS ON INTERLINKAGES AND POTENTIAL UOPS



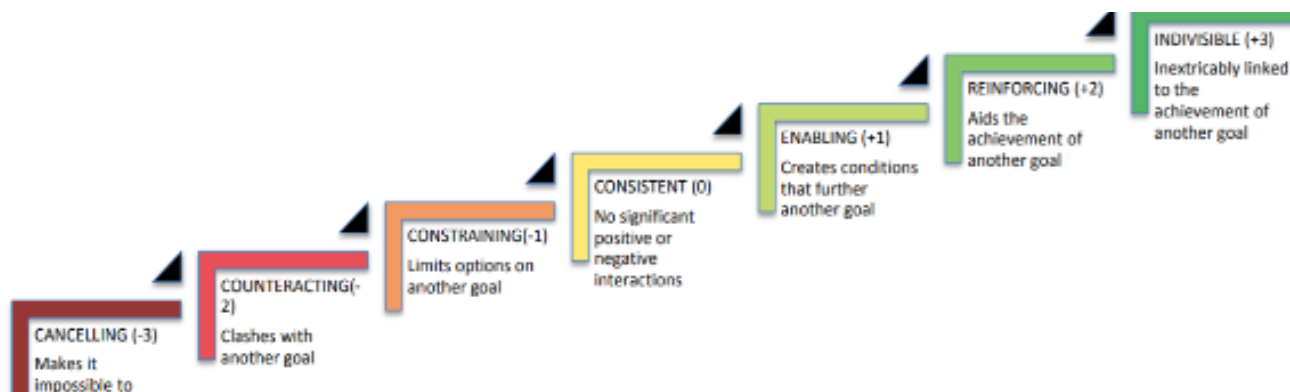
<p>1: Ensure universal access to clean water and sanitation at an affordable cost so as to eliminate poverty Projects of water networks to connect previously underserved people, with disclosure of the previous and new cost of access for the target population</p>	<p>10: Limit and control tensions around the use of water resources between and among territories Cross boundaries water infrastructure projects with disclosed diplomatic management policy</p>
<p>2: As agriculture accounts for 70% of global freshwater demand, expand farming practices that consume less water, and reduce the use of water contaminated with phytosanitary products as it damages and reduces productivity of pasture and crops Programs with local farmers in sourcing places (education programs and lending of equipment) to update local practices. E.g. Danone Mount Elgon project</p>	<p>11: Make cities permeable, manage flooding risks and ensure that urbanization does not contribute to water pollution and scarcity. Water-cycle projects with comprehensive water treatment (from sourcing to treatment of wastewater), for renovation of existing water systems in cities or new urbanization</p>
<p>3: As polluted water is the world's largest health risk, restore and guarantee the physicochemical and bacteriological quality of water Cleaning and upgrading of drainage ditches, draining of discharging water, purification plants</p>	<p>12: Reduce the water footprint of households and companies Projects to measure and indicate to companies the impact breakdown of their water consumption along their value chain, for their communication purposes and the for sake of savings</p>
<p>4: Ensure adequate water supply to students, especially in poor rural areas where they spend large parts of each day fetching water instead of attending school.</p>	<p>13: Prevent and attenuate the impact of climate change on water sanitation and water supply</p>
<p>5: Acknowledge and facilitate the fact that in many communities, women and girls bear the burden of collecting and managing water use in everyday use, agriculture and health care Safe access to water and sanitation construction projects where local women have a consulting/commercial/educational role; construction of separate-sex and safe toilets</p>	<p>14: Prevent the spreading of chemicals and plastic pollutants from the sea to watercourses R&D for the removal and replacement of harmful substances, such as micro plastics, chemicals or metals (less packaging intense logistics)</p>
<p>7: Make water provision less fossil fuel energy dependent and energy provision less water dependent, maintain the flexibility of hydropower generation and develop new technologies (tidal energy) Construction of small scale hydro-power facilities</p>	<p>15: Restore the water storage and purification capacity of soils and environments and aim for transboundary benefit sharing in river basins</p>
<p>8: Develop water engineering as a key component of green economy</p>	<p>16: Reinforce the efficiency of the water-police and associated public services</p>
<p>9: Develop techniques and systems to save water, replace for instance old manually-operated water distribution system commonly used for crops irrigation by smart distributions system that deliver required volumes of water at optimum times E.g. modernization of irrigation systems (centralized control system which allows monitoring of the pumping station operation, surveillance of wells, filtering status, locating of failures, daily volumes of water delivered to each irrigator, opening and closing of the flow regulating valves, fertilization of plots and billing of the water used.</p>	<p>17: Pursue a governance of the water resources that involves all relevant stakeholders</p>

Source: Authors

Tool box – typology of SDG interactions

The Stockholm Environment Institute (SEI), in partnership with the International Council for Science, has created a conceptual framework for mapping and analyzing interactions between SDG targets. In 2017 SEI published a paper in Sustainability Science “Towards systemic and contextual priority setting for implementing the 2030 Agenda”. The framework proposes a seven-point scale that captures both negative and positive interactions.

■ TOOL: THE SEVEN-POINT TYPOLOGY OF SDG INTERACTIONS



Source: the Stockholm Environment Institute (SEI)

By exploring and assessing interactions between the SDGs, this framework aims to help policy makers and companies design more coherent and resource effective policies to generate progress on the 17 SDGs overall.



■ Stakeholders segmentation

Segmentation per categories is at the heart of the 2030 Agenda that aims to “leave no one behind”. Numerous UN SDG targets or indicators aim at specific groups of people, for instance:

- 1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable*
10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

The needs for localization and contextualization are key pillars to achieve the 2030 Agenda SDGs. Activities can indeed be performed at various scales and locations (global, national, sub national, city, economic zones, clusters...). A comprehensive approach to the SDGs must take into account, for each different activity, the whole value chain (support and primary activities from inbound to outbound), for every type of company. Disaggregation or segmentation is thus a key principle.

Behind the value of an indicator for an entire population or a customer base can lay disparate realities, masked by, for example, a national average. In the diagnostic phase of our methodology, the indicators chosen to measure progress towards the achievement of SDG should be broken down according to relevant criteria such as gender, age, income, geography, employment, etc.

Those features are for example: employees, subcontractors, work-injury victims, rural vs. urban people, children, newborns, people living with learning disabilities, people living with physical disabilities, people living in poverty, long-term unemployed people, people living with addiction, people with long-term health issues, people living with mental health needs, vulnerable older people, vulnerable young people, refugees and asylum seekers, indigenous people, ecosystem and biodiversity, social trade or business, homelessness, animals...

We have segmented into two main categories: Inward and Outward, the stakeholders that, when they are relevant to the activities, have to be taken into account as a part of the SDG gap analysis.

Identifying the stakeholders involved at each stage of your value chain

Inward

Some of the 17 SDG goals, 169 targets or 244 indicators relate to inward activities and internal stakeholders. For instance:

- *The indicator 8.8.2: Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status.*
- *The indicator 16.5.2: Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official, or were asked for a bribe by those public officials during the previous 12 months*

Among the categories related to inward impacts and stakeholders are:

- Employees representatives and trade unions
- Social partners
- CSR activities
- Inbound and outbound Logistics
- Operations
- Outbound Logistics
- Marketing and Sales
- Procurement (suppliers)
- Human Resources
- Technology

Outward

- Customers
- Riverside population (near production plants and/or facilities)
- Financial community (investors - institutional and individual, shareholders, moneylenders, credit rating agencies, banks and insurance companies)
- Elected officials, local authorities and communities
- Participation In groups, signing agreements etc.
- Business partners & suppliers
- Professional sector: certifiers and labelers, trade associations and regulatory authorities
- Associations and NGOs
- Media and events
- Universities and schools

Examples of population identification, segmentation and targeting

Target group identification is not yet a widespread practice. However, some good practices or examples can be cited:

- **The African Development Bank (AFDB)**, Social Bond Framework, Use of Proceeds category:
Target population is defined as "African populations, including but not limited to: living below the poverty line (USD 1.90 per in PPP terms); excluded and/or marginalized populations and/or communities; Vulnerable groups, including as a result of natural disasters; People with disabilities; Migrants and/or displaced persons; Undereducated; Under-served; Unemployed"
This segmentation is not very precise geographically but has both an economic and social dimension.
- **Caja Rural de Navarra's, 2017 Loan Impact Report** for its Sustainable Covered Bond
For Education, Caja Rural de Navarra gives number of students reached by the investments, however, scholarship and workshop age data is very vague, no information on the status of students.
For affordable housing, segmentation is offered in terms of beneficiaries (age distribution of borrowers, number of children, population per town/village and average income per person). E.g.: "more than 65% of loans granted were in towns with a population of less than 25,000 residents with just over 20% going to villages of less than 5,000 inhabitants, helping sustain small populations and counter the risk of rural depopulation"
- **Comunidad de Madrid's**, in the second opinion of its Sustainability Bond (from Sustainalytics), it is said the risk of poverty and social exclusion of Comunidad de Madrid affected 10.5% of its population and that the "target groups of Comunidad de Madrid's social spending overlap those groups identified as being at risk by the EU Strategy".

E. OUR TOOLS

■ Sectorial matrix and actionable targets identification

To nurture the phase 1 – diagnosis – of our generic approach (see chapter 2), especially the generic and in abstracto analysis, we propose to use a matrix encompassing on one axis a universal list of sectors (for the sake of alignment with existing regulation, we used the same than the HLEG' list), and on the other axis the SDGs.


















In a second phase, this matrix can be populated with a selection of “internationally comparable indicators” (among the UN official indicators and targets but also with additional indicators, see our Natixis GSH's SDG indicators book that reference many of them) measuring the primary contribution of activities to policy objectives.

Two possibilities of use with this matrix:

1/ Attenuation approach: beginning with the sectors (vertical axis) and be careful and take appropriate measures to manage significant risks of deterioration or harmful impact. It is key to address interlinkages.

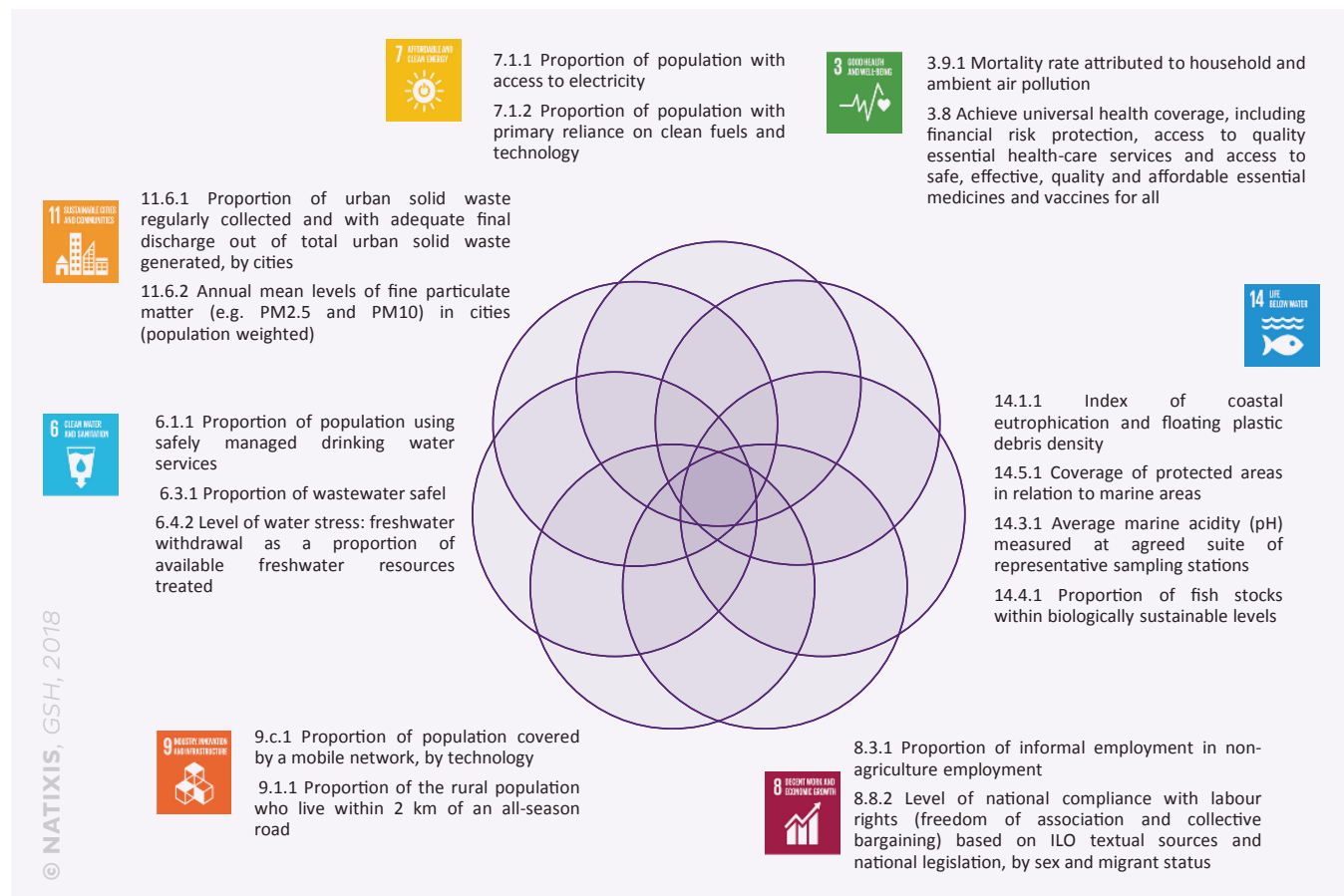
2/ Thematic & SDG positive approach: starting from the SDGs you intend to contribute and thereafter picking up the sectors that could contribute the most positively.

■ TOOL 3 : NATIXIS GSH SDG SECTORIAL MATRIX

	✔ Significant positive impact and contribution								✗ Risks of obstruction or harmful impact								
MAIN SECTORS IDENTIFIED BY THE HLEG																	
Electricity production	✔			✔		✗	✔	✔	✔				✗	✗	✗	✔	✔
Heat production and supply																	
Electricity transmission, distribution and storage	✔			✔		✗	✔	✔	✔				✗	✗	✗	✔	✔
Industry			✗			✗		✔	✔			✗	✗	✗	✗		✔
Products & supply chain activities		✔						✔	✔			✗					
Buildings	✔			✔		✔	✔	✔	✔		✔		✗	✗	✗		
Urban development			✗			✗		✔	✔		✗		✗	✗	✗		
Transport	✔			✔				✔		✔	✔		✗	✗	✗		✔
Water supply, management & wastewater treatment	✔	✔	✔	✔	✔	✔		✔		✔	✔	✔		✔	✔	✔	
Solid waste management			✔			✔		✔			✔	✔		✔	✔		
Agriculture, husbandry, aquaculture & fisheries	✔	✔				✗		✔					✗	✗	✗		
Forestry						✗		✔				✗	✗	✗	✗		
Natural ecosystems			✔			✔		✔				✔	✔	✔	✔		
Education	✔			✔	✔			✔				✔				✔	
Healthcare			✔		✔			✔		✔						✔	
Information & communication technology	✔			✔				✔	✔	✔			✗	✗			✔
Financial products & services	✔							✔	✔	✔							✔

■ TOOL 4: NATIXIS GSH MAPPING OF THE MOST RELEVANT TARGETS FOR BUSINESSES AND INVESTORS

Among the 169 official SDG UN sub-targets, many, if not strictly applicable to the private sector, are very useful to enlighten the context in which companies operate. We have identified in the tool below the most actionable that are more granular and specific than the 17 goals. These could be used by companies for instance in their reporting. When enterprises carry their materiality analysis, they should look specifically at these targets.



Source: The 2030 Agenda

■ The SDG contribution chain and claim instruments

The SDG contribution chain must be explicit as to how your actions trickle down to make an impact

■ TOOL 5: NATIXIS GSH SDG CONTRIBUTION CHAIN

	INPUT	ACTIVITY	OUTPUT	IMPACT	
				OUTCOME	CONTRIBUTION
Definition	Resources – capital, human – invested or deployed in service of a set of activities.	Concrete actions or tasks that are performed in support of specific impact objectives	Tangible, immediate practices, products and services that result from the activity undertaken	Changes, or effects, on individuals or on the environment, resulting from the activity, and the delivery of products and services	Effects on a broader target population, that result from outcomes that have been achieved.
Application / Example indicators	€, number of people	Development and implementation of a program, product, project, building new infrastructure	Measurable actions or conditions that evaluate progress against specific operational activities e.g. Number of customers reached, items sold	Measurable actions or conditions that demonstrate progress towards specific outcomes e.g. average journey time reduction)	Changes on society, segment of population, or the environment. Progress of a specific SDG goals or targets.
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Adapting the impact investing's concept of theory of change to “SDG contribution”

We witnessed a pressing demand to **move stepwise from coincidental thematic matching to correlation and ultimately the causation grail. The term impact sounds consistent, meaningful.** It refers to the change brought about by an activity or an entity on people, the environment or the economy.

Within the impact evaluation profession, to assert that an intervention has an “impact” ordinarily requires **a significant degree of certainty of attribution**, proven for instance by the existence of a relevant control group against which to judge a counterfactual. Technically, it equals change that is caused by an intervention. To identify what would have occurred anyway without the intervention or project is a sort of prerequisite. **Nevertheless, measuring impact in the strict technical sense of “being able to attribute causality” is complex and costly.** In the hierarchy of results, it comes at the end, just after an outcome, that we could define as a change for clients or beneficiaries that is plausibly associated with the investee action.

Program evaluation methods

The expression 'theory of change' takes its origin in the field of program evaluation. It refers to the **laying down of a model that specifies the underlying logic, assumptions, influences, causal linkages and expected outcomes of a strategy, program or project**. It describes the steps to be implemented, and what needs to occur, to achieve a certain result or address a problem. The end result is as important as the steps to get there. A theory of contribution provides a clear roadmap that helps stakeholder visualize and understand how investments/products and services can contribute to achieving intended impacts. It serves multiple purposes, including conducting due diligence and selecting investments; identifying causation points to pressure-test and potential barriers.

Once the project commissioned, it is time to assess whether the program or contribution thesis turns out to be compelling, appropriate, relevant and accurate. Does change occur in the ways the intervention proponents have conjectured? Are there other change dynamics or pathways at work? Are there unforeseen actors and factors which promote or constrain contribution? Are there hurdles that stymie or render ineffective the contribution? How can those obstacles be minimized or eliminated altogether?

The answers to these questions are critical and instrumental in the sense that they can usefully inform program managers and funders on how they can modify the design of the intervention under review to improve the outcomes, or whether the intervention should be terminated.

Additionality and SDG value added can be investigated through various routes

An important watchfulness in forecasting impact indicators is that they are often based on a cluster of assumptions. While technical experts aim at making sound and conservative assumptions that are reasonable and are based on the information available at the time, the actual environmental impact of the projects may diverge from initial projections. For example, social, economic, technical, political and legal changes can cause deviations from projections. In any case, transparency on the assumptions would clarify the reasons behind divergences between ex-ante and ex-post assessments.

The most direct approach is: **How do the underlying assets fit into a "transition / 2-degrees aligned / SDG aligned" strategy at issuer level?** In other words, do the underlying projects really contribute to an actual transitioning of the issuer, or ideally are there dynamics that meet the urgencies at stake?

Are the underlying projects fitting into policy objectives that can be considered as being in line with the collective targets? Are they actually transition assets, are we talking about transformative technologies likely to bring the "significant" impacts expected?

Baseline definition: "baseline" refers to measurements of pivotal conditions or indicators before a process, program, or project begins, from which change and progress can be assessed

A baseline assessment encompasses two major steps: i) construct a baseline containing a set of stocktaking indicators, and ii) benchmark baseline data against SDG targets, and against the development indices of other cities and settlements.

How to evidence your contribution?

Statistical tests for association and significance try to determine: 1) what is the probability that the relationship between two variables exists; and 2) if it does, how robust is the relationship. **Statistical significance involves that there is consistent chance that we are right in claiming that a relationship exists** (by a simple regression or chi square test) **between two or more variables**, or that there is a significant difference (by a t-test) between results for clients with one type of service compared to another. A challenge is to determine if a few % points of statistical difference mean something useful.

Outcomes are defined as changes for clients or beneficiaries that are plausibly associated with the products and services you provided. **The plausible association can be investigated by asking clients or beneficiaries about the changes** (positive/negative) they have experienced, and what they perceive as the reasons for any changes. This should be made in a neutral way, i.e. with open rather than leading questions to limit bias in the client responses.

Experimental and quasi-experimental methods are both of a quantitative nature: they statistically compare the characteristics of a treatment group. For example, a representative sample of people buying products or services, with a control group whose "only difference on average" is not to have been exposed to the products or services sold by the company.

■ Navigating indicators complexity

Data and indicators for what?

Sometimes, we misunderstand the “why” and “how” when it comes to data and indicators (data being raw materials, and indicators an analytical combination of data).

A few questions are useful to be raised :

- Do you know why you are measuring?
- Do you know what you actually are measuring?
- What should be measured?
- What to do once you get the results?
- Who is your audience?

An indicator aims at measuring the achievement of an objective or to describe a context (economic, social or environmental). It is an analytical combination of data, derived from surveys or accounting company or administrative files, that allows the quantification of all or part of a phenomenon, in time and/or space. To be widely usable and useful, indicators must be unambiguous in their interpretation and easily communicable. This also requires them to be documented and based on a robust methodology.

In sum, SDG-related data could be answering to a multi-faceted purpose:

- To monitor performance;
- To inform strategic and operational decisions that can enhance performance;
- To communicate the benefits of your activity.

There are several potential audiences for SDG contribution assessment, including top management and operational teams, customers and ultimate beneficiaries, shareholders, national and international policymakers, as well as civil society stakeholders.

We prefer quantitative indicators (measurable units, \$, tons, hectares, microgram, hour) rather than a qualitative statement of fact or opinion, textual or descriptive form. But both are useful and can be complementary.

In this context, an indicator can be used to collect data: identify where (e.g. territories) the most acute needs and/or challenges are (context or situation indicator, analysis of the gaps), or to track the efforts and resources allocated by an organization (input indicators). For assessing access to basic services for instance, it is crucial to measure the total number of beneficiaries/clients affected. Stakeholders' segmentation is key to demonstrating additionality and building a robust claim. Under certain situations, especially in high income countries, it is relevant to distinguish access, productivity/efficiency, quality and affordability of a service.

Contribution measurement is much more than just collecting data, albeit a prerequisite. Data is the stepping stone towards better decision making. Feedback loops are key to ensure that the information collected is relevant and useful not only when it comes to reporting to investors, but also to inform strategic decision-making.

The highly valued qualities for an indicator

Indicators should be specific, measurable, achievable, relevant and time-bound (SMART). When selecting indicators, consider how well they meet each of the subsequent criteria: relevance, usability, clarity, feasibility and comparability.

The qualities of a «good indicator» were identified by Anthony Atkinson in the early 2000s. They should:

- grasp the «heart of the issue» by capturing the meaning and importance of the phenomenon being measured;
- allow an easy interpretation;
- be statistically solid and reliable;
- not be easily manipulated;
- can be updated over the recent period and be subject to revisions;
- not be too burdensome to produce;
- be, as far as possible, accessible to citizens.

In fact, it is unusual for an indicator to say exactly and exhaustively what you want to know about the outcome of a program, project or policy. Sometimes, the indicator accurately reflects the objective (e.g. the «number of road deaths»), sometimes it can solely illustrate an important but partial aspect of the objective (such as the number of common birds, a proxy of biodiversity which of course includes many other aspects).

The indicator is always the result of collection and calculation conventions, which should not be overlooked when interpreting it.

Finally, while the SDGs are the same for all UN States, they are not translated in the same way for all countries and for all categories of actors: poverty, malnutrition, ecosystem protection or economic development do not take the same forms in a small island state, in a poor African country or in France. To measure progress towards certain targets, a country may have preferred an alternative indicator to the one used at the global level, because it is more appropriate to the national context and concerns.

Navigating indicators' nature and scale heterogeneity– the example of Gender Equality

The “entry- and mid-level positions held by men and women ratio” is for a company rather a situation or stocktaking indicator. By contrast, its potential fluctuation over a lapse of time, especially in the aftermath of a gender equality action plan, is the delta you want to explain and the related positive changes you will try to claim.

Female labor force participation (% female) in a country where you operate is useful to contextualize your own gender equality footprint, but you won't be able to convincingly claim it has enhanced thanks to your gender equality plan.

Meanwhile, the total and reduction of the number of complaints related to unequal treatment at the or a workplace for women during reporting period is interesting but the calculation robustness is weak and prone to manipulation.

By contrast, the gender wage gap (Total, % male median wage) is applicable and calculable at both macro and micro levels. It is the difference between male and female median wages of full-time employees and those self-employed, divided by the male median wage. Furthermore, you can adapt the indicator women in science and engineering (% of women tertiary graduates in natural sciences and engineering from total tertiary graduates in natural sciences and engineering) to the indicator of women in science and engineering positions in your organization (i.e. % of women occupying natural sciences and engineering functions from total employees in natural sciences and engineering departments).

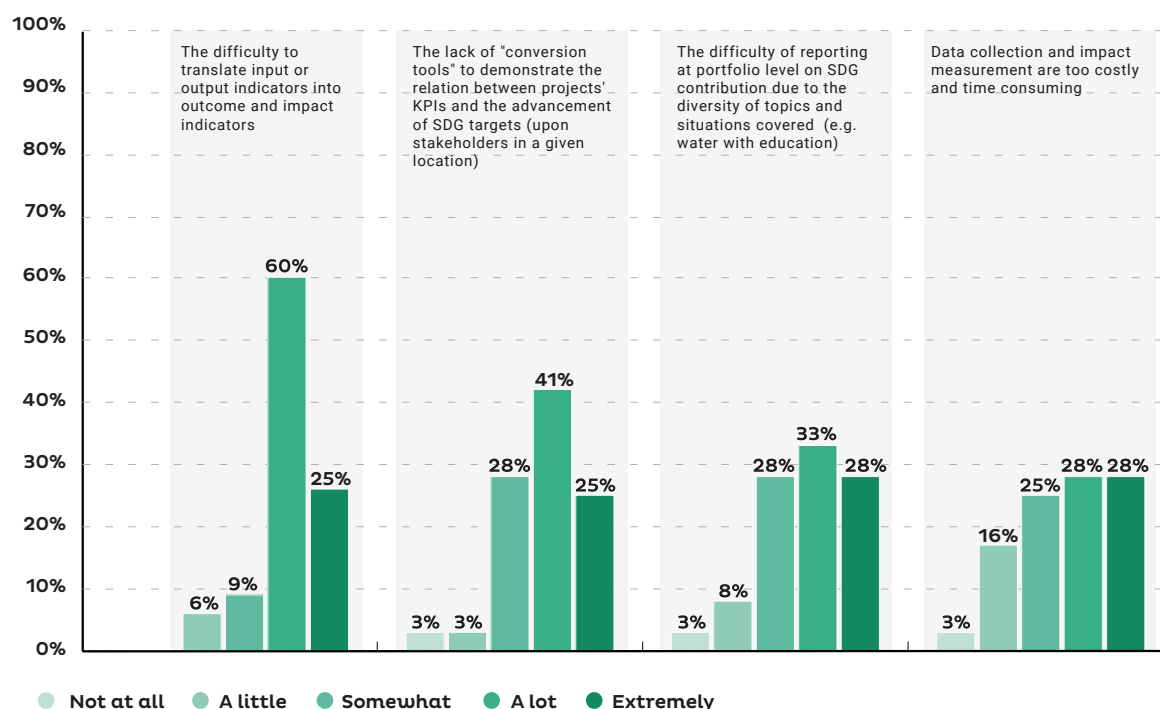
If you want to advance the SDG 5 within your organization, and reach full and effective participation, and equal opportunities for women in leadership, you should sequence your intended contribution and differentiates: number of women leadership trainings and programs initiated (input), the number of women trained or mentored (output); the % beneficiaries entering managerial positions (outcome) and ultimately the increase % of women in leadership positions (impact).



Facts: the SDGs are by nature relatively unfit for the private sector

The seventeen goals and one hundred sixty-nine targets as they stand are rarely straightforwardly transposable for use at the microeconomic and private-sector levels. Indeed, translation from SDG macro and public policy indicators into private sector indicator is challenging. Several respondents of our survey recalled the UN Goals were aimed more at policy makers than the investment community.

■ Q7 | HOW WOULD YOU ASSESS THE FOLLOWING IMPEDIMENTS TO USE SDGS IN YOUR OPERATIONAL ACTIVITIES ?



The Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs) drew up an initial list of indicators in 2016. A set of 244 indicators was drawn up to monitor the achievement of the 17 goals and 169 targets. Nine indicators are linked to two or more targets. There is thus a total of 232 unique indicators. Because a significant portion of the 169 UN targets cannot be measured appropriately at a company level, we have identified indicators within a large pool of sources that are more specific to private sectors.

The data on financial performance are robust, as a result of more than a century of accounting sophistication and improvement; by contrast, SDG related data are mostly inadequate or simply nowhere to be found. However, we have identified the most promising indicators and approaches across a large range of actors. Among those sources are: *CNIS*, *Eurostat*, *UN Sustainable Development Solutions Network (SDSN)*, *Cerise*, *Reference Framework for Sustainable Cities (RFSC)*, *stratégie nationale de transition écologique vers un développement durable 2015 – 2020 (SNTEDD)*, *Social Bonds Impact Reporting (ICMA)*, *The Harmonized Indicators (HIPSO)*, *SDG Compass*, *EU Social Index*, *IRIS (catalogue)*, *database Eider (the French acronym for integrated regional environmental data) of the French Ministry for Ecology*, *Toniic*, *Impact Management Project*, *SDG Tracker*, *SDG Impact Indicators*, *Dutch Sustainable Finance Platform (2017)*, *(WFE ESG Metrics June 2018)*, *The World Federation of Exchanges (WFE)*, *Dutch agency NIBUD*, *United Nations World Water Assessment Program*.

The criteria against which indicators are assessed in our "indicators book" or taxonomy are clustered under the two main phases we propose to follow (phase 1: diagnosis phase: 2 contribution). However, some criteria of the phase 1 can also be used with phase 2 (for instance segmentation and outward impact). This grid can help to classify your existing indicators, to identify what your needs and constraints are. It is only a sample of the indicators we reviewed.

Our criteria to classify and assess indicators

Below are some definitions to help you understand and use our grid.

PERIMETER	Sovereign, supranational and agency Emerging countries Developed countries Corporation Micro or project level Macro level
NATURE	Input Activity Output Outcome Impact Stocktaking / Situation Inward impact Outward impact (products and services) Opportunities driven (new markets) Risks driven (legal, social, sanitary) Sensitive to interlinkages Stakeholders segmentation Geographical breakdown Additionality and accountability Reference and prone to comparison Time series availability In house data collection Third party data collection Robust calculation methodology Affordability to implement
	FEATURES
	Phase 1 : Diagnosis
	Phase 2 : Contribution
	Collection processes and methodological criteria

Perimeter

The same indicator cannot always be used indifferently for a SSA (sovereign, supranational and agency public authorities) and a corporation. Some indicators are more relevant at a micro, project or branch level. Also, the needs and the situations vary often along the levels of income and development. Thereby, some indicators are useful in the context of emerging countries, and pointless for developed countries. When an indicator is assessed as relevant at a given level, it means that it is measurable at this level to capture a phenomenon. For instance, affordable housing (monthly average housing cost as % of income) can be calculated at SSA level. It is not relevant for describing the situation of a corporation, however, a company can absolutely try to address this issue and find offers and solutions to increase this affordability. Micro or project levels differ from macro level in the sense that metrics applying across regions or sectors are by nature higher-level and generic measures.

Nature

The nature of an indicator is debatable and depends on its exact definition, a slight adjustment such as adding “increase/decrease” modifies its scope and purpose. Below are the definitions of the criteria we proposed and/or explanations about their potential use.

Input Indicator: Resources (capital, human) invested or deployed in the service of a set of activities. Examples: €, number of people.

Activity indicator: Concrete actions or tasks of the investees (development and implementation of a program, product, project)

Output indicator: Tangible, immediate practices, products and services that result from the activity undertaken. Output data allows companies to track performance year on year and to benchmark it against industry or regional standards and look at trends and improvement.

Outcome indicator: Changes, or effects, on individuals or on the environmental, resulting from the activity, and the delivery of products and services

Impact indicator: Effects on a broader target population. Changes, or effects, on society, segment of population, or the environmental, that follow from outcomes that have been achieved

Stocktaking indicator: refers to a situation and informs a context. It describes relevant aspects of the contextual trends in which an activity or an investment occurs, is designed, planned and implemented. They precise the backdrop in which the activity takes place and are useful to interpreting the results (demographic, social, etc.). Example: Employment rate for women and men aged 20-64

Nota Bene: A negative externality is considered in our grid as an output. An impact is often defined as the improvement or degradation of a situation, depending on the formulation of the indicator.

Features

Inward: refers to the internal sphere of the organization and its impacts through its own operations (upstream, wage policy, sourcing, etc.).

Outward: refers to the impact of the products and services sold (external/outbound focused).

Opportunities: describes the value-creation orientation (new markets, anticipation of evolving consumption trends)

Risks: driven dimension describe potential threats and damages or losses for the organization. It could be lawsuits it could be reputational.

Geographical breakdown: a criterion to assess if spatial disaggregation, by regions or cities for instance, is feasible and relevant. If yes, it means it could help to reflect the diversity of impacts in different contexts.

Stakeholders segmentation: a criteria that assesses whether breakdowns for this indicator are available, for instance, gender and age, poverty status of households (at-risk-of-poverty or not), tenure status, degree of urbanization. Segmentation is paramount. Behind the value of an indicator for an entire population can lie very disparate realities, masked by a national average. With the overarching goal of «leaving no one behind», the indicators defined to measure progress towards the SDGs should be broken down according to the most relevant criteria for each, such as gender, age, income, geography, employment, etc. Sensitive to interlinkages: criteria that assesses to what extent this indicator is inextricably linked or influenced by the achievement of other goals or external factors. It captures the magnitude to which the indicator fluctuates along a large range of projects. It is a key principle of the SDGs; an indicator can be sensitive and progresses only if other goals advance. To what extent it requires the progress of other SDG or external factors as “enabler”. For instance, the income of the bottom 40% of population relies heavily on other factors.

Additionality and accountability: describes how easy it is to attribute benefits and claim progresses. Is the indicator prone to clear affordability? By essence, outputs or outcomes that are really in the investee’s control are more efficient to demonstrate additionality. It is a prerequisite for answering the question: what is in investee’s control and what is not?

Time series availability: criteria that assesses if the indicator represents valid and reliable measures and its timeliness (i.e. occurring at a suitable time, seasonable). Refers to the frequency of data collection, main categories are: every year; every 2 years; every 3 years; every > 3 years; a-periodic.

Affordability to implement: how intense in resources is the indicator, especially the budget and required human resources.

In house or third-party data collection: criteria that assess if it is more relevant to collect the data for the indicator internally or to outsource it to external researchers. In the first case, the organization retains control over the assessment and monitoring of outcomes and observed changes using KPIs.

If the indicator is related to the number of clients from the target group, profiles of beneficiaries and their level of satisfaction, outsourcing may not be relevant. However, external verification helps to enhance the credibility of the organization’s internal efforts and helps it communicate more effectively with partners.

Reference and prone to comparison: measures whether it is possible to carry longitudinal comparison, i.e. tracking data for the same clients (a cohort) from baseline to end line.

Once those criteria are defined and their purpose stated, they could be used to test indicators along the 10 steps of our 2 phases methodology, either to measure needs or gaps, to gauge efforts and/or to claim a contribution. The following canvas assesses a sample of indicators we encountered in our research across many providers, and that we found relevant. For the sake of synthesis, we did not give their definition and calculation methodology, but we chose ones that are intuitive, somehow meaning robust. We tied those indicators to each of the SDGs, but their scope is often larger, and they can be reallocated.

The criteria against which indicators are assessed in our “indicators book” or taxonomy are clustered under the two main phases we propose to follow (phase 1: diagnosis phase: 2 contribution). However, some criteria of the phase 1 can also be used with phase 2 (for instance segmentation and outward impact). This grid intends to facilitate indicators classification, to strengthen the strategic use made of them, to spur benchmark. This grid is supposed to help companies and/or investors reviewing their existing indicators against their needs and constraints. It is only a sample of the indicators we reviewed for each SDG.

TOOL 6: NATIXIS GSH SDG INDICATORS BOOK

		PERIMETER						NATURE						FEATURES											
														Phase 1 : Diagnosis				Phase 2 : Contribution				Collection processes and methodological criteria			
NO POVERTY	% of revenue from products serving low income groups	●	●	●	●	●	●				✓			✓	●	●	●	●	●	●	●	●	●	●	●
	Poverty headcount ratio at \$1.90/day (% of the population)	●	●	●	●	●	●					✓			●	●	●	●	●	●	●	●	●	●	●
	Social housing rate (% in relation to the total number of houses existing in the urban area)	●	●	●	●	●	●				✓		✓	●	●	●	●	●	●	●	●	●	●	●	●
	Total enterprise or organization headcount covered by collective bargaining agreement(s) in %	●	●	●	●	●	●					✓		●	●	●	●	●	●	●	●	●	●	●	●
	Affordable housing: monthly average housing cost (including rent, energy and local taxes) as % of income (housing cost ratio) agreement(s) in %	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
	Permanent contracts in total enterprise headcount (%)	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
ZERO HUNGER	Share of organic farming areas in the total utilized agricultural area	●	●	●	●	●	●	✓					✓	●	●	●	●	●	●	●	●	●	●	●	●
	GHG emissions from agriculture (in absolute and % of total emissions)	●	●	●	●	●	●		✓				✓	●	●	●	●	●	●	●	●	●	●	●	●
	Prevalence of obesity: percentage of the adult population that has a body mass index (BMI) of 30kg/m2 or higher	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
GOOD HEALTH & WELL-BEING	Estimated number of fatal road traffic injuries per 100,000 people	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
	Health & medical professionals density (per 100,000 inhabitants)	●	●	●	●	●	●	✓					✓	●	●	●	●	●	●	●	●	●	●	●	●
	Decrease of age-standardised death rate due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease in populations age 30–70 years (per 100,000 population)	●	●	●	●	●	●				✓		✓	●	●	●	●	●	●	●	●	●	●	●	●
	Noise pollution: number of inhabitants or share of the population exposed to road/rail/air traffic noise >65 dB (A) at day time/>55 dB (A) at night time	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
QUALITY EDUCATION	Literacy rate, adult total (% of people ages 15 and above)	●	●	●	●	●	●					✓	✓	●	●	●	●	●	●	●	●	●	●	●	●
	Net primary school enrollment rate (%)	●	●	●	●	●	●		✓				✓	●	●	●	●	●	●	●	●	●	●	●	●
	Proportion of schools with access to electricity, the Internet for pedagogical purposes, computers for pedagogical purposes, adapted infrastructure and materials for students with disabilities, basic drinking water, single sex basic sanitation facilities, and basic handwashing facilities	●	●	●	●	●	●		✓				✓	●	●	●	●	●	●	●	●	●	●	●	●

Indicators ● Unfit ● Somewhat applicable ● Relevant

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GENDER EQUALITY	Total organization headcount held by men and women	●	●	●	●	●	●								✓	✓		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Indicators ● Unfit ● Somewhat applicable ● Relevant

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																								Phase 1 : Diagnosis				Phase 2 : Contribution				Collection processes and methodological criteria							
LIFE BELOW WATER	Ocean Health Index - Clean waters (0-100)	●	●	●	●	●	●						✓			✓	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
	Fish stocks overexploited or collapsed (%)	●	●	●	●	●	●							✓	✓		●	●	●	●	●	●	●	●	●	●	●	●	●	●									
	Fish caught by trawling : % of a country's total fish catch, in tons, caught by trawling, a method of fishing in which industrial fishing vessels drag large nets (trawling) along the seabed	●	●	●	●	●	●							✓	✓		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
LIFE ON LAND	Area of land on which native species of trees were planted by the organization during the reporting period	●	●	●	●	●	●		✓						✓	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
	Terrestrial protected areas (% of total surface area)	●	●	●	●	●	●					✓		✓	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
PEACE, JUSTICE AND STRONG INSTITUTIONS	Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official, or were asked for a bribe by those public officials during the previous 12 months	●	●	●	●	●	●						✓			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
	Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation	●	●	●	●	●	●						✓			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
PARTNERSHIPS FOR THE GOALS	Tax Haven Score: ranking of countries' contribution to global corporate tax avoidance and evasion, on a scale from 0 (best) to 5 (worst). Calculated by first identifying a set of tax havens from various credible bodies, and then assessing three key elements for corporate tax dodging; corporate tax rates, the tax incentives offered, and lack of cooperation with international efforts against tax avoidance. The scale and global significance of the tax avoidance structures were considered.	●	●	●	●	●	●		✓							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
																								Indicators ● Unfit ● Somewhat applicable ● Relevant															

Sources: CNIS, Eurostat, UN Sustainable Development Solutions Network (SDSN), Cerise, Reference Framework for Sustainable Cities (RFSC), stratégie nationale de transition écologique vers un développement durable 2015 – 2020 (SNTEDD), Social Bonds Impact Reporting (ICMA), The Harmonized Indicators (HIPS), SDG Compass, EU Social Index, IRIS (catalogue), database Eider (the French acronym for integrated regional environmental data) of the French Ministry for Ecology, Toniiic, Impact Management Project, SDG Tracker, SDG Impact Indicators, Dutch Sustainable Finance Platform (2017), (WFE ESG Metrics June 2018), The World Federation of Exchanges (WFE), Dutch agency NIBUD, United Nations World Water Assessment Program.



CHAPTER 3.

A CROSS-ASSET METHODOLOGICAL TOOLKIT

A. SDG CONTRIBUTION MEASUREMENT

■ Asset level: the best-suited for our approach

Assessing SDG contribution at project level is easier because the impact is less diluted (focused on one delimited territory), and the changes are observable. All our recommendations – starting from context-based and spatial SDG gaps, identification of stakeholders, attention to negative interlinkages – are more fit for asset or project level. The imputability demonstration is less difficult because the actor or company is more likely to have an influence on the situation and targeted stakeholders. In addition, external factors could be assessed more robustly. However, granular data at micro level are not always available.



REGION ILE DE FRANCE CASE STUDY



Measuring SDG contribution *in situ*: the example of the Tramway Line T4

Region Ile-de-France is a frequent and regular issuer in the green bond market with 8 green and sustainability bonds issued since 2012, including 6 benchmark public issues, for a total amount of €3.2 bn. This represents 72% of total borrowing by the Region during this period. The part of the green & sustainability borrowing in the annual borrowings of the Region was 97% in 2017. The part of the green & sustainability borrowing in the outstanding total debt of the Region was 49% in 2017.

By “playing the game” of this SDG case study, the Region Ile-de-France, once again, demonstrates it is a pioneer and innovative actor in sustainable development and sustainable finance. We would like to thank the Region for this participation. The methodology and sequencing proposed and experimented here cannot be applied to the full portfolios of projects financed through sustainable bonds proceeds. It is an extensive development that should therefore be prioritized to project that are emblematic by their nature and budgetary scale. The tramway Line T4 was chosen because transports account for 27% of Region Ile-de-France budget in 2018, with a total of € 1,4bn.

The Region IDF: a sustainable finance forerunner actor that plays the game of methodological innovation with this case study

Why transportation?

Significant expenditures for the region: transports account for 27% of Region Ile-de-France budget in 2018, with a total of € 1,4bn, and 48.1% of the total allocation of the 2017 green and sustainability bond (240.6 M€ /500 M€).

Very relevant for the context-based approach: the geospatial dimension is strong, significant interlinkages, segmentation of the population, intended outcomes are clear.

■ THE PROJECT CHOSEN: TRAMWAY LINE T4 OVERVIEW AND PRESENTATION OF THE PROJECT

PUBLIC TRANSPORT AND SUSTAINABLE TRANSPORTATION

Projects: subways

Subway line 4
Subway line 11
Subway line 14

Projects: tramways

Tramway line T4
Tramway line T9
Tramway line T11 (north tangential)
Tramway line T12

Projects: railway links

EOLE
Ligne P (Paris-Troyes)

Scheme: development for buses on own sites and layout of roadways

Example: Bus on own site of Massy-Saclay

Scheme: master plan for accessibility

Example: Railway station of Saint-Denis

Source : Region Ile-de-France, 2018, Reporting on the projects financed by the 2017 green and sustainability bond
https://www.iledefrance.fr/sites/default/files/reporting_isr-va-2017.pdf

What and how? Where?

The project seeks to create a new tramway link between Bondy and Montfermeil. The new branch created from Gargan station will include 11 new stations.

■ THE FUTURE PUBLIC TRANSPORT NETWORK AROUND THE TRAMWAY LINE T4

Purpose	New branch between Bondy and Monxermeil
Locations	Pavillons-sous-Bois, Livry-Gargan, Clichy-sous-Bois and Montfermeil
Key dates	Commencement of work: 2015; Projected commissioning: end-2019
Total project cost	€ 255.8 million
Financing by the Region in the total amount of the project	49.0%
2017 financing by the green and sustainability bond	€ 9.3 million
Timeline of project financing by previous green and sustainability bonds	

Source : Region Ile-de-France, 2018, Reporting on the projects financed by the 2017 green and sustainability bond
https://www.iledefrance.fr/sites/default/files/reporting_isr-va-2017.pdf



Source : Region Ile-de-France, 2018, Reporting on the projects financed by the 2017 green and sustainability bond
https://www.iledefrance.fr/sites/default/files/reporting_isr-va-2017.pdf

A spectrum of approaches split into 3 categories

■ THREE SHADES OF SDG APPROACHES

A company, a project or a product could...

... RELATE TO THE SDG S	... ALIGN WITH THE SDG S	... CONTRIBUTE TO THE SDG S
Action: to presume	Action: to explain	Action: to demonstrate
Nature of claim: General activities (health, food) matching against the UN SDGs	Nature of claim: Mapping of sub-activities, products or services to the UN SDGs	Nature of claim: Determination of whether it has delivered benefits above what would have occurred in its absence
Impact scope: Overall	Impact scope: Specific	Impact scope: Context-based
Impact likelihood: Possible	Likelihood: Plausible	Likelihood: Substantiated

The objective of this case study is to go farther than the already interesting approach that consists in “reading each project under the lens of the UN SDG” (the link towards the actual methodology used by the Region is available page 90 of the **2017 green & sustainable bond reporting**). What is explored in this case study is how to contextualize the contribution starting from geospatial SDG gaps.

Region Ile-de-France (2018) Reporting on the projects financed by the 2017 green and sustainability bond. Page 90. Available here: https://www.iledefrance.fr/sites/default/files/reporting_isr-va-2017.pdf

In abstracto materiality analysis

FIRST RANK RELEVANT SDG TARGETS (AMONG THE 169) OR INDICATORS (AMONG THE 244)



8.3 Promote development-oriented policies that support productive activities, **decent job creation, entrepreneurship**, creativity and innovation, and encourage **the formalization and growth of micro-, small- and medium-sized enterprises**, including through access to financial services



Target: 9.1: **“Develop quality, reliable, sustainable and resilient infrastructure**, including regional and trans-border infrastructure, to support economic development and human well-being, with a **focus on affordable and equitable access for all”**



Target: 11.2: “By 2030, provide **access to safe, affordable, accessible and sustainable transport systems for all**, improving road safety, notably by **expanding public transport**, with **special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons”**

Indicator 11.2.1: “Proportion of population that **has convenient access to public transport, by sex, age and persons with disabilities”**

Indicator 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, **resource efficiency, mitigation and adaptation to climate change**, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels



Target 13.3 “Improve education, awareness-raising and human and institutional capacity on **climate change mitigation, adaptation, impact reduction and early warning”**

Target 13.2: **Integrate climate change measures into national policies, strategies and planning**

Indicator 13.2.1: Number of countries that have communicated **the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change**, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

SECOND RANK RELEVANT TARGETS (AMONG THE 169) OR INDICATORS (AMONG THE 244)

Positively



Target: 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

Indicator: 3.9.1 Mortality rate attributed to household and ambient air pollution

Target: 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

At risk (requiring attenuation measures, see infra)



15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Where and how needed? Geo-spatial SDG gaps analysis

In concreto analysis will become more and more important to demonstrate with strong evidence the contribution to the SDGs. Localizing the SDG gaps and needs is very useful to assess projects additionality and transformative intensity. An impact is defined by a change, which itself requires a baseline in the sense of an initial situation, which by essence, lies within a specific geography.

Almost 70% of the targets linked with the SDGs are directly related to local basis service provision, whose spatial and local dimension are preponderant. If not largely available at that moment, several SDG indexes at local levels are under preparation (in Spain, Italy, Canada, and other countries, see the dedicated section SDG gaps data providers in the Chapter 2).

The Sustainable Development Solutions Network (SDSN) co-produced the 2018 SDG Index and Dashboard Report. It presents regional dashboards of SDG achievement and trends towards the goals. Country-level data on SDG implementation is consolidated in two-page country profiles for every UN member states, available in the “Country Profiles” section. It provides a visual representation of countries’ performance by SDGs to identify priorities for action. The “traffic light” color scheme (green, yellow, orange and red) illustrates how far a country is from achieving a particular goal. Below is an excerpt of the French Dashboards.

■ EXTRACT OF THE SDG FRENCH DASHBOARDS

SDG11 – Sustainable Cities and Communities			
Annual mean concentration of particulate matter of less than 2.5 microns of diameter (PM2.5) in urban areas ($\mu\text{g}/\text{m}^3$)	12.4	●	↗
Improved water source, piped (% urban population with access)	100.0	●	→
Satisfaction with public transport (%)	68.0	●	↗
Rent overburden rate (%)	12.4	●	↗

Source: SDG Index and Dashboards Report, 2018

However, national average is not really actionable in the case of Region Ile-de-France. More granular data and if possibly quantitative are required to assess objectively SDG needs.

Stakeholders’ situation in the project’ area

To what extent is the project located in a “landlocked territory in great social difficulty” must be explained (the “**how needed**” in Natixis’ GSH methodology). According to the “Investigation file prior to the declaration of public utility” for the Line 4: The population of the sector studied is generally young and includes a high proportion of students and young workers. The **unemployment rate is high**, and there is a large population of non-active people who are not looking for work.

Localizing the SDG gaps and prioritizing areas where the needs are the highest is crucial.

The T4 project is included in the **«Espoir Banlieues» Plan** and will support **the urban redevelopment of a landlocked territory in great social difficulty** by financing and undertaking the complete redevelopment of the public spaces served by the tramway.

What data ?

The INSEE provides very detailed and relevant information about population access to transportation. For instance, **the share of households with at least 1 car** which stands at 82.2% in Montfermeil in 2015, is significantly more than at the department level (62.2% in Seine Saint-Denis). This difference is hard to explain but this ownership rate could be linked to the lack of public transportation. For instance, the city of Le Raincy, that is already connected to the tramway line T4, has a share of households with at least 1 car of 75.2%.

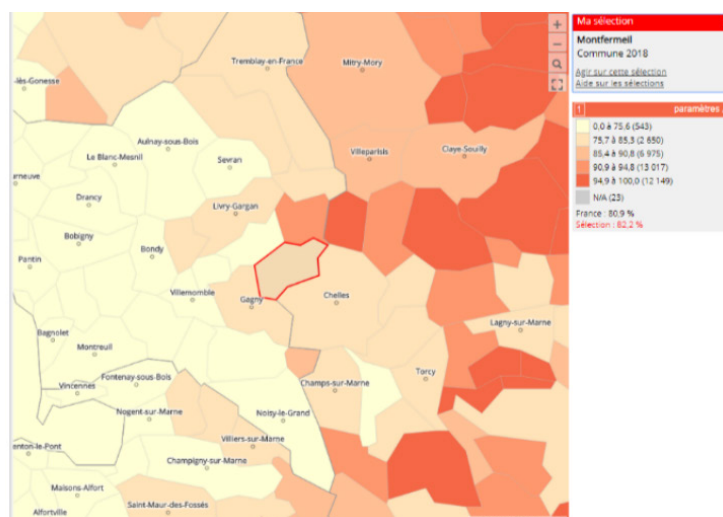


Available here : http://www.tramway-t4.fr/download/enquete_publique/_17-DEP-T4.pdf

■ INSEE - SHARE OF HOUSEHOLDS WITH AT LEAST 1 CAR (%) 2015

City	Share of households with at least 1 car (%) 2015
Bondy	65,1%
Clichy-sous-Bois	65,9%
Sevran	68,6%
Aulnay-sous-Bois	72,8%
Villemomble	74,1%
Le Raincy	75,2%
Les Pavillons-sous-Bois	76,4%
Livry-Gargan	80,7%
Montfermeil	82,2%

Cities already connected to T4 today
Project of connection



Source : <https://statistiques-locales.insee.fr> Data on the area available here

■ INSEE - DISTRIBUTION OF EMPLOYED WORKERS 15 YEARS OF AGE AND OVER BY MODE OF TRANSPORT USED TO GET TO WORK (2015)

As compared to other cities in the area, les Pavillons-sous-Bois, Livry-Gargan, Clichy sous-Bois et Montfermeil have a less important share of public transportation.

City	Motorcycle	Public Transportation	Walking	No transportation	Car, truck
Le Raincy	235	2 677	371	254	3 111
Montfermeil	335	2 773	478	175	5 696
Les Pavillons-sous-Bois	492	3 701	533	232	5 185
Clichy-sous-Bois	203	4 041	559	221	4 100
Villemomble	447	5 979	612	330	5 908
Livry-Gargan	562	6 259	894	370	11 046
Sevran	392	9 337	845	393	7 639
Bondy	455	10 025	1 290	480	7 461
Aulnay-sous-Bois	877	12 834	1 659	685	14 604

Source : Insee, Recensement de la population (RP), specific data on the area available here)

Those statistics, that reflect the use of the service by the targeted population, are relevant indicators of impact, and the breakdown by cities offers a good granularity. It would thus be interesting to follow their evolution in time, **especially to compare one city before and after the connection to the T4.**

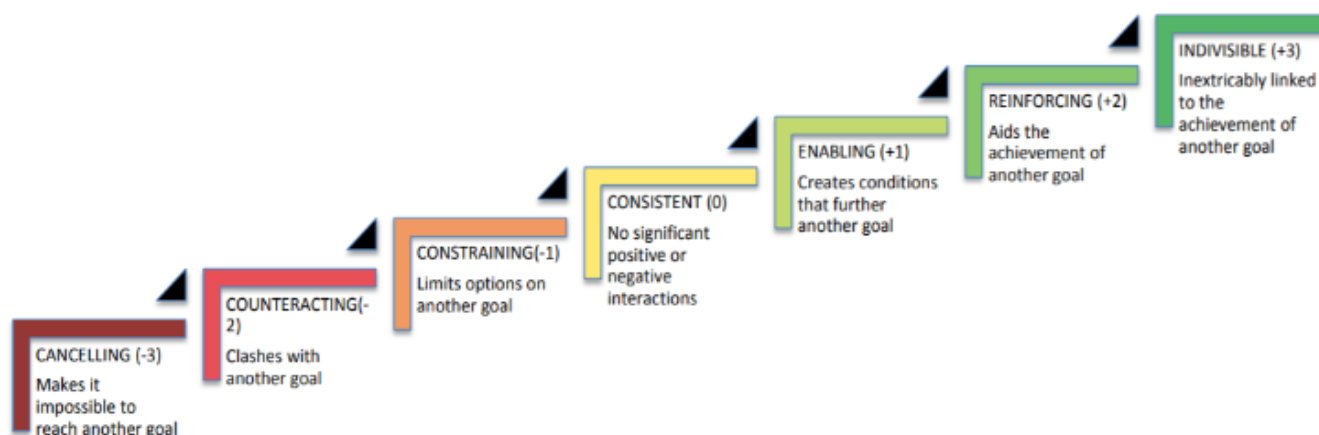
Other indicators could be monitored such as **roadway Congestion Index** (RCI, i.e. the average journey time per mile, during the morning peak on major routes), or the number of times **the limit of main air pollutants emissions defined by the European directives on air quality is exceeded** (PM10, O3, NO2) in these locations.

The evolution of the **“distribution of employed mode of transport used to get to work”** would be a great indicator to track to assess the consequences of the project and its impact in terms of enhanced mobility”. It would be a robust stocktaking indicator to evidence the SDG contribution of the project.

Interlinkages are at the heart of Region Ile-de-France projects design and management and have been integrated in the T4 Line

More than 45% (36% a lot, 10% Extremely) of the investors that answered our survey consider the SDGs are a “useful and relevant tools to take into account investment interlinkages (i.e. holistic approach to avoid unintended and harmful side-effects)”. Tradeoffs, synergies and ripple effects must be looked at thoroughly when trying to advance the SDGs. It is what is called interlinkages in the SGD technical jargon. It consists in disentangling interactions between the goals. Clearly, advancing clean transportation and providing mobility are key enablers to the achievement of the other goals by laying the right empowering foundations. Transportation is inextricably linked to the achievement of other goals: the goals 1, 8, 10. When transportation is clean, it avoids gains of mobility to be detrimental to other SDGs, such as the goal 3, good health.

■ THE SEVEN-POINT TYPOLOGY OF SDG INTERACTIONS



Source: the Stockholm Environment Institute (SEI)

Focus on the measures taken by the Region IDF in this project to avoid adverse effects on other SDGs

Overall, the 9 eligibility criteria developed with Vigéo guarantee a robust responsible management and the mitigation of externalities.

Environment: The clearing of the Bosquet du Chêne Pointu will be compensated for at least 200% on a 6,000 m² plot. Other attenuation measures: green worksite charter limiting the nuisances. The tramway route intersects an ecological corridor favourable to birds and classified as a Natura 2000 area, at the level of the Dhuis aqueduct. However, the project's impacts on the species targeted by this classification have been specifically studied and conclude that there is no significant impact.

Inconveniences for riverside population: Information tools for neighbors, residents and shopkeepers have been established for the follow-up of the work: information brochures, a dedicated website, T4 Infos team with facilities to receive the public. Note that stakeholders were consulted. A public inquiry was held from 10 December to 24 January 2013 and the Public Interest Order was issued on 12 September 2013

Stakeholders differentiation: safety and accessibility criteria for all categories of users (emergency call terminals, CCTV cameras and remote signaling equipment). The service will be provided from 4:30 am to 1:20 am, 7/7 days.

Social pricing: The project is integrated with pricing in effect in Ile-de-France, set by Ile-de-France Mobilités and involving a social rate financed by the Region to guarantee the poorest have access to mobility and public transport.

Focus on the T4 contribution chain

■ FOCUS ON THE T4 CONTRIBUTION CHAIN

The SDG contribution chain must be explicit as to how your actions trickle down to make an impact on the SDG target "11.2 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities"







	INPUT	ACTIVITY	OUTPUT	IMPACT	
				OUTCOME	CONTRIBUTION
Definition	Resources – capital, human – invested or deployed in service of a set of activities.	Concrete actions or tasks that are performed in support of specific impact objectives	Tangible, immediate practices, products and services that result from the activity undertaken	Changes, or effects, on individuals or on the environment, resulting from the activity, and the delivery of products and services	Effects on a broader target population. that result from outcomes that have been achieved.
Examples with the Tramway Line T4	Total project cost: € 255.8 million Financing by the Region in the total amount of the project 49.0% Worksite FTEs supported by the project (also an outcome)	New tramway branch between Bondy and Montfermeil 11 new stations connected Quantity of public transport systems that were developed during the reporting period (in km); length of rail construction	Number of trips per day Number of people transported	Average journey time reduction at the morning rush hour: 10 minutes for those already traveling by public transport, 5 min. for new users. Worksite FTEs supported by the project (also an input) Number of beneficiaries of the project	SDG Target 11.2.1 Increase of the proportion of population that has convenient access to public transport, by sex, age and persons with disabilities Jobs creation or companies' registration nearby the stations Unemployment rate decrease in the nearby cities

A detailed methodology from Region Ile-de-France explain the estimation of the number of visits using the traffic modelling (GLOBAL model for RATP and ANTONIN 2 for Ile-de-France Mobilités)

■ HOW TO DEMONSTRATE AND CLAIM

Reporting canvas to evidence Tramway Line 4 contribution to SDG progress for specific stakeholders in given locations

UoP	Clean transportation – Tramway Line T4
Location acuteness	landlocked territory in great social difficulty, the "Espoir Banlieues" Plan (Pavillons-sous-Bois, Livry-Gargan, Clichy-sous-Bois and Montfermeil)
Stakeholders	Population not living within 500 meters distance from collective transport lines running at least every 20 min
Core SDGs	Core SDGs :    
Direct influence	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
Interlinkages	9.1.2 Passenger and freight volumes, by mode of transport; 3.6.1 Death rate due to road traffic injuries; 3.9.1 Mortality rate attributed to household and ambient air pollution
Indicators	(existing and potential): Reduction in travel time, increase share of public transportation Average journey time reduction at the morning rush hour for those already traveling by public transport, and for new users, Tons of CO2 (or other GHG) avoided, Km of tracks built, No. of passenger, Jobs created
Evolution	Baseline / endline Ex ante / ex post calculations
Attribution and claim	ex post survey: % of beneficiaries who report decrease time spent in public transportation or easier access to public transportation, INSEE (distribution of employed workers by mode of transport used to get to work)

Interview from Manuel Thomas, Region Ile-de-France, Finance Director

Question 1: 50% of our survey respondents stated to have made formal commitments or announcements regarding the use of the Sustainable Development Goals (SDGs).

Why are the SDGs important and/or relevant for the Region IDF and its sustainable financing strategy?

This new presentation we begin to put in place reflect the evolution of practices towards universal standards and harmonized disclosures.(...) to stay at the forefront of the investors demand, we wanted to present a minimal SDG turntable in the annual reporting.

Manuel Thomas

Manuel Thomas: Region Île-de-France, as a regional government in France, has the responsibility to establish some schemes on structural public policies for a well-balanced development of its territory with: economic development, land settlement, urban mobility or environment. One the most recent one was passed in July, with the energy-climate strategy. The SDGs are turned to the needs of the citizens as the regional actions are for the 12 million inhabitants of Ile-de-France. So, it was now natural to give a new point of view to our green & sustainability bond reporting with a reading of our projects through the SDGs. I remind quickly the main previous steps: justification of the eligibility of the projects financed for each criteria established with a second party opinion; calculation of key projects impacts and the assessment of the calculation methodologies by a third-party opinion. This new presentation we begin to put in place reflects the evolution of practices towards universal standards and harmonized disclosures. And as a public green and sustainability bond issuer, we could be already considered as an SDG bond issuer by some investors (I saw in the survey the SDG funds are often the new name of sustainable

funds). Consequently, to stay at the forefront of the investors demand, we wanted to present a minimal SDG turntable in the annual reporting.

Question 2: Would you agree that the new idea brought by the SDGs is to start from beneficiaries needs and the situation in the location where the project is developed (the so-called "distance" to reach the 2030 goals)?

Manuel Thomas: Absolutely. And it is with the same concern that the Région Île-de-France plans its projects. The regional authority aims to answer to the needs of the Ile-de-France population, whether it is in education, transportation, economic and social development and so on. For example, concerning the high schools, we have a multi-annual investment plan for the next 10 years based upon the population growth in each area of the territory. We can thus reach the goals 4 Education and 11 Sustainable and inclusive cities. So, presenting our projects according to the SDGs is a relevant way to improve their reporting.

Question 3: What do you think of the context-based and SDG gaps approach proposed by Natixis GSH? Does it offer a good tradeoff for a synthetic reporting on most of the projects completed by some detailed SDG contribution assessments on a small but significant number of projects?

Manuel Thomas: I totally agree with that pragmatic approach and I think indeed that the most important conditions to succeed in a new approach is firstly, to consider the context (not the same according to the country and the sector financed), secondly, to be synthetic and clear (that is a global demand of investors and analysts) and thirdly, to be easily workable (to not discourage future and current green & sustainable issuers).



Manuel Thomas,
Region Ile-de-France, Finance
Director



Question 4: Would you agree that the high quality of reporting aimed for by the Region Ile-de-France in the end will improve the project design and management processes of the Region?

Are they somehow new tools to assess and enhance public policies?

It's true that the green & sustainable finance, especially on the momentum created by the reporting, is a tool to produce and/or put forward qualitative and quantitative indicators, to develop a systemic performance approach, and to upgrade management control.

Manuel Thomas

Manuel Thomas: In any case that can be only positive, even if it is because the project design and management processes were already sufficient that we issued green and sustainability bonds. But it's true that the green & sustainable finance, especially on the momentum created by the reporting, is a tool to produce and/or put forward qualitative and quantitative indicators, to develop a systemic performance approach, and to upgrade management control. The reportings have the merit of disclosing that public funds are directed to projects having the most positive environmental, economic and social impacts. They are effectively a means of doing public policies assessment.

Question 5: In our survey, for the question n°7 relative to the impediments to use SDGs, "The difficulty to translate input or output indicators into outcome and impact indicators" and "the lack of "conversion tools to demonstrate the relation between projects' KPIs and the advancement of SDG targets" are cited as the major hurdles. What measures would help to overcome them?

That is a supplementary work, even if the information exists, and that asks the question of the size and the cost of the reporting, even more if the standard goes towards an ex post evaluation.

Manuel Thomas

Manuel Thomas: It's true and intuitive that it is not obvious to demonstrate the outcomes and impacts under the filter of the SDGs. For example, there is no specific goal about transportation, although a green transportation is one of the best way to reduce CO² emissions. But we can justify the link with one or several SDGs by showing how the projects are conceived and are in compliance with the eligibility criteria and so, in what they are SDG's compatible. Then, the KPIs can be more clearly connected to the SDG targets. A measure to help a SDG reading of the projects reporting could be to map this "holistic value chain view" phrased by an investor in your survey, that is to say, perhaps in making the link between eligibility, input/outputs and impacts. For example, with the tramway T4 (one of the projects financed by the Region green & sustainability bond), to objectivize the modal shift thanks to this new line and the beneficiaries involved. That is a supplementary work, even if the information exists, and that asks the question of the size and the cost of the reporting, even more if the standard goes towards an ex post evaluation. Perhaps a trade-off can be to make the exercise only for one project of each category of sectors financed.

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Our reporting assessment grid for green, social and sustainable bonds under the lenses of the Sustainable Development Goals (SDGs)

As presented in the section “**Issuers and investors’ appetite for SDG contribution and measurement**”, SDG reference and contribution claims are becoming a must have of a green & sustainable bond issuance framework. We even have started to see SDG bond frameworks appearing (e.g. BBVA, ANZ, etc.)

However, at issuance, SDG contribution statements are very theoretical (“in abstracto” as we call it in our methodology). It is thus almost impossible to make an educated judgement of those claims, going beyond an “in abstracto” diagnosis and definitely not an SDG contribution a priori evaluation.

Therefore, we believe that at this stage, it makes more sense to focus on green & sustainable bonds **reporting** to make a view on the issuances **alignment / contribution to SDGs**.

Based on Natixis Green & Sustainable research green bond issuance and reporting analysis grids (cf. “**Green & Sustainable Bond 4.0: Deep dive into Green & credit credentials**” March 8, 2018), we suggest here an adaptation of our reporting analysis grids to better address SDGs.

Thereafter are presented our Green Bond Reporting evaluation grid from our March 2018 study, and our addendum proposal to assess SDG contribution in a reporting.



■ TOOL 7: NATIXIS GSH REPORTING ASSESSMENT

"REPORTING" GRID		
1/ TRANSPARENCY		
TIMING & STRUCTURE	Document published on time	No - The documents were realised late / are still not available (issuance date anniversary + 3 months) Yes - The documents were made available on the anniversary date of issuance or at the end of the year of issuance
	Reporting is easy to find	No - The documents are hard to access (i.e. not on issuer's website...) Yes - The documents are easily accessible
	Evaluation of the clarity of the reporting (Are the documents easy to understand? Clearly structured?)	Very Poor Poor Medium Good Very Good
TRANSPARENCY	Improvement over time (only for repeat reportings)	No - Issuer is not improving its reporting each year (however if the reporting does not need improving/there is limited room for improvement then the score to attribute is Yes) Yes - Issuer is improving its reporting each year
	The reporting includes all the elements / data promised at issuance	No - The reporting does not meet commitments made at issuance (missing sections...) Yes - The reporting does answer commitments made at issuance
	Level of disclosure on proceeds allocation (granularity, detailed list of projects, split financing/refinancing, funds allocated of projects, split per category of project, etc.)	Poor - It is difficult to assess how the proceeds have been allocated Medium - The allocation of proceeds is easy to understand and transparent, however there is room for improvement Good - The allocation of proceeds is detailed and very transparent
	Verification of cash investments pending allocation	No - The issuer has not disclosed how the cash is managed pending allocation to eligible projects Yes - The reporting addresses the cash management pending allocation
	Demonstration of the actual eligibility of projects funded	Poor - This does not appear in the reporting Medium - A section of the reporting is dedicated to explaining how the projects funded are compliant with a set of eligibility criteria Good - The demonstration is performed eligibility criteria by eligibility criteria
	Demonstration of compliance with the responsible management policy introduced in the green bond framework	No - There is no section relative to responsible management of projects included in the reporting documents Yes - The reporting demonstrates how the responsible management of projects policy defined at issuance has been incorporated
	Examples of projects/ categories/case studies of disbursements made with the green bond proceeds	No - There is no section dedicated to projects / types of projects examples or list Yes - There is a section dedicated to projects / types of projects examples or small case studies of some of the projects funded (or all of them but at least one or more)

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2/ RESPECT OF THE PROMISE & AMBITION

AMBITION OF THE UNDERLYING PROJECTS © NATIXIS, GSH, 2018	<i>Respect of the promise</i>	No - The actual allocated projects fall below the announced ambition and categories Yes - The actual allocation meets the announced eligible categories and ambition
	<i>Consistency with ESG strategy</i>	No - The projects actually allocated are not consistent/anecdotal with the overall sustainable strategy, transition, positioning of the issuer Yes - The projects actually allocated are consistent with the overall sustainable strategy, transition, positioning of the issuer
	<i>In the case of "polluting industries", the projects are transformative (cf. oil or heavy industries where alternative exist), showing the transition trend or provide very significant impacts</i>	No - Achieved impacts do not match the environmental challenges of the underlying industry Yes - Issuer is funding transformative/transitioning projects
	<i>The impact achieved is significant (either by the nature or split of projects, or in a quantified manner) Additionality case? Demonstration of the net benefits?</i>	No - The actual allocated projects fall below the announced ambition and categories Yes - The actual allocation meets the announced eligible categories and ambition

3/ IMPACT REPORTING QUALITY

IMPACT REPORTING (ALSO RELEVANT FOR ISSUERS WITHOUT IMPACT REPORTING) © NATIXIS, GSH, 2018	<i>Scope of impact reporting (project level vs bond level vs only part of the projects financed)</i>	Poor - The impact indicators are provided at project level, meaning it is difficult/impossible for the investor to assess the part of the impact linked to the green bond, where other instruments have been used to fund the projects or when other participants are involved Good - The impact indicators are provided at bond level, reflecting the share of the issuer in the project funding and the investor can easily determine the impact of its bonds based on the amounts held.
	<i>Calculation methodology disclosure</i>	No - The calculation methodology for impact indicators is not disclosed, we cannot assess how the results shown are obtained Yes - The calculation methodology for impact indicators is disclosed
	<i>Ex-Ante / Ex-Post results commitments</i>	Poor - The reporting does not disclose if the results are ex-post or ex-ante Medium - Results are ex-ante only Good - The issuer is trying to provide ex-post indicators on a best effort basis
	<i>Relevance of indicators</i>	Poor - The indicators used are not relevant to the types of projects financed Medium - The indicators used are in part relevant (usually standardised indicators only partly relevant to some projects) Good - The indicators are very relevant/even different based on project categories or/types of project
	<i>Reference to standardised reporting frameworks (IFI Framework, Nordic Issuers framework...)</i>	No - The reporting does not refer to standardized frameworks available on the market Yes - frameworks available on the market
	<i>Overall quality of impact reporting</i>	Very Poor Poor Medium Good Very Good

4/ THIRD PARTY OPINION

<p>AUDIT SCOPE</p> <p>© NATIXIS, GSH, 2018</p>	<p><i>A 3rd party opinion has been mandated by the issuer to audit the reporting</i></p>	<p>No - There is no 3rd Party opinion Yes - There is a 3rd Party opinion</p>
	<p><i>Depth of mandate</i></p>	<p>Poor - The auditor only assesses the actual allocation of proceeds Medium - The auditor assesses actual allocation, actual eligibility, proceeds management Good - The auditor assesses actual allocation, actual eligibility, proceeds management as well as impact measurements (when there are impact measurements from the issuer)</p>
	<p><i>Satisfaction of the auditor with regards to audit procedures conducted (conclusions)</i></p>	<p>Poor - The auditor is not "satisfied without doubts" on the back of the audit process conducted Medium - The auditor is satisfied with audit conclusions but there are still potentially some reservations (due to some processes not being conducted because of the mandate or persisting grey areas) Good - The auditor's conclusions are fully satisfactory</p>
	<p><i>Granularity of audit methodology</i></p>	<p>Poor - The audit methodology is below standard market practice (no commitment to limited assurance or better) Medium - The audit methodology is standard market practice (limited assurance as per IFAC/ISAE 3000) Good - The audit methodology is above standard market practice</p>
	<p><i>Audit mandate fully executed</i></p>	<p>No - For reasons independent of its will the auditor was not able to conduct all regulatory audit procedures relevant to the given mandate Yes - All relevant procedures were conducted</p>

■ ADDENDUM: ADDING SDG LENSES TO THIS “REPORTING ASSESSMENT GRID ”

ASSESSING GREEN, SOCIAL OR SUSTAINABLE BONDS REPORTINGS UNDER THE LENSES OF THE SDGS

I - CONTEXTUAL DIMENSION

Geographical acuteness & stakeholders segmentation	SDG situation in the locations where the UoPs were allocated or where the issuer has a footprint (assets, liabilities, turnover etc.)	<p>The reporting encompasses gaps identification, for each of the SDG supposedly addressed and advanced in the reporting. Alternatively, the reporting granularity allows for the identification of SDG gaps addressed by allocated projects, according to countries or local government SDG dashboards (for instance, from the SDSN index):</p> <p>Poor - The SDGs addressed by the projects are already "achieved" in the locations</p> <p>Medium - Challenges remain</p> <p>Good - Significant challenges remain</p> <p>Excellent - Major challenges remain</p> <p>Location not disclosed - the UoPs allocation geographical breakdown is not disclosed</p>
	SDG trends in those locations	<p>The reporting refers to actual SDG situations and evolutions or its structure. Alternatively, the reporting granularity allows such analysis to be made, using for instance the SDSN's index trend analysis</p> <p>Good - At least one of the SDGs supposedly addressed in the reporting is undergoing a trend that is: Moderately Increasing, Stagnating or Decreasing</p> <p>No - All the SDGs supposedly addressed in the framework are undergoing a trend described or assessed as: On track, or Maintaining SDG achievement</p> <p>Location not disclosed</p>
	Pioneering potential	<p>Yes - At least one of the UoP in the reporting provides an innovative approach, allowing a target population to gain access to a product (physical goods or financial products), technology or financing structure that is new or not widely used.</p> <p>No - Already diffused and widespread service or product (processes or solutions that are not cutting edge and won't allow leapfrogging in developing countries)</p>
	Target population and/or beneficiaries	<p>Vague - The target population is vaguely disclosed (e.g. excluded, poor, underserved people,...)</p> <p>Precise - The target population is precise in terms (official definitions from statistics institute) of issue targeted and/or geography</p> <p>Very Precise - The target population is very precise and matches 2030 Agenda stakeholders categories (number of people, exact location, thresholds specifying their situation in terms of level of income, access to basic services, etc.)</p> <p>Target population not disclosed</p>
Contextual ability to deliver	Institutional and political constraints	<p>According to, for instance, the World Bank's Worldwide Governance Indicators</p> <p>Yes - The countries where allocated projects are located have overall poor estimated scores in the categories: Control of corruption, Government effectiveness, Political Stability and Absence of Violence/Terrorism and Regulatory Quality</p> <p>No - The countries where allocated projects are located have overall good estimated scores in those categories</p> <p>Location not disclosed</p>
	Social and environmental constraints	<p>Is the issuer's contribution hindered by weak leverage and limited influence on the situation ?</p> <p>Yes - Strong path dependency, in regions that are hard to reach, or with a population hard to work with (social instability, political turmoil)</p> <p>No - The matter at hand is really in the issuer's control, whether it is a new enterprise or project, or for an existing project that is reversible and for which adjustments are possible. The issuer has a strong clout on the project and room for maneuver</p> <p>Location not disclosed</p>

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ASSESSING GREEN, SOCIAL OR SUSTAINABLE BONDS REPORTINGS UNDER THE LENSES OF THE SDGS

II – SDG IMPACT OF THE USE OF PROCEEDS

Suitability for purpose	Relevance of the projects	For each of the SDG supposedly addressed in the reporting: Poor - Projects are undoubtedly not linked to the progress of the SDGs reportedly addressed (vague relation) Good - Projects are somehow linked to the progress of the SDGs reportedly addressed Excellent - Projects are fully linked to the progress of the SDG targets reportedly addressed
Contribution	SDG alignment or contribution approach	Within the reporting: Poor - Only the SDGs numbers and stickers are mentioned Medium - SDGs and relevant targets regarding the sector, industry, or location, are mentioned Good - SDGs, targets and related/relevant project and business KPI are mentioned Excellent - There is a real theory of change and contribution (at organization, intervention, or program level) that outlines the linkage from input, to activities, to output, to outcomes, and ultimately to impact, linked to SDGs targets and is backed by KPI
	KPIs, planning and trajectories for the intended contribution	Poor - No SDG related KPI for measurement of impact are given Medium - Few or weak SDG related KPIs are given (mostly inputs), no targets or base-lines are disclosed, no means of measurements are explained Good - SDG related KPI are disclosed (output, and outcome) but no base-line or target is disclosed Excellent - SDG related KPI are robust, disclosed for each projects/category of projects, the
Interlinkages	Disclosure and management of the interlinkages	Overall in the framework or at project management process level : Poor - Side-effects of the projects and potential spill overs upon other objectives are not assessed or with a narrow approach Medium - There is a life-cycle approach and attention paid to side effects without however counter-measures or clear demonstration of mitigation Good - Interlinkages are really embedded into risks management with solutions and counter-measures, substantiated with KPIs © NATIXIS, GSH, 2018

ASSESSING GREEN, SOCIAL OR SUSTAINABLE BONDS REPORTINGS UNDER THE LENSES OF THE SDGS

III – ADDITIONAL SDG-RELATED DISCLOSURES

Disclosure	Referencing	Yes - The reporting references data providers and sources for context-based analysis (SDG gaps) and refers to Voluntary National Reviews (VNRs) from host countries and 2030 Agenda national roadmaps No - There is no referencing of qualitative or quantitative data
	Third-party assurance of SDG contribution assessments	Yes - Projects monitoring and impact assessment against SDG are reviewed or validated by a third party No - There is no third party validation of the impact reporting © NATIXIS, GSH, 2018

The example of NWB Social Bond Reporting

■ NEDER WATERSCHAPSBANK

REPORTING ANALYSIS

Respect of Social Bond Principles	Not entirely: pure player financing (no real project visibility)
Compliance with other Principles / Standards	No
Net environmental benefit / Green Ambition	Business as Usual
In line with initial promise	Yes
Impact assessment oriented	No
Relevance and robustness of impact indicators	No impact indicators disclosed at bond level or at project portfolio level. However, a substantial list of indicators on the social impact of the Dutch social housing sector as well as how it contributes to SDGs is provided.
General quality of the transparency	Fair at bond level but very high at "Dutch Social housing" level

Rating	A	B	C	D	E
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Extract of NWB Reporting Analysis in Natixis GSH's "Green & Sustainable Bond 4.0: Deep dive into Green & credit credentials" March 8, 2018

According to NWB Social Indicator Report 2017, "this report demonstrates the existence of sufficient (quantitative and qualitative) evidence of the social impact of investments in Dutch social housing and their contribution to the SDGs".

NWB mapped different social housing fields against the SDGs, for which it has given a series of indicators, and explained how the combination of these fields contributed to the SDGs they claimed to address.

1. Provide housing to vulnerable groups
2. Provide affordable housing
3. Ensure availability and stability of social housing
4. Maintain good quality and adequate housing
5. Contribute to livable communities and neighborhood quality
6. Environment & energy
7. Responsible local partner



Extract of NWB Social Indicator Report 2017

Analysis of NWB's reporting through the different sections of our grid

CRITERIA	APPLICATION TO NWB
SDG situation in the locations where the UoPs were allocated or where the issuer has a footprint (assets, liabilities, turnover etc.)	The reporting encompasses gaps identification, for each of the SDG supposedly addressed and advanced in the reporting Alternatively, the reporting granularity allows for the identification of SDG gaps addressed by allocated projects, according to countries or local government rankings (for instance, from the SDSN index) Medium - Challenges remain
SDG trends in those locations	The reporting refers to actual SDG situations and evolutions or its structure Alternatively, the reporting granularity allows such analysis to be made, using for instance the SDSN's index trend analysis No - All the SDGs supposedly addressed in the framework are undergoing a trend described or assessed as: On track, or Maintaining SDG achievement

NWB does not proceed to gap analysis and trend analysis.

However, the location of the Use of Proceeds being the whole country of Netherlands, the SDSN index and dedicated dashboard can be a base to evaluate the gaps and the trends of the SDGs supposedly addressed

NETHERLANDS

OECD Countries

▼ CURRENT ASSESSMENT – SDG DASHBOARD



▼ SDG TRENDS



More granular trend analysis could be done by giving the base line for some indicators already present in the framework of NWB, such as

- › **Availability and stability: % of total social housing stock accessible for persons with disabilities (accessible with no use of stairs)**

CRITERIA	APPLICATION TO NWB
Target population and/or beneficiaries	Very Precise - The target population is very precise (number of people, exact location, thresholds specifying their situation)

NWB makes a great effort to explain its end target population through classification and backed by both economical and social indicators.

› **“Provide housing to vulnerable groups (...)** The source of vulnerability is often linked to **low income**. It can also be linked to other disadvantages such as disabilities, special needs, homelessness or urgent re-housing needs. In the social stock, 81% of tenants are part of the **primary target group**. These are people who receive housing allowances from the government due to their **low-income** situation. In total, 1,765,000 low-income households (2015) rent a social dwelling.”

CRITERIA	APPLICATION TO NWB
SDG alignment or contribution approach	Within the reporting: Poor - Only the SDGs numbers and stickers are mentioned

In the reporting, although an explanation is given for each supposed contribution, only the SDGs numbers and stickers are mentioned.

CRITERIA	APPLICATION TO NWB
Relevance of the projects	For each of the SDG supposedly addressed in the reporting: Excellent - Projects are fully linked to the progress of the SDGs reportedly addressed
Disclosure and management of the interlinkages	Overall in the framework or at project management process level : Medium - There is a life-cycle approach and attention paid to side effects without however counter-measures or clear demonstration of mitigation

Through its approach in 7 steps, NWB gives a robust and granular demonstration of how Social Housing is linked to the progress of the SDGs it claims to address.

This approach also enables the issuer to have a very good assessment of the inter-linkages, backed by KPIs. For example, with Environment and Energy:

- › average CO2 emissions per dwelling (theoretic level in kg/m2/year)
- › investments in maintenance, renovation and improvements (including energy efficiency measures)
- › energy performance of social dwellings

However the measure of interlinkages management faces the same issues as the general impact measurement in NWB reporting (see infra)

CRITERIA	APPLICATION TO NWB
KPIs, planning and trajectories for the intended contribution	Poor - No SDG related KPI for measurement of impact are given

The main problem of NWB reporting, that we had already identified in our study in March 2018, is the lack of in concreto impact measurement.

“The indicators are relevant and interesting but their scope is national and not limited to the proceeds of the social bond or even to the SHO projects funded by NWB Bank. There is absolutely no possibility to assess the real «social impact» of the programme set-up by NWB.”

- Natixis “Green & Sustainable Bond 4.0: Deep dive into Green & credit credentials”

Even though KPIs are given, they are situational / stocktaking (**see Natixis GSH's indicators book**) and do not measure a trend, an improvement, an impact. There are no base-line or comparison to eventual targets.

CRITERIA	APPLICATION TO NWB
Referencing	Yes - The reporting references data providers or sources, for instance for context-based analysis (SDG gaps)

Even if NWB does not perform gap analysis, for the majority of the 59 SDG-related indicators provided in the reporting, NWB discloses sources and year of calculation.

List of indicators		
	Social & Affordable Housing Indicator	Data
33	Availability and stability: yearly total maintenance and improvement investments, total and average per dwelling	€4,817 million €2.022 per dwelling (2015, Aedes-benchmark)
34	Availability and stability: total number of annual attributions of social dwellings	211,146 (2015, Cijfers over Wonen en Bouwen, Rijksoverheid)
35	Good quality: rating given by new tenants of their overall satisfaction (on scale of 10)	7.2 (2016, Aedes Benchmark)

Extract of NWB Social Indicator Report 2017

■ Corporate level: hard to gauge

Equity contribution is two-fold

What could be the added contribution of the SDGs as compared to CSR approaches? Will they embolden companies to integrate new dimensions of sustainable development which have so far been discarded? How to go beyond the legitimacy given to them by the UN framework and their adoption by all the world's heads of state?

At first glance, it seems that ESG reporting pays more attention to internal processes than SDG reporting, that is expected to be more external/outbound focused. ESG notation consists mainly in assessing disclosure policies and policies statements (e.g. existence of guidelines). It often evaluates the processes and mechanisms but rarely their effectiveness and implementation. With the SDGs however, there seems to be a real notion of impact, and, they cover such a wide-range of topics that they do, in fact, address internal processes and inward impact as much as outward/outbound impact.

The measurement of SDG contribution at corporate level requires a little more than ESG analysis legacy. Equity contribution measurement is difficult to reach, and it is two-fold: assessment of the operational footprint (supply chain, upstream activities) and assessment of the footprint of all products and services, which presents the challenges of categorizing and localizing the sales/turnover.

As stated by one respondent of our survey of investors: measuring if a company is more or less positive on SDG overall is “*particularly difficult for conglomerates like GE or Ahold who do lots of different things*”.

Main area of activity is difficult to identify

Attempts to quantify Sustainable Development Goals investments needs and to track actual flows rely often on economic frameworks that describe which sectors money needs to be channeled. However, **the UN goals are not sector-aligned because in practice each of them could be addressed by different sectors or activities**. Interdependencies, synergies and trade-offs across different economic sectors disturb this classification and counting exercise. It may lead to **double counting, difficulties in monitoring cross-sector impacts, potential omissions**, etc. To address this challenge, we have proposed a matrix (see section Chapter 2, our tools), with sectors on the vertical axis and SDGs on the horizontal axis, thereby indicating at the crossroads, either an evident positive impact and contribution, a neutral effect or an unclear contribution, or significant risks of deterioration or of a harmful impact.

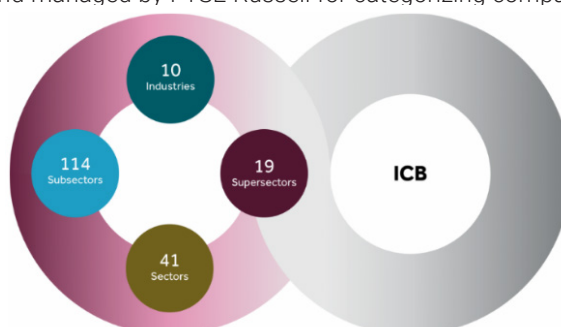
Sectorial classifications are used by ESG agencies and portfolio managers to classify companies according to the supposed impacts and materiality assessment of their activities.

The NAF classification

The NAF, the French nomenclature of activities, is a classification of productive economic activities, mainly developed to facilitate the organization of economic and social information. To facilitate international comparisons, it has the same structure as the NACE European activity classification, itself derived from the ISIC international classification.

Industry Classification Benchmark (ICB)

ICB is a global standard, operated and managed by FTSE Russell for categorizing companies and securities across four levels of classification.



Source: FTSE Russell

Each company is allocated to the subsector that most closely represents the nature of its business, which is determined by its primary source of revenue and other publicly available information. The main source of information used for the classification of a company shall be its audited accounts and directors' report. Where a company carries out two or more lines of business that differ substantially from each other, FTSE Russell bases its decision on the accounting segmentation published in the audited accounts and directors' report.

TRBC

Thomson Reuters Business Classification is an industry classification system that is owned and operated by Thomson Reuters. The market-oriented system tracks the primary business of a corporation and reflects global industry practices by grouping together correlated companies that offer products and services into similar end markets. It is used by the investment community for navigation, aggregation and benchmarking.

TRBC is a five-level hierarchical structure consisting of (from top to bottom):

- 10 Economic Sectors
- 28 Business Sectors
- 54 Industry Groups
- 1361 industries
- 837 Activities

In case of multiple business segments, thresholds are used.

Two Business Segments: **A 60% of total revenue threshold** is used to assign an industry to companies with two business segments. If neither segment meets the 60% revenue threshold, the criteria is applied first to assets then operating profit.

Three or more Business Segments: **A 51% of total revenue threshold** is used to assign an industry to companies with three or more segments. If none of segments meets the 51% revenue threshold, the criteria is applied first to assets then operating profit.

Assessment of the total impact of a company

Gross revenue percentage in support of one or more SDG

The % of a company turnover made from products and services advancing SDG achievements in countries where significant gaps do exist is the goal. However, assessing gross revenue percentage in support of one or more SDGs is not easy in practice.

Impax Asset Management's Specialists reportedly requires investee companies to have more than 50% of their underlying revenue generated by sales of environmental products or services. In practice, this weighted average revenue exposure across the portfolio is about 80%, the company said.

We start to see **products portfolio mapping against the UN SDGs by third party**. For instance, Chr. Hansen's entire product portfolio of more than 3,000 products, has been audited by PWC. The accounting firm certified the Danish bioscience giant that produces natural ingredients for the food, beverage, dietary supplements and agricultural industry. It found that 81% of Chr. Hansen's gross revenue contributes to SDGs 2 (Zero Hunger), 3 (Good Health and Wellbeing) and 12 (Responsible Consumption and Production) by promoting sustainable agriculture, improving global health and reducing food waste.

Stakeholders segmentation

Another important question when assessing SDG impact is who are products and services being delivered to? We are not aware of companies precisely describing who are their end-customers using Agenda 2030 main categories, with few exceptions such as Essilor.

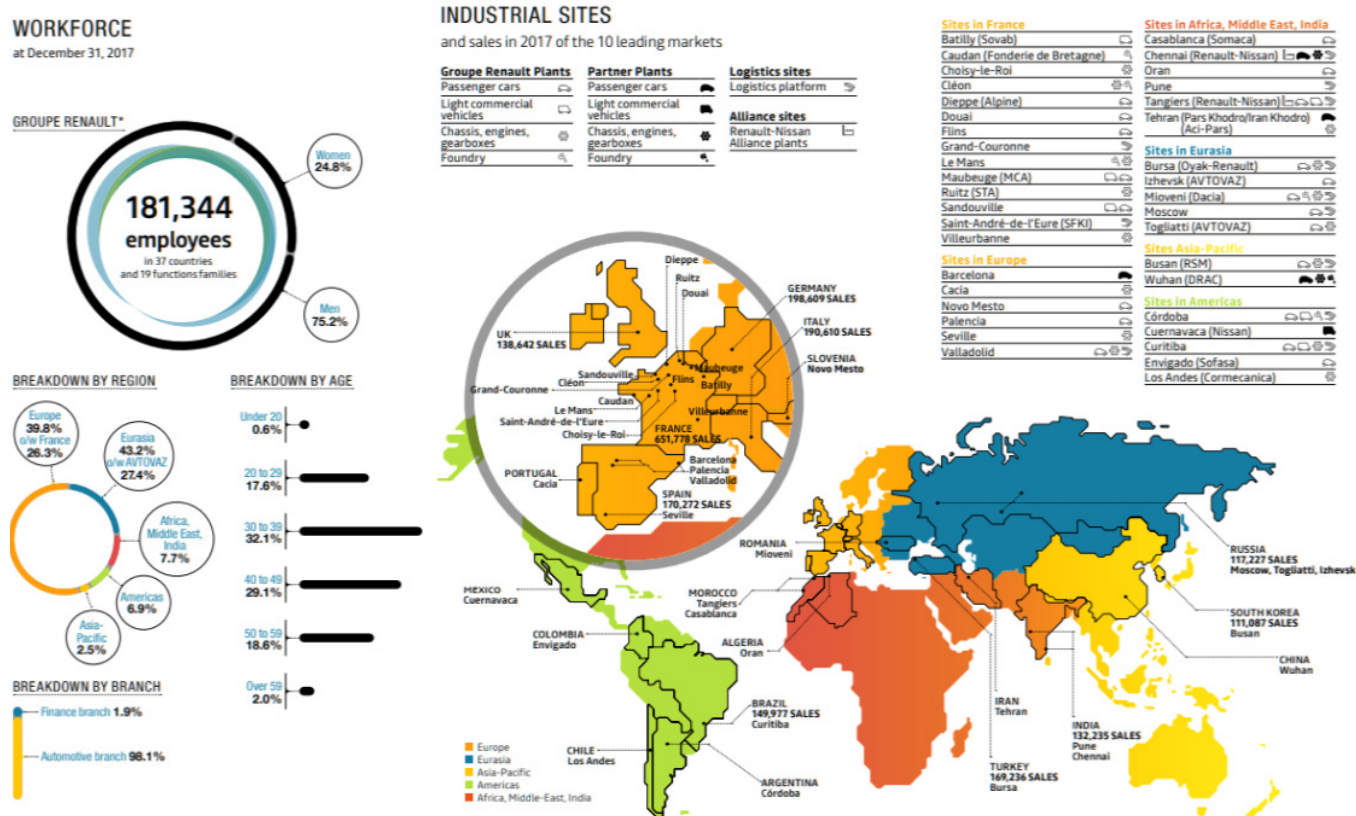
Company geographic exposure to SDG gaps

Information about companies' geographic footprint and spatial anchorage is far from being mature and easily accessible. Companies' disclosure is the primary source of information but there is no mandatory reporting on this matter. Thus, in their sales or assets reporting on a spatial basis companies adopt the geographic nomenclature of their choice.

Worldscope (Datastream) is one of the main data providers today, it collects data “as reported” by companies. It often happens that a company does not disclose any geographic breakdown of sales and assets or, its geographic implementation but not the relevant percentages. Frequently, multinational companies report on a limited number of geographic segments (e.g., Worldscope uses 10 geographic segments) and then aggregate their results at regional level, when appropriate. Regional aggregation is by essence less granular than country scoring and could be misleading especially in regions where SDG achievement situations are uneven. In addition, as it is impossible to differentiate the exact meaning (and geographic inclusion parameters) of a region for one company versus another, certain assumptions must be made. Geographical footprint assessment is thus extremely complex as of today. In our understanding, this specific step represents the main hurdle for systematic location-based impact analysis.

An example of stakeholders' segmentation and geographical footprint breakdown: Group Renault

The car-making industry offers good practices in terms of disclosure. For instance, Group Renault publishes the breakdown of its workforce and geographical repartition of its industrial sites, sales and market share.



Renault (2018) Groupe Renault. Facts and figures. Available here
<https://group.renault.com/wp-content/uploads/2018/03/march-2018-edition-facts-figures.pdf>

Source: Group Renault Facts & Figures / March 2018 Edition

CASE STUDY: FOCUS ON ICADE'S CONTRIBUTION TO UN SUSTAINABLE DEVELOPMENT GOALS

In order to ensure its contribution and to be actively involved in this initiative, Icade wanted to benchmark its CSR strategy against these ambitious goals. As a result, the Company conducted an analysis based on methodology from SDG Compass, which is supported by the United Nations Global Compact and WBCSD (World Business Council for Sustainable Development) and a study carried out by the World Green Building Council relating to the contribution of green buildings to SDGs.

This study shows a connection between the 169 SDG targets on the one hand, and CSR material issues, 2020 commitments and Icade's initiatives on the other. As a result, this "bottom-up" analysis identified 32 relevant targets consistent with 13 overall goals to which Icade can make a major contribution.

The selected goals have been ranked based on two priority levels, depending on Icade's potential degree of contribution to each one of them:

Priority goals: these are the most strategic goals, for which Icade wants to position itself as a leader, and which it has already integrated into its products and services or has the intention to do so. Eight goals are considered to be a priority:

	GOOD HEALTH AND WELL-BEING		AFFORDABLE AND CLEAN ENERGY		DECENT WORK AND ECONOMIC GROWTH
	INDUSTRY INNOVATION AND INFRASTRUCTURE		SUSTAINABLE CITIES AND COMMUNITIES		RESPONSIBLE CONSUMPTION AND PRODUCTION
	CLIMATE ACTION		LIFE ON LAND		

Icade, 2017, Registration document , Corporate social responsibility
http://content.zone-secure.net/Document-De-Reference-2017-Icade/ICADE_EN_DDR2017_CSR.pdf#page=4

Significant goals: these are goals which are relevant to Icade's business activities and that are also integrated into its strategy. Five goals are considered to be significant:

	GENDER EQUALITY		CLEAN WATER AND SANITATION		REDUCED INEQUALITIES
	PEACE, JUSTICE AND STRONG INSTITUTIONS		PARTNERSHIPS FOR THE GOALS		

Icade, 2017, Registration document , Corporate social responsibility
http://content.zone-secure.net/Document-De-Reference-2017-Icade/ICADE_EN_DDR2017_CSR.pdf#page=4

Icade has identified three types of possible contributions to the Sustainable Development Goals:

- contribution through operational efficiency: this includes Icade's initiatives to improve its internal operations and the effectiveness of its processes;
- contribution through the development of new products and services: Icade's contribution to these goals opens up potential for new market penetration through the development of new products, services and solutions to meet major societal challenges;
- contribution through its societal commitment: Icade's contribution to these goals is not central to its business, but the Company wants to become involved because it considers that it is part of its societal responsibility.

Natixis' GSH insights

ICADE's approach to the 2030 Agenda is relevant as it prioritizes the SDGs that are the most material considering its activities. It avoids the pitfall of compulsively ticking the 17 SDGs boxes and claiming inappropriately a contribution without any evidence. The difference made between contribution through operational efficiency and contribution through the development of new products and services is welcomed. More than 65% of the respondents of our survey of investors agreed that the "SDG contribution assessments are focusing on outward impacts (services or products) and much less on inward impacts (upstream process and internal activities such as gender wage gap, raw material sourcing)". Almost 42% of our respondents reportedly include both SDG dimensions in their decisions. To go further, identifying potential areas of "obstruction to the SDGs" and listing measures to reduce those risks might be relevant. For instance, examples of how attention is given to landscaping, rainwater management, and recovery and recycling of construction waste. Noteworthy, ICADE is one of the few company that does not dismiss the goal 16 and has thoroughly paid attention to the target 16.5 that states: "reduce corruption and bribery in all their forms". Icade has taken and identified appropriate measures such as: Creation of a Compliance Department and updating the Code of Ethics in 2017; Risk mapping, training employees identified as "at risk" in the fight against corruption and the fight against money laundering and the financing of terrorism, anonymous whistleblower system.

ICADE's geographical footprint

ICADE discloses the geographical breakdown of its whole portfolio by type of asset, as well as an exhaustive list of property assets (with addresses, value, acquisition date, construction date etc.)

GEOGRAPHIC DISTRIBUTION OF THE PROPERTY PORTFOLIO BY TYPE OF ASSET

As of June 30, 2018

In value terms on a proportionate consolidation basis

(in millions of euros)	Offices	Business parks	Other assets	TOTAL	%
PARIS REGION	4,506	3,741	111	8,358	92.9%
% of total	88.8%	100.0%	61.1%		
incl. Paris	629	975	0	1,604	
incl. La Défense/Peri-Défense	2,362	-	-	2,362	
incl. Western Crescent	868	135	-	1,003	
incl. Inner Ring	627	1,517	10	2,154	
incl. Outer Ring	21	1,113	101	1,235	
OUTSIDE THE PARIS REGION	568	-	71	639	7.1%
% of total	11.2%	0.0%	38.9%		
GRAND TOTAL	5,074	3,741	182	8,997	
% OF TOTAL PORTFOLIO VALUE	56.4%	41.6%	2.0%		100%

Icade, 2017, Registration document, Corporate social responsibility

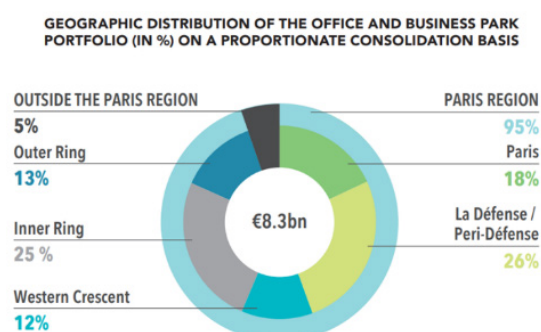
http://content.zone-secure.net/Document-De-Reference-2017-Icade/ICADE_EN_DDR2017_CSR.pdf#page=4

...and even further, by Division, split into the three following categories:

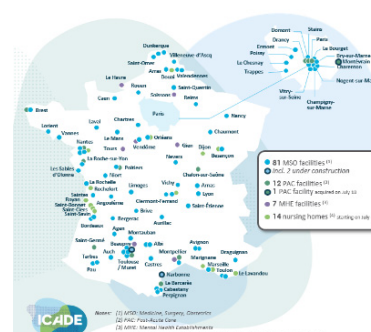
- offices and business parks of the Commercial Property Investment Division (including public-sector properties and projects held as part of public-private partnerships, and the Millénaire shopping centre)
- other assets of the Commercial Property Investment Division, which consist of warehouses, housing units and hotels;
- the assets of the Healthcare Property Investment Division.

Examples of information given:

Commercial Property Investment



Healthcare Property Investment



Icade, 2017, Registration document, Corporate social responsibility http://content.zone-secure.net/Document-De-Reference-2017-Icade/ICADE_EN_DDR2017_CSR.pdf#page=4

SDG GAPS ANALYSIS

Several sources may be used to document the SDG situation where ICADE operates, although the indicators are most of the time very macro.

Among them are:

THE SDSN dashboard for France, draw from UN Sustainable Development Solutions Network (SDSN) SDG Index published in partnership with the Bertelsmann Stiftung. It provides data about:

- % of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances)
- Rent overburden rate (%)

The OECD Affordable Housing Database (that documents rent overburden rate (%))

The data from INSEE (2017), for instance: "Housing conditions in France" (Edition 2017)

Nevertheless, as stock-taking/situation indicators, they do not allow to measure precisely ICADE' micro or local contribution.

Stakeholders identification

In its CSR report, in the section «An approach in tune with stakeholders» (Section 1.5) ICADE gives an extensive list of its stakeholders

This includes (general categories): Customers, Employees & employee representatives, Elected officials, Local authorities and communities, Business partners & suppliers, Professional sector (certifiers and labelers), associations and NGOs, Media and events and Universities and schools.

ICADE also disclose a total workforce breakdown by gender, division and type of contract, in the section 4.1 of its CSR report.

For example, in the category Customers, ICADE mentions the Green lease committees

When it comes to impact at the end of the SOG contribution chain, that is hard to predict, the behaviors of end-customers is decisive to achieve the intended objectives. Through green lease committees, ICADE tries to avoid rebound effect and to optimize end-customers uses. *«These meetings enable ICADE to educate tenants about the energy savings possible in the private areas and to implement a comprehensive action plan to reduce energy and water consumption, carbon emissions and waste production with quantified targets. In 2017, 89% of tenants subject to green lease regulations were able to exchange ideas and best practices at green lease committee meetings.»*

CSR report Section 11. «Taking action to fight climate change»

Other information can also be found in section 4.3 such as *the share of employees who were officially designated as being disabled*

For the Residential Segment, ICADE gives a breakdown of orders by type of customers, in the section 3.3 of the Performance of the Group's business activities Section.

BREAKDOWN OF ORDERS BY TYPE OF CUSTOMER

	06/30/2018	06/30/2017
Social housing institutional investors (ESH) – social landlords	19.8%	19.0%
Institutional investors	20.3%	11.4%
Individual investors	31.8%	42.1%
Home buyers	28.1%	27.5%
TOTAL	100.0%	100.0%






















Icade, 2017, Registration document, Corporate social responsibility

http://content.zone-secure.net/Document-De-Reference-2017-icade/ICADE_EN_DDR2017_CSR.pdf#page=4

ICADE CONTRIBUTION TO UN SUSTAINABLE DEVELOPMENT GOAL'S











ICADE'S CONTRIBUTION TO SDGS

1. PRIORITY GOALS

OPERATIONAL EFFICIENCY	DEVELOPING NEW PRODUCTS AND SERVICES	SOCIETAL COMMITMENT	SDG TARGETS RELEVANT TO ICADE*	KEY COMMITMENTS AND MEASURES TAKEN BY ICADE FOR EACH TARGET	COMMENTS FROM NATIXIS' GREEN & SUSTAINABLE HUB
			Three relevant targets from SDG 3: promote mental health and well-being (target 3.4); • give access to quality essential healthcare services at an affordable price (target 3.8); • reduce the number of deaths and illnesses from air, water and soil pollution (target 3.9).	~ health innovations: optimised outpatient care in private hospitals, telemedicine booth with H4D, wellness areas and fitness trails in the business parks, etc.; ~ measures to promote the quality of life in the workplace, the Well label, Osmoz initiative; ~ measures to promote air, water and soil quality in Icade's buildings, partnership with AirParif on air quality and an experiment with Veolia.	The measures and commitments are appropriately chosen with a clear relation with SDG targets identified as relevant. The materiality is significant, with a welcomed differentiation between products and services and operational efficiency. To go further and/or welcomed: Probably not feasible in a synthetic overview document but providing further details about the products, including sales, R&D, penetration, end-customers, would be welcome.
			Two relevant targets from SDG 7: increase the share of renewable energy in the energy mix (target 7.2); • double the global rate of improvement in energy efficiency by 2030 (target 7.3).	~ target of a 20% share of renewable energy in the Commercial Property Investment Division portfolio's energy mix by 2020; ~ goal for reducing energy consumption by 30% and CO2 emissions by 40% in offices and business parks between 2011 and 2020; ~ energy efficiency plan for commercial properties with a budget of €60 million between 2017 and 2019; ~ goals to develop properties surpassing Thermal Regulation RT 2012 by at least 10% and with the BEPOS label (positive energy buildings).	Key quantitative targets for CO2 emissions reduction and share of renewable, with baseline and trajectories (which corresponds to the step 4 of our methodology, "What objectives"). The "imputability" or attribution of this KPIs is strong. Budgets are given and reflect input Indicator, which is useful to objectivize the commitments and gauge efforts. To go further and/or welcomed: Mention the data, from 26 kg/CO2/m2 in 2011, 20 kg/CO2/m2 to 16 kg/CO2/m2, and gives the market average (do the same for renewable energy) instead of 3.1. Taking action to fight climate change.
			Four relevant targets from SDG 8: • promote entrepreneurship, innovation and the growth of small- and medium-sized enterprises (target 8.3); • achieve decent work and equal pay for equal work (target 8.5); • reduce the proportion of youth not in employment, education or training (target 8.6); • protect labour rights and promote safe and secure working environments for all workers (target 8.8).	~ a real estate solution dedicated to start-ups ("Grow-up", Icade's accelerator), range of services developed in partnership with start-ups, Icade's intrapreneurial approach; ~ agreements relating to gender equality, disability and age diversity; ~ professional integration and local employment commitments for construction sites and employee involvement in associations promoting integration; ~ responsible procurement charters and supplier CSR assessments, in particular ensuring compliance with labour rights; ~ policies dealing with health, safety and the quality of life in the workplace.	This corresponds to the step 5 of our methodology (responsible procurement charters and supplier CSR assessments) and is inward focused. To go further and/or welcomed: "Achieve decent work and equal pay for equal work (target 8.5)" could be linked to data and indicators, including HR indicators, that are in the part 4 of ICADE' CSR chapter, titled: "employee skills development, workplace well-being and diversity"
			Two relevant targets from SDG 9: • develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being (target 9.1); • increase access to information technology (target 9.8).	~ 20 solutions resulting from the innovation process that aim to contribute to customers' well-being and environmental performance; ~ solutions and commitments to promote Smart City: the Coach Your Growth programme, sustainable mobility, certified buildings, etc.; ~ 100% connected dwellings and business parks, oversight of the "smart and connected buildings" label.	Corresponds to the step 4 of our methodology To go further and/or welcomed => Mention HQE and/or BREEAM certification level in 2017 and objectives for new development projects (HQE certification for 100% of offices and 35% of dwellings by the end of 2018, and 100% of Icade Santé's healthcare facilities of over 10,000 sq.m).
			Five relevant targets from SDG 11: • ensure access for all to adequate, safe and affordable housing (target 11.1); • provide access to safe, accessible and sustainable transport systems for all (target 11.2); • enhance capacities for sustainable urban planning and participatory management (target 11.3); • reduce the adverse environmental impact of cities, paying special attention to air quality, waste management and access to green spaces (targets 11.6 and 11.7).	~ 26% of the homes built in 2017 are social housing; • accessible and innovative soft mobility solutions (car-sharing, ride-sharing, electric shuttle buses, autonomous shuttle pilot project, etc.); ~ participation in the emergence of the new profession of eco-friendly property manager responsible for locally coordinating the management of a neighbourhood or block of buildings, a local development charter with Plaine Commune, and local consultation bodies; ~ measures to promote air quality and responsible waste management for existing properties and new builds, EcoJardin-labelled green space and the development of urban vegetable gardens in the business parks.	The % of homes built that are social housing is a valuable stocktaking indicator that could serve as baseline, it might be interesting to provide time series and industry average. To go further or/and welcomed => to mention the objective of 75% of new projects less than 5-minute walk from public transport between 2016. Clearly a good interlinkages indicator.
			Three relevant targets from SDG 12: • achieve the sustainable management and efficient use of natural resources (target 12.2); • ensure waste generation (target 12.5); • ensure that people everywhere have the relevant information and awareness for sustainable development (target 12.8).	~ use of FSC®- or PEFC-certified wood in buildings measures, to reduce the water consumption of existing properties and new builds, and a paperless office policy within Icade; • creation of a circular economy and reuse platform (Cycle Up, a joint venture with Egis), measures for waste reduction, recycling and recovery; • CSR e-learning module for employees, green lease committees for tenants, user guides for property buyers to help raise awareness about eco-friendly practices.	Consideration of both inward and outward impacts (materials for building construction and waste reduction within Icade).
			Two relevant targets from SDG 13: • strengthen resilience and adaptive capacity to climate change (target 13.1); • improve awareness-raising to climate change for all (target 13.3).	~ use of FSC®- or PEFC-certified wood in buildings assessing risks related to climate change in order to adapt commercial properties; • CSR e-learning module for employees, green lease committees for tenants, user guides for property buyers to help raise awareness about eco-friendly practices.	
			Three relevant targets from SDG 15: • ensure the conservation, restoration and sustainable use of ecosystems (target 15.1); • promote the sustainable management of forests (target 15.2); • halt the loss of biodiversity (target 15.5)	~ goal of 25% of commercial properties and new builds with a net positive impact on biodiversity by 2020; • biodiversity performance contracts for business parks and the Nature 2050 programme led by CDC Biodiversité; • use of FSC®- or PEFC-certified wood.	

ICADE'S CONTRIBUTION TO SDGS

2. SIGNIFICANT GOALS

	OPERATIONAL EFFICIENCY	DEVELOPING NEW PRODUCTS AND SERVICES	SOCIAL COMMITMENT	SDG TARGETS RELEVANT TO ICADE*	KEY COMMITMENTS AND MEASURES TAKEN BY ICADE FOR EACH TARGET	COMMENTS FROM NATIXIS' GREEN & SUSTAINABLE HUB
				Two relevant targets from SDG 5: • end all forms of discrimination against women (target 5.1); • ensure women's effective participation for leadership (target 5.5).	~ gender equality agreement: solutions for working parents, raising the awareness of recruitment agencies, special budget to fill the gender pay gap; ~ goal of increasing the rate of women managers from 29% in 2015 to 34% in 2018.	
				Two relevant targets from SDG 6: • increase water-use efficiency and ensure sustainable withdrawals of fresh water (target 6.4); • support and strengthen the participation of local communities in improving water management (target 6.8).	~ goal of reducing the water consumption of commercial properties by 25% between 2011 and 2020 and equipping at least 25% of projects with a rainwater collection system; ~ green lease committees with tenants, user guides for property buyers to help raise awareness about eco-friendly practices.	A very comprehensive approach, that aims both at reducing consumption and alternative sourcing.
				Two relevant targets from SDG 10: • promote the inclusion of all, irrespective of age, sex, disability, etc. (target 10.2); • ensure equal opportunity by eliminating discriminatory practices and promoting appropriate policies (target 10.3).	~ agreements relating to gender equality, disability and age diversity; ~ disability awareness e-learning module; goal of increasing procurement from the sheltered work sector by 50% between 2015 and 2018.	Even though the breakdown of workforce in section 4.1.1 does only give information on gender, ICADE gives indicators in section 4.3 such as the recruitment rate of young people, and the share of employees were officially designated as being disabled
				One relevant target from SDG 16: • reduce corruption and bribery in all their forms (target 16.5).	~ creation of a Compliance Department and updating the Code of Ethics in 2017; ~ risk mapping, training employees identified as "at risk" in the fight against corruption and the fight against money laundering and the financing of terrorism, anonymous whistleblower system.	Much appreciated to take into account this often-disregarded SDG and corruption and bribery targets.
				One relevant target from SDG 17: • promote partnerships, especially public-private and civil society partnerships (target 17.17).	~ partnerships and working groups with institutions, local governments, industrial players, start-ups, schools and associations.	

* Further information about the SDG targets referred to in this table is available on the global compact website:
<https://sustainabledevelopment.un.org/content/documents/11803Official-List-of-Proposed-SDG-Indicators.pdf>

■ APPLICATION OF OUR 2-PHASES METHODOLOGY TO ICADE'S SDG CONTRIBUTION MEASUREMENT

PHASE 1 : DIAGNOSIS

		STEPS	TOOLS	DELIVERABLES
Generic and in abstracto analysis	WHAT AND HOW	1. Screen the material positive and negative SDG hotspots of your core business activities across your entire value chain (up until end-users, end-of-life products product or projects decommissioning)	<ul style="list-style-type: none"> • United Nations. Transforming our World: The 2030 Agenda for Sustainable Development. 2015 • United Nations Global Compact • WBCSD (World Business Council for Sustainable Development) • A study carried out by the World Green Building Council • Risks classification (regulatory, reputational, operational, financial, physical) 	<ul style="list-style-type: none"> • Benchmark of ICADE's CSR strategy against the SDGs (CSR report Section 1.3) • Identification of the 32 relevant targets consistent with 13 overall goals to which Icade can make a major contribution. Icade has identified three types of possible contributions to the SDGs: <ul style="list-style-type: none"> - Contribution through operational efficiency: this includes Icade's initiatives to improve its internal operations and the effectiveness of its processes; - Contribution through the development of new products and services: Icade's contribution to these goals opens up potential for new market penetration through the development of new products, services and solutions to meet major societal challenges;(see infra for contribution through societal commitments)"
	WHO	2. Identify your stakeholders under 2030 Agenda main socio-economic categories	<ul style="list-style-type: none"> • Stakeholders segmentation analysis • Reference documents • Customer's surveys • Icade's CSR materiality Matrix (page 69, Icade, 2017 Registration document) • Reports of "Analysis and Remuneration" unit of the HR Department (from payroll and labour management software, the results of analyses conducted as well as all HR players responsible for training, mobility, diversity and labour-related affairs. 	<ul style="list-style-type: none"> • ICADE's Stakeholders identification"An approach in tune with stakeholders" (CSR report Section 1.5), Including (general categories) : customers, employees & employee representatives, elected officials, local authorities and communities, business partners & suppliers, professional sector (certifiers and labellers), associations and NGOs, Media and events, Universities and schools • Total workforce and breakdown of employees by gender, division (CSR report Section 4.1) • For the Residential Segment:Breakdown of orders by type of customers (social housing institutional investors ESH - social landlords, institutional investors, individual investors, home buyers (Performance of the Group's business activities Section 3.3)
				End result : ICADE' identification of 32 relevant targets consistent with 13 overall goals to which ICADE can make a major contribution.
Context-based and in concreto analysis	WHERE	3. Map SDG achievement gaps and needs in the location where your organization has a strong foothold (assets, workforce, customer base) or where you plan a project, if possible upon specific stakeholders	Proposition of indexes for SDG gap analysis in the Residential segment: multi-family housing, student residences, senior residences <ul style="list-style-type: none"> • SDSN dashboard for France, draw from UN Sustainable Development Solutions Network (SDSN) SDG Index published in partnership with the Bertelsmann Stiftung % of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances) • Rent overburden rate (%) • OECD Affordable Housing Database : Rent overburden rate (%) • INSEE (2017) Housing conditions in France Edition 2017" 	<ul style="list-style-type: none"> • ICADE gives the geographical breakdown of Paris Region vs. Outside of Paris Region for * the Commercial Property Investment Division (with major french cities, and breakdown by outer ring, inner ring and Western Crescent)* the Healthcare Property Investment Division
	HOW NEEDED			To date, there is no in concreto materiality analysis of the SDG gaps between ICADE's actual stakeholders (employees, target customers, project beneficiaries) and where it operates. However, information might be available considering the satisfactory disclosure of the customer base (see step 2). The reports of the "Analysis and Remuneration" unit of the HR Department (payroll and labour management software, analyses conducted as well as all HR players responsible for training, mobility, diversity and labour-related affairs) may help to identify the SDG gaps for internal stakeholders.

PHASE 2 : CONTRIBUTION

		STEPS	TOOLS	DELIVERABLES
Strategy and action plan	WHAT OBJECTIVES	4. Determine the ultimate benefits your organization or project expects to achieve Prioritization of the SDGs you want to address on the basis of, <i>i) business and stakeholders materiality, ii) strategic choices that could also reflect your societal commitments</i>		• ICADE's Contribution to UN Sustainable Development Goals (CSR section 1.3) - Contribution through its societal commitment: Icade's contribution to these goals is not central to its business, but the Company wants to become involved because it considers that it is part of its societal responsibility (five significant goals)
	HOW TO ACHIEVE THEM	5. Identify the main features of the project considered or specific actions or programs to reach those objectives	• Project design and cost benefits analysis (externalities management) • Baseline assessment • Natixis GSH's SDG contribution chain : model that specifies the underlying logic, assumptions, influences, causal linkages and expected outcomes	• List of key commitments and measures taken by Icade for each target (CSR Report Section 1.3) • Mention of related activities (commercial property or healthcare property) in contribution analysis (CSR Report Sections 3, 4 and 5)
	HOW TO GET THERE	6. Be explicit as to the causal cascade between projects features, actions or programs and expected benefits : from input (\$ or HR), activity, output, outcome and finally impact.		• Choice of indicators (CSR Report Section section 5.4) • For some indicators Icade discloses: Methodological clarifications (CSR Report Section section 5.6), Change in calculation method (CSR Report Section section 5.7) For example: Methodology for assessing the net positive impact on biodiversity • For interlinkages : Main risk control measures and solutions implemented (CSR Report Section 1.4)
Implementation	HOW TO FOLLOW THE EXECUTION	7. Over the project or program's lifetime, collect data to feed the KPIs and monitor distance to targets and trajectories, as well as anticipated and unanticipated negative externalities	• Recommendations of international standards, such as the Global Reporting Initiative (GRI) standards published in October 2016, the GRI's "Construction & Real Estate Sector Supplement", version 4 (GRI-G4), EPRA's "Sustainability Best Practices recommendations Guidelines" of September 2017, and the "Reporting Guide – Article 225 for Construction and Real Estate" prepared by France GBC (Green Building Council) of 2012. For example, for weather-adjusted energy performance, Icade uses the methodology of Météo France	• Summary tables of CSR indicators (CSR Report Section 8) • Indicators given in sections New habits and lifestyles and partnership with local authorities and communities, Energy transition and preservation of resources, Employee skills development, workplace well-being and diversity (CSR Report Sections 2, 3 and 4)
Reporting	HOW TO DEMONSTRATE AND CLAIM	8. Publish output and outcome results	• Yearly KPI dashboards • Potential gaps analysis compared to ex ante claims	• Summary of reporting scope and methods (CSR Report Section 5) • Summary table of indicators subject to tests of details and independent third-party body report (CSR Report Section 8), for instance : Amount of renewable energy from district heating networks (Commercial and Healthcare Property Investment divisions), Environmental construction certifications • External Assurance (Section 5.8) by Mazars, with disclosure of main points checked
		9. Identify what SDG progress would have happened anyway, without your intervention (additional evaluation)	• Test group, surveys • Consultation of beneficiaries • Answers to those questions : Are there other change dynamics or pathways at work? Are there actors and factors who promote or hinder benefits achievement?	• CSR Report Sections 2, 3 and 4 of CSR with classification of some quantitative and qualitative results between In Progress, Achieved, Not Achieved • Involvement of external third parties (auditors) for contribution claims verification • Short list of external factors, broader socio-economic trends and other actors influencing SDG gap progress status
Progress outlook	HOW TO BETTER TOMORROW	10. Feed the future : ways of improvement for ongoing SDG contribution optimizing	• Review of contribution demonstration obstacles and mapping of how those hurdles could be minimized or eliminated through a more SDG cautious planning at the earliest phases possible • CSR risks and opportunities (CSR Report Section 1.4)	• The analysis conducted in 2017 identified Icade's main contributions to SDGs and its conclusions will contribute to future discussions on how its CSR strategy should evolve.

INTERVIEW OF DAPHNÉ MILLET, ICADE, CSR DIRECTOR

Comments and reactions to the results of our SDG Survey of Investors

- I) Your analysis of the SDG footprint expectations of investors
- II) What you are already doing in this regard
- III) Next step and challenges for ICADE

The analysis of companies' contribution to the SDGs is an underlying trend that seems to be spreading among investors. The extra-financial rating agencies are adapting their offer to meet this demand, as are the companies in their reportings. Investors expect much more transparency from companies, especially with regards to the concept of impact.

In 2017, Icade conducted an in-depth analysis of its contribution to the SDGs, accompanied by the CSR consulting firm Utopies. We analyzed our potential and actual contribution to the 169 targets of the SDGs. From this bottom-up analysis, 32 material targets emerged, corresponding to 13 SDGs, with two levels of materiality (priority and significant). It is noteworthy that we can find, among the priority SDGs for Icade, most of the issues considered as the most investable by the investors surveyed by Natixis: SDG 7 (Affordable and clean energy), SDG 13 (Climate action), SDG 9 (Industry, innovation and infrastructure), SDG 3 (Good health and well-being) and SDG 11 (Sustainable Cities and communities).

Icade analyzed what type of main contribution it could make to these 13 material SDGs: either in terms of operational efficiency, or by developing new products and services, or by making a plain societal contribution. This analysis, conducted in parallel with an in-depth study of our CSR risks, contributed to the definition and prioritization of our challenges within the framework of the new CSR commitments of Icade's 2019-2022 plan. Some emerging issues have been

identified or strengthened, such as the development of local partnerships, health or air quality, for example.

Compliance with reporting requirements, including French non-financial performance reporting regulation, urge companies to adopt in-depth risk analysis. SDGs as a "tool" make it possible to complete this approach with opportunities linked to CSR issues. It is a useful reading grid to help companies prioritize their issues, especially since the private sector has an important role to play in the contribution to these major global development goals.

The challenge Icade will face in the future will be to quantify its level of contribution to each of its relevant SDGs. To this end, we will be attentive to the publication of the French roadmap in 2019, as well as to the evolution of the analysis methodologies of rating agencies and investors.



Daphné Millet, ICADE,
CSR Director

CASE STUDY ESSILOR – A PIONEER AND ROBUST SDG CONTRIBUTION APPROACH

The SDG contribution of Essilor is robust, evidence-based and is backed by a strong geographical footprint analysis. In addition, stakeholders' segmentation and needs analysis are put at the heart of the value proposition of the company. Most of the data are available in Essilor's sustainability report, but above all, in the standalone and dedicated report, titled: "Our contribution to the Sustainable Development Goals".

We have used our SDG contribution grid presented in this report to track and identify the different actions undertaken by Essilor to determine, assess and report on its SDG contribution.

Phase 1: Diagnosis

Step 1 (what). Essilor designs, manufactures and customizes corrective and protective lenses and optical instruments. It is a supplier for eye care professionals and optical chains. It produces more than 500m lenses via lens polymerization or resin injection molding. It is a customer of chemical companies and glass manufacturers.

Step 2 (who). Essilor has five "roadmaps" for different consumer types, each of which constitutes a specific market for the company: Kids & teens; Young adults; Mid-life; Seniors; Next Generation Consumer. Importantly, Essilor has a clear target customer base characterized by specific features that aligns clearly with the UN SDG categories. It is the "2.5bn people without visual correction living mainly in emerging countries" with limited visual health structures. Essilor serves "the Bottom of the Pyramid" (BoP), that refers to underprivileged and high-risk populations characterized by high rates of poverty, living on less than \$2.50 a day.

Step 3.1 (where). Essilor has 67,000 employees, 481 prescription labs, 34 production plants and 14 distribution centers around the world. For the employees, the breakdown of the workforce (FTEs) by geographical area is disclosed. 80% of manager level employees at Essilor production sites are reportedly recruited locally.

Step 3.2 (how needed). According to Essilor, 7.4bn people need to protect their eyesight. Assessments of productivity losses are estimated by the Vision Impact Institute at €272bn in global productivity lost each year due to poor vision. Reportedly, in the United States, one child in four has an eye sight problem that affects learning. According to the Center for Disease Control and Prevention, vision impairment is one of the most common disabling conditions in children in the United States

› **End of the phase 1 (diagnosis phase):** To identify where its contribution is most significant and where more can be



done to support the SDGs, Essilor carried out the following assessment:

- Mapping of impacts on SDGs along Essilor's value chain (horizontal axis), in line with the SDG Compass guidelines.
- Mapping of those impacts against Essilor's priority areas (vertical axis), based on its materiality matrix. Following this two-step assessment, the following SDG Matrix was formalized.

The materiality analysis below is close to what we have identified as a good practice, i.e. a materiality analysis with on the horizontal axis the "business materiality" and on the vertical axis the "stakeholders materiality", with a cluster of 2 to 3 SDG and 4 to 7 sub-targets, with explanations.

The business impacts of Essilor are higher on the SDG 3 good health and well-being, the SDG 1 no poverty, the SDG 4 quality education.

Source : <https://www.essilor.com/en/sustainability/commitments/>

Essilor. Our contribution to the Sustainable Development Goals. Available here : https://www.essilor.com/essilor-content/uploads/2017/05/SDG_Contribution_Report.pdf
See: www.visionimpactinstitute.org – Smith et al. Potential lost productivity resulting from the global burden of uncorrected refractive error – Bulletin of WHO 2009.87:431-437

ESSILOR MATERIALITY ANALYSIS

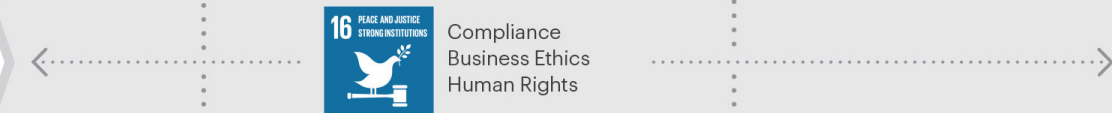
STRATEGIC/HIGHEST CONTRIBUTION



PRIORITY/CONTRIBUTION



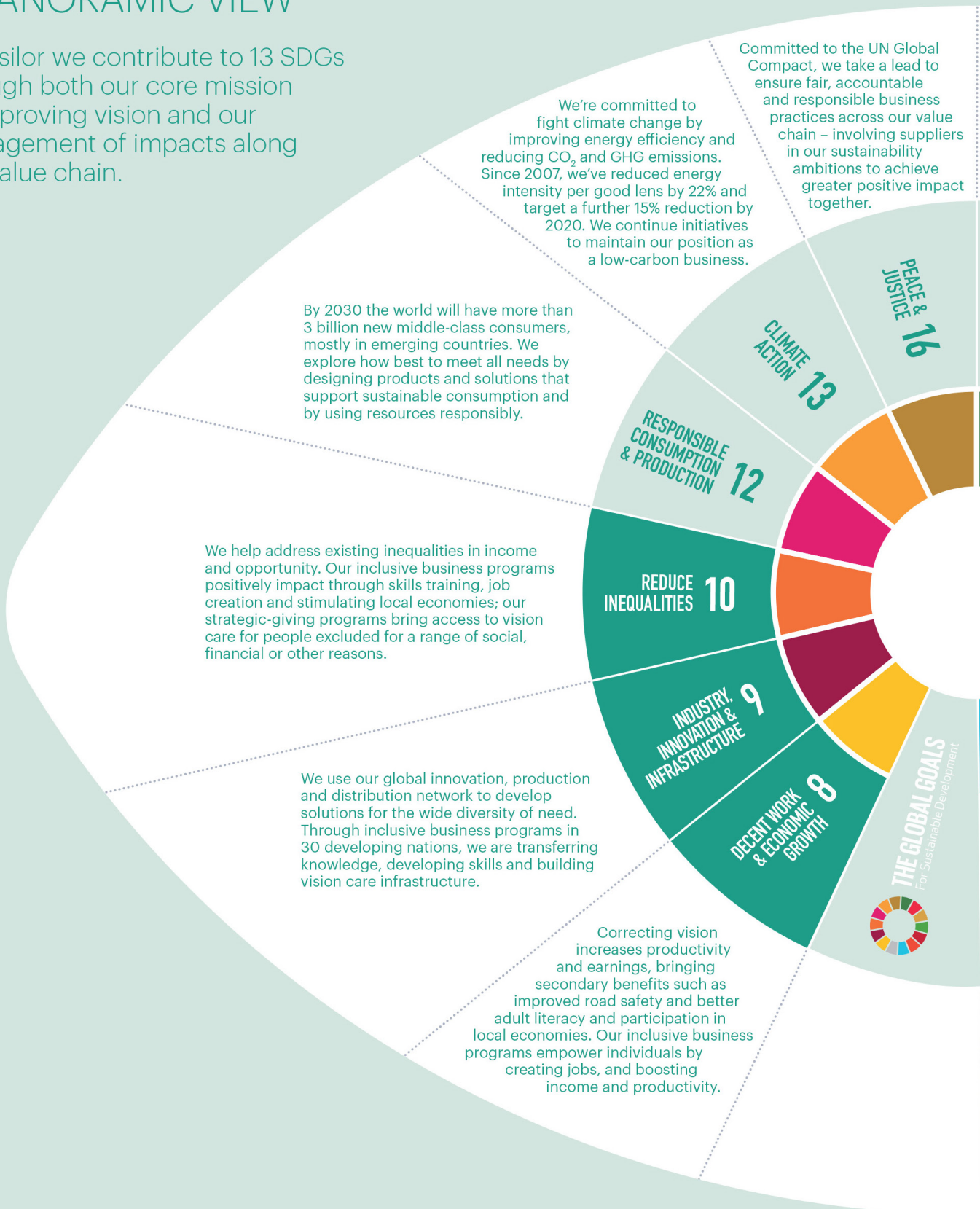
CORE



Source: Essilor. "Our contribution to the Sustainable Development Goals" report

A PANORAMIC VIEW

At Essilor we contribute to 13 SDGs through both our core mission of improving vision and our management of impacts along our value chain.



Partnership powers everything. We are proud to work with multi-sector partners on all levels to pool our knowledge, experience and resources to scale-up vision care solutions to address the global health challenge of poor vision.

We provide free vision care to people living below the poverty line in over 40 countries. Our inclusive business programs improve vision and boost local economies by creating jobs and increasing incomes.

Vision underpins everyone's health and well-being. We aim to protect and correct the visual health of the seven + billion people on earth, with a focus on the 2.5 billion individuals who lack vision correction. To date, we've equipped six million people with their first pair of glasses.

In rural areas of less developed countries, only one in six children who need glasses have them. Our strategic giving programs equip children from disadvantaged communities to see clearly, to perform better at school and improve educational outcomes. We also advocate at global, national and local levels to make vision a priority in school health programs.

We want women and girls to have equal access to good vision, education and opportunities to contribute socially and economically to their communities. Many of our inclusive business programs empower women to develop new skills, create a professional activity and improve financial independence through providing vision care locally.

Water is a key resource for making lenses thus we seek to reduce consumption to minimise impact on local populations and the environment. Since 2007, we've saved 9.1 million m³ of water. We continue to deploy further water savings programs in our sites across the world.

We are increasing use of renewable energies locally for example from solar and geothermal sources and engaging energy utilities and transport suppliers in carbon efficiency programs.



Phase 2: contribution

Step 4 (what objectives). Addressing the issue of uncorrected vision needs. It is clearly formalized in the group mission: “improving lives by improving sight”. Essilor states that: “Correcting vision improves learning at school and creates a better-educated population, alleviates poverty by boosting employability and increasing productivity at work and enables people to stay active in the workforce longer”.

Step 5 (how to achieve them). Essilor has forged new approaches in terms of product development, pricing and distribution to fulfill its group mission. A special business unit exists, so-called 2.5 New Vision Generation (2.5 NVG) Division, that is responsible for implementing and scaling up inclusive business models that reach consumers at the bottom of the pyramid.

That is a dual approach, through the products and services and the management of impacts along the value chain.

Step 6 (how to get there). Key targets and performances indicators, with clear baseline (reference year 2013, 2014 or 2015) have been set on a limited and material topic directly linked to the SDGs.

The indicators on water use or energy intensity per good lenses produced are valuable for operational impact. Moreover, Essilor has for instance a goal to create 25,000 primary vision care providers by 2020. At the end of 2017, the Group had attained over 23% of its target i.e. 5,718 primary vision care providers on a cumulative basis.

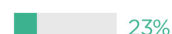
Creating wearers

- Improve the lives of 50 million individuals at the “base of the pyramid”⁽¹⁾ (cumulative, reference year 2013)

% of progress
to 2020 target



- Create 25,000 primary vision care providers (cumulative, reference year 2013)



- Invest €30 million in philanthropic visual health programs (reference year 2014)

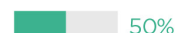


Sustainable
Development
Goals

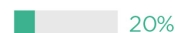


Reducing environmental footprint

- Reduce water intensity by 20%, compared to a 2015 baseline⁽²⁾



- Lower energy intensity by 15%, compared to a 2015 baseline⁽²⁾



Caring for our people

- Decrease by 30% work-related injury frequency rate (compared to a 2015 baseline) towards a zero-accident goal



- Give 100% of employees access to Essilor University online training platform



- 35% of employees as shareholders, with a longer-term ambition of 50%



Working with society

- 100% of strategic suppliers receive external CSR audit



- 100% of preferred suppliers acknowledge Essilor's Supplier Charter



(1) “Base of the pyramid” refers to underprivileged and high-risk populations characterized by high rates of poverty, living on less than \$2.50 a day.

(2) Targets measured per good lens produced across a defined scope of manufacturing facilities with Group's most significant environmental footprint.

Step 7 (how to follow the execution). For negative interlinkages management or attenuation for instance, the frames are made of a highly durable and biodegradable material called “Natura”, which can be returned to the Company for recycling when customers want to change their style. Meanwhile, Costa sunglass brand is partnering with the Bureo NGO for taking fishing nets that are at the end of their lives and giving them new ones by recycling them into Costa’s collection of polarized sunglasses.

Step 8 (how to demonstrate and claim - publish output and outcomes and results). The 2.5 New Vision Division with a reach in 30 countries across Asia, Latin America and Africa has reportedly equipped over three million people with eye-glasses in 2017. A reporting on a regular basis on SDG contribution is planned to track progress (the 2018 edition will be published shortly after this report).

Step 9 (how to demonstrate and claim - identify what SDG progress would have happened anyway, without your intervention). To date, Essilor has reportedly equipped almost 13.4m people with their first pair of glasses, including mostly people living below the poverty line. Demonstration with some evidence of the situation improvement is provided in standalone reports. Independent impact studies with data and calculation methodology on job creation in rural and semi-urban areas are available. For instance, an impact study reviewing the work of 400 Eye Mitra serving 70,000 spectacle wears across 6 districts was conducted by Dalberg Global Development Advisors in 2015. It concluded that 75% of people served by Eye Mitra bought their first pair of spectacles and two-thirds reported increased independence in movement and travel thanks to improved vision. Furthermore, four in ten Eye Mitra had previously been unemployed and the others now earned 64% more than in their previous jobs).

Step 10 (how to do better tomorrow). Review of contribution obstacles and mapping of how those hurdles could be minimized or eliminated, for instance: complex logistics chains. Essilor has developed Ready-to-Clip, a range of symmetrical, interchangeable lenses that can be fitted instantly in a wide range of frames. This allows consumers on low income to obtain or purchase an affordable pair of glasses locally, immediately after their eye test, avoiding any issues with logistics and order tracking.

See the Untangled Collection: <https://www.costadelmar.com/us/en/the-untangled-collection>
Essilor See Change Report <https://www.essilorseechange.com/website/wp-content/uploads/2017/07/Essilor-See-Change-Report.pdf>





■ Overview of ESG Agencies' SDG offer

In this section we wished to demonstrate a –non-exhaustive– benchmark of ESG agencies practices when it comes to assessing the impact on Sustainable Development Goals of companies or products/assets portfolios.

We directly reached out to the main agencies for elements of their methodologies and picked up from our many discussions their constant confrontation to the lack of disclosure from companies and/or comparability of the data given, for important statistics like the geographical breakdown of their turnover for example. We would like to thank them for their contribution.

Overall, agencies, at one point in their assessment, have established a mapping of sectors and/or products and services to the SDGs. This approach, though it seems inevitable, is obviously not ideal, as we think it is quite incomplete to consider one sector or product to be labeled “contributing” to an SDG without consideration of the whole value-chain for its production, the population it is addressed to, or its geographical situation.

With that in mind, some of the methodologies we are presenting below are quite detailed and demonstrate our sincere attempt to measure SDG impact the most accurately possible.

The following methodologies are heterogeneous in disclosure, depending on the material that was sent to us by the agencies.

BEYOND RATINGS REPORT ON SDG ACHIEVEMENTS



DASHBOARDSPORTFOLIOS AND BENCHMARK

For Climate, ESG and SDG in particular, Beyond-Ratings has developed a **top-down approach that goes from country to sectors and then corporates**. The latter are assessed with regards to their **geographic exposure to SDG**, thanks to an **analysis of their revenue breakdown by country**.

Ultimately, **177 countries and approximately 10,000 companies are covered** by Beyond Ratings' SDG geographic approach, with various analytical outputs (Excel and reports files at portfolio, country, sector, and company levels).

Beyond Ratings' analytics range then from country assessment performance regarding the 17 SDG, as well company exposure to countries and SDG level, to portfolio analytics.

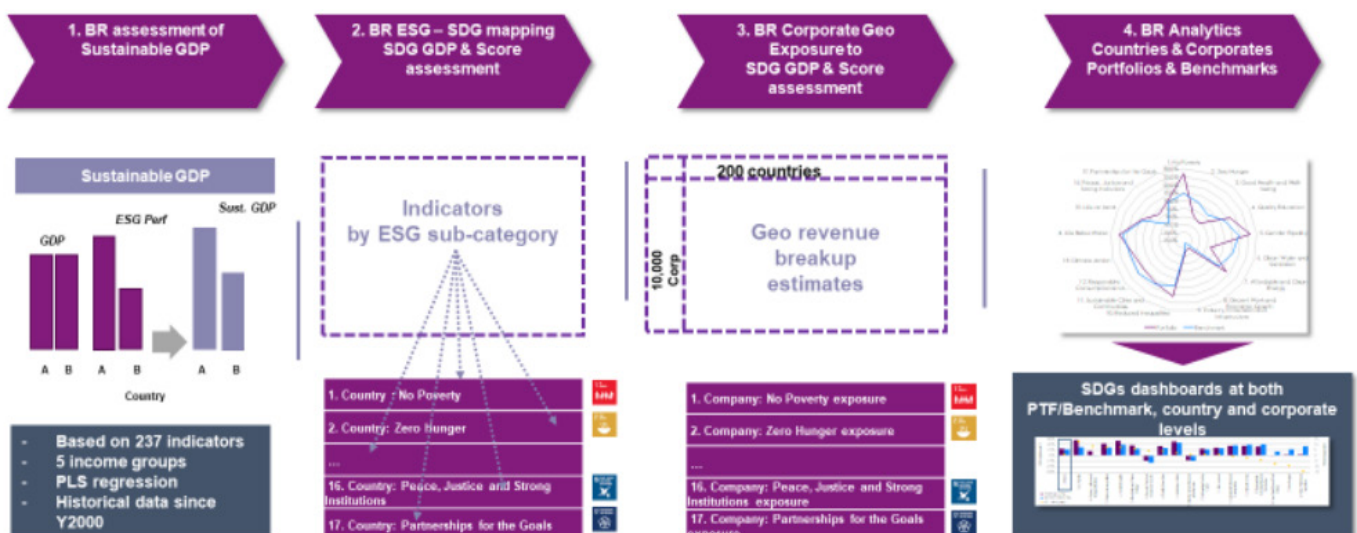
The country assessment on SDG is derived from **the proprietary ESG factor-In model, that combines level of GDP and ESG country performance into a single sustainable-adjusted GDP**. Two countries can have a similar GDP but the one with highest ESG credentials will ultimately see its GDP upgraded in line with its ESG outperformance. This relation between GDP and ESG has been rigorously set up through a Quant model using 237 E, S, and G indicators from various official, public and widely accepted sources (World Bank, IMF, FAO, UNICEF, WHO, etc.). The material impact (coefficient) of

each indicator on GDP is determined by the Quant model (PLS regression). As we reckon that countries are also on different pathways and different states of development, **the model has been rolled out on 5 different groups of countries according to their level of income per capita**.

The SDG factor-in model then is directly derived from **a re-combination of the 237 ESG indicators with respects to the 17 SDG themes**. A specific adjusted GDP is computed for each of the 17 themes and compared to the official GDP, then delivering a specific measurement of the performance on a common metric.

Once every country performance on SDG has been modelled, corporate geographic exposure can be mapped against this performance according to the geo breakdown of revenues as disclosed by companies. BR has developed a Quant model to estimate revenues generated country per country for every company. The split of revenues on 177 countries allows for a precise measurement of geographic exposure, paving the way for geographic exposure to SDG issues. Intermediary scores can be calculated on all 17 SDG themes, prior to a final SDG score.

FROM SUSTAINABLE GDP TO SDG ASSESSMENT TO COUNTRY AND CORPORATE GEOGRAPHIC EXPOSURE



Source : documentation from Beyond Ratings

MSCI ESG Sustainable Impact Metrics aim to help institutional investors align their investments to the SDGs. The product features:

1. A tool to measure revenue exposure of a portfolio (per \$M invested) to sustainable impact themes (see figure on the right) and compare it to a benchmark.
2. Screens to identify sustainable impact companies that also meet minimum ESG standards, for example to avoid companies that also derive revenue from harmful products, that have faced allegations of wrongdoing, or that are not adequately managing ESG risks.
3. Granular data to measure revenue exposure to sustainable impact solutions on companies, and support actionable thematic allocations in line with the SDGs



■ Focus on Basic Needs Theme

› “Basic needs” refer to the fundamental requirements for long-term wellbeing, including access to nutrition, health, sanitation and housing. Listed companies can play a key role in addressing these particular concerns through the provision of nutritious products, treatments for major diseases, sanitation products and affordable real estate.

› In the MSCI ACWI Index universe, 396 companies have some level of revenue exposure within the Basic Needs theme. The number of eligible stocks for a hypothetical investor requiring a 20% minimum revenue threshold is 183, reducing to 113 companies when adding the minimum ESG standards requirements as proposed by MSCI ESG Research (data as of September 2018).

Theme	Categories	MSCI ESG Research Definition	Company examples (estimated share of revenue)
Basic Needs	Nutrition	Basic products, as defined by Choices International, refer to those products that contribute to the daily intakes of essential nutrients, while non-basic products are not needed to fulfill daily nutritional requirements.	General Mills (43%) Toyo Suisan Kaisha (87%) Danone (52%)
	Major Disease Treatment	Drugs that aim to treat major diseases of the world as defined by the WHO daily adjusted life year (DALY), as well as neglected tropical diseases, and orphan drugs.	Novo Nordisk (95%) Biomarin Pharma. (99%)
	Sanitation	Basic hygiene and sanitation products including soaps, oral care and diapers.	Unicharm (82%) Toto (60%)
	Affordable Real Estate	Low-income housing options take the form of homes for reconstruction efforts, affordable residences for the elderly and units devoted to be managed under social rent or purchased through shared equity or shared ownership. Low-income commercial properties include commercial spaces for Small and Medium Enterprises (SMEs).	Taylor Wimpey (19%) Persimmon (15%)

Source: documentation from MSCI

The most significant categories not currently covered by this framework are access to energy and access to water. In their initial research, MSCI found insufficient data and only minimal involvement by publicly listed companies in targeting access to water and access to electricity programs and services.

Trucost SDG Evaluation is a solution that provides **a quantitative analysis of corporate performance on the SDGs across the value chain, from raw material inputs to product use and disposal, within the context of a company's geographic operations.** The solution has been designed **to be used by both corporates and investors**, scoring performance for each of the 17 SDGs.

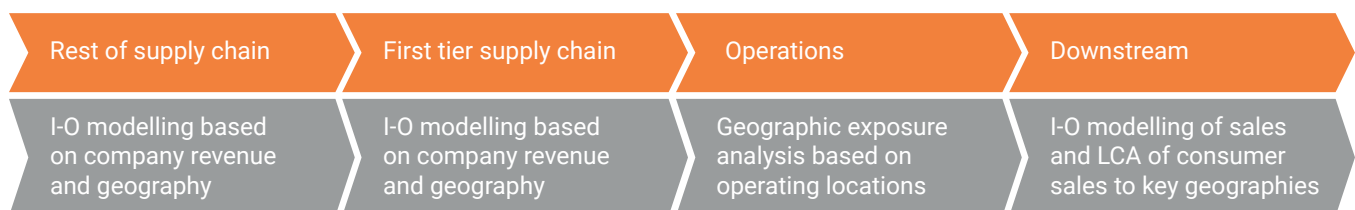
According to Trucost, the product *looks at the entire value chain, is country-specific, is comparable and measurable against targets and includes quantitative impact metrics (recycled waste, jobs created etc.)*

■ The methodology in a nutshell

Trucost SDG score for each company will take into account the 1) overall exposure to negative impacts, 2) the processes in place to mitigate such impacts and 3) the positive impacts, notably through revenue and R&D exposure.

• SDG Exposure estimation

Trucost estimates the exposure of a company to each metric across the value chain and a cut-off is applied to identify the most material metric / geography combinations at each value chain stage (using input-output modelling).



Source: documentation from Trucost <https://www.trucost.com/publication/moving-forward-with-sdgs-metrics-for-action/>

Trucost has identified **a set of ~40 SDG metrics for use in their SDG Evaluation** that meet the following criteria: representative of corporate exposure to an SDG target through **a plausible impact or dependency pathway and amenable to geographic and sector specific exposure modelling with appropriate modelling techniques and data sets available.** For example: for SDG Target 3.3 in Good Health and Well Being: Workforce Communicable Disease Risk would be the metric used

• SDG Positive Impact Scorecard

Trucost assesses the degree to which a company creates positive value for the SDGs in the following way:

- › **SDG Positive Revenue Share:** % of revenue by geography from products and services categorized as SDG solutions or SDG enablers (indirect solution) based on Trucost's taxonomy
- › **SDG Positive R&D Share:** % of R&D spend on topics of relevance to each SDG
e.g. energy efficiency, healthcare or education
- › **Business Model Transformation:** focusing on public and forward looking commitments to transform existing business models to better align with the SDGs
e.g. coal divestment for energy producers, electric vehicle production for car manufacturer

Trucost has developed a taxonomy of over **250 product categories** that contribute directly or indirectly to specific SDGs and targets. The product categories come in addition to the 464 sector categories usually used by Trucost. This methodology is already being used by companies such as Iberdrola, Tarkett, Orsted, AMD or Rockwool.

ISS-oekom has developed **15 sustainability objectives** on the basis of the UN SDGs. It then proposes a **methodology framework** to assess products and services across those 15 objectives.

For all companies, ISS-oekom identifies the **% of net sales generated with products contributing to and/or obstructing the attainment of each of the 15 objectives along a 5-point scale** (see table in the example below). It goes from significant contribution to significant obstruction, resulting in **75 individual data points per company**.



Source : ISS-oekom - SDG Methodology - ISS-oekom Sustainability Solutions Assessment

■ Example of the Environmental Objective: Preserving marine ecosystems

The objective is to maintain functioning marine and coastal ecosystems by minimizing negative impacts such as pollution or overfishing and protecting threatened species as well as by restoring degraded ecosystems so that they have an intact biodiversity and can continue to deliver vital ecosystem services.

ISS-OEKOM GRID OF CONTRIBUTION

- Does the product/service by its intended purpose (or main impact/characteristic) contribute to or obstruct the achievement of the sustainability objective?

Grade	Level of Contribution / Obstruction	Product Examples
5.1 to 10.0	Significant Contribution	Water/wastewater filtering technologies specifically adapted to use on offshore facilities Mechanical oil spill containment booms
0.2 to 5.0	Limited Contribution	No products/services so far
-0.1 to 0.1	No net Impact	Certified wild and farmed fish
-5.0 to -0.2	Limited Obstruction	Uncertified wild and farmed fish Products containing microplastics Large scale ports in sensitive coastal ecosystems Deep sea mining/drilling
-10.0 to -5.1	Significant Obstruction	Marine and riverine tailings disposal "Polluting high-impact heavy industry" activities in protected areas (including IUCN I-IV)

Source : ISS-oekom - SDG Methodology - ISS-oekom Sustainability Solutions Assessment

EXTRACT OF ISS-OEKOM'S SCORES FOR 421 COMPANIES (FROM THE SECTORS CHEMICALS, CONSTRUCTION, FOOD & BEVERAGES AND REAL ESTATE) ON 15 SUSTAINABLE OBJECTIVES

Top 10 worst performers for the objective Preserving marine ecosystems, i.e. with the highest score of obstruction to the objective (Within this sample no company has a net positive score of contribution for this objective. Within the whole ISS-oekom universe, there are companies with a net positive contribution).

Company name	Industry	Country	obstruction (combined %)	obstruction (products)
Thai Union Group Public Co. Ltd.	Food & Beverages	Thailand	80,0%	products based on uncertified fish
SalMar ASA	Food & Beverages	Norway	80,0%	products based on uncertified fish
Austevoll Seafood ASA	Food & Beverages	Norway	75,0%	products based on uncertified fish
Lerøy Seafood Group ASA	Food & Beverages	Norway	75,0%	products based on uncertified fish
Norway Royal Salmon AS	Food & Beverages	Norway	70,0%	products based on uncertified fish

Source : ISS-oekom - SDG Methodology - ISS-oekom Sustainability Solutions Assessment

Vigéo aims to offer a clear reference framework and a precise metric to identify and weigh risks and opportunities with regards to companies and investors' responsibilities towards the SDGs. To do so, they check and balance companies' degree of contribution to the SDGs against their governance, operations, and the specific nature and footprint of their products and services.

■ Vigéo's 5-step methodology

› STEP 1: Assess companies' level of commitment towards SDGs

- Mapping of SDG targets against Vigéo's 39 authoritative sustainability drivers for companies and 330+ indicators
- Weighting of the sustainability drivers for companies by taking into account the authoritativeness of each objective, peoples and stakeholders' vulnerability and needs, and the intensity of risks and opportunities for evaluated companies
- Questioning of companies' willingness and capacity to integrate their relevant sustainability drivers into their strategies and operations

Scores for SDG-relevant drivers are consolidated into 5 behaviour-focused SDG topics: Business Ethics, Corporate Governance, Social Welfare, Human Capital, Natural Capital

› STEP 2: Determine companies' levels of performance, ratings and rankings

- Each company is given a score from 0-100 for each behaviour-focused SDG topic
- Scores are classified into 5 categories according to a normal distribution curve using the complete Vigéo Eiris research universe as the population, where each band has a width of 1 standard deviation

› STEP 3: Identify sustainable goods and services within companies' offerings

- Vigéo Eiris has identified 100+ products and services with strong positive impacts on the SDGs through their sectorial expertise from screening products and services contributing to SDGs in a relevant and sustainable manner

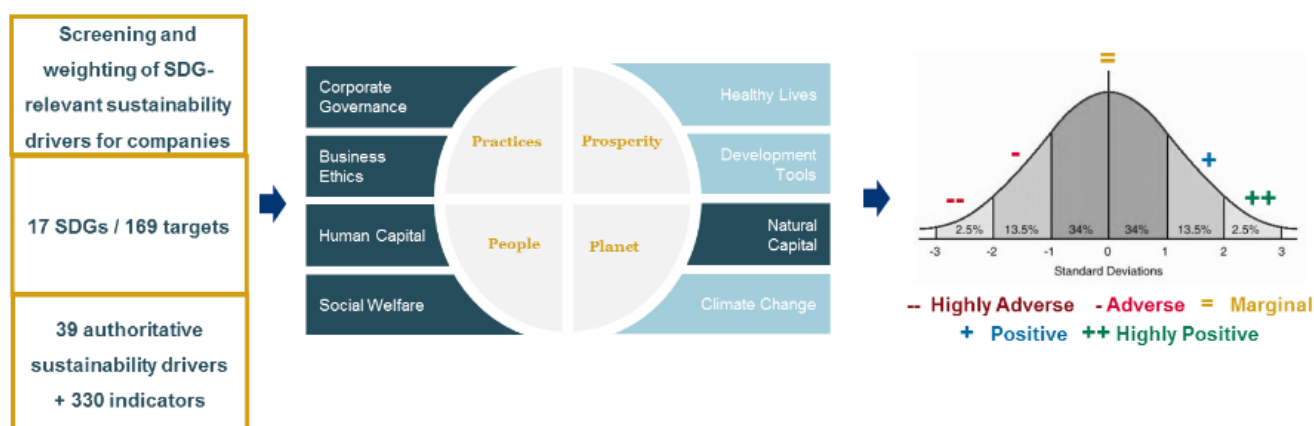
› STEP 4: Assess a company's level of involvement

- Products and services are grouped into the 3 product-focused SDG topics: Climate Change, Healthy Lives, Development Tools
- Corporate involvement in each product-focused SDG topic is calculated and categorised as None, Minor, Significant or Major

› STEP 5: Rating & ranking

- Rating of companies' impact and contribution to the SDGs by combining behaviour and products & services scores. Companies' performances, which are spread in a normal distribution, range from "highly adverse" to "highly positive" (see illustration below)

■ Vigéo's scoring methodology



Source: documentation from Vigéo Eiris

SUSTAINALYTICS' SDG METHODOLOGY



Sustainalytics' SDG approach is grounded in three fundamental principles:

1. Assessing alignment across a company's value chain, from product and services, to operations, to supply chain;
2. Considering business activities that are both aligned and misaligned to the SDGs; and
3. Evaluating companies on the SDGs that are most relevant to their business.



Source: documentation from Sustainalytics

The product assessment is built upon an **analysis of the revenues a company derives from products that are aligned with the SDGs** (for example, renewable energy, green transportation, or affordable housing, among others) and products that are misaligned with the SDGs (for example, tobacco, controversial weapons or thermal coal, among others). Metrics and indicators were identified for each SDG based on the underlying targets and KPIs in the SDG framework. The Sustainable Development (SD) Analytics and Data product enables investors to measure the alignment of their portfolios and individual holdings to the SDGs. Sustainalytics assessment includes: **(1) company level scores per SDG and an overall SDG score; (2) portfolio level scores per SDG and an overall portfolio level score; and (3) a comparison of a portfolio performance to a benchmark.**

Spotlight on Assessing SDG 6 for Operational Alignment

SDG 6 is focused on clean water and sanitation, where the underlying targets and KPIs articulated in the SDG framework address themes such as **water efficiency, water quality, and access to water**. Depending on the industry or company, the SDG 6 operational alignment assessment includes metrics and indicators such as:

SDG 6	Example of SDG 6 Targets	Examples of Aligned Operational Indicators	Examples of Misaligned Operational Indicators
Ensure availability and sustainable management of water and sanitation for all	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Water intensity	Severity of events related to water use in own operations and supply chain
	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Water management programs	Severity of events related to emission, effluents and waste in own operations and supply chain
	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Water risk management	

Source: documentation from Sustainalytics

■ Portfolio level contribution measurement: in its infancy

Asset managers, investment bankers, family office managers or wealth managers, are trying to measure and improve the contribution of their assets to the achievement of the SDGs.

We have however identified some hurdles:

- I) **Comparability across a portfolio is limited.** The main impediment is to aggregate impact performance and insights across an investment portfolio that compounds multiple sectors, regions or asset classes.
- II) **Attribution of contribution is difficult.** In presenting impact at the level of the investor, some protagonists calculate the portion of their investees' impacts that they consider is attributable to their portion of the funding. The benefit and methodology of making such a calculation seems questionable.

Multiple goals can be pursued by investors:

- To assess the contribution performance of your individual (direct and fund) investments and broader portfolio.
- To refresh and streamline your reporting by valuing specific impacts and to eliminate lengthy and wordy reporting
- To design contribution-focused products (indexes, funds)

Tips for SDG contribution assessment at portfolio level

1. **Pick the right indicators:** in close collaboration with your investees and/or provide them feedback
2. Cover intelligently: if it is technically impossible or not desirable to cover your entire portfolio exhaustively, sample investees on the basis of relevancy and representativeness criteria
3. **Less is better:** set a high standard in terms of data quality control and validation to obtain results that are usable and reliable
4. **Use data for strategic decision making:** leverage outcomes results in your decision process, do not discard unexpected and disappointing outcomes but try to understand them
5. **Consolidate only if possible:** if your measures are comparable enough, consolidate portfolio analysis; if impossible, maintain the analysis at the case study level

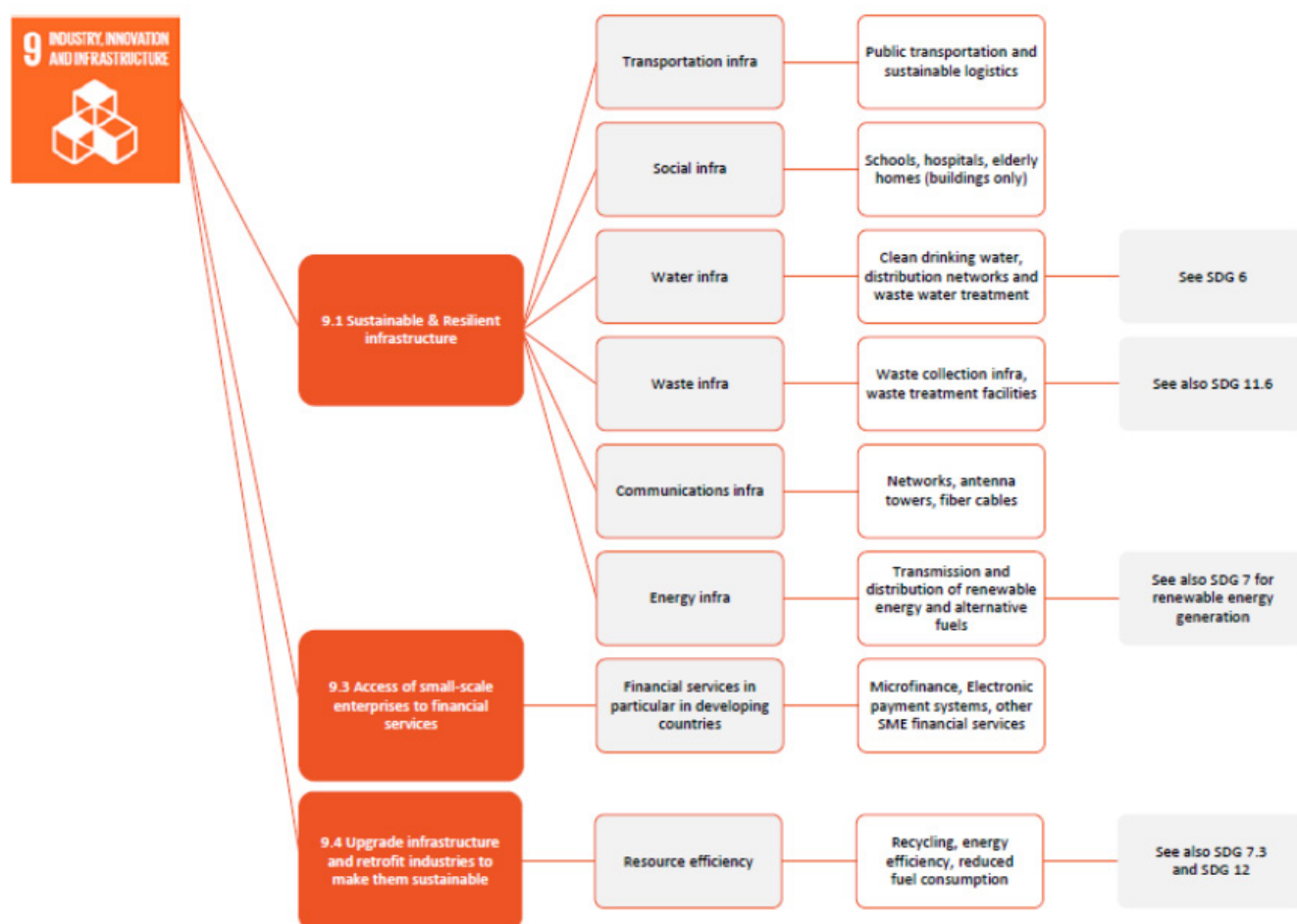
Possible steps:

Holdings identification in your portfolio (stock-taking of your holdings) comes first. Then, carry a sectorial analysis of your investees (materiality analysis against the SDGs) and geographical analysis of your investees (context-based analysis of the SDG gaps achievement). An asset class screening could help you to determine your leverage and influence on your investee (bond, equity, project finance). Map the actions possible, engagement, divestment, define your goals and require of your investee specific metrics.

APG: translating SDGs into SDIs

In 2017, APG together with PGGM have developed a methodology to identify investment opportunities linked to 13 of the United Nations' 17 Sustainable Development Goals (SDGs). They published Taxonomies. This methodology identifies solutions and economic activities that contribute to the UN Sustainable Development Goals and is used to 'translate' the Sustainable Development Goals (SDGs) into Sustainable Development Investments (SDIs). SDIs are defined by APG as "investments in companies with a positive influence on people and on the environment through their products and services or because they are recognized as leaders in the transition to a more sustainable economy. To decide whether a company qualifies as an SDI, APG "first considers whether it makes a positive contribution to any of the UN goals." Possible involvement in major controversies such as bribery scandals or environmental disasters are also considered.

■ THE GOAL 9 IN APG AND PGGM' SDGIS TAXONOMY



APG, PGGM, (2017) Sustainable development investments (SDIs) taxonomy. Available here : <https://www.apg.nl/pdfs/SDI%20Taxonomies%20website.pdf>

Robeco (2018) - Insights. How to quantify a company's contribution to the UN SDGs? Available here : <https://www.robeco.com/en/insights/2018/05/how-to-quantify-a-companys-contribution-to-the-un-sdgs.html>

Focus on Robeco AM

Robeco AM has developed a matrix pairing its products across the entire range of SDGs to demonstrate how its existing platform of sustainability products contributes to each one. The information is available in the report RobecoSAM Insight 2017 "Accelerating Impact: Integrating Sustainable Development Goals into Investing" (available here)

Robeco's credit analysts and RobecoSAM's SI analysts have reportedly done a mapping exercise of around 450 companies. 62% of the companies have been assessed as delivering a positive contribution, such as grid operators, healthcare companies, banks (by providing finance, especially in emerging markets,) and utilities with a relatively limited share of coal, nuclear energy and oil in the energy generation mix. 26% of the companies analyzed make a negative contribution. Examples cited are energy producers with a relatively large share of fracking, companies that produce unhealthy food, or car manufacturers with a low share of EV/hybrid models.

■ ROBECO AM' ASSESSMENT OF ITS SUSTAINABLE INVESTMENT PRODUCT ALIGNMENT WITH SDGS

<u>Strategy (launch year)</u>	SDG 1: No Poverty	SDG 2: Zero Hunger	SDG 3: Good Health and Well-being	SDG 4: Quality Education	SDG 5: Gender Equality	SDG 6: Clean Water and	SDG 7: Affordable and	SDG 8: Decent Work and Economic Growth	SDG 9: Industry, Innovation and Infrastructure	SDG 10: Reduced	SDG 11: Sustainable Cities and Communities	SDG 12: Responsible Production and Consumption	SDG 13: Climate Action	SDG 14: Life below Water	SDG 15: Life on Land	SDG 16: Peace, Justice and Strong Institutions	SDG 17: Partnership for the Goals
RobecoSAM Core Sustainability Equities Strategies																	
Sustainable European Equities (2011) *																	
Global Gender Equality Impact Equities (2015)																	
Global Child Impact Equities (2015)																	
RobecoSAM Thematic Resource Efficiency Strategies																	
Sustainable Agribusiness (2008)																	
Smart Energy (2003)																	
Sustainable Healthy Living (2007)																	
Smart Materials (2006) *																	
Sustainable Water (2001)																	
Robeco Sustainable Product Strategies																	
Quant Sustainable Global Equities (2013)																	
Sustainable Conservative Fund (2016)																	
Robeco Euro Sustainable Credits (2010)																	
*indicates the date of strategic re-positioning of product strategies and is not the date of product inception.																	

RobecoSAM (2017) Accelerating Impact: Integrating Sustainable Development Goals into Investing. Available here : https://www.robeco.com/media/e/4/c/e4c1ddf8e238421287ca43ea386688a0_advancing-sustainable-development-goals_tcm17-10395.pdf

■ ROBECO'S ASSESSMENT OF ITS ACTIVE OWNERSHIP TEAM'S ENGAGEMENT THEMES WITH THE SDGs

In the table below, Robeco has mapped a sampling of its engagement themes with the SDGs considered most relevant.

Table 2: Mapping Robeco's Active Ownership Team's engagement themes with the SDGs

	Engagement Themes	SDG 1: No Poverty	SDG 2: Zero Hunger	SDG 3: Good Health and Well-being	SDG 4: Quality Education	SDG 5: Gender Equality	SDG 6: Clean Water and Sanitation	SDG 7: Affordable and Clean Energy	SDG 8: Decent Work and Economic Growth	SDG 9: Industry, Innovation and Infrastructure	SDG 10: Reduced Inequalities	SDG 11: Sustainable Cities and Communities	SDG 12: Responsible Consumption and Production	SDG 13: Climate Action	SDG 14: Life below Water	SDG 15: Life on Land	SDG 16: Peace, Justice and Strong Institutions	SDG 17: Partnerships for the Goals
ENVIRONMENTAL	Climate change and Well-being in the Office Real Estate Sector																	
	Sound Environmental Management																	
	ESG Challenges in the Auto Industry																	
	Environmental Challenges in European Electric Utilities																	
	Environmental challenges in Oil & Gas sector																	
SOCIAL	Social risks of sugar																	
	Data Privacy																	
	Social Issues in the Food & Agri supply chain																	
	ESG risks and opportunities in the biopharmaceutical industry																	
	Sound Social Management																	
	Improving Sustainability in the Meat & Fish Supply chain																	
GOVERNANCE	Board Quality																	
	Corporate Governance in Japan																	
	Tax Accountability																	
	Good Governance																	
	Corporate governance standards in Asia																	
	Culture and risk oversight in the banking industry*																	

*Research to be completed in Q4, 2017.

RobecoSAM (2017) Accelerating Impact: Integrating Sustainable Development Goals into Investing. Available here :

https://www.robeco.com/media/e/4/c/e4c1ddf8e238421287ca43ea386688a0_advancing-sustainable-development-goals_tcm17-10395.pdf

■ Tracking policies and progress at local government level

The example of Toyoma City in Japan

The Government of Japan established the “SDGs Promotion Headquarters” in May of 2016, chaired by the Prime Minister with the Chief Cabinet Secretary and Minister of Foreign Affairs as Vice-Chairs, to promote measures related to the SDGs and close coordination among related government agencies. The guiding principles adopted set out a vision, five implementation principles, eight priority areas and an approach to the follow-up and review process, including at local levels.

Toyama City, the largest city and capital of Toyama Prefecture in the Hokuriku Region of northern Chubu, prepared its Sustainable Development Goals Report 2018 in collaboration with the Institute for Global Environmental Strategies (IGES). It was presented at the High Level Political Forum on Sustainable Development (HLPF2018). It was structured around the “*Handbook for the Preparation of Voluntary National Reviews: 2018 Edition*”, taking into account specific characteristics and the level of progress on SDGs initiatives in each respective city.

Toyama City had promoted a number of initiatives that incorporate SDG concepts through the Japanese government’s “Eco-Model City” and “FutureCity” projects for regional revival, even before the United Nations’ 2030 Agenda for Sustainable Development (SDGs) was adopted. Toyama was also selected for the “SDGs FutureCity” and “Municipal SDGs Model Project” by the Cabinet Office in June 2018. Toyama City will work on realizing its’ vision for 2030 to become a sustainable innovative city by promoting a compact city strategy, and incorporating the global goals into urban plans. As an indicator to measure the progress in becoming a compact city, Toyama City Urban Master Plan aims to increase the ratio of residents living in areas with good access to public transport from 37% in 2017 to 42% by 2025. Below are several excerpts of Toyama’s SDG progress indicators and related policies.



Toyama City
the Sustainable Development Goals Report
— Compact City Planning based on Polycentric Transport Networks—
2018

Toyama City the Sustainable Development Goals Report – Compact City Planning based on Polycentric Transport Networks (July 2018) Available here : https://pub.iges.or.jp/pub_file/english/toyama0726pdf/download

6 CLEAN WATER AND SANITATION



GOAL 6 AND TOYAMA'S RELEVANT INDICATORS

SDG target	Toyama Indicator	Past	Last	Plan
6.1 Achieve universal and equitable access to safe and affordable drinking water for all	Water service coverage	98.92% (2013)	98.72% (2016)	3
6.2 Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation.	Ratio of concrete pipes with measures against dilapidation		38.5% (2016)	4
6.2 Pay special attention to the needs of women and girls and those in vulnerable situations	Proportion of population with sewage treatment		99.1% (2015)	3
6.3 Improve water quality	Achievement of environmental standard (water quality)		100.00%	3
6.4 Substantially reduce the number of people suffering from water scarcity.	Achievement of environmental standard (ground water)		100.00%	3
6.6 Protect and restore water-related ecosystems	Promote management of waterfront scenery and protection of aquatic life in rivers and ocean.			1
	Promote social activities utilizing waterfront environment by the rivers and development of recreation sites, as well as waterfront space that is considerate of the landscape and water amenities.			

Note: Plan 1 Second Comprehensive Plan 2017-2026; plan 2 Basic Environment Plan 2017-2026; plan 3 Environmental Model City Action Plan; plan 4 Land Tolerance Regional Plan; plan 5 Environment FutureCity Plan; Comprehensive Strategy for City, People and Work (2015-2019); plan 7 Resilience Strategy (30-Year Plan).

7 AFFORDABLE AND CLEAN ENERGY



GOAL 7 AND TOYAMA'S RELEVANT INDICATORS

SDG target	Toyama Indicator	Past	Last	Plan
7.2 Increase the share of renewable energy	Volume of timber from thinning hauled to biomass power plants		8100m ² (2015)	1
7.2 Increase the share of renewable energy	Number of subsidies provided for residential solar power systems	356/year (2010)	500/year (2016)	2
7.3 Double the rate of improvement for energy efficiency	Number of subsidies for energy saving equipment	25/year (2010)	50/year (2016)	2

Note: Plan 1 Second Comprehensive Plan 2017-2026; plan 2 Basic Environment Plan 2017-2026; plan 3 Environmental Model City Action Plan; plan 4 Land Tolerance Regional Plan; plan 5 Environment FutureCity Plan; Comprehensive Strategy for City, People and Work (2015-2019); plan 7 Resilience Strategy (30-Year Plan).

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



GOAL 9 AND TOYAMA'S RELEVANT INDICATORS

SDG target	Toyama Indicator	Past	Last	Plan
9.1 Develop sustainable, resilient and inclusive infrastructure	Proportion of aseismic distributing water pipes		42% (2016)	1
9.2 Promote inclusive and sustainable industrialization	Volume of pedestrian traffic in CBD and station area		44,374persons (2015 Sunday)	1
9.3 Increase access to financial services and markets	Product shipping amount, etc.	1166 bil yen (2010)	1348 bil yen (2016)	1
9.5 Enhance scientific research and upgrade technological capabilities of industrial sectors	Areas for cultivation of medicinal crops and healthy crops		Medicinal 2.9 ha	1
			Healthy 8.8ha	1

Note: Plan 1 Second Comprehensive Plan 2017-2026; plan 2 Basic Environment Plan 2017-2026; plan 3 Environmental Model City Action Plan; plan 4 Land Tolerance Regional Plan; plan 5 Environment FutureCity Plan; Comprehensive Strategy for City, People and Work (2015-2019); plan 7 Resilience Strategy (30-Year Plan).



GOAL 11 AND TOYAMA'S RELEVANT INDICATORS

SDG target	Toyama Indicator	Past	Last	Plan
11.1 Ensure access to safe and affordable housing	Proportion of aseismic housing		79.4% (2015)	1
11.2 Provide access to safe and sustainable transport systems	Proportion of total population living in areas with convenient access to public transport	32.% (2005)	37.0% (2016)	4
11.3 Enhance inclusive and sustainable urbanization	Equipment of radio communications for disaster prevention and administration (mobile)		91.2% (2015)	1
11.3 Enhance inclusive and sustainable urbanization	Proportion of areas that are safe from heavy rains		77% (2016)	1

Note: Plan 1 Second Comprehensive Plan 2017-2026; plan 2 Basic Environment Plan 2017-2026; plan 3 Environmental Model City Action Plan; plan 4 LandTolerance Regional Plan; plan 5 Environment FutureCity Plan; Comprehensive Strategy for City, People and Work (2015-2019); plan 7 Resilience Strategy (30-Year Plan).



GOAL 12 AND TOYAMA'S RELEVANT INDICATORS

SDG target	Toyama Indicator	Past	Last	Plan
12.2 Sustainable management and efficient use of natural resources	Recycling of general waste		24.6% (2010)	3
12.3 Halve per capita food waste	Volume of kitchen waste recycling in recycling project area	528MT (2010)	1,800MT (2015)	3
12.4 Environmentally sound management of chemicals and all wastes	Reduction and recycling of industrial waste		95.6% (2014)	3
12.5 Substantially reduce waste generation	Volume of processed general waste		13,676MT (2010)	3
12.6 Encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting	Number of on-site inspections for industrial waste generating businesses		356 (2010)	3
12.8 Ensure that people have information for sustainable lifestyles	Number of users for eco-town socialization promotion center		8,921per (2010)	3

Note: Plan 1 Second Comprehensive Plan 2017-2026; plan 2 Basic Environment Plan 2017-2026; plan 3 Environmental Model City Action Plan; plan 4 Land Tolerance Regional Plan; plan 5 Environment FutureCity Plan; Comprehensive Strategy for City, People and Work (2015-2019); plan 7 Resilience Strategy (30- Year Plan).

B. FINANCING SOLUTIONS

■ Project or identified expenditures lending

ICMA's GBP/SBP works on the UN SDGs

The International Capital Market Association (ICMA) published in June 2018 the document "Green and social bonds: a high-level mapping to the sustainable development goals"[1].

It provides a broad frame of reference by which issuers, investors and bond market participants can evaluate the financing objectives of a given Green, Social or Sustainability Bond/Bond Program against the Sustainable Development Goals (SDGs). The spreadsheet supplement[2] is a result of a review of each of the 169 targets associated with the 17 SDGs in order to identify those that may be relevant to either the GBP or the SBP project categories : a very detailed and useful "in abstracto" analysis tool.

GBP categories identified

- Climate Change Adaptation
- Environmentally sustainable management of living natural resources and land use
- Environmentally Sustainable Agriculture
- Terrestrial and Aquatic Biodiversity Conservation
- Pollution prevention and control
- Renewable Energy
- Wastewater Treatment



■ EXTRACTS OF THE ICMA'S MAPPING TABLE

SDG	SBP Project Categories ¹⁶	GBP Project Categories ¹⁷	Example Indicators
	<ul style="list-style-type: none"> • Access to Essential Services (8.3, 8.6, 8.10) • Employment Generation (8.2, 8.3, 8.5, 8.6, 8.9) • Socioeconomic Advancement and Empowerment (8.3, 8.5, 8.6, 8.7, 8.8) 	<ul style="list-style-type: none"> • Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes (8.4) • Energy Efficiency (8.4) • Renewable Energy (8.2) 	8.1 Number of loans, deposits or insurance products in line with SDGs or number of people provided these 8.2 Number of jobs created 8.3 Number of jobs retained
	<ul style="list-style-type: none"> • Access to Essential Services (9.3, 9c) • Affordable Basic Infrastructure (9.1, 9a, 9c) • Employment Generation (9.2) 	<ul style="list-style-type: none"> • Energy Efficiency (9.4) • Renewable Energy (9.1) 	9.1 Length of sustainable road construction with equitable access 9.2 Length of rail construction 9.3 Number of first-time internet connections 9.4 R&D expenditure in line with SDGs as % of sales
	<ul style="list-style-type: none"> • Access to Essential Services (10c) • Socioeconomic Advancement and Empowerment (10.1, 10.2, 10.3, 10.7) 		10.1 Number of jobs created in low-income areas, among disadvantaged groups and other target populations 10.2 Number of local SME suppliers and smallholder farmers in supply chain

SDG	SBP Project Categories ¹⁸	GBP Project Categories ¹⁹	Example Indicators
	<ul style="list-style-type: none"> • Food Security (12.3) 	<ul style="list-style-type: none"> • Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes (12.5) • Environmentally Sustainable Management of Living Natural Resources and Land Use (12.2) • Pollution Prevention and Control (12.3, 12.4, 12.5) • Renewable Energy (12.4) • Sustainable Water and Waste Water Management (12.2, 12.5) 	12.1 Avoided resource waste 12.2 Avoided emissions to air (other than greenhouse gases) 12.3 Avoided emissions to water 12.4 Materials sourced sustainably or recycled 12.4 Absolute or % reduction in local pollutants 12.5 Reduction of hazardous materials used
		<ul style="list-style-type: none"> • Climate Change Adaptation (13.1, 13.2, 13.3, 13b) • Climate Change Mitigation (13.1, 13.3) • Renewable Energy (13.1) 	13.1 Water storage capacity 13.1 Reduction in weather-related disruption (days p.a.) and/or risk frequency (%) 13.2 Flood-resilient floor space 13.3 High-risk assets with climate insurance cover
	<ul style="list-style-type: none"> • Socioeconomic Advancement and Empowerment (14b) 	<ul style="list-style-type: none"> • Environmentally Sustainable Management of Living Natural Resources and Land Use (14.4, 14.6, 14a, 14b) • Terrestrial and Aquatic Biodiversity Conservation (14.1, 14.2, 14.3, 14.5, 14.6, 14a) 	14.1 Avoided or reduced marine and fresh water pollution (ecotoxicity, eutrophication) 14.2 Biodiversity loss avoided or reduced (# of species)

[1] ICMA (June 2018) <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Mapping-SDGs-to-Social-and-Sustainability-Bonds-Final-030818.pdf>

[2] ICMA (June 2018) https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2018/SBP_GBP-Mapping-to-SDGs-linked-140618v2.xlsx

■ TOOL 8: NATIXIS GSH ADDENDUM TO THE GBP AND SBP FOR NON-SUPERFICIAL INTEGRATION OF SDG INTO FRAMEWORKS

As issuance of SDG self-labelled bonds is emerging in the market, and since SDG supposedly aligned green, social or sustainable bonds frameworks are more and more frequent (see Chapter 1, "issuers and investors' appetite for SDG contribution measurement"), the need for guidelines on how to structure a clear and robust SDG-linked framework is all the more obvious.

Moreover, if used correctly, SDGs can actually enhance green/social bonds frameworks, by adding accuracy, transparency to impact approaches and measurement but also by bringing additional consistency between green and social Use of Proceeds.

With that in mind, we have developed a grid that can be used either to evaluate the level of SDG ambition of an already-published framework, or to structure the SDG alignment / contribution of a new framework. Based on our "generic SDG contribution methodology", our addendum matches different levels of issuers' SDG ambition, preparedness or maturity. For each GBP/SBP principles that ought to appear in a framework (UoP, selection of eligible projects, management of proceeds, reporting), we suggest the additions that could be considered to better embrace SDGs.

A) USE OF PROCEEDS

TOOLS

Extracts from the GBP

[Green projects] should be appropriately described in the legal documentation for the security. Provide an estimate of the share of financing vs. re-financing. Clarify which investments or project portfolios may be refinanced and the expected look-back period for refinanced Green Projects.

Additional SDG Step



Describe the eligible activities and their SDG footprint

Level 0 - Map the category of projects only against SDGs numbers/stickers and/or titles

Level 1 – Support your SDG contribution claim by mentioning the SDGs relevant targets regarding your sector, industry, or projects' features

Level 2 – Match SDG & targets to actual identified projects and their expected output

Level 3 - Demonstrate a real a theory of contribution that outlines the linkages with your activities, their input, planned output, intended outcomes, and ultimately the impact/contribution, linked to SDGs targets

* ICMA "Green and social bonds: a high-level mapping to the sustainable development goals"

*United Nations. Transforming our World: The 2030 Agenda for Sustainable

Development. 2015

* Natixis GSH's SDG sectorial matrix

* Natixis GSH's SDG contribution chain

* SDG stakeholders segmentation analysis

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<i>"Clearly communicate the environmental sustainability objectives, the process [to determine] how the projects fit within the eligible Green Projects categories, and the related eligibility criteria and exclusion criteria"</i>			
Complementary SDG Steps	How?	For each of the SDG supposedly addressed in your framework, attempt to identify the SDG gaps where the proceeds of your bonds are likely to be disbursed due for instance to your geographical footprint Level 0 – Geo-spatial gaps are not documented or taken into account (location non-disclosed) Level 1 – The SDG gaps are considered as a criteria for choosing eligible projects, a bonus is given to projects for which major or significant challenges remain in the location	SDSN Index and dashboards, or other SDG analysis providers (countries rankings, situation and trends)
		Identify the SDG trends in those locations Level 0 - Location neither disclosed nor taken into account in project selection Level 1 - Differentiate if the SDGs supposedly addressed in the framework are undergoing a trend described as: on track, or maintaining SDG achievement, or a trend that is moderately Increasing, stagnating or decreasing	SDSN Index and dashboards, or other SDG analysis providers
		Identify the target population and/or beneficiaries Level 0 - Not disclose the target population Level 1 - Vaguely disclose the target population (eg: excluded, poor, underserved people,...) Level 2 - Precisely disclose the target population in terms (official definitions from statistics institute) of issue targeted and/or geography Level 3 - Very precisely disclose the target population (number of people, exact location, thresholds specifying their situation)	Data providers (for example EU Social Index, INSEE or Statistics Netherlands (CBS)) Survey of customers or beneficiaries
Communicate the process to identify and manage potentially material environmental and social risks associated with the projects			
Complementary SDG Steps	How?	Identify, disclose and manage the potential SDG interlinkages of the projects Level 0 - Do not assess - or with a narrow approach - the side-effects of the projects and the potential spill overs upon other objectives (obstruction to other SDGs) Level 1 - Present a life-cycle approach and pay attention to ripple effects without however having counter-measures or clear demonstration of mitigation Level 2 - Embed interlinkages into risks management with solutions and counter-measures, substantiated with KPIs	<ul style="list-style-type: none">* Natixis GSH's SDG Sectorial matrix* Stockholm Environment Institute's seven-point typology of SDG interactions* Risks analysis tools
		Explain your pioneering and transformative added value Level 0 - The product or service you are financing is already diffused and widespread (processes or solutions that are not cutting edge) Level 1 - At least one of the Use of Proceeds in the framework has an advancing innovative approach, allowing a targeted population to gain access to a product (physical goods or financial products), technology or financing structure that is new or not widely used.	
Additional SDG Step		+	

NATIXIS, GSH, 2018

C) MANAGEMENT OF PROCEEDS

TOOLS

Net proceeds, or an amount equal to net proceeds, should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked in an appropriate manner	
Disclose the formal internal process linked to the lending and investment operations for Green Projects	
During the outstanding period, balance of the tracked net proceeds should be periodically adjusted to match allocations to eligible Green Projects made during that period. Make known to investors the intended types of temporary placement for the balance of unallocated net proceeds	

D) REPORTING

TOOLS

<p>The annual report should include a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects and the amounts allocated, and their expected impact.</p>		
<p>Complementary SDG Steps</p> <p>How?</p> <p>Additional SDG Step</p> <p>+</p>	<p>Identify baselines and sources used</p> <p>Level 0 - There is no referencing of qualitative or quantitative data</p> <p>Level 1 - Explicit reference indicators calculation methodology, data providers or sources in the framework, for instance for context-based analysis (SDG gaps)</p> <p>Level 2 - Additionality demonstration (identification of the SDG progress that would have happened anyway, without your intervention)</p>	Baseline assessments
	<p>Quality and relevance of indicators</p> <p>Level 0 - little/no/unsatisfactory information on the indicators</p> <p>Level 1 - sufficient and satisfactory information on the indicators</p> <p>Level 2 - comprehensive and reliable information on the indicators</p>	<p>*Natixis GSH's SDG Indicators Book (different sections and uses)</p> <p>*KPIs' definition and calculation methodology</p>
	<p>Commitments to report on interlinkages management</p> <p>Level 1 - Evidence of the detrimental side-impacts will be given but not third-party verified</p> <p>Level 2 - There will be a qualitative review of the interlinkages by a third-party</p> <p>Level 3 - There will be a quantitative review or institutional assessment of the interlinkages</p>	Third-party assurance, longitudinal comparison, test group, surveys, consultation of beneficiaries

SDG-based reporting





When asked about SDGs as a tool to demonstrate impact, one respondent of our survey said “[This is] very important, as it is what matters. Goals and objectives are only providing a roadmap but impact are at the very end of the chain. Reporting should reflect what has been achieved”. Impact reporting ex-post is indeed one of the most intuitive use of the SDGs.

But for an issuer willing to report on SDGs, the question is how to do so ? What is needed on top of the existing practices to claim SDG contribution. Once again, the main issue, in our view, is to make sure that geography, stakeholders and additionality / imputability are used as bedrock of SDG reporting.

The reporting template example we propose here encompasses several steps of our generic approach to help answering several of our guiding questions, inter alia: what and how, who, where, how needed, how to demonstrate and claim. The template is filled with the example of UoP disbursed for climate change adaptation (flood protection, Waterway management, Pumping stations) in Netherlands.

■ HOW TO DEMONSTRATE AND CLAIM

Reporting canvas to evidence Tramway Line 4 contribution to SDG progress for specific stakeholders in given locations

UoP	Clean transportation – Tramway Line T4
Location acuteness	landlocked territory in great social difficulty, the "Espoir Banlieues" Plan (Pavillons-sous-Bois, Livry-Gargan, Clichy-sous-Bois and Montfermeil)
Stakeholders	Population not living within 500 meters distance from collective transport lines running at least every 20 min
Core SDGs	Core SDGs :    
Direct influence	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
Interlinkages	9.1.2 Passenger and freight volumes, by mode of transport; 3.6.1 Death rate due to road traffic injuries; 3.9.1 Mortality rate attributed to household and ambient air pollution
Indicators	(existing and potential): Reduction in travel time, increase share of public transportation Average journey time reduction at the morning rush hour for those already traveling by public transport, and for new users, Tons of CO2 (or other GHG) avoided, Km of tracks built, No. of passenger, Jobs created
Evolution	Baseline / endline Ex ante / ex post calculations
Attribution and claim	ex post survey: % of beneficiaries who report decrease time spent in public transportation or easier access to public transportation, INSEE

■ Sovereign SDG bonds

Bridging SDG country roadmaps and fiscal budgets through the issuance of sovereign SDG bonds

As acknowledged by the OECD (report Policy coherence for sustainable development, 2018), “as key policy and priority-setting document for governments, national budgets are an essential tool for policy integration and coherence”. On the sidelines of the High Level Political Forum in July 2018, a workshop titled “Using the tools of budgetary policy-making towards the implementation of SDGs” was organized by the OECD. Manifold countries have begun to use budgetary processes to align actions and programs with the SDGs.

1/ For instance, Mexico has incorporated a provision into its Guidelines for the Programming and Budgeting Process for the Fiscal Year 2018 establishing elements, dates and specific actions so that federal agencies and entities can link their authorized program structures with the SDGs.

2/ In Norway, the Ministry of Finance is responsible for ensuring a coordinated budget to foster SDG implementation. It assigns each of the 17 Goals to a coordinating ministry who must co-operate with other ministries involved in the follow-up of relevant targets. Ministries’ progress reports are compiled by the Ministry of Finance and submitted to the parliament as part of the national budget annual White Paper.

3/ In Finland, through the “Government Implementation Plan”, SDG-related objectives will be included in the performance targets and performance management of ministries and in budgetary planning process.

Those three examples, by tracking and assessing budgetary programs and fiscal expenditures against SDG gaps, pave the way to the issuance of sovereign SDG bonds. If occurring, it would strengthen the monitoring of SDG gaps and trends and increase political accountability. Spain also stated its intention to use the SDGs as a blueprint for its policies by evaluating the impacts of new laws on their achievement. Few countries, such as Benin and Ireland, have reportedly calculated the cost of investment for national implementation of SDGs (see the interview of Elisabeth Hege, from IDDRI). Note that the 2019 HLPF will be placed under the aegis of the United Nations General Assembly. France committed to complete its national roadmap by then, which should be presented by the French President Emmanuel Macron.

This French 2030 Agenda roadmap “will be based on a review of public policies against the SDGs and will define priorities for France’s action to achieve them [...] to lay the foundations for the future French 2020-2030 strategy for sustainable development” (February 2018 conclusions of the French Inter-Ministerial Committee on International Cooperation and Development (CICID). If linked to budgetary expenditures, this 2030 roadmap could pave the way to the issuance of an SDG OAT, building on the success of the Green OAT. Note that the conclusions of the French Inter-Ministerial Committee on Cooperation and Development (CICID) chaired by the Prime Minister on February 8, 2018 state that “the government will make its budget performance indicators (PAP/RAP) more consistent with the SDGs, where relevant and possible, while maintaining dedicated indicators of effectiveness and efficiency”. In our view, the use of SDGs in budgeting for SSAs, and financing for corporates, is the best way to overcome the challenge of SDG contribution superficiality. It provides additionality in the way it better informs decision about fiscal expenditures (or allocation of resources, i.e OPEX and CAPEX for companies). Evidence-based impact reporting expectations from investors, as illustrated in our survey of investors, would create a new form of accountability between policy makers and sustainable bond holders.

The IDDRI (Hege, E., Brimont, L (2018). Integrating SDGs into national budgetary processes. Studies N°05/18, IDDRI, Paris, France, 20 p.) has identified several ways in which countries integrate the SDGs into budgeting processes. First, mapping budgets against the SDGs and qualitative reporting in main budget document, second, using SDG to improve budget performance evaluation system or as a management tool for resource allocation and arbitration. Another step forward is assessing the antagonistic or synergistic effects of different programs to improve policy coherence. Courts of audit could play a key role in such evaluations. Of the 64 countries that submitted a national voluntary review during the 2016 and 2017 sessions of the High-level Political Forum (HLPF), 23 mentioned ongoing measures to link the SDGs to the national budget, or that they had considered such action.

■ MAIN INSTITUTIONAL MECHANISMS FOR SDG IMPLEMENTATION IN 20 OECD COUNTRIES

	STRATEGIC FRAMEWORK / ACTION PLAN	INSTITUTIONAL MECHANISMS FOR COORDINATION/ENGAGEMENT	INTERNATIONAL CO-OPERATION
BELGIUM	National Sustainable Development Strategy (approved in 2017) Federal Sustainable Development Strategy The Flanders Sustainable Development strategy The Wallonia Sustainable Development strategy The Brussels-Capital Region strategy	The Inter-ministerial Conference for Sustainable Development (IMCSD) involves federal, regional and community ministers for sustainable development and development cooperation The Inter-departmental Commission for Sustainable Development (ICSD) Federal Council for Sustainable Development Federal Institute for Sustainable Development (IFSD) Advisory Council for Policy Coherence for Development http://www.SDGs.be collects actions undertaken in the provinces and local governments	
CHILE	Government Programme (2014-2018) Energía 2050	National Council for the Implementation of the 2030 Agenda, composed of the Ministry of Foreign Affairs, the Ministry of Economic Affairs, Business Development and Tourism, the Ministry of Social Development and the Ministry of the Environment Government Network for the SDGs involving 23 ministries "Dialogues for a Sustainable Chile" organised by civil society National Indigenous Council Council of Social Responsibility for Sustainable Development of the Ministry of Economic Affairs	
CZECH REPUBLIC	The "Czech Republic 2030" (adopted in April 2017)	Government Council for Sustainable Development (GCSD) chaired by First Deputy Minister and Minister for the Environment Department of Sustainable Development Interdepartmental Development Cooperation Council	The new Development Cooperation Strategy of the Czech Republic 2018 – 2030 will reflect the SDGs
DENMARK	National Action Plan for the SDGs	Ministry of Finance (responsible for coordinating national implementation) Ministry of Foreign Affairs (responsible for international engagement in support the 2030 Agenda and the SDGs) Inter-ministerial SDG working Group	Strategy for Development Policy and Humanitarian Assistance New Development Strategy "The World 2030"
ESTONIA	Estonian Sustainable Development Strategy Sustainable Estonia 21	Inter-ministerial working group led by the Government Office Strategy Unit Estonian Sustainable Development Commission	Strategy for Estonian Development Cooperation and Humanitarian Aid 2016-2020
FINLAND	The Finland we want by 2050 (updated in 2016) Government's Plan for the 2030 Agenda (submitted to Parliament in 2017)	The Prime Minister's Office is responsible for coordinating national implementation. An interministerial Coordination Network with focal points from each ministry supports the PMO National Commission on Sustainable Development (NCSD) The Development Policy Committee (DPC)	International Development Policy (updated in 2016) is steered by the 2030 Agenda
FRANCE	National Strategy of ecological transition towards sustainable development 2015-2020 National reform program (French transposition of Europe 2020, EU's ten-year jobs and growth strategy)	The General Commissariat for Sustainable Development (CGDD), mandated by the Prime Minister, in close partnership with the Ministry for Europe and Foreign Affairs (MEAE) Network of senior sustainable development officials The National Council for Development and International Solidarity (CNDSI) The National Council for the Ecological Transition (CNTE)	France's Development Strategy and Multiannual Development and International Solidarity Policy Act (2014)
GERMANY	German Sustainable Development Strategy (adopted in January 2017)	The State Secretaries' Committee chaired by the Head of the Federal Chancellery Parliamentary Advisory Council on Sustainable Development Sustainable Development Council Ministry Coordinators for Sustainable Development Directors' working group for sustainable development (UAL-AG)	

Source: OECD, 2018, Policy Coherence for Sustainable Development 2018: Towards Sustainable and Resilient Societies, OECD Publishing, Paris.
<http://dx.doi.org/10.1787/9789264301061-en>

	STRATEGIC FRAMEWORK / ACTION PLAN	INSTITUTIONAL MECHANISMS FOR COORDINATION/ENGAGEMENT	INTERNATIONAL CO-OPERATION
ITALY	National Sustainable Development Strategy 2017/2030 (NSDS) Plan of Action (under development) National Reform Programme and the Economy and Financial Document	Prime Minister leads coordination with the support of the Ministry for the Environment, Land and Sea and the Ministry of Foreign Affairs The Ministry of Finance will be tasked to create strong synergies between the NSDS implementation and the formal economic policies	Three-year Strategic and Planning Document of the Italian Development Cooperation (2016-18)
JAPAN	SDGs Implementation Guiding Principles SDGs Action Plan 2018	Cabinet body "SDGs Promotion Headquarters", headed by the Prime Minister Public Private Action for Partnership (PPAP) SDGs Promotion Roundtable Meetings "Japan SDGs Award"	
LUXEMBOURG	National Plan for Sustainable Development Law of 25 June 2004 on coordination of national sustainable development policy	Interdepartmental Sustainable Development Commission High Council for Sustainable Development Inter-ministerial Committee for Development Co-operation	
MEXICO	National Development Plan National Strategy for Implementation of the 2030 Agenda (under development) National Platform for Monitoring the SDGs	National Council for the 2030 Agenda for Sustainable Development (launched in 2017) Senate's Working Group for the Legislative Follow-up of the SDGs Commission for Compliance with the 2030 Agenda under The National Governors' Conference	
NETHERLANDS	Dutch Coalition Agreement	Minister for Foreign Trade and Development Cooperation, supported by an SDG-Coordinator. The SDG Coordinator leads an interministerial working group of focal points to support a coherent implementation of the SDGs.	New policy on Foreign Trade and Development Cooperation, embedded within broader foreign policy, will take SDGs as guiding framework Action plan and annual report on policy coherence for development, aligned with SDGs.
NORWAY	National Strategy for Sustainable Development (updated 2011)	Ministry of Finance and coordinating Ministries The Storting (Norwegian parliament) Inter-ministerial contact group led by the Ministry of Foreign Affairs	
PORTUGAL	A part of the sustainable development goals were already enshrined in the Constitution. Intra-governmental guidelines for the 2030 Agenda adopted by the Council of Ministers in 2016.	Ministry of Foreign Affairs and the Ministry of Planning and Infrastructures lead coordination 2 Commissions responsible for 1) the interministerial coordination of foreign policy, and 2) for co-operation policy Network of focal points from different government departments	
KOREA	2015 Sustainable Development Act Third Basic Plan for Sustainable Development	Commission for Sustainable Development Committee for International Development Cooperation Ministry of Foreign Affairs and Ministry of Environment	Framework Act on International Development Cooperation
SLOVENIA	Vision of Slovenia 2050 Slovenian Development Strategy 2030	Government Council for Development	
SWEDEN	Policy for Global Development (PGU)	Minister for Public Administration Minister for International Development Cooperation and Climate Consultation group for the 2030 Agenda Inter-ministerial working group for the 2030 Agenda The Scientific Council for Sustainable Development Multi-stakeholder National Committee	
SWITZERLAND	Sustainable Development Strategy (SDS) 2016–2019	Interdepartmental Sustainable Development Committee (ISDC) National 2030 Agenda Working Group	
TURKEY	10th National Development Plan 2014-2018 and Primary Transformation Programs 11th National Development Plan	High Planning Council Ministry of Development (contact point) Sustainable Development Coordination Commission led by the Ministry of Development Turkish Co-operation and Co-ordination Agency (TIKA)	Legal Framework on Development Cooperation (2011)

Source: OECD, 2018, Policy Coherence for Sustainable Development 2018: Towards Sustainable and Resilient Societies, OECD Publishing, Paris.
<http://dx.doi.org/10.1787/9789264301061-en>

JOINT INTERVIEW

SDG ROADMAPS INTEGRATION IN PUBLIC POLICIES AND BUDGET PROCESSES

This in-depth interview of two experts whose organizations are involved in implementing the 2030 Agenda addresses some thrilling questions. Will the increasing use of budgetary processes to align public policies with the SDGs open the way to the issuance of sovereign SDG bonds? It is not yet planned but it is definitely possible. At different levels of policy making, national and supranational (including the EU), integrating the SDG across different institutional mechanisms is not a question of why but of how. The foundations are laid for an increasing role of the SDGs into public policies design, evaluation and financing.

Q1. Mexico has incorporated in its Budgeting Process for the Fiscal Year 2018 elements and specific actions so that federal agencies and entities can link their authorized program structures with the SDGs. In Norway, the Ministry of Finance is responsible for ensuring a coordinated budget to foster SDG implementation. Do you think further states will follow?

Countries use the SDGs in different ways in their budgetary processes, for example to map the link between budgetary programs and SDGs (the Mexican example you cite) or to trace expenditures on each SDG (Nepal).

Elisabeth Hege

Elisabeth Hege: Of the 64 countries that submitted a national voluntary review during the 2016 and 2017 sessions of the High-level Political Forum (HLPF), 23 mentioned ongoing measures to link the SDGs to the national budget, or that they had considered such action. At IDDRI, we have studied some of these examples, most of them being still at an early stage. Countries use the SDGs in different ways in their budgetary processes, for example to map the link between budgetary programs and SDGs (the Mexican example you cite) or to trace expenditures on each SDG (Nepal). SDGs can also be useful to improve budget performance evaluation systems (Mexico), to assess the impact of taxes and subsidies on a selected number of SDGs (Finland) or to identify investment needs (Benin).

Q2. Do you think the SDGs can be used as a management tool for re-

source allocation and arbitration? Especially at the European Level? Do you think the European Commission's Sustainable strategy for the implementation of the UN 2030 Agenda and the SDGs could have gone further and how?

Regarding the CAP, the SDGs could provide a basis on which to discuss the reformulation of its policy objectives from a sustainability point of view.

Elisabeth Hege

Elisabeth Hege: The European Commission is in the process of preparing a reflection paper on SDG implementation in and by the EU. In November 2016, the Commission already communicated its will to work towards a “full integration of the SDGs in European policy framework”. While this is a positive signal, the practical way in which this will be done still needs to be specified. Until now, the EU hasn't defined a real strategy giving a clear vision and priorities for 2030, with measurable targets. There are important debates at the European level at the moment, for example on the future European budget or the reform of the Common Agricultural Policy (CAP) and the SDGs could be used as a legitimate basis since all the Member States have signed these ambitious agenda. In reality, the weight of the SDGs in these debates seems rather limited, however. The EU could learn from some of the best practices in Member States for its own budgetary discussions. It could also think about how to support Member States in better aligning their budgets with the SDGs and climate objectives and about the role the Growth and Stability



Elisabeth Hege, Institut du Développement Durable et des Relations Internationales (IDDRI), Research Fellow, Governance and Financing for Sustainable Development



Guido Schmidt-Traub, Sustainable Development Solutions Network (SDSN), Executive Director



Pact should play in this. Regarding the CAP, the SDGs could provide a basis on which to discuss the reformulation of its policy objectives from a sustainability point of view. Together with the Paris Agreement it is a legitimate basis to justify greening measures, better taking into account climate change but also impacts on biodiversity and societal issues like decent jobs and health. Demonstrating the value added for sustainable development is even more critical in a context where the Commission has proposed budget cuts for the CAP.

The IMF Fiscal Affairs department will publish findings of a study on SDG financing in low and middle-income countries.

Guido Schmidt-Traub

Guido Schmidt-Traub: I would add that on September 24 the IMF Fiscal Affairs department will publish findings of a study on SDG financing in low and middle-income countries. In it the IMF lays out specific recommendations for resource mobilization and budgeting for the SDGs that will help countries use the goals as a management tool.

Q4. Are you aware of countries that have calculated the cost of investment for national implementation of SDGs?

Among the G20, India stands out as having conducted one of the most thorough SDG investment needs assessment.

Guido Schmidt-Traub

Guido Schmidt-Traub: A number of countries have undertaken such assessments. In particular, UNDP has been supporting several countries in preparing SDG needs assessments, but this work remains incomplete and non-systematic. To my knowledge it does not yet drive national budgeting in a significant way. This may well change with the IMF's increased interest in these issues. Among the G20, India stands out as having conducted one of the most thorough SDG investment needs assessment. We are not aware of industrialized economies that have conducted such analyses.

Colombia uses the SDGs to identify investment needs and to communicate them to the private sector and foreign investors.

Elisabeth Hege: After having identified priority targets for Benin, a costing exercise will evaluate the financial resources needed for SDG implementation. Similarly, Slovakia, has defined 6 national sustainable development priorities and now plans to integrate them into a 2030 strategy, as well as into sectoral strategies and into a national investment plan. Colombia uses the SDGs to identify investment needs and to communicate them to the private sector and foreign investors. It is striking to note that there is a wide difference in the use of the SDGs in the budget process depending on the country type. High-income countries use the SDGs more as a framework for integrating qualitative reporting in the budget proposal and to improve the narrative of a budget proposal. The low and middle-income countries that we have looked at in our study mainly map the budget according to SDGs to enable the tracking of expenditure on the different goals and/or targets. This could be linked to the desire to meet the expectations of international donors. Colombia, in a pilot project aims to signal investment needs to international private and public donors. Colombia is an interesting example: not only have they developed a text analysis tool to determine links between their budget and the different SDGs, but they also work on a national document that sets national targets for 2030, so called cross-cutting accelerator targets that aim to work towards the Agenda 2030 as a whole. In this process, the SDGs have allowed to identify gaps and bring new issues to the agenda, such as food waste. Once these targets are identified, they want to know the cost to achieve them and the kind of investments needed.

Q5. Do you think that the issuance of SDG sovereign bonds could help to operationalize 2030 Agenda at the global (for instance MDBs), national, and sub-national levels? Would it help to start a process of data-driven and evidence-based implementation and follow-up?

Guido Schmidt-Traub: MDBs have a large impact on infrastructure financing as well as some corporate bonds. Once they start issuing SDG bonds this will have a significant impact, particularly in project finance. This process has already started with the World Bank's SDG bonds, but this product has yet to be applied to mainstream World Bank financing. We understand that other multilateral development finance institutions are considering their own SDG bonds.

Q6. Once SDG implementation priorities for a country are identified, using for instance SDSN's gaps analysis, does it open the way to the identification of public expenditures that contribute to filling those gaps and might be as such eligible as proceeds for a SDG bond?

Guido Schmidt-Traub: Our assessment of SDG financing needs provides orders of magnitude of public as well as private financing needs. Such analyses must be conducted at the country level to generate numbers on which investment strategies can be designed. Bringing greater clarity to investment needs at the country level is a critical next step in operationalizing the SDGs. Some middle-income countries will be in a position to issue SDG bonds while low-income countries will have to rely predominantly on domestic resource mobilization and concessional international financing.

Q7. When it comes to social, green or sustainability bonds reporting, how can issuer countries report on the progress towards implementing the 17 SDGs achieved thanks to proceeds of their bonds? Are the SDG dashboards realized by the SDSN a good tool for that? How can they consistently assess the contribution of those proceeds to the improvement of sub-SDG targets? What are the input and outcome metrics they could use to track progress, for instance on education or health?

Traditional ESG standards for project finance tend not to quantify the contribution a project makes towards achieving the SDGs at the national level. This gap needs to be urgently closed.

Guido Schmidt-Traub

Guido Schmidt-Traub: This is a good question to which we don't have a fully satisfactory answer. The national SDG Index and Dashboards published by the SDSN and the Bertelsmann Stiftung track national-level progress towards the SDGs, but these numbers cannot be applied directly to the project level. Traditional ESG standards for project finance tend not to quantify the contribution a project makes towards achieving the SDGs at the national level. This gap needs to be urgently closed. We are in discussion with several data providers and development finance institutions who are working on this issue. I hope to see initial products becoming available over the next year.

Q8. What could be the role of the civil society and the private sector in formalizing and implementing the French national SDG roadmap?

There is a window of opportunity between now and spring 2019 for non-state actors to get involved in the elaboration process of the French SDG roadmap.

Elisabeth Hege

Elisabeth Hege: In France, for example, there is a window of opportunity between now and spring 2019 for non-state actors to get involved in the elaboration process of the French SDG roadmap. Ideally, this roadmap will contain clear and verifiable measures and targets and provide a long-term vision for sustainable development needs. Financial actors in France could lead by example and propose their own commitments. If voluntary commitments are taken, it is crucial, however, that there is a follow-up and that they are verifiable. The Agenda 2030 is based on the idea of partnership between actors. So why not imagine a collaboration between financial actors and NGOs to develop innovative and credible commitments and instruments in the financial sector?

Q9. The 2019 HLPF will be placed under the aegis of the United Nations General Assembly. France committed to complete its national roadmap by then, which should be presented by the French President Emmanuel Macron. If linked to budgetary expenditures, would you say it could pave the way to a SDG OAT, building on the success of the Green OAT ?

I expect that the French SDG roadmap will identify the need for greater long-term investments in infrastructure and human capital, so this question may very well arise.

Guido Schmidt-Traub

Guido Schmidt-Traub: It is great to see France's commitment to presenting a national roadmap during the first 5-year review of the SDGs, which will take place in New York in one year. France and other European governments have for some time been raising the question how long-term infrastructure and other capital investments should be reflected in national accounts. Currently, public investments are treated as a consumption expenditure, which is of course not correct. I expect that the French SDG roadmap will identify the need for greater long-term investments in infrastructure and human capital, so this question may very well arise. In this context OAT might indeed be a good way to mobilize more capital for long-term investments in France.





C. INVESTMENTS SOLUTIONS

■ INVESTMENT CASE WITH SOVEREIGN BONDS ON SDG 4- EDUCATION



WE PRESENT IN THIS SECTION OUR METHODOLOGY TO SELECT A BASKET OF SOVEREIGNS' BONDS THAT OFFER A POSITIVE CONTRIBUTION TO ACHIEVE THE SDG 4 - EDUCATION GOAL.



Executive summary

Why sovereign debts and Education? SDG goals are defined at state-level. In a quite obvious relationship, sovereign debts appear a very appropriate investment tools to finance government's efforts to reach their targets at country level. At sovereign debt level, we decided to give priority to SDGs for which we consider that the central/federal government has the ability to deliver material impact. It's the case for Education.

We acknowledge that Education is not the only field where governments represent the major actor to contribute in the achievement of the SDG goal. Yet, education hardly ever crosses minds when it comes to SDG-oriented investment, as opposed to SDG 7 – Affordable and clean energy, SDG 9 - Industry, innovation & infrastructure and SDG 13- Climate action.

For the purpose of this study, we use several official sources of information including the Sustainable Development Solutions Network (SDSN) Dashboards Report, OECD/PISA 2015 Results and OECD Database on Education. We also refer to Vigeo indicators for Sovereign ESG ratings.

After crunching Education-related indicators and numbers, we developed a holistic Education scoring system that can be used for investment process which seeks positive contribution to SDG 4.

Our step-by-step methodology

In line with our developed framework for SDG diagnosis / contribution, our approach, here, is composed of two distinct stages with dedicated purposes.

The **Step 1** consists in defining the geographic areas where it makes most sense to take action. It means we don't consider countries that already met their target as most relevant candidates for our basket but rather the ones that are still far from reaching the goals.

This constitutes a very strong assumption, suggesting another vision of the “best-in class/universe” approaches, since, we give an overarching weight to the notion of SDG gaps, to both introduce the notion of impact and that of “investing where it's most needed”. But we would also, of course, avoid states that do not provide efforts to achieve the goal as well as those that are not heading in the right direction.

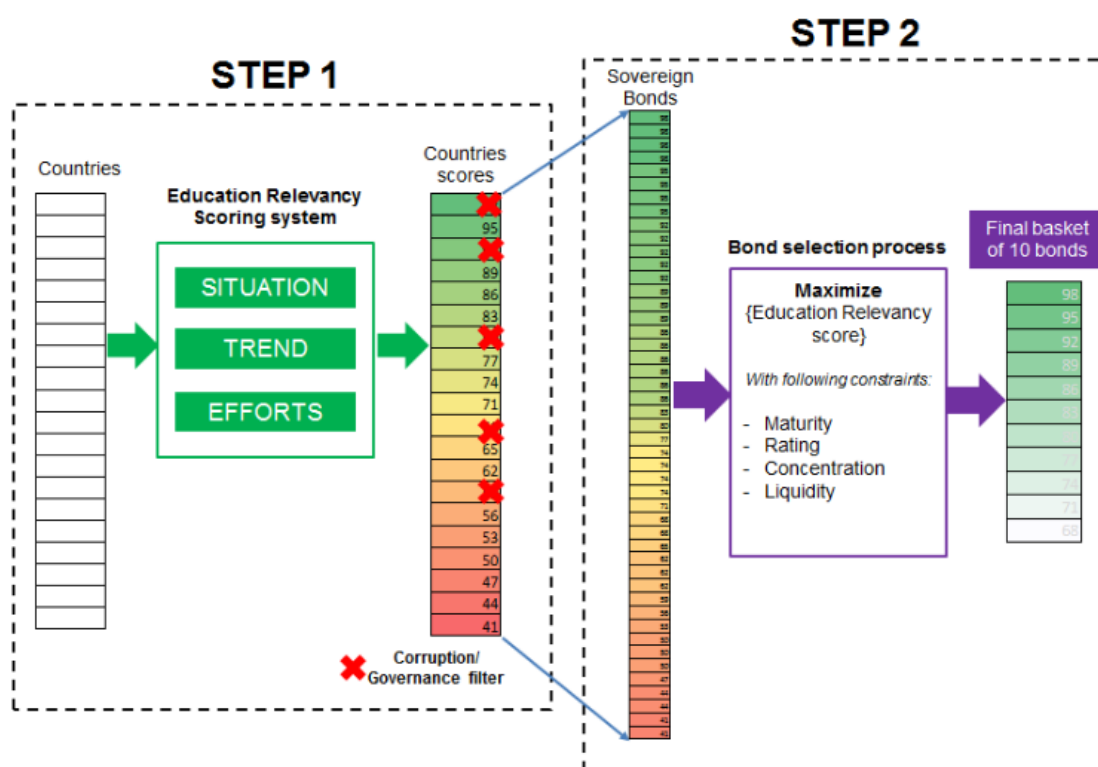
This Step 1 answers to three majors questions:

- Situation: How far is the country from their Education goal?
- Trend: How fast is the country moving towards its target?
- Efforts: How much of resources does the country roll out in order to reach the goal?

We finally exclude countries with material Corruption/governance risk and those for which missing data prevent from having a consistent assessment on the Education Relevancy score. As the outcome of the first step, we end up with an “**Education Relevancy score**” for each country.

The **Step 2** is a bond selection process with financial constraints. We build a basket that present the highest possible “Relevancy score” and comply with a certain number of practical constraints. As top performers in terms of “Education Relevancy” do not always abide by investor's constraints (risk, yield target, maturity, concentration), this step allows to take into account usual portfolio managements rules. At the end of this second step, we finally obtain a basket of bonds that meet both financial targets and optimized relevancy.

■ OUR APPROACH IN A NUTSHELL





It always starts with “why”

Why sovereign debts? SDG goals are defined at state-level. In a quite obvious relationship, sovereign debts appear a very appropriate investment tools to finance government’s efforts to reach their targets at country level. Yet, all the targets are not equally addressed at state-level, notably because the main required actions to succeed in many SDGs do not necessarily involve state governments but often (non bond-issuing) local authorities or rather private actors.

Why the SDG 4 – Education? At sovereign debt level, we decided to give priority to SDGs, for which we consider that the central/federal government has the ability to deliver material impact. It’s the case for Education.

We acknowledge that Education is not the only field where governments represent the major actor to contribute in the achievement of the SDG goal. Yet, education hardly ever crosses minds when it comes to SDG-oriented investment, as opposed to SDG 7 – Affordable and clean energy, SDG 9 - Industry, innovation & infrastructure and SDG 13- Climate action.

This double reason explains why SDG 4 - Education represents an interesting investment case on sovereign debts. Yet, a framework needs to be built so as to identify the most pertinent relationship between the bond and the Education impact. We show in this section a step-by-step methodology to factor in this single-SDG approach to select a basket of sovereign bonds.

Digging for data

Sound metrics and data are critical for turning SDGs into practical tools for SDG-oriented investments. However, availability and disclosure of data to score countries’ SDG performance are far from perfect. For the purpose of this study, we use several official sources of information including:

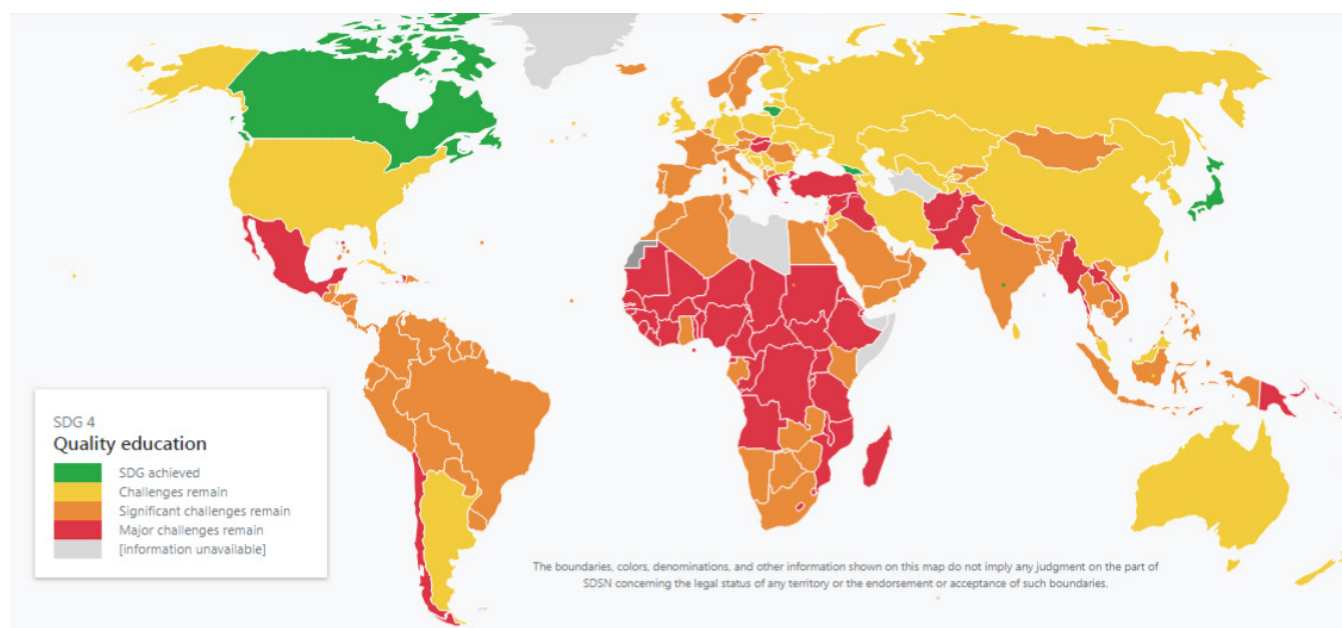
- the Sustainable Development Solutions Network (SDSN) Dashboards Report which provides the SDG Index score for each of the 17 SDG goals
- OECD/PISA 2015 Results
- OECD Database – Education
- Corruption Perception Index, provided by Transparency International

As well as:

- Vigeo indicators for Sovereign ESG ratings

After crunching Education-related indicators and numbers, we developed a holistic Education scoring system that can be used for investment process which seeks positive contribution to SDG 4.

■ SDG INDEX AND DASHBOARDS REPORT 2018 – FOCUS ON QUALITY EDUCATION



Source: <https://dashboards.sdgindex.org>

Our step-by-step methodology

In line with our developed framework for SDG diagnosis / contribution, our approach, here, is composed of two distinct stages with dedicated purposes.

The **Step 1** consists in defining the geographic areas where it makes most sense to take action. It means we don't consider countries that already met their target as most relevant candidates for our basket but rather the ones that are still far from reaching the goals. This constitutes a very strong assumption, suggesting another vision of the "best-in class/universe" approaches, since, we give an overarching weight to the notion of SDG gaps, to both introduce the notion of impact and that of "investing where it's most needed".

But we would also, of course, 1/ avoid states that do not provide efforts to achieve the goal and 2/ those that are not heading in the right direction. We end up with an **"Education Relevancy score"** for each country.

We then define 2 additional filters in order to exclude 1/ countries with material Corruption/governance risk and 2/ those for which missing data prevent from having a consistent assessment on the Education Relevancy score.

The **Step 2** is a bond selection process with financial constraints. We build a basket that must 1/ present the highest possible "Relevancy score" and 2/ comply with a certain number of practical constraints. As top performers in terms of "Education Relevancy" do not always abide by investor's constraints (risk, yield target, maturity, concentration), this step allows to take into account usual portfolio managements rules. At the end of this second step, we obtain a basket of bonds that meet both financial targets and optimized relevancy.

For liquidity and feasibility reasons, we restrict our study universe to euro and dollar-denominated debts with an outstanding of over 1bn. Yet only a proportion of sovereigns have recourse to euro and dollar-denominated instrument for their funding. This constraint therefore reduces the geographic possibilities down to 75 countries and excludes 81 countries out of the 156 for which SDG index score is available.

We present hereafter the details of each step.

STEP 1 – Education Relevancy scoring

At this stage, the main objective is to identify the most relevant countries where an investment in sovereign debts could positively contribute in the achievement of the SDG 4 goal.

In practice, we define a methodology to attribute individually to each country an "Education Relevancy score". This score is not


a static performance score. Our Education Relevancy score encompasses not only the country current situation but also its willingness to achieve the SDG. Consequently, a high Education Relevancy score doesn't suggest a high SDG 4 performance. On the contrary, it favors low SDG 4 performances yet with positive dynamics and great efforts to achieve SDG 4.

Only such a global approach can motivate an investment in sovereign debts: we don't see great value when SDG impact/contribution is at the heart of the stated investment objective, in selecting countries that already met their targets. Quite intuitively, we are not suggesting neither investing in countries that demonstrate negative dynamic or show few efforts to reach the target.

Our Education Relevancy scoring system is composed of 3 pillars as explained in the following chart.

I. Situation score - How far is the country from their Education goal?

$$\blacksquare \text{ COUNTRY EDUCATION RELEVANCY SCORE} = \text{AVERAGE (SITUATION SCORE + TREND SCORE + EFFORTS SCORE)}$$

SITUATION	TREND	EFFORT
<p>SDSN \$06 4 performance [0;100%]</p> <ul style="list-style-type: none"> • Net primary school enrolment rate (%) • Mean years of schooling (years) • Literacy rate of 15-24 year old (%) <p>PISA performance [-10%;+10%]</p> <ul style="list-style-type: none"> • PISA score • Share of resilient students among disadvantaged students (%) • Low performers in science (%) • Science performance explained by socioeconomic background • Population with tertiary education (%) • Young people who are Not in Employment, • Education or Training (%) • Early school leavers (%) 	<ul style="list-style-type: none"> • SDG 4 trend [0:4]  <ul style="list-style-type: none"> • SDG Gap Adjustment, which is a normalized SDG Gap in the range of 20%; +20%] 	<p>Quantitative score [0%;100%];</p> <ul style="list-style-type: none"> • Education expenditure as a percentage of GDP [70%] • Cumulative expenditure by educational institutions per student aged 6 to 15 (2013) per GDP [1096] • Class size in language-of-instruction class [10%] • Teacher salaries - Ratio of salaries after 15 years of experience to per capita GDP in lower secondary [10%] <p>Qualitative score [0%;100%];</p> <ul style="list-style-type: none"> • Change in equity index in material resources allocation • Change in equity index in human resources allocation
<p>Situation score (%) = (100% - SDSN SDG 4 performance) x (1 + PISA 2015 performance)</p>	<p>Trend Score = SDG 4 Trend x (1 +</p>	<p>Efforts score (%) = Quantitative score x (1+ Qualitative score)</p>
<p>Country Education Relevancy score = Normalized (Situation Score + Trend Score + Efforts Score)</p>		

This score assesses the Gap between the country's current situation and its target. Countries that face a long way to targets have higher scores than those close to their goal, as we prefer choosing geographical zones where Education-related financings are the most needed. The score is computed as follow:

$$\text{Situation score (\%)} = (100\% - \text{SDSN SDG 4 performance}) \times (1 + \text{PISA 2015 performance})$$

Where the SDG 4 performance is in the range of [0%; 100%] and the PISA 2015 performance is in the range of [-5%; 5%].

We detail hereafter the indicators used in the calculation.

SDSN SDG 4 performance. In the SDSN methodology, the SDG 4 performance is the average of three indicators. The score describes countries' progress towards achieving the SDGs and indicates areas requiring faster progress. The score can be interpreted as the percentage of achievement and the difference between 100 and countries' scores is therefore the SDG gap, i.e. the distance in percentage that needs to be completed to achieving the goals. Note that we rescale each of these 3 indicators so as to obtain normalized data in % between 0% and 100% before computing the average. Data is available for the 75 countries in our universe for 2016.

1. **Net primary school enrollment rate (%):** number of pupils of official primary school age who are enrolled in primary education as a percentage of the total children of the official school age population.
2. **Mean years of schooling (years):** average number of completed years of education of a country's population, excluding years spent repeating individual grades.
3. **Literacy rate of 15-24 year old (%):** proportion of the population aged 15–24 years who can both read and write with understanding a short simple statement on everyday life.

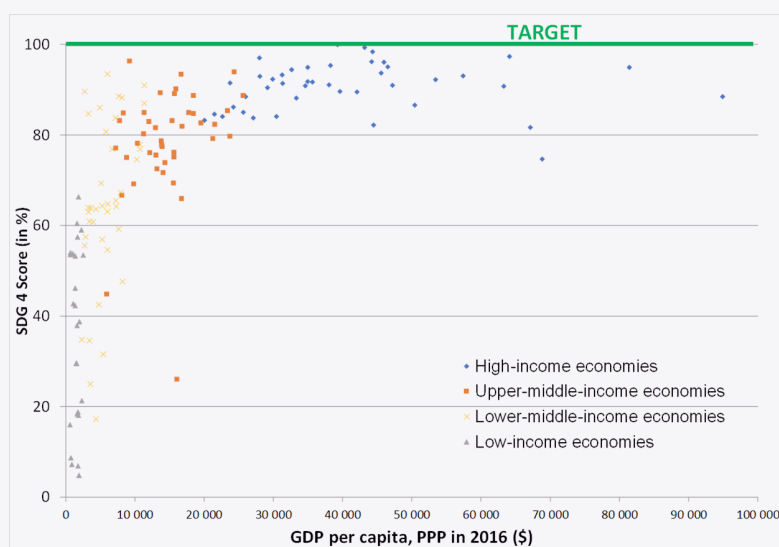
PISA 2015 performance. In order to have a more precise view, we complete the previous list of indicators with 7 other indi-

cators, as of now available only on countries that participated in the PISA survey, i.e. 33 in average out of 75 countries in our universe. We also rescale each of these indicators but in this case so as to obtain normalized data in % between -5% and 5%. The idea of reducing this PISA score down in a short range is to avoid excessive bias between countries that participated in the PISA survey and those that did not.

4. **PISA score:** 15-year old school pupils' performance on mathematics, sciences and reading.
5. **Share of resilient students among disadvantaged students (%).** A student is classified as resilient if he or she is in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in the country/economy of assessment and performs in the top quarter of students among all countries/economies, after accounting for socio-economic status.
6. **Low performers in science (%):** percentage of students below level 2 (409 points).
7. **Science performance explained by socioeconomic background (%):** Some performance differences between schools may be related to the socio-economic composition of the school's student population or other characteristics of the student body. This indicator provides the percentage of variance in student performance in science explained by ESCS (strength of the socio-economic gradient).
8. **Population with tertiary education (%):** Population with tertiary education is defined as those having completed the highest level of education, by age group. This includes both theoretical programs leading to advanced research or high skill professions such as medicine and more vocational programs leading to the labour market.
9. **Young people who are Not in Employment, Education or Training (%):** This indicator presents the share of young people who are not in employment, education or training (NEET), as a percentage of the total number of young people in the corresponding age group, by gender.

SDG 4 performance and GDP per capita

As regards Education, few countries have already actually reached the target (SDG index score = 100%). The countries' performance is unsurprisingly highly correlated to the GDP per capita, with a convergence around the 90% area for High-income economies. A great dispersion of SDG 4 performance is observed for low-income, lower-middle-income groups and even part of upper-middle-income groups.



Source: SDSN Index and Dashboard report 2018

II. Trend score – How fast is the country moving towards its target?

The **Trend score** assesses the speed of progression towards the SDG 4.

Trend score (%) = SDSN SDG 4 Trend x (1 + SDG Gap Adjustment)

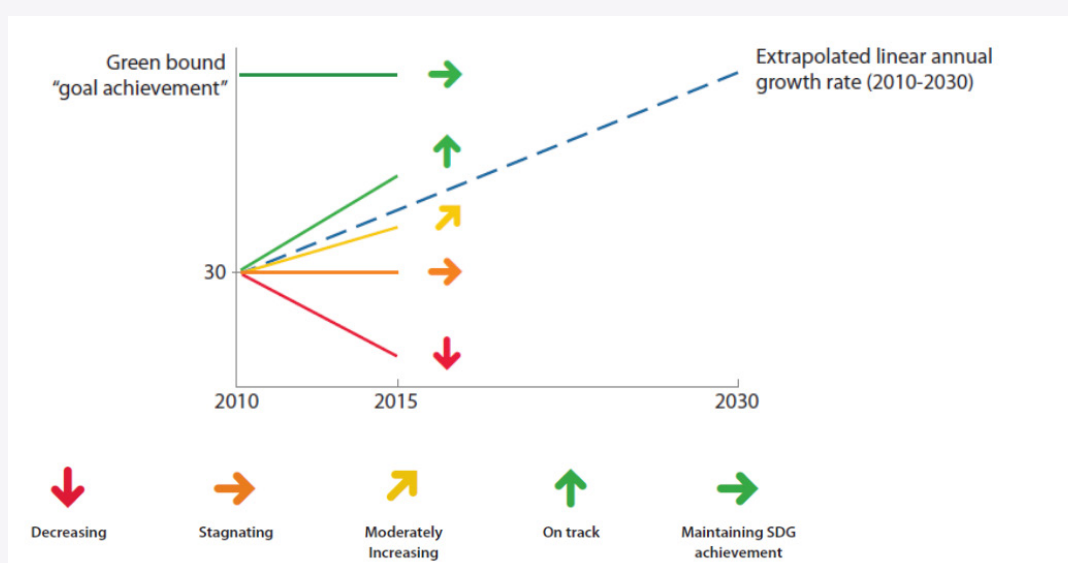
Where the SDG 4 performance is in the range of [0; 4] and the Situation Adjustment is in the range of [-20%; 20%].

We use the SDG trends provided by SDSN on the **SDSN SDG 4 performances**, materialized in a 5-arrow system that is converted into numbers from 0 and 4. See SDSN methodology below.

SDSN SDG Trend methodology. Using historical data, we estimate how fast a country has been progressing towards an SDG and determine whether – If we assume a stable pace of improvement in the future – this pace will be sufficient to achieve the SDG by 2030. For each indicator, SDG achievement is defined by the green threshold set for the SDG Dashboards. The difference in percentage points between the green threshold and the normalized country score denotes the gap that must be closed to meet that goal.

To estimate SDG trends, we calculated the linear annual growth rates (i.e. annual percentage improvements) needed to achieve the goal by 2030 (i.e. 2010-2030) which we compared to the average historical annual growth rate (i.e. yearly improvements) over the most recent period (usually 2010-2015). Progress towards goal achievement on a particular indicator is described using a 5-arrow system.

To estimate overall trends for an SDG, each indicator trend for that SDG was re-normalized on a linear scale from 0-4. The trend for an SDG was calculated as the arithmetic average of all trend indicators for that goal. An average between 0-1 corresponds to a “decreasing” goal trend, between 1-2 to a “stagnating” goal trend, 2-3 “moderately improving goal trend”, 3-4 “on track” goal trend. Maintaining SDG achievement corresponds to a normalized score of exactly 3. Trends are reported at the SDG level only if trend data were available for at least 75% of SDG Dashboards indicators under that goal.



Source: SDSN Index and Dashboards Report 2018

As the SDG trend system is based on the 2030 target, we seek to differentiate between countries with different SDG 4 gaps. For example, a country with a 50% SDG 4 performance will need to progress much more quickly than another with an 80% SDG 4 performance.

Consequently, we add an **SDG Gap Adjustment** factor which is the SDG Gap (=100% - SDG 4 performance) normalized in the range of [-20%; +20%]. A high score will be attributed to a country presenting a positive trend and a wide SDG 4 gap.

III. Efforts score – How much of resources does the country roll out in order to reach the goal?

This score assesses the Efforts intensity each country deploys to reach the target. We include quantitative data as well as qualitative data based on survey made by PISA. The score is computed as follows:

$$\text{Efforts score (\%)} = \text{Quantitative score} \times (1 + \text{Qualitative score})$$

The **Quantitative score** [0%; 100%] is composed of normalized indicators with respective weights and data source:

1. **Education expenditure as a percentage of GDP [70%] - provided by Vigeco:** General government expenditure on education (current, capital, and transfers) is expressed as a percentage of GDP. It includes expenditure funded by transfers from international sources to government. General government usually refers to local, regional and central governments.

2. **Cumulative expenditure by educational institutions per student aged 6 to 15 (2013) per GDP [10%] – provided by PISA 2015 Results:** Countries also vary by the financial resources invested in education. Even though financial education is only beginning to be introduced in school in many countries, education expenditure per student gives an indication of the overall resources devoted to schools.
3. **Class size [10%] – provided by PISA 2015 Results:** Class size can affect learning in various ways. Large classes may limit the time and attention teachers can devote to individual students, rather than to the whole class; they may also be more prone to disturbances from noisy and disruptive students. As a result, teachers might have to adopt different pedagogical styles to compensate, and these, in turn, might affect learning.
4. **Teacher salaries - Ratio of salaries after 15 years of experience to per capita GDP in lower secondary [10%] – provided by PISA 2015 Results:** Teachers' salaries represent the largest single share of expenditure on education (OECD, 2016b). School systems differ not only in how much they pay teachers, but in the structure of their pay scales.

Lower weights on the last 3 indicators are justified by missing values which would bring strong bias between countries for which data are available and the others

Qualitative score [0%; 100%]. There is no simple relation between expenditure and fairness in education systems as the amount of resources spent is as important as how they are used. How equitably resources are allocated across schools determines whether all students are given equal opportunities to learn.

For this reason, we add a Qualitative score ranging [-10%; +10%] composed of indicators on fairness of resources allocation regarding staff and material (see below for definition)

Qualitative score = **50% normalized in equity index in material resources allocation**
+ 50% normalized in equity index in human resources allocation

Excerpts from PISA 2015 Results – Equity on resources allocation

An equitable resource allocation would mean that the schools attended by socio-economically disadvantaged students are at least as well-equipped as the schools attended by advantaged students, to compensate for inequalities in the home environment. This is measured by the index of equity in resource allocation (material), which assesses the extent to which the socio-economic profile of a school is positively or negatively associated with the principal's concern about the lack or inadequacy of educational material at school.

Equity in resource allocation can also be measured by how concerned principals are about the human resources at their schools. An equitable allocation of human resources would imply that the schools attended by socio-economically disadvantaged students are at least as well-staffed as the schools attended by advantaged students, to compensate for the inequalities in the home environment. This is measured by the index of equity in resource allocation (staff), which measures the extent to which the socio-economic profile of schools is positively or negatively associated with principals' concern about the lack or the inadequacy of human resources at school.

IV. Mixing the numbers: Education Relevancy score

For each country, we computed the global Education Relevancy score by applying the formula presented above:

Education Relevancy score = Average (Situation Score + Trend Score + Efforts Score)

IV. Additional filters

In the final step, we apply two additional filters for dedicated purposes:

- Data quality filter: information is consistent only if they are supported by qualitative and sufficient figures. Thus, we exclude countries for which one pillar and more than 10 indicators are missing.
- Corruption/Governance filter: Generally speaking, corruption is the abuse of entrusted power for private gain. Corruption impacts societies in a multitude of ways and could represent a major obstacle to the achievement of SDGs. One of the most direct impacts on Education is scarce public investments in projects that benefit communities (schools, hospital and roads) in favor of the ones more in line with politicians' private interests.

As part of our impact-based analysis, the Corruption/Governance filter represents a major step in order to exclude countries where the corruption risk is material. We use for this filter the Corruption Perception Index (CPI) 2017 provided by Transparency International. The CPI aggregates data from 12 institutions that capture perceptions by business people and country experts of the level of corruption in the public sector (see <http://www.transparency.org/cpi> for more information). The CPI uses a scale of zero (highly corrupt) to 100 (very clean). Of the 180 countries assessed in the 2017 index, more than two-thirds score below 50.

In this study, we define a minimum CPI threshold at 40, under which countries are excluded from our basket. The table below shows the final countries basket, those excluded for risky Corruption Perception index being highlighted in gray.

Countries	Situation	Trend	Efforts	Education Relevancy Score	Corruption/ Governance filter
Morocco	38	89	70	66	40 excluded
Ireland	54	67	75	65	74
Korea, Republic of	50	67	70	62	54
Mexico	51	64	72	62	29 excluded
Venezuela	24	63	90	59	18 excluded
Portugal	36	65	71	57	63
Ukraine	12	66	90	56	30 excluded
Belgium	9	66	90	55	75
Ethiopia	79	24	60	54	35 excluded
Ghana	44	29	90	54	40
Qatar	17	97	48	54	63
Luxembourg	11	99	52	54	82
Italy	8	100	53	54	50
Bulgaria	45	65	52	54	43
Greece	15	98	44	52	48
Brazil	43	31	80	51	37 excluded
Vietnam	16	64	73	51	35 excluded
Costa Rica	20	32	100	51	59
Romania	44	32	76	51	48
Saudi Arabia	14	65	70	50	49
Austria	18	NA	81	50	75
Argentina	12	66	70	49	39 excluded
South Africa	26	31	90	49	43
Hungary	16	65	58	46	45
Malaysia	12	66	60	46	47
Colombia	55	31	51	46	37 excluded
Poland	10	66	61	46	60
El Salvador	36	60	40	45	33 excluded
Philippines	48	65	20	44	34 excluded
Zambia	64	59	10	44	37 excluded
Indonesia	54	31	44	43	37 excluded
France	8	NA	78	43	70
Pakistan	81	26	20	42	32 excluded
Spain	10	66	51	42	57

Sources :
 Authors' calculations
 SDSN, 2018, SDG Index and Dashboards
 OECD - PISA index of economic, social and cultural status (ESCS)
 Transparency international, Corruption Perception Index (CPI) 2017

STEP 2 – Sovereign bonds selection

In this bond selection process, we aim at picking a basket of 10 sovereigns bonds from 10 respective countries so as to maximize the relevance of the basket. While it would seem logical to select the top 10 performers from the above geographical relevancy analysis, investors' constraints make the selection process much less straightforward.

Alternative 1 – Maximizing Education Relevancy score

The first alternative consists in maximizing the weighted average Education relevancy score of 10-equally weighted bonds, under financial constraints. The optimization equation is the following:

$$\max \left(\sum_{i=1}^{10} w_i \text{Education Relevancy Score}_i \right)$$

Under the following constraints:

- $w_i \leq 10\%$
- $\sum_{i=1}^{10} w_i = 100\%$
- Rating at least BBB-
- Average residual maturity of 8 years
- Concentration limits on country (1 bond per country)

We obtain the following sovereign bonds basket, mainly composed of High Income and Upper- Middle Income Groups.

Issuer	Country code	Currency	Education Relevancy score	Income Group	Rating Moody's	Rating S&P	Rating Fitch	Maturity	Yield (%)
Ireland Government Bond	IRL	EUR	65	HIC	A2	A+	A+	15/05/2026	0.64
Korea International Bond	KOR	USD	62	HIC	Aa2	AA	AA-	19/01/2027	3.57
Portugal Obrigacoes do Tesouro OT	PRT	EUR	57	HIC	Ba1	#N/A/N/A	BBB	21/07/2026	1.51
Kingdom of Belgium Government Bond	BEL	EUR	55	HIC	NR	#N/A/N/A	AA-	22/06/2026	0.49
Qatar Government International Bond	QAT	USD	54	HIC	Aa3	AA-	AA-	02/06/2026	3.88
Luxembourg Government Bond	LUX	EUR	54	HIC	Aaa	AAA	AAA	01/02/2027	0.49
Italy Buoni Poliennali Del Tesoro	ITA	EUR	54	HIC	Baa2u *-	#N/A/N/A	BBB	01/06/2026	2.45
Bulgaria Government International Bond	BGR	EUR	54	UMIC	Baa2	BBB-	BBB	26/03/2027	1.23
Romanian Government International Bond	ROU	EUR	51	UMIC	Baa3	BBB-	BBB-	29/10/2025	1.54
Saudi Government International Bond	SAU	USD	50	HIC	A1	#N/A/N/A	A+	26/10/2026	4.07
Average			56						

Sources: Authors' calculations

Alternative 2 – Maximizing the average Yield

We acknowledge a second alternative consisting in maximizing the average yield under constraints on Education Relevancy scores (not detailed in this report). The optimization equation would be translated into the following:

$$\max \left(\sum_{i=1}^{10} w_i \text{Yield}_i \right)$$

Under the following illustrative constraints:

- Average Education Relevancy Score at 50 or Minimum Education Relevancy score of 45
- $w_i \leq 10\%$
- $\sum_{i=1}^{10} w_i = 100\%$
- Rating at least BBB-
- Average residual maturity constraint
- Concentration limits on country (1 bond per country)

■ Equity index – SDG basic services cluster

“SDG basic services cluster: factoring geographical footprint to reach universal access”

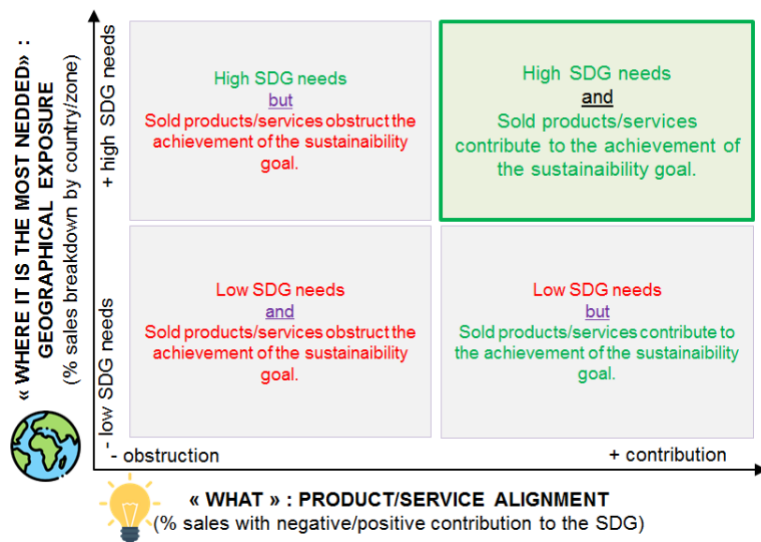


Executive summary

A step further in the SDG-based investment. The measurement of SDG contribution at corporate level requires a little more than ESG analysis legacy. An investment displayed as theoretically “making a difference and advancing the SDG” is no longer enough. There are questions that need answers: “as compared to what”, “where”, “upon whom” and “how much”. The SDGs, and the distance to reach them, are a formidable tool to apprehend those yardstick concerns.

“Where” matters as much as “what”. Equity contribution measurement is difficult to reach, notably the assessment of the footprint of all products and services, which presents the challenges of categorizing and localizing the sales/turnover. Through this double question mark, we aim at assessing, for each SDG, whether the products address the issue by 1/ its nature and 2/ the location of the sales, i.e. where the SDG needs related to those products are the most acute.

We distinguish inward contribution or obstruction to the SDGs, that refers to the internal sphere of the organization and its impacts through its own operations (upstream) and outward contribution or obstruction to the SDGs, that relates to the impact of the products and services sold (external/outbound focused). Although we acknowledge the necessity to integrate inward contribution, we chose in this specific study to focus on outward contribution, as the geographical breakdown data is for the moment limited to products/services sales and net income figures.



Why focusing on SDG Basic Services cluster? Our opinion is that attempting to embrace the 17 goals in the design of an equity investment solution has strong chances to dilute the targeting and purpose of such product. By contrast, it appeared to us that focusing on a cluster of few interconnected and tangible goals in their products and results was more in line with the overall SDG contribution methodology we have built and presented in this report. In particular, there are some SDGs that are key enablers to the achievement of the other goals by laying the right empowering foundations. We have chosen the 3 SDGs that are the most inextricably linked to the achievement of other goals: SDG 3 - Good health and well-being, SDG 6 - Clean water and sanitation, and SDG 7 - Affordable and clean energy.

Our methodology. We present in this study our methodology for selecting a basket of stocks that offer a positive contribution to achieve the SDG Basic Services cluster. The perimeter of the study is composed of the Stoxx Global 1800 members. Our methodology was driven by the following underlying questions for each company:

- **Do the products/services contribute to the achievement of the SDG?** To properly answer to the question, we decided to use the oSSS framework, an ISS-oekom methodology to measure the sustainability impacts of products and services at the company level. The oSSS assesses the overall, aggregated impact of a company's product portfolio on the achievement of sustainability objectives in the form of a score.
- **Where does the company operate?** For each company, we obtain an estimation of the (often undisclosed) sales breakdown by countries/regions using data reported by Worldscope/Reuters and retreated by Beyond Ratings. The locations split are communicated either at country-level or regional and give some more complexity in the geographical footprint assessment. In our understanding, this specific step represents the main hurdle for systematic location-based impact analysis.
- **How important are the SDG Gaps in locations where the company operates?** We use the Sustainable Development Solutions Network (SDSN) Dashboards Report which provides the country SDG Index score for each of the 17 goals. The SDG Index describes countries' progress towards achieving the SDGs and indicates areas requiring faster progress. By mixing the numbers, our methodology can factor companies' geographical footprint in their contribution in the achievement of respective SDGs. In practice, we eventually defined an individual "Basic Services contribution score" at company-level. This score allows launching the final selection process by picking the best companies based on their "Basic Services scores". Some additional constraints also come under scrutiny:

- we exclude companies with products/services with net obstruction to one of the four sustainability goals in order to avoid harmful side-effects.
- we exclude companies with ESG rating in negative or risk categories, based on the ISS-oekom-Mirova rating methodology. This filter allows taking into account the global sustainability opinion of the corporates (environmental, social and governance).
- we limit the sector industry sector concentration of the portfolio at 10%. By the nature of their products/services, Health Care-related industries or Pharmaceutical companies have higher Target scores (even after our Adjustment treatment). For the purpose of this study, we favor diversification across sectors.
- we apply a double liquidity filter with a minimum market capitalization outstanding of eq. €1bn and a minimum turnover amount of eq. €10mn.

As the outcome of these successive steps, we end up with a basket of 50 tradable liquid stocks that bring positive contribution to the achievement of basic services goals in geographic areas where the issues are the most severe.

Detailed solution: Investment case with an Equity index solution

“SDG basic services cluster: factoring geographical footprint to reach universal access”

We present in this section our methodology for selecting a basket of stocks that offer a positive contribution to achieve the SDG 3 (Good health and well-being), SDG 6 (Clean water and sanitation) and SDG 7 (Affordable and clean energy). The perimeter of the study is composed of the Stoxx 1800 members.



Our opinion is that attempting to embrace the 17 goals in the design of an equity investment solution has strong chances to dilute the targeting and purpose of such product (in the same way we observed with multi-criteria ESG screenings). Though, this is something we might look into its feasibility in the future. By contrast, it appeared to us that focusing on a cluster of few interconnected and tangible goals in their products and results was more in line with the overall SDG contribution methodology we have built and presented in this report.

The measurement of SDG contribution at corporate level requires a little more than ESG analysis legacy. Equity contribution measurement is difficult to reach, and it is two-fold: assessment of the operational footprint (supply chain, upstream activities) and assessment of the footprint of all products and services, which presents the challenges of categorizing and localizing the sales/turnover.

Why these SDGs?

Around 45% (36% A lot, 10% Extremely) of our survey of investors respondents answered that the SDGs are a “useful and relevant tools to take into account investment interlinkages (ie. holistic approach to avoid unintended and harmful side-effects)”. Tradeoffs, synergies and ripple effects must be looked at thoroughly when trying to achieve the SDGs. It is what is called inter-linkages in the SGD technical jargon and in this report. It consists in disentangling interactions between the goals.

For instance, the lack of awareness of inter-linkages brings with it the risk that progress towards one goal occurs at the expense of another. In concrete terms, reliance on fossil fuels to expand access to energy (SDG 7) could exacerbate climate change and ocean acidification, undermining progress in climate action (SDG 13) and in ocean conservation (SDG14), as well as contributing to health problems (SDG 3).

Conversely, there are some SDGs that are key enablers to the achievement of the other goals by laying the right empowering foundations. We have chosen the 3 SDGS that are the most inextricably linked to the achievement of other goals: SDG 3 - Good health and well-being, SDG 6 - Clean water and sanitation, and SDG 7 - Affordable and clean energy.

Factoring geographical footprint as a must-do

Our main objective in this methodology is to identify companies that bring positive contribution towards reaching the SDGs. But “making a difference and advancing the SDG” is no longer enough.

The SDG paradigm, as we decided to see it, is plunging us into the era of geospatial investing that pays attention to impact intentionality, perimeter, intensity, additionality and transformative spill-over. An investment displayed as theoretically “making a difference and advancing the SDG” is no longer enough. There are questions that need answers: “as compared to what”, “where”, “upon whom” and “how much”. The SDGs, and the distance to reach them, are a formidable tool to apprehend those yardstick concerns. While all the UN States are equal in their commitment to the SDGs, they are unequal in the distance to reach them. Countries’ distance to travel in relation to the SDGs varies from one state to another.

“Where” matters as much as “what”.

Our approach integrates the complementary questions of “what” and “where”.

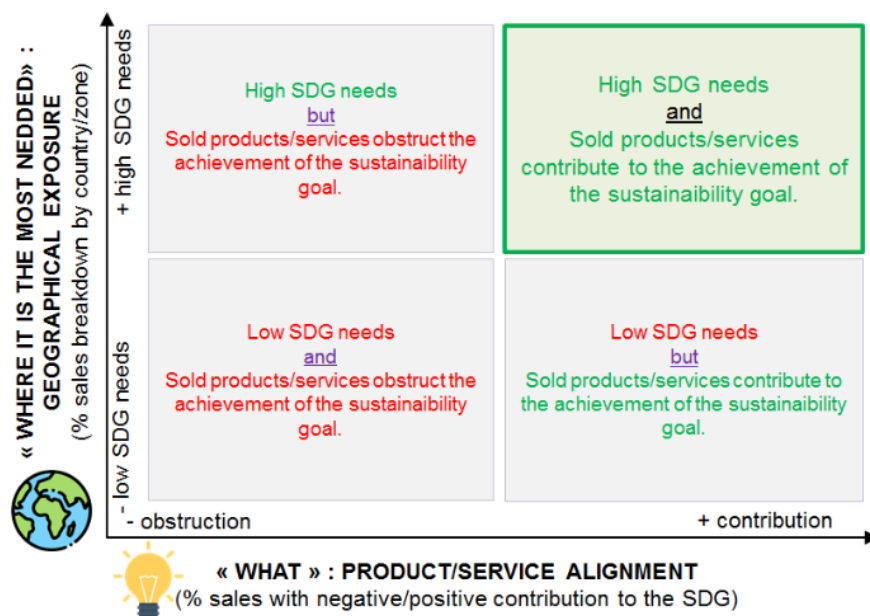
What? At the overall business level, does the product/service delivered by the company by its intended purpose or main impact contribute to or obstruct the achievement of the sustainability target?

This question tries to address the request expressed by investors in our survey. At the question “To assess SDG contribution at a corporate level, what indicators or information would you use or would you like to see covered by ESG rating agencies?”, more than 30% of them answered “% of turnover derived from products and services advancing SDG achievements”. One of the key lessons of our survey from investors, perfectly phrased by a respondent is that “outward impacts have typically been under addressed and so the SDGs are helpful in redressing this imbalance”.

Where? In which specific areas are the products/services sold?

To strengthen the legitimacy of green and sustainable finance instruments, we urgently need to factor in territorial anchorages, baselines and stakeholders’ situations. Context-based analysis and localization of the higher gaps is the tool for materiality when it comes to the SDGs.

Through this double question, we aim at assessing, for each SDG, whether the products address the issue by 1/ its nature and 2/ the location of the sales, i.e. where the SDG needs related to those products are the most acute. The chart below summarizes the most relevant zone for action.



In our methodology, we distinguish inward contribution or obstruction to the SDGs, that refers to the internal sphere of the organization and its impacts through its own operations (upstream) and outward contribution or obstruction to the SDGs, that relates to the impact of the products and services sold (external/outbound focused). In the two cases, the SDGs the more impacted are not the same although a certain number of them are transversally influenced.

Although we acknowledge the necessity to integrate inward contribution or obstruction to the SDGs, we chose to focus on outward contribution (products/services), as the geographical breakdown data is for the moment limited to sales or net income figures. Integrating inward contribution regardless the location would be a possibility as well, but we made the choice to focus on the geographical aspect so as to make better use of information coming from SDG gaps.

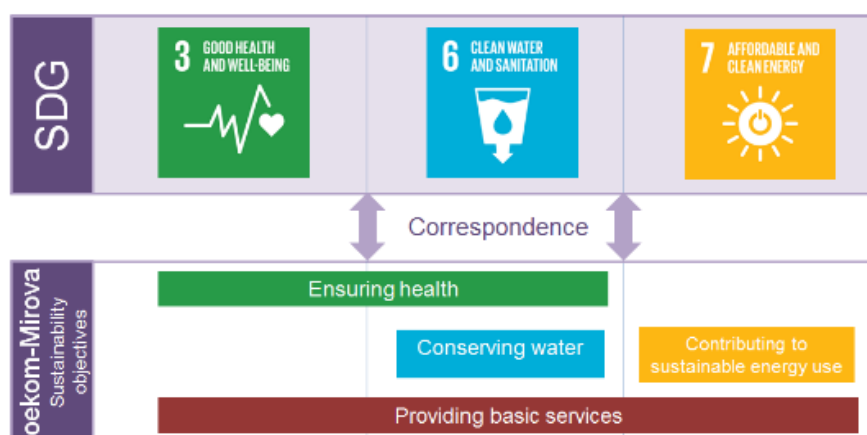
Digging for data

Our search for data was driven by the triple underlying questions for each company:

1. **Do the products/services contribute to the achievement of the SDG?** To properly answer to the question, we use the ISS-oekom methodology to measure the sustainability impacts of products and services at the company level. The ISS-oekom Sustainability Solutions Assessment assesses the overall, aggregated impact of a company's product portfolio on the achievement of sustainability objectives in the form of a score.

In practice, the **Target scores** are based on the type of product and the respective score linked to it and the share of net sales. Each Target score (e.g. «Ensuring Health») is calculated based on the share of net sales generated with relevant product groups and their respective classification within the range from -10 "significant obstruction" to +10 "significant contribution".

The ISS-oekom objectives scores can be mapped in a corresponding table with the UN SDGs, as showed below. The 3 considered SDGs in this study correspond to 4 Sustainability scores as defined in the ISS-oekom methodology.



Source: ISS-oekom

2. Where does the company operate? For each company, we obtain an estimation of the (often undisclosed) sales breakdown by countries/regions using data reported by Worldscope/Reuters and retreated by Beyond Ratings. It's worth noting at this stage that the geographical breakdown provided by companies vary widely from one to another. The locations split are communicated either at country-level or regional and give some more complexity in the geographical footprint assessment. In our understanding, this specific step represents the main hurdle for systematic location-based impact analysis.
3. **How important are the SDG Gaps in locations where the company operates?** We use the Sustainable Development Solutions Network (SDSN) Dashboards Report which provides the country SDG Index score for each of the 17 goals. The SDG Index describes countries' progress towards achieving the SDGs and indicates areas requiring faster progress. The SDG Index score by goal can be interpreted as the percentage of achievement.

With the example of Pennon Group, we obtain the following information:

1. Target scores / contribution towards achieving the sustainability targets (source: ISS-oekom):
 - Ensuring health - score of 2.0. 40% of Pennon Group's sales are dedicated to water and wastewater treatment services (limited net positive contribution).
 - Providing basic services - score of 2.5. 50% of sales are linked to waste services and water/wastewater services for private customers (limited net contribution)
 - Conserving water - score of 4.1. 41% of sales are related to water and wastewater treatment services (significant contribution).
 - Contributing to sustainable energy use - score of 0.6. 6% of sales stem from renewable energy generation.
2. The company operates in the UK, China, EU with the respective sales breakdown of 93%, 3% and 1%. The rest being classified in "Rest of world" (source : Reuters/Beyond Ratings)
3. On the 3 locations, SDG performances (=100% - SDG gap) (source : SDSN Report):
 - UK - SDG3: 93.3%; SDG6: 92.6%; SDG7: 87.7%
 - China - SDG3: 80.0%; SDG6: 89.9%; SDG7: 69.1%
 - EU – the EU SDG are the population-weighted average of the EU members' SDGs.
SDG3: 91.9%; SDG6: 87.1%; SDG7: 88.2%

Step-by-step methodology

Our approach is composed of three distinct stages:

- **Step 1:** for each company, we compute at this stage Adjusted Target scores that compose the SDG basic services cluster: ensuring health, providing basic services, conserving water and contributing to sustainable energy use. Why "Adjusted" Target scores? In our scoring system, the initial Sustainability scores provided by ISS-oekom are adjusted to the company geographical footprint thanks to the sales breakdown figures. The cross-analysis allows a more granular assessment of the company's contribution to the SDG achievement.
- **Step 2:** we define the "Basic Services contribution score" for each company by mixing the four previous Adjusted Target scores in an equally weighted normalized sum.
- **Step 3:** in this selection process, we pick the best companies based on their "SDG Basic Services" score and exclude companies with global low ESG ratings and those that obstruct any of the four Sustainability Targets. We also define a concentration limit of 10% by industry sector.

Step 1 – Factoring geographical gaps in companies' sustainability scores

With datasets provided by ISS-oekom Reuters WorldScope/Beyond Ratings and SDSN, we can indeed map more accurately the impacts of a company's products/services on the respective SDGs. We then define an **Adjusted Target Score** for each company and each sustainability objective in order to factor in the geographical context:

$$\text{Adjusted Target score} = \text{Target score} \times \text{Adjustment Factor}$$

$$\text{Adjusted Target score} = \text{Target score} \times \left(\sum_{i=\text{locations}} \text{SDG Gap}_i \times \% \text{Sales}_i \right)$$

The Adjustment Factor integrates the sales breakdown and the SDG gaps of the respective locations which could be either countries or regions. The Adjusted Target score is high when:

- the initial Target score is high;
- the SDG gaps in locations where the products/services are sold are wide;
- the share of total sales contributing to this specific sustainability Target is important.

By construction, the Adjusted Target scores are always lower than the initial Target scores in absolute terms (as SDG Gap < 100%). Positive contributions remain however always positive, same for the negative ones.

The Adjusted Target scores from the previous example become the following:

- Ensuring health - score of 0.15 (vs 2.0).
- Providing basic services - score of 0.1 (vs 2.5)
- Conserving water - score of 0.31 (vs 4.1)
- Contributing to sustainable energy use - score of 0.01 (vs 0.6)

Due to potential significant discrepancies in the SDG gaps and geographical exposures, this scoring system can significantly change the companies' ranking compared to its peers as it favors the ones located in countries/regions where SDG gaps are wider. For instance, Abbott Laboratories (6.5) has a lower initial "Ensuring Health" Target score than Sysmex (10) but its exposure to countries that have low SDG 3 performance (India 8% of sales/SDG performance 59% and China 5% of sales / SDG performance 80%) allows its Adjusted Target Score to be higher than Sysmex's one, which has exposure to only Japan, Americas, Germany and China with respective SDG performance of 94%, 82%, 94% and 80%.

Step 2 – SDG Basic Services score

After rescaling the Adjusted Target scores on the four sustainability targets, we define a SDG Basic Services score as the total: **SDG Basic Services score = Equally-weighted Sum** of Adjusted Target Scores (Ensuring Health, Providing basic services, Conserving water, Contributing to sustainable energy use)

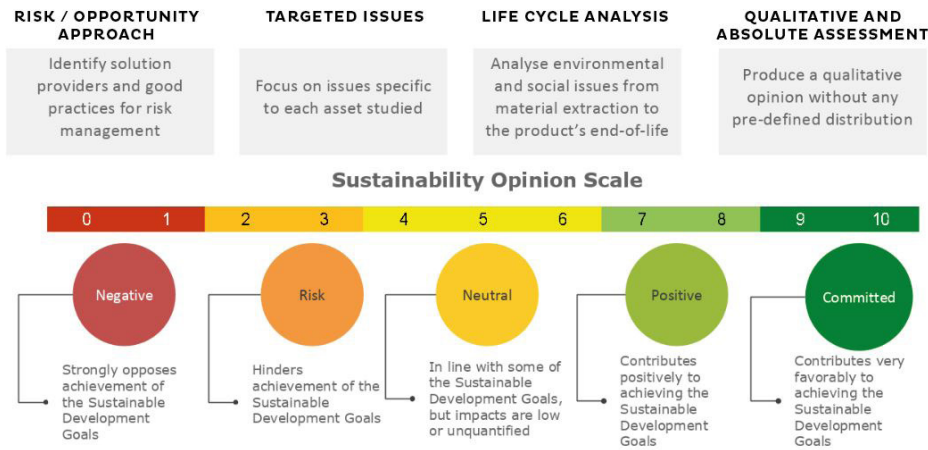
Step 3 – Selection process

In the **Step 3**, we aim at selecting a basket of 50 stocks amongst the Eurostoxx 1800 index that present the best **SDG Basic Services scores**.

We define additional constraints in the selection process:

- we exclude companies with products/services with net obstruction to one of the four sustainability goals in order to avoid harmful side-effects.
- we exclude companies with ESG rating in negative or risk categories, based on the ISS-oekom rating methodology (see below). This filter allows taking into account the global sustainability opinion of the corporates (environmental, social and governance). However, the objective in the use of the ESG framework here is not to seek the best ESG ratings but rather to avoid the negative spillover effects.
- we limit the sector industry sector concentration of the portfolio at 10%. By the nature of their products/services, Health Care-related industries or Pharmaceutical companies have higher Target scores (even after our Adjustment treatment). For the purpose of this study, we favor diversification across sectors.
- we apply a double liquidity filter with a minimum market capitalization outstanding of eq. €1bn and a minimum turnover amount of eq. €10mn (daily average over the last 6 months on daily volumes of exchanged stocks * stock price).

Chart: ISS-Oekom-Mirova ESG RATING METHODOLOGY



The final selection

After implementing our methodology on the Eurostoxx 1800 index, we obtain a basket of 50 stocks detailed in the table below.

COMPANY NAME	ADJUSTED SUSTAINABILITY SCORE				SDGBASIC SERVICES SCORE	ESG SCORE
	ENSURING HEALTH	PROVIDING BASIC SERVICES	CONSERVING WATER	CONTRIBUTING TO SUSTAINABLE ENERGY USE		
Kurita Water Industries Ltd.	0,2	0,0	1,0	0,0	1,22	9,0
Siemens Gamesa Renewable Energy	0,0	0,0	0,0	1,0	1,00	9,0
OSRAM Licht AG	0,0	0,0	0,0	0,9	0,86	7,0
Mediclinic International plc	0,4	0,4	0,0	0,0	0,82	10,0
Cochlear Ltd.	0,8	0,0	0,0	0,0	0,79	4,0
Vestas Wind Systems A/S	0,0	0,0	0,0	0,8	0,78	9,0
Roche Holding AG	0,7	0,0	0,0	0,0	0,70	7,0
bioMérieux S.A.	0,7	0,0	0,0	0,0	0,69	7,0
United Utilities Group PLC	0,1	0,0	0,5	0,0	0,69	7,0
Sonova Holding AG	0,7	0,0	0,0	0,0	0,65	7,0
NMC Health Plc	0,2	0,4	0,0	0,0	0,64	4,0
American Water Works Co. Inc.	0,2	0,1	0,4	0,0	0,64	4,0
Signify N.V.	0,0	0,0	0,0	0,6	0,63	9,0
Sanofi	0,6	0,0	0,0	0,0	0,61	9,0
Medtronic plc	0,6	0,0	0,0	0,0	0,59	4,0
Astellas Pharma Inc.	0,6	0,0	0,0	0,0	0,59	7,0
Severn Trent Plc	0,1	0,0	0,5	0,0	0,59	7,0
Pfizer Inc.	0,6	0,0	0,0	0,0	0,58	7,0
Abbott Laboratories	0,6	0,0	0,0	0,0	0,55	7,0
Fresenius Medical Care	0,4	0,1	0,0	0,0	0,54	9,0
Novartis AG	0,5	0,0	0,0	0,0	0,54	9,0
Shimano Inc.	0,2	0,0	0,0	0,3	0,51	9,0
Fresenius SE & Co. KGaA	0,4	0,1	0,0	0,0	0,49	9,0
Veolia Environnement S.A.	0,1	0,1	0,3	0,0	0,47	7,0
HP Inc.	0,0	0,0	0,0	0,5	0,45	7,0
MTR Corporation Ltd.	0,0	0,1	0,0	0,3	0,45	9,0
Universal Health Services Inc.	0,3	0,1	0,0	0,0	0,44	7,0
Alstom S.A.	0,0	0,0	0,0	0,4	0,41	9,0
Koninklijke Philips N.V.	0,4	0,0	0,0	0,0	0,39	9,0
SUEZ S.A.	0,1	0,0	0,3	0,0	0,35	7,0
Arista Networks Inc.	0,0	0,0	0,0	0,3	0,32	5,5
Pennon Group Plc	0,0	0,0	0,2	0,0	0,32	7,0
Cigna Corp.	0,2	0,1	0,0	0,0	0,31	7,0
Acuity Brands Inc.	0,0	0,0	0,0	0,3	0,28	4,0
WellCare Health Plans Inc.	0,2	0,1	0,0	0,0	0,28	9,0
Humana Inc.	0,2	0,1	0,0	0,0	0,28	9,0
NetApp Inc.	0,0	0,0	0,0	0,3	0,28	7,0
Aetna Inc.	0,2	0,1	0,0	0,0	0,28	9,5
Centene Corp.	0,2	0,1	0,0	0,0	0,27	7,0
Welltower Inc.	0,1	0,1	0,0	0,0	0,27	7,0
EDP - Energias de Portugal S.A.	0,0	0,1	0,0	0,2	0,26	7,0
Autoliv Inc.	0,3	0,0	0,0	0,0	0,26	7,0
Adobe Systems Inc.	0,0	0,0	0,0	0,3	0,25	8,5
Novozymes A/S	0,0	0,0	0,0	0,2	0,23	7,0
Equinix Inc. (REIT)	0,0	0,0	0,0	0,2	0,23	7,0
Infineon Technologies AG	0,0	0,0	0,0	0,2	0,21	6,0
Konica Minolta Inc.	0,0	0,0	0,0	0,2	0,21	6,0
Tesla Inc.	0,0	0,0	0,0	0,2	0,21	7,0
Bayer AG	0,2	0,0	0,0	0,0	0,19	4,0
Geberit AG	0,1	0,0	0,1	0,0	0,19	9,5

Sources : Authors' calculations, ISS-oekom Sustainability Solutions Assessment

In the sector breakdown (see table below), we observe 21 industry sectors represented in the basket, including 30% linked to the health care sector.

INDUSTRY	Health Care Facilities & Services	Health Care Equipment & Supplies	Pharmaceuticals & Biotechnology	Utilities/ Environmental Services	Electronic Devices & Appliances	Managed Health Care	Electronic Components	Renewable Energy & Energy Efficiency Equipment	Software & IT Services	Chemicals	Water Efficiency & Treatment	Sustainable Transportation	Utilities/ Multi Utilities	Transport & Logistics	Machinery	Real Estate	Utilities/ Electric Utilities	Auto Components	Semiconductors	Automobile	Construction Materials
#	5	5	5	5	5	5	3	2	2	2	1	1	1	1	1	1	1	1	1	1	
%	10%	10%	10%	10%	10%	10%	6%	4%	4%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	

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<https://ec.europa.eu/eurostat/fr/home>
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