

## 2.

# The 2030 Agenda: trends of transition toward sustainability

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## INTRODUCTION

Sustainability is a ubiquitous landmark in contemporaneity, and its definition is as diverse as it is ambiguous. On its behalf, the Earth and Mankind's salvation is often claimed, but more than the planet's rescue, what sustainability implies is the reinforcement of the transition process through new social practices and behaviours (Veiga 2011 [2010]). It is an outcry for innovative ways of preserving the commons, and to efficiently maintain the ecosystems' biocapacity on which depends the conditions of existence of the present and the future generations.

Nevertheless, the ubiquity of the concept, coupled with its programmatic and conceptual elasticity, has probably contributed to some disenchantment and measurement difficulties, though the world situation would hardly be better without it. At least from 1987, when the seminal and the most consensual definition of Sustainable Development (SD) was established by the Brundtland Report (WCED 1987)<sup>1</sup>, many successes have been obtained. Whether they will be enough to avoid the announced ecological disaster is the question.<sup>2</sup>

In any case, three decades later, rather than disagreeing on unreached global principles, the lack of consensus on how to act and how to measure progress made seems to be a critical failure. Global governance bodies, national and local governments, civil society, and people from different social segments yearn for logical references to guide individual behaviours and essential decision-making in the absence of a steady, broad, inclusive, and long-termed path of fostering environmental and social quality. The deployment of framing, measurement, and monitoring tools is thus crucial to overcoming the "wishful thinking" in which SD has become (Guerra and Schmidt 2016), and "Sustainable Development Goals" (henceforth SDGs), are well positioned for it.

In this chapter we thus present the 2030 Agenda and its 17 SDGs in a disruptive context of environmental and social imbalance. To better illustrate trends of such context of implementation, after presenting the holistic view

1 For a more precise definition, please see Schmidt and Guerra in the first chapter of this volume.

2 The concept of sustainable development is an oxymoron that contains a combination of contradictory terms or purposes: (1) the fulfilment of essential needs of Humankind, particularly the world's poor; (2) the imposed ecological limits to economic growth and development and, therefore, to meet present and future needs of humanity (WCED 1987). Such inherent contradiction, claims the critical thinking of SD, primarily results in its ineffectiveness or poor effects (Redclift 2005).

of sustainability and its background, the current framework of 2030 Agenda will be analysed. Then, the available database of *SDG Index and Dashboards 2017* (see at [www.sdgindex.org](http://www.sdgindex.org)) will be used to provide an overall appraisal of this ongoing endeavour, crossed by Human Development Index and income average of countries. Also, to cover the trends released by former Millennium Development Goals, the review will be complemented by other more concrete and diachronic information, mostly gathered from the World Bank databank (<https://data.worldbank.org/>).

Our aim is to present the current world situation so that, as claimed in the 2030 Agenda, no one is left behind (UN General Assembly). However, when the very battery of SDGs indicators is under refinement and not yet universally available, this goal was only partially achieved. Many countries (by insufficient or disqualified data) are not present in the analysis, and this must be underlined as a significant constraint. The concluding remarks would thus reflect on the expected results of the 2030 Agenda and on opening and follow-up strategy, which seeks a traceable transition toward a more balanced society, from both an environmental and a social point of view.

## BACKGROUND OF A HOLISTIC VIEW

Environmental problems and their rebounds to human-life are at the root of SD and emerged with the industrial revolution and its impact on natural resources (Redclift 2005). Therefore, some pioneering work on the genesis of the Brundtland Report must be mentioned. One of the keys surely is “Silent Spring” (Carson 1962), a postulate empirically built about the threat of life on “earth’s green mantle” by the use of synthetic pesticides. Carson’s work was a trigger of the environmentalist movements, and thus of a social change based on the gradual emergence of a new ecological worldview (Dunlap 2008).<sup>3</sup>

But the primordial attempt to measure the exponential impacts of civilisation on a finite planet was “The Limits of Growth”. Based on model equation simulations of futures that warned about the potential for a global collapse of the biological system that sustains human life, this work became

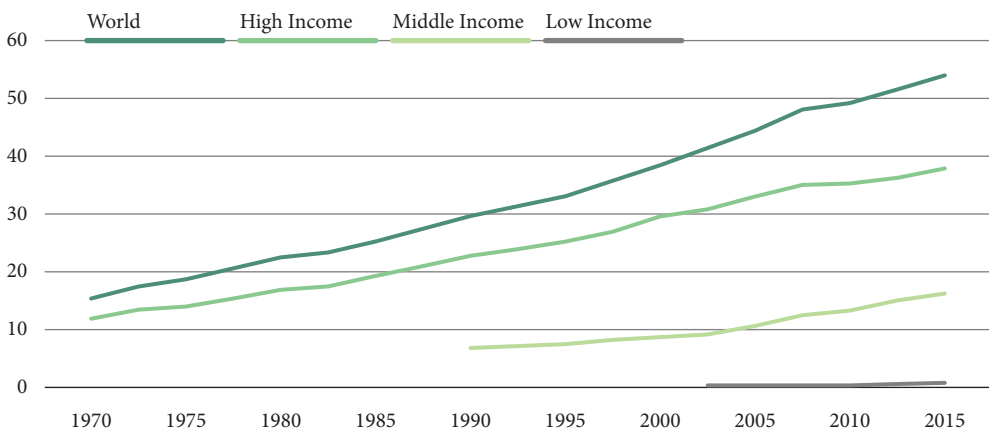
3 As per Riley Dunlap, this process of gradual and non-linear social change is driven by, among other things, the increasing environmental concern, and the assumption of environmental values and attitudes. However, to cover all the process, the author suggests the use of the term “worldview”, since it reflects the growing degree to which people view the world ecologically (Dunlap 2008).

an influential appraisal of environmental degradation, but also the genesis of the sustainability idea. Worries about “human environment” came from the exponential economic and population growth within limited resource supplies and industrial pollution (Meadows et al. 1972). Nevertheless, the book was not unanimously accepted. Some authors criticised the assumption of replay by the world of the US pattern of consumption (Furtado 1974).

If we look at Household Final Expenditure trends from the 1970s to our days, according to the World Bank, with countries aggregated by their profile of income some evident differences do confirm Furtado’s doubts (Figure 2.1). Note that the top line in the chart represents the total amount of the world final consumption expenditure in the period from 1970 until 2015, followed top-down by curves respectively of the expenditures by high, middle, and low-income countries, according to the availability of their official data. Thus, at least in part, Furtado’s criticism was right in considering the incapacity of the low-income states to have performance similar to prosperous economies.

Even so, if one compares those data with the current impacts of global consumer society, Meadows’ team was also right. The total of the world’s final consumption expenditure (sum of private or household and government consumption) rose from US\$ 15.196 trillion in 1970 to US\$ 53.999 trillion in 2015. During this period, 2009 was the only year in which a decrease occurred.

**Figure 2.1** *World household final expenditure (in constant 2010 US\$)*



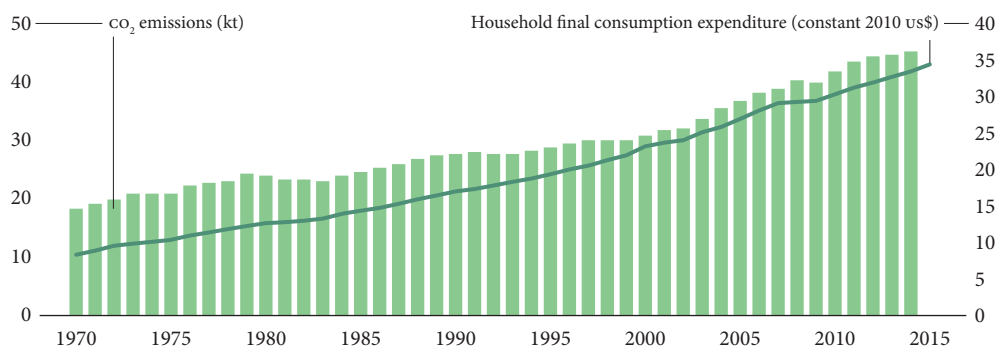
Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data - <https://data.worldbank.org/indicator>.

The financial crisis caused a loss of US\$ 216 billion in expenditures but recovered in 2010 by an absolute increase of US\$ 1.244 trillion in expenditure: from a negative annual growth of 0.45% in 2009, there was an upswing of 2.51% in 2010 (Figure 2.2).

After all, Carson's and Meadows' warnings seem to have had a tiny effect, and more than ever "the numbers are overwhelming (...). Earth's being battered by humanity – and it's coming from every direction. Greenhouse gases. Ocean acidification. Chemical pollution. It has all reached a point where our future is at risk. For the first time in human history, we may have pushed the planet too far" (Rockstrom and Klum 2015, 15). And all this happens in a world where unacceptable levels of deprivation perpetuate: 766 million people, 45 million of them children, lived on less than \$1.90 a day in 2013; poor nutrition causes 45 percent of the deaths among children under age 5, etc. (UNDP 2016), and despite the common acceptance that sustainability would hardly happen in a world where wider questions of social needs and welfare are ignored or not integrally related to ecosystemic limits (Agyeman et al. 2002).

Bearing this in mind, and that the metrics of well-being deserve a separate follow-up with a reliable compass other than the reductionist Gross Domestic Product (Stiglitz, Sen and Fitoussi 2010), the UN-sponsored "Millennium Summit" was held at the United Nations headquarters in New York City, in September 2000. It resulted in the landmark "Millennium Declaration" and the Millennium Development Goals (MDGs), adopted but not entirely fulfilled by 189 countries. Mostly seeking to eliminate human poverty and to promote

**Figure 2.2** *Household consumption expenditure and CO<sub>2</sub> emissions*



Source: Authors' own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

equity and social capabilities, this international agreement implied a set of commitments that have brought considerable success (Table 2.1).

However, despite MDGs' results and beyond – “between 1990 and 2015 the aggregate HDI value of the least developed countries increased 46 percent, and the aggregate HDI value for low human development increased 40 percent” (UNDP 2016, 26) – clear signs remain that humanity is still despoiling the present at significant cost to the future (Rockstrom and Klum 2015). On the one hand, the gains made in the last decades are far from addressing the negative impacts of the increasingly globalised consumer society. On the other hand, this imbalance tends to exacerbate the effects on

**Table 2.1** *Millennium Development Goals Achievements*

GOAL	RESULTS IN 2015
Eradicate Extreme Poverty and Hunger	Population under US\$ 1.25/day reduced to 14% (50% in 1990), totaled 836 million (1.9 billion in 1990); Undernourished dropped to 12.9% in developing areas. Middle class (more US\$ 4/day) tripled.
Promote Universal Education	School net enrolment reached 91% (83% in 2000); Youth (15-24) literacy increased to 91% (83% in 1990). Gender gap narrowed.
Promote Gender Equality and Empower Women	Asia: 103 girls enrolled for 100 boys (74 in 1990); 41% paid workers outside rural area (35% > 1990); Parliamentary representation in 90% of 174 countries. Less 13% vulnerable employment of female work.
Reduce Child Mortality	Declined: 43 over 1,000 births (90 in 1990); 6 million deaths of children (12.7 million in 1990); Fivefold faster reduction of <5y-o mortality in Africa.
Improve Maternal Health	Maternal mortality fell 45% since 2000; 71% births assisted (59% > 1990); Four antenatal visits to 89% of pregnant women (50%) in Africa
Combat HIV-AIDS, Malaria, & other diseases	New HIV infections dropped 40% to 2.1 million (3.5 million in 2000); Malaria incident rate in Africa to 37%; 58% fewer deaths.
Ensure Environmental Sustainability	Ozone-depleting substances eliminated, layer to recover; Protected areas rose 23.4% in Latin America (1990-2014); 58% of world population enjoys drinking water; 2.1 billion people gained improved sanitation; Slums fell to 29.7% of the urban population (39.4% in 2000)
Develop Global Partnership for Development	Official assistance increased to US\$ 135.2 billion (66% over 2000); Five European countries exceeded UN target of 0.7% of their income; External debt of developing countries fell to 3% (12% in 2000); Mobile-cellular tenfold, 7 billion in 2015 (738 million in 2000); Internet reaches 43% of world's population.

Source: Adapted from UN General Assembly 2015.

deprived communities and less-favoured social groups. Indeed, it is clear that “discounting the future, valuing the present above the future, is much easier to do in materially poor societies where survival itself may be at stake for many people” (Redclift 2005, 215).

Given this, a new and more integrated strategy of action has been considered. Under the 2030 Agenda, 17 interconnected new goals with 169 targets were designed for the following 15 years (UN General Assembly, 2015). The intent is to build on the MDGs and complete their promising but narrow and sectoral achievements, in a more integrated, inclusive, and balanced manner. Universally thought to cover all geo-economic contexts, the 2030 Agenda considers different national realities, capacities, and levels of development, as well as national priorities. Moreover, and crucial to sustainability implementation, SDGs are providing a universal, and comparative framework of performance, evaluation, and monitoring, and through them, an expected significant contribution to a more accurate and crosscut sustainable mode of development.

## CURRENT FRAMEWORK

Implementing the idea of SD – some authors prefer sustainability since it “carries less political baggage”<sup>4</sup> – is plainly a challenge. It connects several areas of knowledge: from biology and environmental sciences to governance and social sciences, but it is always associated with societal goals. Such complexity, in which vested human interests (e.g., social, economic, political) are hardly ignored, seems to have prevented an accurate understanding and prolific monitoring of sustainability (Guerra 2011). And this is what SDGs proponents seek to address.

Strengthened by previously achieved experience and results, the SDGs rely on a collective, inclusive, and monitorable endeavour (Swanson 2015, 5). It is a multilevel governance strategy that depends on: (i) the use and improvement of pre-existing sources of information; (ii) the sponsoring and facilitating of new sources; and (iii) the strengthening of statistical capacities, especially in developing countries (UN General Assembly 2015).

In a broader and comprehensive perspective of the 2030 Agenda, the 17 SDGs can be grouped into five “P areas”: People, Planet, Prosperity, Peace, and

4 See Schmidt and Guerra in the first chapter of this volume.

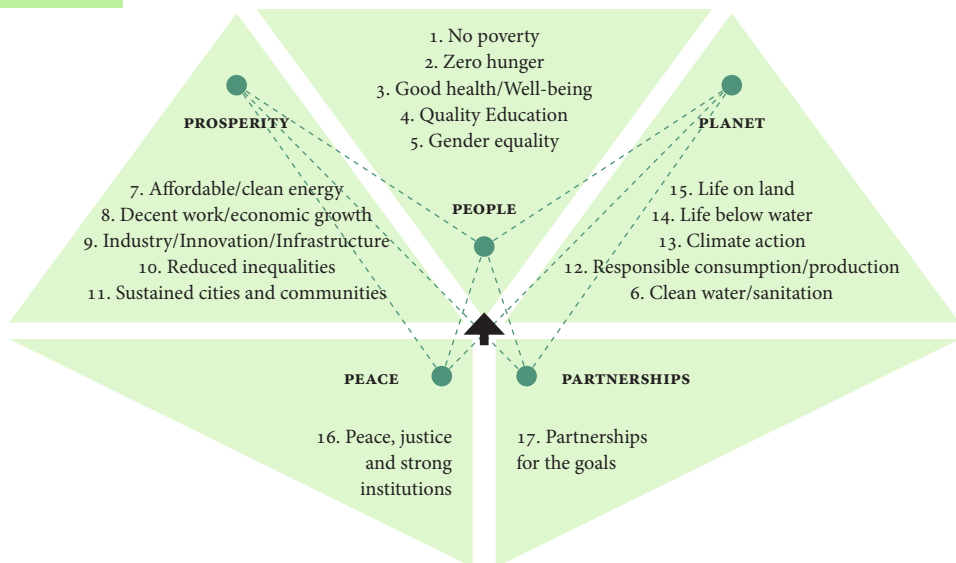
Partnership (Figure 2.3). These spheres can be understood in two groups of instrumental purposes. The first three (at the top of the diagram) somehow replicate the three traditional dimensions of the SD. They have a mutual perspective that is visible when measured, which are a minimum dignifying material basis for the vulnerable population in a healthy environment. Also, they include variables driven by production and consumption factors considering natural resource degradation, as well as climate change (CC) preparedness requirements.

The second group (at the bottom of the diagram) consists of “a collective journey” to ensure the pursuit of values, means, and conditions. It refers to what is usually known as “governance factors”: strong institutions and social capital, and the resulting capacity to co-operate on a win-win basis, and the fostering of just and inclusive societies under the spirit of both intra- and inter-generational solidarity.

Following this structure, the “Inter-Agency Expert Group on SDG Indicators” was established in March 2015 by the UN Statistical Commission to develop and implement the global indicator framework. Based on their level of methodological development and acceptance, the set of available indicators has thus been separated into three tiers: (i) conceptually clear,

**Figure 2.3**

*The five ‘P’ areas of action on SDGs*



Source: Authors' own elaboration based upon the 2030 Agenda (UN General Assembly 2015).



established methodology and standards, regularly produced by countries; (ii) conceptually clear, established methodology and standards, not regularly produced by countries; (iii) no established methodology or standards available, which must be developed or tested.

There was no preconceived differentiation of the indicators, but the mere aim to achieve a gradual improvement on strategies. Under this classification, amongst the total of 244 indicators, about 65% fall into tiers 1 or 2, and the remaining 35% are in tier 3, needing more work to grant them applicability (UN-ESC/Statistical Commission 2017). After all, it is expected that global data availability, as well as methodologies of reliability, will improve over time since a mechanism for updating is foreseen from an early stage of the 2030 Agenda.

The list in Table 2.2 displays the reformulation of a previous version of 2015, presented by Statistical Commission on March 2017 (Ibid.). With this set of intervention areas, goals, and indicators, we should be facing “an unprecedented step to advance and strengthen a novel type of governance that will guide and ‘orchestrate’ public policies and private efforts” (Biermann and Kanie 2017, 295). It was expected that this new stage of global sustainability endeavour would provide more effective integration of the various dimensions of SD, along with the inclusion of different communities, and the inclusion of diverse levels of development. From the poorest to the most affluent, from the privileged to the least favoured, all are called upon to take part in the joint endeavour.

In sum, SDGs are an ambitious initiative still to gain traction at global governance. Since 2015 countries have been invited to submit voluntary national reviews of their progress to the United Nations High-level Political Forum on Sustainable Development. But many of them still struggle with implementing the full range of official SDG indicators (Sachs et al. 2017), to judge from the unavailability of required data.

Lack of quality and opportunity, shortage of human and financial capacity, methodological difficulties in data standardisation and comparability, all are impediments to managing a comprehensive tracking of the 2030 Agenda. Those mainly happen in some Southern countries where the monitoring installed capacity is nonexistent or residual (e.g., poorest and least-developed countries, small island developing states, failed or near-failed states). Furthermore, “the process of bringing on board a wide range of actors, each using different methodologies and approaches to produce, analyse, curate and disseminate data, will be messy and [even more] challenging” (Espey 2017, 4).

**Table 2.2** *Sustainable Development Goals and numbers of target and indicators*

FULL DISCRIMINATED SDGS	TARGETS	INDICATORS
End poverty in all its forms everywhere	7	14
End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	8	13
Ensure healthy lives and promote well-being for all at all ages	13	27
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	10	11
Achieve gender equality and empower all women and girls	9	14
Ensure availability and sustainable management of water and sanitation for all	8	11
Ensure access to affordable, reliable, sustainable, and modern energy for all	5	6
Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	13	17
Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation	9	12
Reduce inequality within and among countries	10	11
Make cities and human settlements inclusive, safe, resilient, and sustainable	10	15
Ensure sustainable consumption and production patterns	10	13
Take urgent action to combat climate change and its impacts	5	8
Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	10	10
Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt biodiversity loss	12	14
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	14	23
Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	19	25
<i>Totals</i>	<i>172</i>	<i>244</i>

Source: Adapted from UN-ESC/Statistical Commission, 2017.

There are thus plenty of partial, sectoral, national, and regional reports (e. g., Eurostat, OECD, World Bank, National Statistics, Corporations, Universities, NGOs), but they globally fail to show the current worldwide picture. Even the UN report (UN 2017) limits the analysis to specific areas within the 17 goals, without presenting up to date global comparative values.

## A GLOBAL COMPARATIVE AND UP TO DATE ANALYSIS

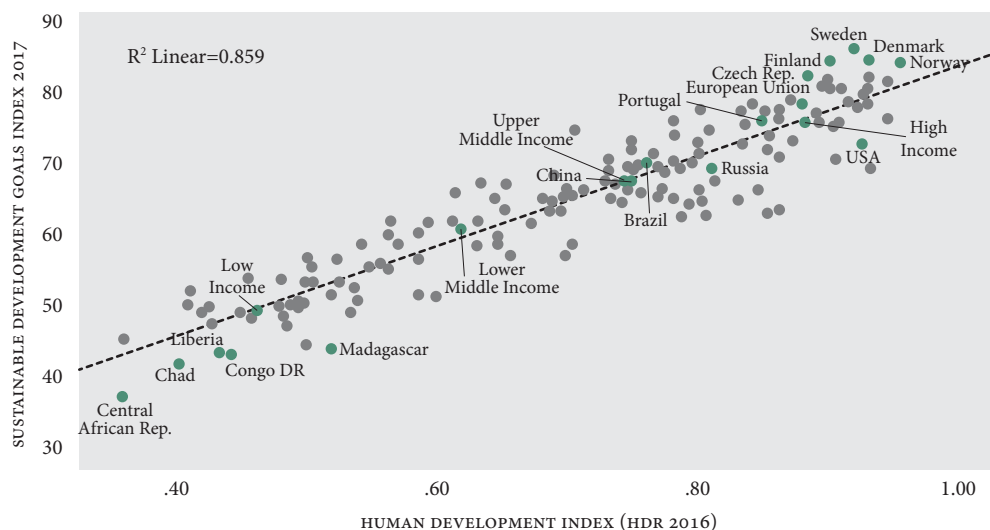
If the follow-up of the pursuing process of SDGs is the proposed enormous task of the 2030 Agenda, a few years after the take-off, the available data surely do not fit for a diachronic analysis. Instead, this initial phase and the non-stabilisation of data suggest a global approach of the still-to-unfold situation and its emerging dynamics. Therefore, the next pages allow only a partial, if not negligible, understanding of reality.

Our choice was to get an overall picture ultimately based on data prepared by a task force of independent experts on sustainability. Based whenever possible on the official SDG indicators – prescribed for the voluntary country-led follow-up and review process – the Sustainable Development Goal Index as well as the 17 sub-indexes – one for each SDG – have been thought and calculated considering the quality, the representativeness, and the comparability of the available set of indicators.<sup>5</sup> The result is reliable and comparable information for 157 countries, which allows us to compare the performance of countries and regions and, above all, to assess the present global situation by crossing these indexes with other data. It is thus a useful tool for interested researchers and stakeholders on sustainability, who can carry out specific and diversified analysis.

Taking the 17 goals in a single composite index (SDGI,  $\alpha=0.851$ ), what factors then promote sustainable development.<sup>6</sup> According to Figure 2.4, human development seems to be a *sine qua non*. As the  $R^2$  value makes clear

5 The SDG Index and Dashboards comprise 99 indicators, of which 83 are included in the global SDG, jointly developed by a team of independent experts of Bertelsmann Stiftung (Germany) and Sustainable Development Solutions Network (SDSN). The report (Sachs et al., 2017), as well as the SDG Index and Dashboards database can be downloaded in Excel and Stata formats at [www.sdgindex.org](http://www.sdgindex.org). For a better and complete appraisal of methodological issues, both must be consulted.

6 The results obtained and the conclusions achieved may not reflect positions of SDSN, or of Bertelsmann Stiftung.

**Figure 2.4** *Crossed global averages of SDGI and HDI in the World*

Source: Authors' own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdindex.org](http://www.sdindex.org)).

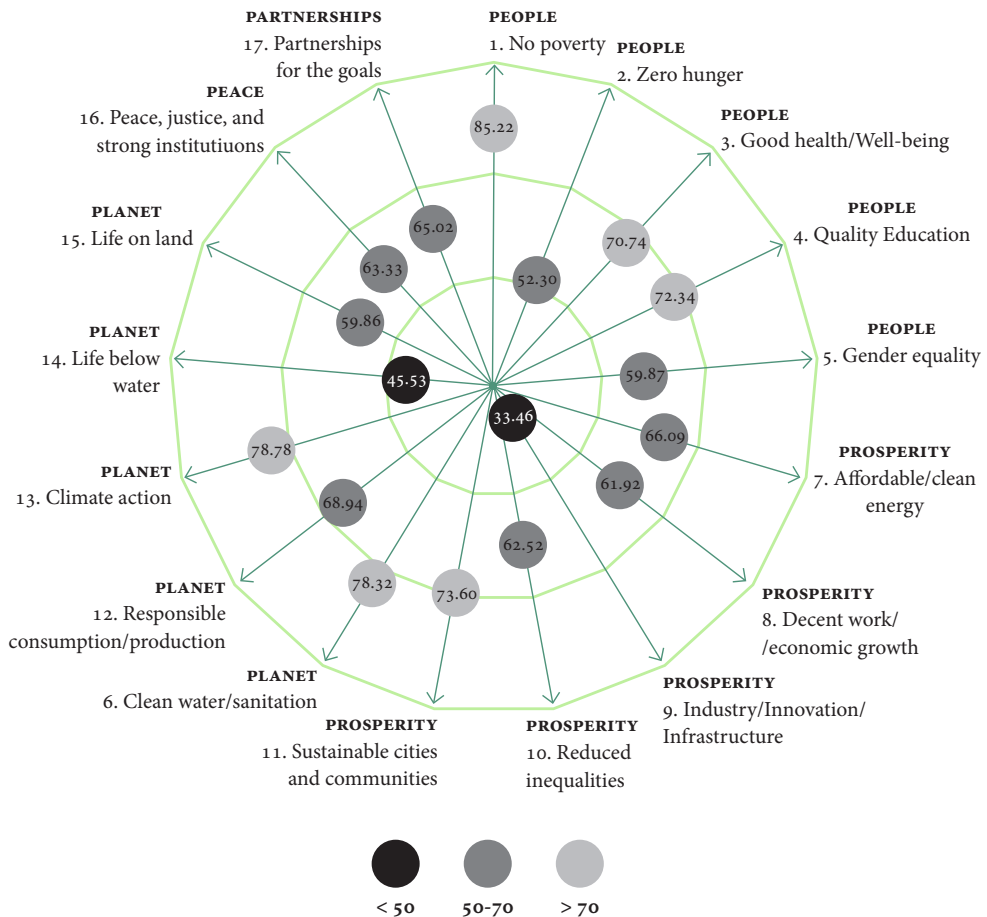
(0.859) to guarantee the best performances in sustainability measured by SDGI, countries need human development and, indeed, this is not new. As underlined in the Brundtland Report, “a world in which poverty and inequity are endemic will always be prone to ecological and other crises. Sustainable development requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life” (WCED 1987, 54). That is why both concepts – Sustainable Development and Human Development – have been increasingly interacting over the last decades (Guerra 2011).

Worth mentioning is the also meaningful relationship between the SDGI and the income of countries. After all, the poorest would have the least capacity to promote necessary change, although they are the most susceptible to the effects of environmental degradation such as climate change (see, for example, Guerra and Schmidt 2016). This is clear by looking at either the income level of countries or at the most extreme points of the interception line: sub-Saharan Africa in the lower left, Scandinavian countries in the upper right corner, corresponding to the lowest and highest performances, respectively.<sup>7</sup>

<sup>7</sup> Following a similar pattern, the Portuguese score follows the EU average, while Brazil is in-between other BRICS, like China and Russia.

Let us then begin with a glance at the 17 goals in a more disaggregated way, complementing the *SDG and Dashboard Index* data with specific MDGs evolution indicators (2000-2015) for highlighted areas, by either above-average scores or below-average scores. According to Figure 2.5, the world performances are very differentiated from area to area, and from goal to goal. The data also show the field of social issues (“People”) as the globally best scored, with three of the five goals presenting a score higher than 70. In turn, the economics (“Prosperity”) obtains only one goal that stands out: “sustainable cities and communities” with a score of 73.6. Finally, in the environmental area

**Figure 2.5** Average score on the 17 SDGs



Source: Authors' own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdgindex.org](http://www.sdgindex.org)).

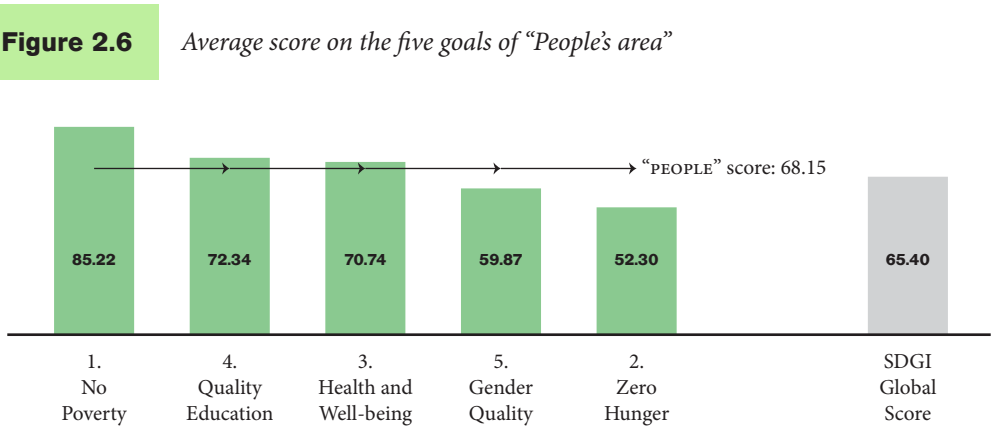
(“Planet”), “life below water” and “life on land” show some of the worst scores: 45.55 and 59.86 respectively, which probably result from their apparent lack of correlation to human well-being or immediate human interests.

Such results partially confirm those reported so far by states to the *UN High-Level Political Forum on Sustainable Development*. Despite the problems of comparability mentioned above, a first review of those reports found a best performance on socioeconomic SDGs (Bizikova and Pinter 2017). For now, taking advantage of such data availability and its potential for breakdown, we will investigate the questions in depth, more detailed analysis of each of the “P” areas and their goals, to uncover and trace the dynamics initiated with the MDGs at the beginning of this century.

PEOPLE (GOALS 1, 2, 3, 4, AND 5)

In the present age, common sense sees the eradication of poverty and hunger as utopian, but at the same time considers immoral and unsustainable the abyss between opulence and privation. This bears a resemblance to the abolitionist movements in the 19th century, including its similar benefit to the expansion of markets, here again, from fear to hope. Successful attempts are already achieved (e.g., global poverty halved since 2000; the adoption of measures to prevent malnutrition and food insecurity), although the numbers of Figure 2.6 suggest that continued effort is required.

Furthermore, despite the high Cronbach’s alpha for this first group of five SDGs ( $\alpha = 0.899$ ), there is one goal that stands out for the better: No poverty;



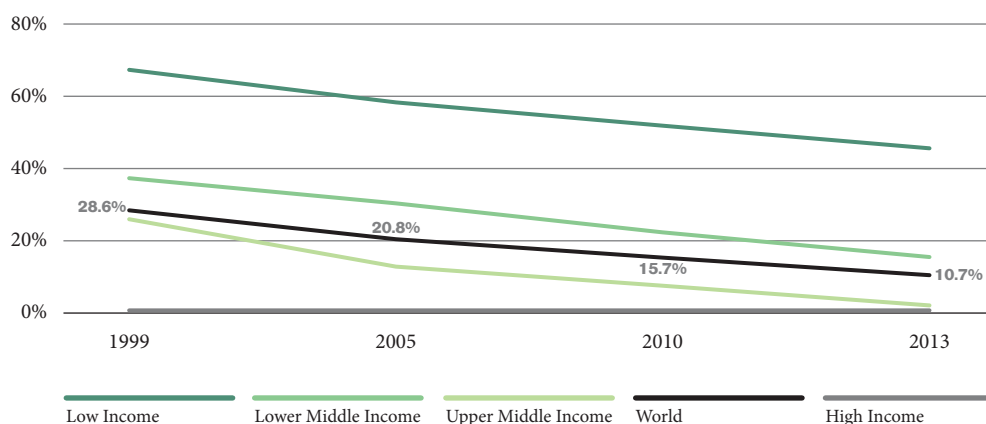
Source: Authors’ own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdgindex.org](http://www.sdgindex.org)).

and two relatively more complex social endeavours that stand out for the worse: Gender equality; Zero hunger. To allow a more concrete view of the on-going dynamics of change, and given the impossibility of carrying out a complete analysis of indicators and objectives, let us focus on a “*flag indicator*” of each of these three SDGs.

**Goal 1 – End poverty in all its forms everywhere** – Being out of poverty is the very essence of sustainable development (UN 2017). However, according to statistics, an estimated 767 million people lived below the extreme poverty line in 2013. Compared with 1.7 billion people in 1999, the rate of poverty dropped from 28.6% to 10.7% in 2013.

Hence, despite its relatively positive score, compared to the remaining goals of this area, much remains to be done. Figure 2.7 is only an example, a *flag indicator* that should be complemented by many other indicators showing equally worrying signs. If the progress made is undeniable, there are sure signs that poverty is becoming increasingly concentrated in specific countries, which means that an unequal distribution pattern remains. Here, as in other areas of DS, the so-called “business as usual approach” proved insufficient to solve the problem. As an example, the continuing wave of refugees crossing the Mediterranean toward Europe is a clear signal that much must be done.

**Figure 2.7** Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of the population)

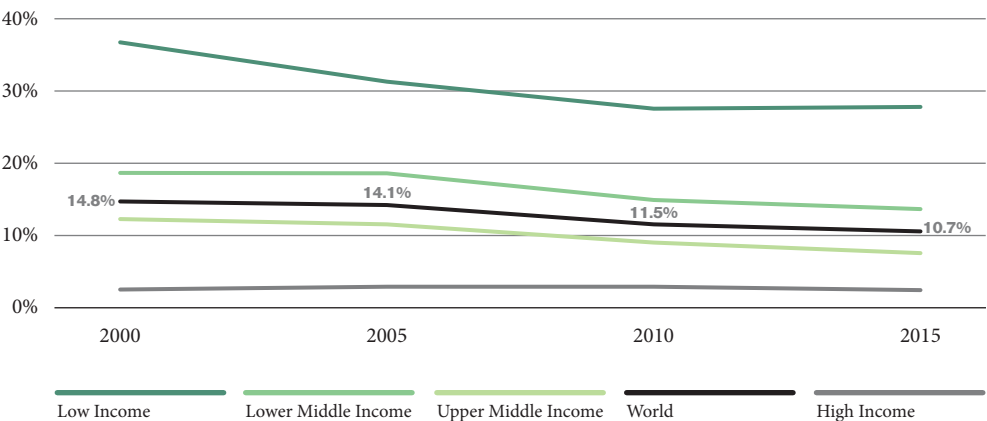


Source: Authors' own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

**Goal 2 – End hunger, achieve food security and improved nutrition, and promote sustainable agriculture** – It is recognised that individual food consumption is currently measured with precision in only a few countries and for relatively limited samples. Nevertheless, the idea of environmental scarcity is becoming consensual (Schnaiberg 1980), as signs of ecological degradation become evident, jeopardising the Earth’s food production capacity. A profound change in this area is thus needed to nourish the world’s growing population.

The available data show a decrease from 14.8% to 10.7% of undernourished people between 2000 and 2015 (Figure 2.8), a continuous problem located in low-income countries of the South. Without neglecting problematic cases of localised hunger in affluent contexts, at this level of analysis, the problem is almost residual in that it never surpasses 0.6% of the total population. Indeed, “at the current rate of progress, the world will not meet the zero-hunger target by 2030” (UN 2017). The high population growth rate contributes likewise to bad performances, but plant and animal genetic resources are getting scarce, and investments in sustainable agriculture are considered lagged.

**Figure 2.8**      *Prevalence of undernourishment population (%)*



Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

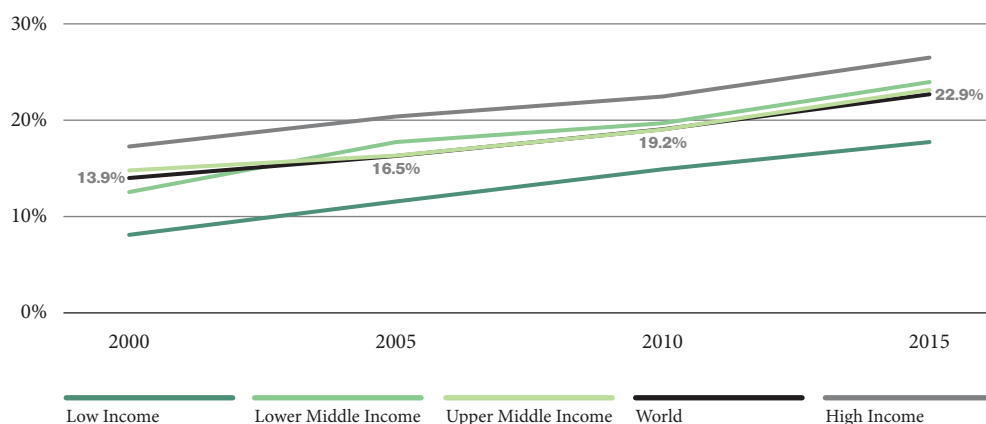


### Goal 5 – Achieve gender equality and empower all women and girls –

Another of the imbalanced goal scores is “gender equality”. Despite some advances in this area, “one hundred fifty countries still have, at least, one law that treats women and men differently, and 63 countries have five or more” (World Bank 2017, 26). Moreover, physical or sexual violence against women and girls are still common in all regions of the planet, depriving victims of their basic rights and opportunities.

However, the most comparable data (our chosen “flag indicator”) refer to the proportion of seats held by women in national parliaments (Figure 2.9). In this, also considered as a “milestone” of gender equality’s challenges, we can find at the bottom not the usual low-income countries group, but the lower middle-income countries. A different pattern that can be explained by broad institutional biases and adverse social norms that still undermine women’s empowerment around the world (the maximum here achieved is 26.7% within high-income countries). Nevertheless, from the data, overall improvement is quite explicit.

**Figure 2.9** *Proportion of seats held by women in national parliaments (%)*



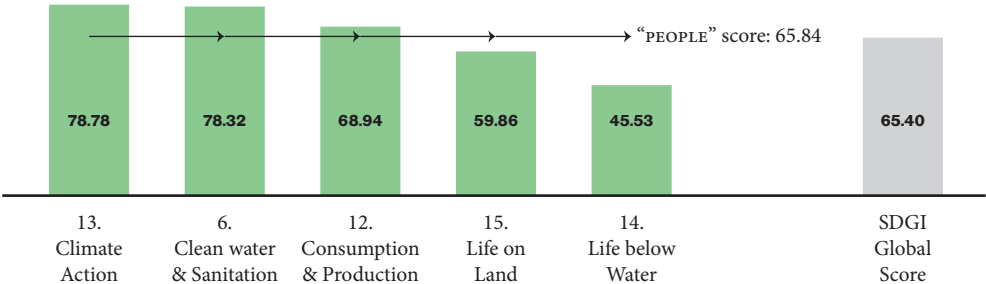
Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

PLANET (GOALS 6, 12, 13, 14, AND 15)

This “P area” is the place to plot all prospects for the planet. Ecological limits and the stressed ecosystemic balances advise an already uncontested decrease of the “looting” of nature, which makes environmental issues central in today’s societies. Since the the 1970s, it has been claimed that the ecological limits have been exceeded (Schmidt and Guerra in the first chapter of this volume). This has led to some social action, mainly within the environmental goals related to social causes (e.g., Goal 6 – Clean Water & Sanitation; Goal 13 – Climate Action). Below the average of this group of SDGs, perhaps because the relationship with day to day life is less visible, we find the more strictly environmental goals, and above all the Goal 14 – Life Below Water (Figure 2.10).

Following this “anthropocentric bias”, which implied the lowest alpha ( $\alpha = 0.332$ ) and, therefore, a less reliable sub-index, we will focus the analysis on the evolution of the four *flag indicators* of goals whose score stands out from the average.

**Figure 2.10** Average score on the five goals of “Planet’s area”

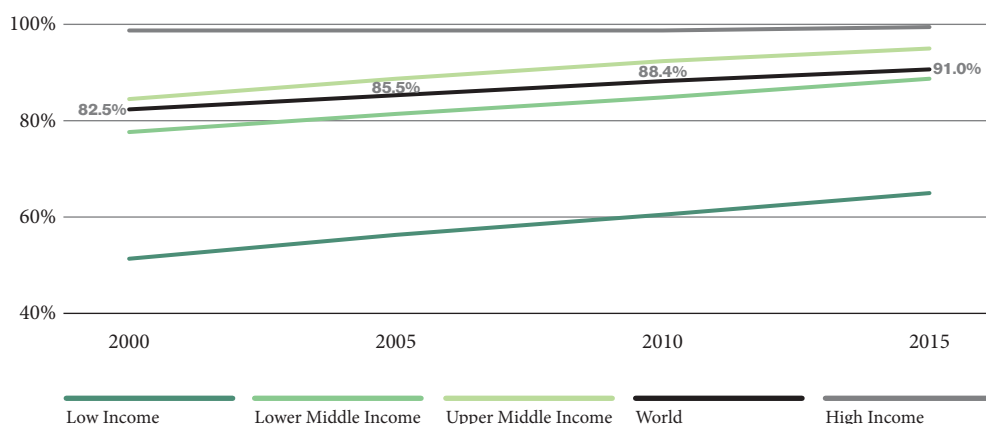


Source: Authors’ own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdgindex.org](http://www.sdgindex.org)).

**Goal 6 – Ensure availability and sustainable management of water and sanitation for all** – Safe freshwater ecosystems are essential to life and environmental sustainability, but remain very unequal, whereas its indicators are critical for child survival, maternal health, children’s health, family well-being, and of course economic prosperity.

Being simultaneously an environmental and a social indicator it attests to qualities of both natural ecosystems and human life. In 2015, at the beginning of the 2030 Agenda, no more than 6.6 billion persons had access to improved drinking water sources and 4.9 billion to sanitation facilities. According to Figure 2.11, “improved water source” is by no means a problem of high-income countries. There, the percentages of population covered are invariably around 100%. In turn, the situation is far from satisfactory in low-income countries, despite the improvements achieved in the period analysed by the MDGs (52.3% to 65.6%). Indeed, the percentages of population covered in those countries lowered the global average to 91% but did not determine a sharp drop of Goal 6, which reached 78.32, one of the highest scores in Planet’s area.

**Figure 2.11** *Access to improved water sources (% of the population)*



Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data - <https://data.worldbank.org/indicator>.

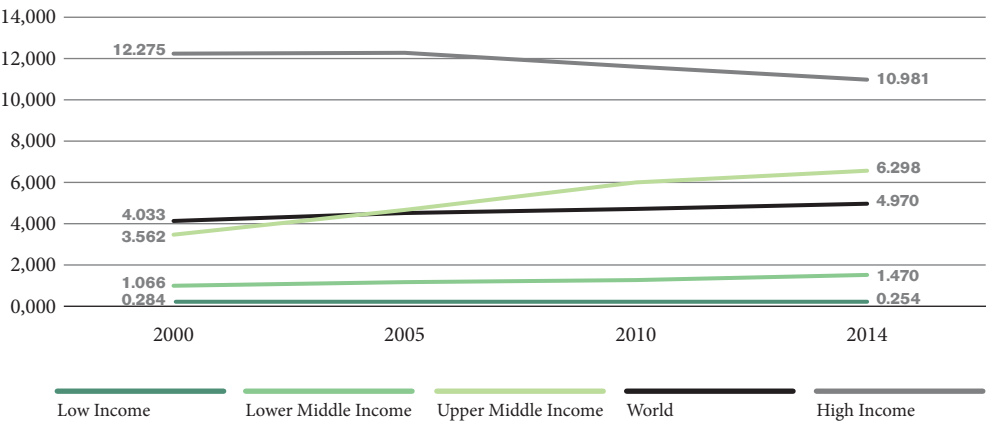
**Goal 13 – Take urgent action to combat climate change and its impacts**

– More acutely than ever, Climate Change, and its socioeconomic impacts, recall the hypothesised “Limits to Growth” by Meadows et al. in 1972. The question is thus how to reconcile long-term environmental goals with short-term economic logic, often shot through with national egotisms that seem to be even more difficult to overcome? (Guerra and Schmidt 2016).

Climate risk is the outcome of the interaction between the risks associated with climate conditions and the various degrees of vulnerability and exposure to natural and human systems (IPCC 2015, 13). To address it, thus building a bridge between SDGs, the Paris Agreement, and the Sendai Framework are probably the answer. To adequately measure such process a complex set of indicators is needed, but due to the scarcity of space, we are limited to one flag indicator: CO<sub>2</sub> emissions.

The climate change mitigation undertaken by reducing CO<sub>2</sub> emissions had results, mainly among high-income countries, but not enough to counterbalance the growth of emissions within upper-middle-income countries. This confirms the importance of SDGs transversality. In any case, the second-highest score achieved amongst the 17 SDGs, and the highest within “Planet” area, is apparently insufficient, as confirmed in the trend shown in Figure 2.12.

**Figure 2.12** *CO<sub>2</sub> emissions (metric tons per capita)*



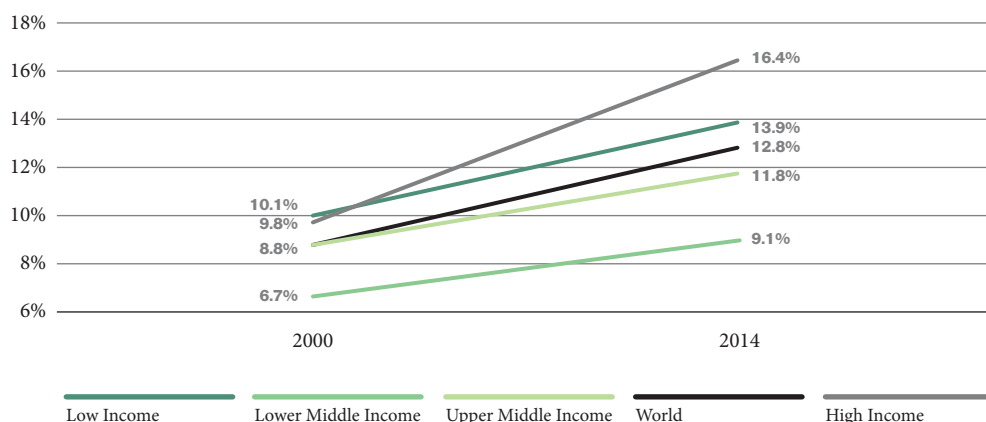
Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

**Goal 14 – Conserve and sustainably use the oceans, seas, and marine resources for sustainable development; and Goal 15 – Protect, restore, and promote sustainable use of terrestrial ecosystems...** – The loss of biodiversity and the ever-diminishing capacity of ecosystems (whether maritime or terrestrial) is increasingly evident (Carson 1962; IPCC 2015). Life below water, *i.e.* the largest ecosystem on Earth, is suffering permanent severe damages in our days. Ocean acidification changes ocean chemistry, as evidenced by buoys, wave gliders, and scientific projects. In turn, although it fulfils vital functions for humanity (as habitat for biodiversity, carbon sequestration, coastal protection in mangroves, and soil and water conservation), the forestland and the global terrestrial ecosystems are being hit by a similar degree of destruction.

The problem gains even more importance because it is mostly invisible to the lay citizen, who still does not link ecosystems damage to resources availability, and the quality of life of present and future generations. An accurate measurement of those areas is thus crucial to give visibility of such problems and to plan a more sustainable future. Since there is a common indicator, we decided to introduce a single “flag indicator” for both Goals, showing terrestrial and marine protected areas by the level of countries’ income (Figure 2.13).

The in-part invisibility, and in-part misunderstanding of environmental degradation, which depends above all on the consumerism that nowadays spreads to the whole world, indeed explain the disappointing scores achieved,

**Figure 2.13** *Terrestrial and marine protected areas (% of total territorial area)*



Source: Authors' own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

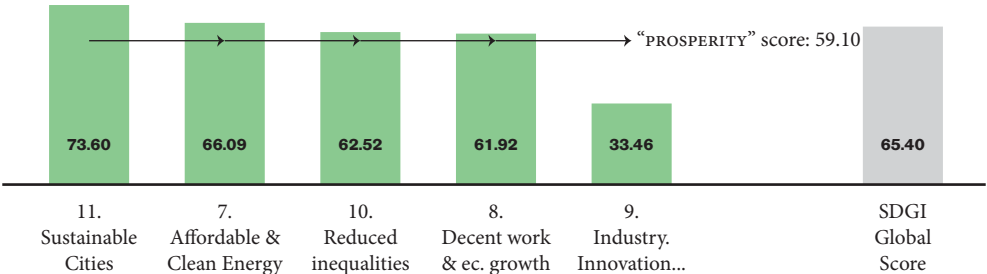
despite the increase in marine and terrestrial ecosystems protection. This yet improving trend is mainly found among high-income countries, where the protected areas increased from 9.8% to 16.4% between 2000 and 2014. In turn, the two middle categories of countries (upper-middle and lower-middle income) show the most modest results. After all, those are contexts in which the pressure of growth is high, without the counterpoint of organised and demanding citizenship to foster environmental protection (Schmidt, Nave and Guerra 2010).

PROSPERITY (GOALS FROM 7 TO 11)

Given the current ecological scarcity and the overall scope of the environmental, economic, political, and social crisis, no one seriously denies the need for sustainable economic practices. Nevertheless, the partial and short-term corrections, which have been implemented all over the world, do not seem sufficient (Guerra and Schmidt 2016). Since the overall environmental quality continues to fall, a coherent notion of prosperity is needed in a global and transversal effort. “One in which it is possible for human beings to flourish, to achieve greater social cohesion, to find higher levels of well-being and yet still to reduce their material impact on the environment” (Jackson 2009, 35).

This utopian sounding endeavour (although not new), requires a deep commitment by all countries. It depends on the availability of funds and the countries’ performances and, no less important, the renewed monitoring capacity proposed in the 2030 Agenda. Therefore, the idea of sustainability

**Figure 2.14**      *Average score on the five goals of “Prosperity’s area”*



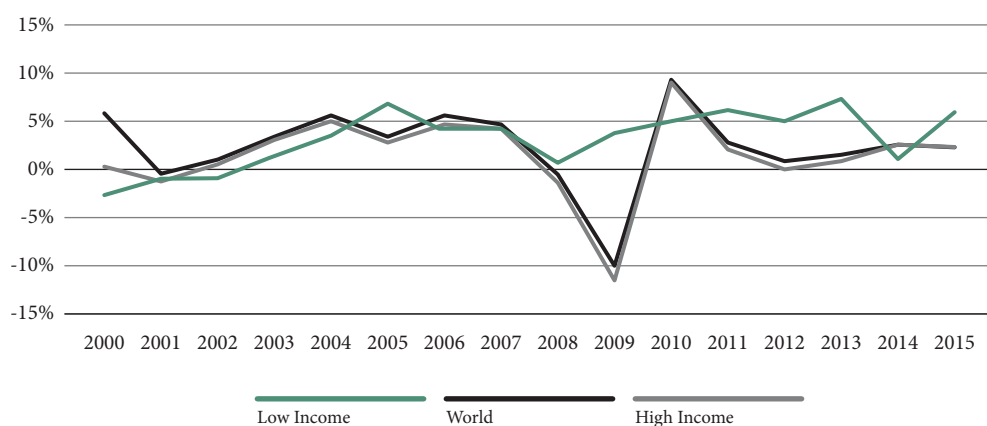
Source: Authors’ own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdindex.org](http://www.sdindex.org)).

is embedded in the evaluation of economic goals present in Figure 2.14. This is a less positively evaluated area, which globally does not exceed 59.1, while the overall average is 65.4. This seems to be a kind of “Achilles’ heel” of sustainability where, in any case, there exists a diversity of performances. Two indicators stand out from the average: “Goal 11 – Sustainable Cities and Communities,” with the highest score (73.6); and “Goal 9 – Industry, Innovation, and Infrastructures” with the lowest (33.46). Let us then see, as above, one “flag indicator” for each of those two “outlier” goals.

**Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation** – The socio-geographical imbalances of economic growth increase the pressure on ecosystems and social vulnerabilities. We are therefore faced with a critical factor of modernity and sustainability when we look to it. Indeed, this kind of “endemic” imbalance of modernity spreads to every economic activity, but perhaps for a “flag indicator” of goal 9, the annual growth of manufacturing value added (Figure 2.15) well fulfils the function. It is closely linked to industrial production and, consequently, to consumption stimulus; and disaggregated data availability for every year of the period under review enable a better illustration of circumstantial effects.

Therefore, to better mirror these data, the chart of Figure 2.15 does not sufficiently respect the standards of previous ones. With more-disaggregated

**Figure 2.15** *Manufacturing, value added (annual % growth 2000-2015)*



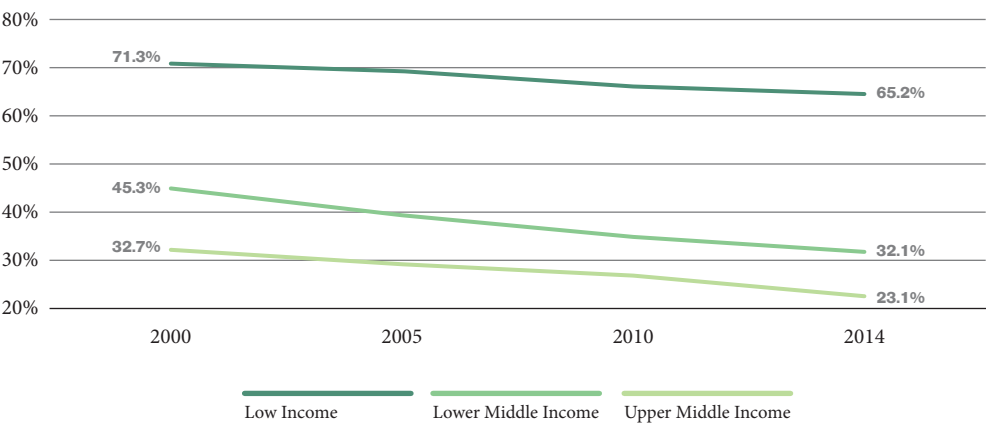
Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.

synchronic information, it indicates that high-income countries have had a weak performance following the crisis of 2008. It shows a marked vulnerability to economic crisis, and a quasi-full determination to the world economy. Meanwhile, the “outsider status” of the most low-income countries provides an apparent resistance to setbacks and upsets imposed by business cycles, as evidenced in 2009.

**Goal 11 – Make cities and human settlements inclusive, safe, resilient, and sustainable** – In 2014 much of the world population (54%) lived in urban areas. This global urbanisation shows growth rates never seen before, and by 2050 the percentage is expected to reach 66%. The cities and the people who live in them are thus determining factors for sustainability.

As part of previous MDGs, Goal 11 calls for sound urban planning to promote the quality of life of almost 800 million residents in slums, informal settlements, or inadequate housing (spatial limitations, limited water supply, and subject to arbitrary evictions). But as seen before for other indicators, these difficulties are not felt the same way all over the world. If for high-income countries numbers are not even worth recording, at other levels the situation is disparate. While all groups show declining trends of slums inhabitants, among low-income countries – those with a more fragile position with 65.2% of their urban population living in slums – improvements seem more challenging

**Figure 2.16** *Proportion of urban population living in slums*



Source: Authors’ own elaboration. Data retrieved from World Bank National Accounts Data – <https://data.worldbank.org/indicator>.



to obtain. Here, the decrease of slum population reached 6.1%, compared to 13.2% in lower-middle income countries, and 9.6% in upper-middle income countries. As in other areas of social prosperity, national performances are not immune to the installed capacity and national affluence.

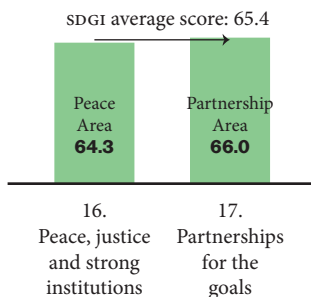
#### PEACE AND PARTNERSHIP, LAST BUT NOT LEAST AREAS

Governance and sustainable development are often seen as interconnected concepts, with common characteristics and interdependent potentials (Guerra 2011). Sustainability is thus an arena in which initiatives and instruments of public participation (authority exercise and power sharing; capacity to implement sound policies; respect for institutions) have been gaining increased visibility and public acquiescence, at least since the Earth Summit in 1992 (Guerra 2011).

In the end, this convergence is the driver of the whole project of SDGs, forming a hub with radial connections with the other three facets of the diagram previously presented in Figure 2.3. Goals of peace and partnership derive from the eighth MDG (“Global Partnership Development”), in which peace means order and no violence, while partnership implies commitments and aid, and both are linked by strong institutions: the *sine qua non* conditions for nations’ prosperity, and thus for sustainability (UNECE 1998).

**Figure 2.17**

*Average score  
on Peace (Goal 16) and  
Partnership (Goal 17)  
areas*



Source: Authors’ own elaboration. Data retrieved from SDGI and Dashboard 2017 ([www.sdginde.org](http://www.sdginde.org)).

As the collection and comparability of data are leading obstacles to the construction of composite indicators like SDGI, the relatively good performance of those two drivers of sustainability (Figure 2.17) can be due to the absence in the index of some of the more problematic countries in those areas. Indeed, whether because they are too small – with no installed capacity to produce such information – or because those countries are going through periods when political power tends to collapse, a considerable number of countries have been excluded from the index. Examples include many of the island developing states, and other

States such as Equatorial Guinea, Eritrea, Guinea-Bissau, Libya, North Korea, Papua New Guinea, South Sudan, etc. With some of these countries included, the achieved score would certainly be lower.

**Goal 16 – Peace, justice, and strong institutions** – The fulfilment of this goal was thought as promoting participatory governance to:

- foster public acquiescence to sustainability measures;
- prevent all forms of abuse, exploitation, trafficking, torture, and violence, inside and outside national borders;
- enhance global cooperation through the UN Security Council and other UN institutions;
- retard the spread of wars and extreme violence as is now afflicting many countries of the world (SDSN 2015).

To better measure this complex area of intervention on which depends the success of the 2030 Agenda, we hereinafter refer to the WGI – World Governance Indicators ([www.govindicators.org](http://www.govindicators.org)). This database consists of six composite indicators of broad dimensions of governance covering over 200 countries since 1996.<sup>8</sup> The set of composite indicators is based on several hundred variables obtained from 31 different data sources, capturing governance perceptions as reported by survey respondents, nongovernmental organisations, commercial business information providers, and public-sector organisations worldwide (Kaufmann, Kraay and Mastruzzi 2010, 2).

Additionally, to present enough succinct data, we crossed each of the six indicators by the average income of the countries, according to the UN classification.

8 Control of Corruption is an index that captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption; next, Government Effectiveness captures perceptions of the quality of public services, its independence from political pressures, and the credibility of the government's commitment to such policies; third, Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism; then, Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations for the private sector; fifth, Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society (e.g., contract enforcement, property rights, the police); finally, Voice and Accountability captures perceptions of political participation, freedom of expression, freedom of association, and a free media.

Table 2.3 shows that there is a positive relationship between the countries' level of income and the governance dimensions evaluation (total values:  $r = 0.699$ ,  $p = 0.000$ ), meaning that it is the poorest countries that most need to invest in this area. Moreover, it should be noted that the evolution between 2000 and 2015 shows a general erosion in all dimensions. This trend is especially felt in "political stability and absence of violence", among the "high-income countries". In turn, registered improvements are much rarer but surely occur, as in the case of "upper-middle-income countries" in which "government effectiveness" is at stake. Since the current situation is not brilliant, maybe this is a sign of hope for the 2030 Agenda.

**Table 2.3** Governance score by income level of countries (2000 to 2015)

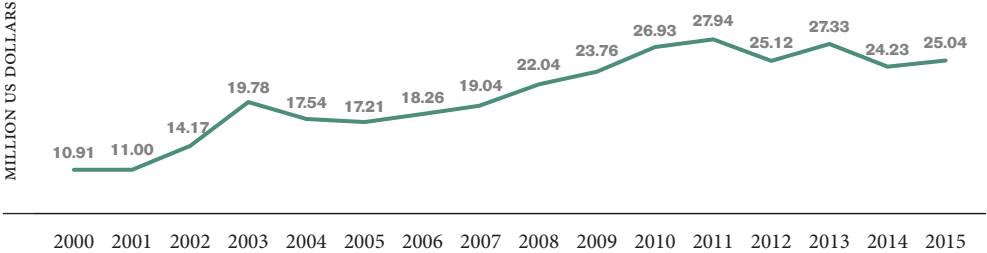
GOVERNANCE DIMENTION		2000				2000-2015			
		LOW INCOME	LOWER MIDDLE INCOME	UPPER MIDDLE INCOME	HIGH INCOME	LOW INCOME	LOWER MIDDLE INCOME	UPPER MIDDLE INCOME	HIGH INCOME
Control of corruption	2000	26,17	28,29	40,25	82,84	-1,23	0,82	0,35	-1,76
	2015	24,94	29,10	40,60	81,08				
Government effectiveness	2000	23,43	33,37	42,18	83,07	-4,56	-2,78	6,63	0,54
	2015	18,87	30,59	48,81	83,60				
Political stability and absence of violence	2000	26,07	32,33	38,30	78,63	-1,20	-3,99	1,80	-7,74
	2015	24,88	28,34	40,11	70,89				
Regulatory quality	2000	26,93	34,17	42,61	82,74	-1,32	-2,76	3,10	0,22
	2015	25,62	31,40	45,72	82,96				
Rule of law	2000	23,52	30,51	37,18	82,43	1,42	-0,77	3,75	0,51
	2015	24,94	29,74	40,93	82,94				
Voice and accountability	2000	28,16	29,66	42,99	76,60	1,22	1,97	-1,55	-0,80
	2015	29,38	31,62	41,44	75,80				
Total	2000	25,71	31,38	40,58	81,05	-0,94	-1,25	2,35	-1,51
	2015	24,77	30,13	42,93	79,54				

Source: Authors' own elaboration. Data retrieved from wgi – World Governance Indicators ([www.govindicators.org](http://www.govindicators.org)).

**Goal 17 – Partnerships for the goals** – Seeking to strengthen the means of implementation and revitalise the global partnership for SD, the Goal 17 prioritises funding, capacity building, knowledge sharing, international outreach, debt sustainability, trade facilitation, domestic resource mobilisation, effective public-private partnerships, and access to tools and technologies. It thus remains, like the 16th, in the “governance for sustainability” area, giving priority to resources (financial, human, technological) in addressing the SDGs’ challenge.

Given the apparent imbalance between countries that remains mostly untouched, an “Official Development Aid” (ODA), funded by OECD members is currently in force. But if we look into its global distribution between 2000 and 2015, in spite of a growth trend in the first years of MDGs, since 2011 it has flattened, if not decayed (Figure 2.18). The implementation of the 2030 Agenda depends on collaborative partnerships of all kinds, without dismissing substantive investments in development and monitoring. This retraction is thus not good news for sustainability, and the coming egotist political events - “America first” or “Euroskepticism” - may exacerbate the situation. Even the advocated global partnership should be based on a spirit of strengthened worldwide solidarity.

**Figure 2.18**     *Distribution of net official development assistance (2000-2015)*



Source: Authors’ own elaboration. Data retrieved from OECD Detailed Aid Statistics: ODA Official Development Assistance (<https://data.oecd.org/oda/distribution-of-net-oda.htm>).

## CONCLUSIONS

At least since “The Limits to Growth”, many proposals to measure and evaluate SD have arisen. Although not always consensual in methods and indicators, they invariably reveal similar trends, as the slippage of its principles. Also, the declared will to implement SD is not new. Agenda 21 (UNCED 1992) covered, from social dimensions to ecological values, from the role of the major groups to the means of implementation, all deep-rooted concerns, as SDG does now. Taking advantage of the fear and hope mix that characterises our age and, consequently, the changing momentum it entails, the core endeavour of the 2030 Agenda is thus to overcome this persistent inertia that until now has condemned SD to “wishful thinking”.

First, SDGs may foster a different assessment of the human experience on earth, no more exclusively, or above all, guided by the classical monetary measurement of GDP.<sup>9</sup> In a broad scope, SDGs rescue the anthropogenic ecological damage and its repercussions on environmental and socioeconomic quality, as well as a set of agreed contemporary values increasingly related to them: no poverty, zero hunger, health and wellbeing, quality education, gender equality, etc. Second, this embracing scope of SDGs includes at once social and environmental well-being for present and future generations, and every corner of the socioeconomic status and the planet, thereby allowing the implicit, but not always practiced, holistic approach of DS. Third, SDGs developed a monitoring process under on-going adaptation. Although looking for a uniform and comparable model of evaluation, it grants leeway to national choices and references and allows a progressive framework improvement and reliability, which is scientifically and openly built to be refined in negotiations to follow.

Accordingly, the 2030 Agenda may represent a dynamic governance tool, to locally and worldwide empower citizens to evaluate governments’ actions and surpass the oversimplifying installed fear that mixes, in a single construct, economic growth, employment, and well-being. In the end, at least partially responding to the more intense criticisms of the current model of development, SDGs can contribute to the recovery of collective confidence in humanity’s capacity to shape a more sustainable future. Of course, the full assessment

9 If space and indicators were available, the present analysis would certainly have benefited from the cross-checking of other variables beyond the average income of the countries.

of SDGs is far too early. For their success, additional pressure on national governments is expected from the visibility of administration performances given by SDGs' gradual implementation. Whether the promised monitoring capacity will "guide and 'orchestrate' public policies and private efforts over the next 15 years" (Biermann and Kanie 2017, 295) is the very question that surely depends on the following points:

- The foreseen global partnership will rely on additional funding from public sources. In a time of scarcity that tends to overwhelm national egoisms, this is perhaps the most significant threat. In this view, the recent signs of disengagement should at least concern defenders of this path and make the global process very risky.
- The increasing formalisation of commitments and the establishment of measurable local, national, and global benchmarks must be anchored on clear and available information, reviews, sharing of best practices, and online platforms, considering that much remains to be done to provide data effective comparability and reliability.
- The need for flexible governance arrangements might better adapt to national/community's specificities. SDGs must not repeat the mistakes of the past (vagueness, ambiguity, wishful thinking), and require effectiveness of the emerging network of implementation mechanisms and partnerships to implement them into concrete progress by 2030. If now it seems more a promise than achievement, hopefully the results will show action beyond both will and speech.

In sum, putting the world on a sustainable and resilient development path demands bold and transformative steps underpinned by new tools and ways of working, and more data and resources to accomplish the set of SDGs purposes for the next 15 years. Composite measurement or indices will be possible and need to be created depending upon objectives. A selected set of indicators will allow a more credible and reliable global assessment of the present situation and the emerging trends. In addition, the continuity of 244 indicators covering different aspects of sustainability must also be guaranteed. Such single measures underline the importance of sustainability by exposing low and high performances on any front.

In conclusion, the data here analysed provide a glimpse of trends of change based on a fleeting portrait of the current situation and the legacy left by

the MDGs between 2000 and 2015. The objective of this chapter was thus to highlight the just-initiated track of the 2030 Agenda and reflect on its unique coverage and approach. The empowerment of SDGs is a long-range mission to surpass constraints of the human fate, as the difficulties identified in collecting and comparing reliable indicators suggest. The promised accuracy of data, and soon both its reachable adherence and transparency, are expected to format multilevel synergies, if international funding for statistical systems is achieved to harness data regarding sustainability in an unbalanced and unequal world, even if it is in transition to a new kind of development.

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