

Article

Exploring the Impact of the Sustainable Development Goals on Sustainability Trends

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Abstract: The SDGs have made a significant contribution to the sustainability movement, being used by many organisations from across sectors all over the world as their sustainability framework. However, have they impacted the previous trend of sustainability challenges just because of their existence? This article aims to contribute to answering this question by statistically comparing the trends in the sustainability performance of the SDGs before and after they were launched in 2015. Data were collected for every SDG and their trends were quantitatively assessed using non-parametric tests, finding that most of the SDGs have not significantly improved and that most of the sustainability indicators are still performing poorly in developing countries. While this research is exploratory and does not assess the direct impact of the SDGs on sustainability, it suggests that for the most part, the SDGs have not significantly changed sustainability trends since they were launched in 2015, which is a concerning finding. This article should serve as a wake-up call to design more suitable sustainability frameworks as the SDGs expire in 2030, and for those using them to be more critical of their reach rather than being satisfied with a framework that although helping will not achieve its main goal.

Keywords: SDGs; sustainability trends; SDG progress



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1. Introduction

The Sustainable Development Goals (SDGs), launched in 2015 by the United Nations in agreement with 195 countries, have been classified as the greatest agreement ever achieved [1], and many academics, universities, corporations, governments and NGOs are following their lead under the seeming assumption that by doing so they are contributing to local and global sustainability. For some, there has been a shift in the sustainability movement since the SDGs were launched [2,3], as an important milestone in the sustainability journey. However, even though a responsibility cannot be directly assigned to them, it is important to assess how successful they have been in contributing to addressing the sustainability challenges they have identified as being crucial to be tackled. How much has really changed since the SDGs were launched? How have the previous trends in poverty reduction, economic output or biodiversity loss, to name a few, been impacted by the implementation of the SDGs? While the direct relationship between the existence of the SDGs and any progress or deterioration in sustainability challenges cannot be established, finding that things have not really improved would stain the impact and importance that many of us have assigned to the SDGs. Certainly, any sustainability challenge cannot be overcome just because the SDGs were launched, have been promoted and are widely used as a sustainability framework. But also, since they are ubiquitous nowadays, it is fair to ask if sustainable development has really improved thanks, although in part, to their existence. Answering this question is the objective of this article. By not knowing this, there is a serious risk of using their name as a way to greenwash our actions [4,5], and as stated by Ali and colleagues, “sustainable washing does not solve problems” but integrated solutions are what is required [6] (p. 3). This is one of the reasons why answering the simple question of whether they have shifted the trend in sustainable development is necessary. This research aims to explore this question and assess whether there have

been significant changes in sustainability challenges thanks to the existence of the SDGs and their implementation. Furthermore, this article is a humble invitation to carefully assess the real weight of the SDGs in the sustainability journey, which is subject to their value and limitations. It is an invitation to those of us conducting research, developing policies, designing strategies or undertaking simple but honest actions to realise that their existence is not enough to contribute to sustainable development and that we must stay away from any potential “SDG washing” if we really want to make deep contributions to our development. This can be considered the immediate implication of this research, but perhaps more importantly, the aim is to use these findings and the discussion we hope to create with them to think ahead of time about the future sustainability framework or strategy we will aim to implement starting in 2030, when the SDGs expire, leaving, most likely, a lot of work still to do.

While the question proposed by this article may seem an obvious one to address, academic work has been mostly focused on the positive value of the SDGs trying to understand how helpful they and every one of them has been in achieving their aim, how they have been used, where and by whom. All certainly contribute to sustainability science and knowledge [6]. However, although it is hard to justify the limited existence of other studies like this, which take a broader and more critical approach, it is crucial to question our own approaches and the frameworks we use so we do not become unconsciously trapped in our own beliefs and short-term agendas, but look to the future and contribute to real change.

2. Literature

The SDGs are about halfway through their span, so it is a good moment to assess whether there have been any changes in sustainability trends since their launch in September 2015. Indeed, assessing their impact on improving the current state of the identified goals can only be made indirectly, since these are such complex challenges that no organisation would be able to tackle alone successfully [7,8]. However, they have been identified as crucial [1] and as causing a shift in the sustainability journey [2], but it cannot be argued that just by their existence that things have changed, just as it is hard to directly link what organisations have done, or declare doing, in terms of contributing to these achievements, with any potential progress [9]. Despite that, partly due to the gap in the literature it is necessary to explore what has happened with the identified sustainability challenges once the SDGs were launched versus what was happening with them before 2015. As their deadline approaches and indicators show that they will not be reached by 2030 [10,11], assessing the success of their existence would help us and local and global policymakers to prepare for 2030 and replace them with a more appropriate and realistic approach.

2.1. SDG Research and Practice

The literature shows that the SDGs have been studied widely in specific and general terms, with a constantly growing number of articles being published on the topic over the years [6]. Across continents, types of organisations and their relevance, there is a global agreement on and a desire to achieve sustainable development [6]. Although some have already argued that they will hardly be achieved by 2030 and provide recommendations to shift route [10], which was probably expected due to the major endeavour they still represent, certainly some improvements at least are expected. But not only that, despite some initial optimism [10] and all the good parts of the SDGs [3,12], including how they could allow corporations to shift their strategies towards specific goals [13], many have highlighted their complexities, limitations and contradictions, e.g., [14–18]. Among them, scholars highlight that they are not legally binding without presenting any obligations, are voluntary so self-interest may be a driver leading to their selection and engagement and that there are no mechanisms for any organisation to innovate in their sustainability agenda [19,20]. Perhaps more challenging are what some have called their inherent contradictions between achieving economic growth (SDG#8) and good health and well-being

(SDG#3), climate action (SDG#13) or protecting life on land (SDG#14), if we continue following the same socio-economic paradigm [21]. On top of these, we cannot forget the impact that the COVID-19 pandemic had on their progress [22,23], along with other crises we are still facing, e.g., the climate crisis, immigration, wars and political polarisation [11]. These have made things even more challenging, as the same challenges we are trying to address hinder the achievement of the SDGs.

Despite the impression that the SDGs have been adopted by many organisations across the world, it is hard to assess the extent of their contributions and the impact of their actions. For example, it is relatively easy to find multinational corporations referring to the SDGs as a strategic framework to structure their sustainability actions [9,24,25], governments at different levels informing how they have incorporated the SDGs into their agendas, e.g., [26–28], collaborative academic initiatives integrating the SDGs into their teaching and research programs, e.g., [29,30] and several other organisations who have adjusted their work in line with the SDGs, e.g., [31–33]. While these are presented as independent initiatives, they depend on each other to ensure some kind of progress and impact on sustainability [34,35]. While the SDGs seem to be everywhere nowadays, the real impact of organisations declaring them as a priority can hardly be measured.

2.2. SDG Impact and Progress

As mentioned, the literature is limited with respect to measuring and monitoring not only the impact of the SDGs on sustainability but the SDGs' general impact, which is still a necessity [36]. When addressing these areas, what is found is mostly at the initial stage of the process and not measuring concrete impact, but rather proposing tools, frameworks or ideas for organisations to operationalise their potential impact on the SDGs, which again speaks to their complexity. For example, B Lab created an SDG Action Manager to help organisations measure their progress [35], although according to Heras-Saizarbitoria et al. [37], it has been limited in its use; SDGs-IAE was developed to qualitatively assess SDG targets on energy projects [38]; van Zanten and van Tulder [39] proposed a nexus approach for companies to manage and assess their contributions to the SDGs in an integrated manner and not in silos; and the World Business Council for Sustainable Development [33] developed the initiative SDG Sector Roadmaps to support businesses in optimising their contributions to the SDGs. Research that has focused on measuring the performance of the SDGs has done so, for example, at the country level, highlighting how their relative position against others is subject to the selected methods and indicators [40], in particular sectors such as manufacturing [41], with respect to firms' ESG performance indicators [42], versus multinationals' GRI disclosure standards [43] or relative to their organisational profile according to whether they focus on environmental or social goals [44].

As stated in the literature, if we aim to contribute to the design of better instruments or frameworks to contribute to sustainable development, measuring and monitoring not only the progress of the SDGs but their progress towards sustainability are crucial [45,46]. However, this type of work has been limited to our knowledge. One of the few articles that tries to understand whether firms changed their practices' breadth and depth due to the SDGs is that of Whittingham et al. [9], who found a "clear but nuanced yes" to their question. However, this is based on an analysis of corporate sustainability reports without any verification of what they found in them. Another recent work is that of D'Adamo and Gastaldi [47] who used a methodological approach to evaluate the SDGs focusing on monitoring their outcomes. While this presents a useful methodological design, its scope is the performance of Italian regions, with relevant contributions to their particular sustainability challenges.

Not surprisingly then, the sustainability challenges highlighted by the SDGs have poorly progressed since they were launched in 2015. According to the latest Sustainable Development Report, not a single SDG is on track to be achieved by 2030, there has been limited progress on environmental and biodiversity goals, health-related goals are off-track,

as well as those concerning housing and institutions [11]. Some progress has been made though with respect to infrastructure, including water and energy; however, this varies largely across countries [11]. According to the UN, less than 20% of the SDG targets have been achieved, with about 15% in reversal progress and the rest having limited or no progress at all. Hence, what has been the real value of the SDGs other than being a common framework we use to position and talk about sustainability?

2.3. SDG Progress and Data Selection

Identifying which targets to address to assess progress on the SDGs is certainly challenging, especially when we aim to measure their performance globally, whereas countries are prioritising actions towards certain SDGs according to their own challenges [12]. According to scholars, another important challenge is how to consider the existing range of approaches and tools, including indicator-based assessments, benchmarking, target mapping or systems analysis techniques [48–50], to support a coherent analysis towards evidence-based decision making when they inform different stages of policy again based on country-level goals [51]. The challenge of which targets to prioritise under the statement that the SDGs and their targets are interconnected has been addressed by some scholars but, as expected, this is always context-specific through analyses in a particular country, not globally [51–54]. Furthermore, while for countries there is a risk in their prioritisation techniques due to potentially arbitrary or politically motivated decisions [51], this article does not aim to provide hard conclusions from its findings but to shed some light into sustainability progress, accepting that assessing progress on the SDGs is subject to the selection of targets and assessment methods [52]. Finally, there is the practical component since the SDG targets are 169, which makes it an extensive number to manage and for many of them there is just none or not enough data from reliable sources to determine whether their trends have significantly changed from before the SDGs were launched to now [55], which is the aim of this article.

3. Methods

To achieve the purpose of this article and answer the proposed research question, the SDGs were considered as a framework and, based on their targets, specific variables were identified and assessed to determine progress or failures on the goals, similar to what D’Adamo and Gastaldi carried out in Italy [47]. Following this rationale, secondary data were collected from various reliable sources that presented information from the year 2000 to 2022 as a way to assess the periods pre- and post-launch of the SDGs. Additionally, since the SDGs are measured at the country level [16], the data had to be organised per country and then clustered into geographic regions to make numbers more manageable. Then, two groups of data were prepared for analysis, the pre-SDG (2000–2015) and post-SDG datasets (2016–2022), similar to what Whittingham and colleagues did [9]. For example, to assess the progress of SDG#1—No Poverty, poverty rate per country was selected as the variable to be assessed. SDG#17—Partnerships for the Goals was not included in the assessment since this is not a sustainability goal per se but an approach to achieve the other sixteen goals [47,56].

The general hypothesis is that significant statistical changes have not occurred since the SDGs were launched with respect to the trends those goals followed before. Since tests showed that the data were not normally distributed, non-parametric paired tests (Wilcoxon Signed Ranked Tests) were used to determine whether statistically significant differences existed between the two proposed periods [57]. Table 1 shows a summary of the dataset and the selected variables for analysis. As stated above, results from this and any other analysis on SDGs’ progress depend on the selected targets [52], so the targets selected in this case were the ones that to the best of our knowledge best represent the respective SDGs.

Table 1. The SDGs, assessed variables, and sources of data.

SDG	Assessed Variables—Associated SDG Target	Source
1—No Poverty	Poverty rate (%)—1.1	[58]
2—Zero Hunger	Prevalence of undernourishment rate (% of population)—2.1.1	[59]
3—Good Health and Well-Being	Maternal mortality rate per 100,000 live births—3.1.1	[60]
4—Quality Education	Out-of-school children rate—4.1	[61]
5—Gender Quality	Female education (%) Higher Level—5.1	[62]
6—Clean Water and Sanitation	Drinking water safely managed service (%)—6.1	[63]
7—Affordable and Clean Energy	Share of modern renewables in total final energy consumption (%)—7.2.1	[64]
8—Decent Work and Economic Growth	GDP annual growth per capita (USD)—8.1.1	[58]
9—Industry, Innovation and Infrastructure	Research and Development expenditure as a percentage of GDP—9.5.1	[65]
10—Reduced Inequalities	Gini index—10.3	[58]
11—Sustainable Cities and Communities	Population living in slums (% of urban population)—11.1.1	[66]
12—Responsible Consumption and Production	Fossil fuels consumption (tons)—12.2.2	[67]
13—Climate Action	CO ₂ emissions (metric tons per capita)—13.2	[68]
14—Life Below Water	Mean percentage of each marine key biodiversity area covered by protected area—14.5	[69]
15—Life On Land	Tree cover loss (ha)—15.2	[70]
16—Peace, Justice and Strong Institutions	Rule of law index—16.3	[71]

4. Results

As seen from Table 2 and Figure 1, the results suggest that most of the sustainability goals (10/16) have not significantly improved after the SDGs were launched (2000–2015 vs. 2016–2022), indicating that there has not been significant progress on most of the goals since the SDGs were launched in 2015. While six sustainability goals were found to have statistically significant improvements ($p < 0.05$), namely SDG#2—Zero Hunger, SDG#3—Good Health and Well-Being, SDG#6—Clean Water and Sanitation, SDG#7—Affordable and Clean Energy, SDG#11—Sustainable Cities and Communities, and SDG#14—Life Below Water; eight goals did not change significantly ($p > 0.05$), despite most of them having improved; and two goals showed a statistically significant decline (SDG#8—Decent Work and Economic Growth, and SDG#15—Life on Land), which is very concerning. When crossing these findings with how the SDGs are organised in the wedding cake proposed by Rockström and Sukhdev [56] so we can understand them better, it can be seen that while economic sustainability has progressed (the top layer of the cake), this has not been statistically significant (industry and inequalities) and decent work and economic growth has significantly decreased; social sustainability (middle layer) shows half of its SDGs with significant progress (hunger, health, energy and cities), whereas the other 50% were found to have improved but not significantly (poverty, education, gender equality and peace); and environmental sustainability (bottom layer of the cake) shows half of those SDGs significantly improving (water and oceans), but land biodiversity decreased significantly and climate did not improve. Figure 1 shows the SDGs and their progress, stagnation or decline. Details of test results can be found in Appendix A.

Table 2. Results on SDG progress.

SDG	Assessed Variable	Improvement (Global Level)	Exception (Regions)	Sig Dif ($p < 0.05$)
1—Poverty	Poverty rate	Yes	Middle East and Northern Africa	No
2—Hunger	Undernourishment rate	Yes	Middle East and Northern Africa	Yes
3—Health	Maternal mortality rate	Yes	-	Yes
4—Education	Out-of-school children rate	Yes	East Asia and the Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean	No
5—Gender	Female education rate (tertiary education)	Yes	Latin America and the Caribbean	No
6—Water	Drinking water safely managed	Yes	-	Yes
7—Energy	Modern renewable energy consumption share	Yes	Middle, Northern and Western Africa, and Western Asia	Yes
8—Economy	GDP per capita annual growth	No	Sub-Saharan Africa	Yes
9—Innovation	Research and development expenditure (% of GDP)	Yes	East Asia and the Pacific, Europe and Central Asia, European Union, and South Asia	No
10—Inequality	Gini index	Yes	South Asia	No
11—Cities	Population living in slums (% of urban population)	Yes	-	Yes
12—Consumption and Production	Fossil fuels use	No	Europe	No
13—Climate	CO ₂ emissions per capita	No	Central Europe and the Baltics, Europe and Central Asia, European Union, North America	No
14—Oceans	Protected marine areas	Yes	-	Yes
15—Land Biodiversity	Tree cover loss	No	North America	Yes
16—Justice	Rule of law index	Yes	East Asia and the Pacific, Eastern Europe and Central Asia	No

With respect to where the SDGs are performing better or worse, in general terms, the developing world is struggling, which is where sustainability challenges are most severe [16]. When assessing the SDGs that have significantly improved (SDG#2—Hunger, SDG#3—Health, SDG#6—Water, SDG#7—Energy, SDG#11—Cities, and SDG#14—Oceans), results suggest some exceptions in the Middle East and Northern and Western Africa, although these are significantly better on water, cities and oceans. Similarly, countries from East Asia and the Pacific, and Eastern Europe and Central Asia do not show significant improvements in quality of education (SDG#4), industry and innovation (SDG#9) or justice (SDG#16); and countries from Latin America and the Caribbean have not significantly

improved their education (SDG#4) nor their gender equality levels (SDG#5), just like South Asian nations on inequality (SDG#10). On the contrary, Europe has improved, although not significantly, its fossil fuel use (SDG#12) and its CO₂ emissions per capita (SDG#13) as North American countries have, which have also reduced their tree cover loss (SDG#15). Details are in Appendix A.

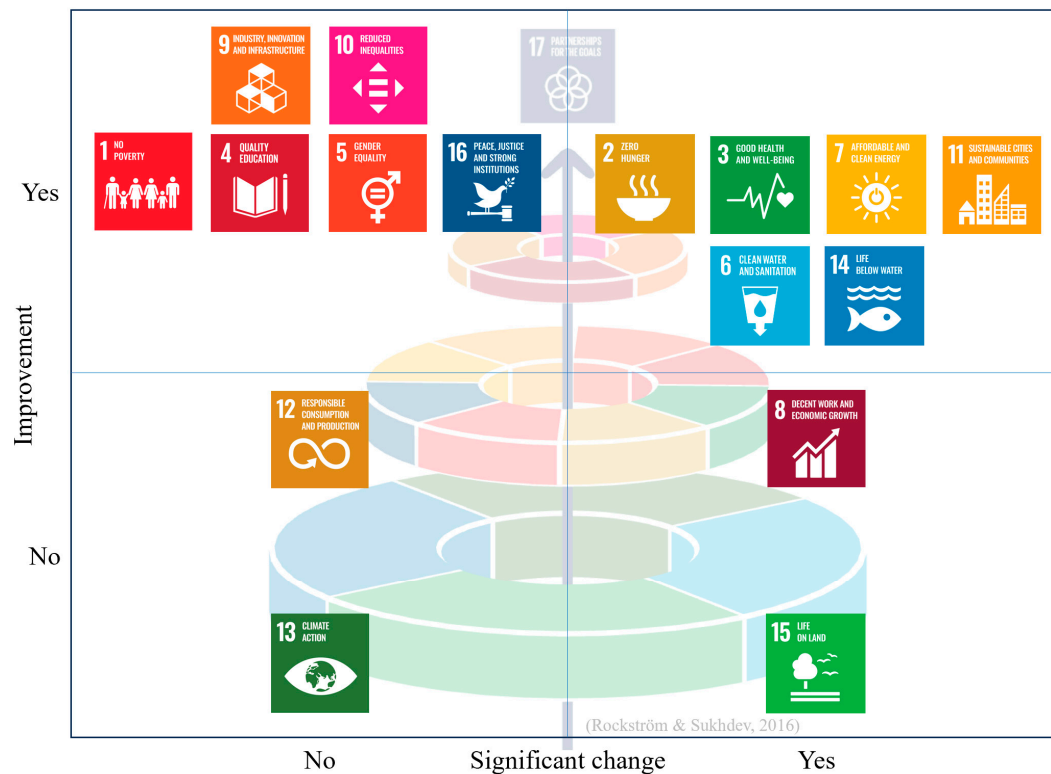


Figure 1. SDGs organised according to their significance of progress (based on Rockström and Sukhdev (2016) SDG wedding cake [56]).

5. Discussion

The purpose of this article is to assess whether the trend that sustainability challenges followed before the SDGs were launched in 2015 has significantly changed over the years. According to some, the SDGs have changed the discourse around sustainability, but has that been enough to modify the trend of development for the better? Indeed, since the SDGs were launched, we have seen companies of all sizes, governments, universities and civil society organisations using the SDGs as the framework to consider when referring to their sustainability policies and practices. However, it is still not clear whether the trends followed by the sustainability challenges have significantly changed due to the very existence of the SDGs, or if these have been used just as a way to organise what organisations do, present it more clearly, and somehow continue doing what they were doing without any emphasis nor accepting the urgency that Agenda 2030 and the SDGs possess.

In general terms, results from this exploratory analysis suggest that most of the sustainability challenges have not significantly progressed since the SDGs were launched, confirming what others have stated in terms of their limited progress and low probability of success [10,11], which is an alarming finding. Following the rationale proposed by Rockström and Sukhdev [56], we see that only half of the SDGs for the supporting system, i.e., the biosphere, have improved significantly (SDG#6—Clean Water and Sanitation, and SDG#14—Life Below Water), while the other two have deteriorated—life on land significantly so, putting at risk not only the accomplishment of the societal and economic SDGs that these are supporting but also the sustainability of the planet and our ways of life. In this respect, we found that the trend of tree cover loss has significantly increased, along

with all the impact that it has on terrestrial biodiversity, and that CO₂ emissions per capita have increased despite global agreements such as the Paris Accord, although the latter not significantly. These results are aligned with the latest version of the planetary boundaries, which shows that by now, we have passed not three, like in 2009, nor four, as in 2015, but six of the nine identified boundaries to continue living on a safe planet [72].

Results also suggest that while half of the SDGs focused on the economy have improved, none of them have changed significantly. Conversely, SDG#8—Decent Work and Economic Growth and SDG#12—Responsible Consumption and Production have not improved as measured through GDP annual growth per capita and fossil fuel use, respectively. The former has actually decreased significantly globally. These findings question why the improvements made by industry, innovation and infrastructure (SDG#9) have not led to an increase in decent work and economic growth (SDG#8) as well as the development of more responsible consumption and production practices (SDG#12). The lack of statistical significance of the improvements made by the industry, innovation and infrastructure (SDG#9) is a way to explain the poor performance of SDG#8 on decent work and economic growth and SDG#12 on responsible consumption and production. It seems that the increase made in R&D expenditure has not yet translated into economic growth, nor a reduction or shift from fossil fuel consumption. Perhaps more time is needed for these to further complement and affect each other. However, due to the complexity of these challenges, if positive results are reached, they may come well after 2030 when the SDGs were supposed to be accomplished. This is a task left for the new framework.

Finally, hopeful news is that four out of the eight SDGs that are society-focused have significantly improved, namely a reduction in the undernourishment rate (SDG#2) and the maternal mortality rate (SDG#3), a higher share of modern renewable energy consumption (SDG#7) and a reduction of slums (SDG#11). However, these improvements are not aligned with significant advancements in reducing poverty (SDG#1), improving the quality of education (SDG#4), progress in gender equality (SDG#5) or the betterment of justice across the world (SDG#16). Again, the limited and challenging timeline set to achieve the SDGs is not helping, as we hope to see, for example, how better nutrition and living conditions should positively impact poverty and education. These are results we hope to see within the timeline of the next sustainability framework, but we at least hoped to find positive trends. These are examples of how the three dimensions of sustainability are not independently progressing, which should be directly related. But perhaps more important and challenging is how all the SDGs are coherently integrated into a successful process that allows them all to flourish, which is one of the criticisms they have faced as they aim to accomplish goals that seem contradictory [21], which is an even tougher challenge and something also confirmed in these results. How to tackle the contradictions presented by some SDGs is one of the biggest tests to address.

Undoubtedly, all the SDGs are complex challenges that not only need the collective participation of all actors to be accomplished, but they also need time, and 15 years does not seem to be enough for them to be reached, let alone half that time. However, whether we achieve them or not by 2030, positive trends were expected to be found due to the urgency of addressing them for the betterment of humanity. All the actions performed by diverse organisations across the world on the SDGs can be hardly monitored or measured, other than referring to what they say they do towards the SDGs, so this research aims to shed some light on that and indirectly determine whether we as humanity have been doing more than what we were doing before the SDGs were launched in 2015 to reach our sustainability challenges, or we have just followed the same approach or even declined in our efforts. However, despite that challenge, measuring and monitoring our performance on sustainability goals remains a need [36], which, although subject to selected methods and indicators [40,52], will be a key consideration [45,46] as we start thinking about the new sustainability framework to take place when the SDGs expire in 2030.

From this analysis, the findings and discussion a few practical implications can be presented for policymakers designing new sustainability frameworks, practitioners working

on organisational strategies and plans to tackle sustainability challenges, and academics aiming not only to understand how this evolves but also to contribute to that goal. First, it is not enough to have a communicationally successful framework, but concrete actions and progress must be achieved, otherwise we all risk contributing to SDG washing more than to sustainable development. Second, while the dimensions of sustainable development are hardly progressing coherently and consistently, it is even harder to accomplish an integrated sustainability approach as the SDG contradictions highlighted by many [14–18] seem to be playing a crucial role in the lack of progress we have made so far. This needs to be well-considered in the design of new sustainability frameworks. That said, this does not suggest avoiding conflicting challenges such as economic development and the protection of nature but finding smart, innovative and feasible ways to accomplish both and make them work together. Third, despite the bias that selecting some assessment methods or indicators may bring to a determined analysis [52], measuring and monitoring as well as reporting, as we mostly see nowadays, are crucial to understanding where we are at, how we are doing, what to fix and whether we will reach our goals. These three points must be considered when thinking about any framework or strategy to achieve sustainability.

6. Conclusions

The SDGs are a useful framework to promote and position sustainability that has become enormously relevant as society faces extreme social, economic and environmental challenges. Sustainability has gained from the SDGs and organisations from all sectors using them have placed the topic at the top of local and international agendas. However, understanding whether sustainability has progressed thanks to the existence of the SDGs is still an open and relevant question to be answered. This is the first aim of this article.

Findings show that only some social (SDGs#2, 3, 7 and 11) and environmental (SDGs#6 and 14) goals have significantly improved since the SDGs were launched, suggesting that their existence does not imply sustainability progress nor success, which is important to keep in mind as we move forward in the sustainability journey and, as the SDGs expire in a few years, start thinking about a new framework. Furthermore, as highlighted by many, the contradictions that seem to be integral to their design play a role in the lack of progress they have achieved. While this is an intrinsic limitation of what the SDGs actually are and this article does not tackle that challenge directly, it is important to understand the type of effect they have had, although indirectly, so that all of us who use the SDGs as a sustainability framework are well aware of their strengths and limitations. Moreover, while the communications component of the SDGs has been extremely successful not only for the sustainability movement but for all those positioning their actions under the SDG framework, it is crucial to keep an eye on using them, or any other sustainability framework, as a way to consciously or unconsciously greenwash our actions without deeply contributing to the final overarching goal. Certainly, this risk of SDG washing must be contemplated when considering the contradicting features of some sustainable development goals. Finally, as a local and global goal, measuring and monitoring mechanisms must be put in place to objectively assess our performance. This not only should show the path we are following but also keep us away from greenwashing our actions. All of this should be particularly relevant for practitioners and policymakers involved in the design of sustainability strategies and frameworks.

Along with the practical implications discussed above, this article also has some theoretical implications for researchers. First, most of the SDG research has focused on what organisations are doing and whether they are contributing or not to some or all of the SDGs. This article presents an overall perspective on SDGs' progress with a critical analysis on the impact the SDGs have had on sustainable development. While this does not deny that there have been some improvements in some areas, it shows that, versus the trends of sustainable development before the SDGs were launched in 2015, in general things have not significantly improved, which is something that has been intentionally or involuntarily assumed by many of us assigning that power to the SDGs. Second, frameworks such as the

SDGs must be carefully considered as a powerful tool to achieve goals. Although they are probably the greatest agreement ever achieved, they have mainly been useful to highlight what we do to make us look like we are doing a lot, but they have not been able to help us accomplish what they were supposed to. Their contradictions certainly do not help, but also our own responsibility is at play when aiming to achieve them independently and in an integrated manner. We refer to them without going further and assessing their impact critically. This article is an invitation to follow that important path. Third, this article highlights the importance of assessing these instruments through monitoring and measuring mechanisms, not only reporting, so that as academics we can contribute to more appropriate and tough decisions to be discussed and made.

Certainly, this research has its limitations. As can be seen, it is exploratory and it attempts to assess whether the trends of improvement or deterioration around sustainability challenges have changed since the SDGs were launched in 2015. To make that assessment, specific targets associated with every SDG were selected, one per SDG, and based on their performance conclusions were made. Indeed, this is a limited approach, since other targets associated with the SDGs may have performed differently. However, the selected variables are among the key dimensions to determine the improvement or deterioration of the SDGs, so it can be argued that if any of them fails the SDGs are not performing as required by the sustainability agenda. However, we understand that assessing progress on the SDGs and their targets is subject to the selection of those targets and the used methods. Another limitation that is surely associated with the SDGs is the short period of assessment, i.e., just 6 to 7 years or even less in some cases since the SDGs were launched depending on the available data, which is a very short period to see significant changes. However, absolute changes were not sought but variations in the respective trends. These limitations are also invitations for other researchers to continue understanding this phenomenon.

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Appendix A

Table A1. SDG#1—No Poverty.

Region	Before	After	Reduced Poverty Rate? *
East Asia and Pacific	19.00	1.74	Yes
Europe and Central Asia	5.29	2.47	Yes
Latin America and Caribbean	8.40	4.33	Yes
Middle East and North Africa	2.84	7.85	No
South Asia	28.24	11.78	Yes
Sub-Saharan Africa	46.17	35.98	Yes
World	19.39	9.43	Yes

Test Statistic: 3.000; $p > 0.05$; * Assessed variable: poverty rate (%); Source: The World Bank; Range: 2000–2021.

Table A2. SDG#2—Zero Hunger.

Region	Before	After	Reduced Undernourishment? *
East Asia and Pacific	7.59	4.08	Yes
Europe and Central Asia	2.98	2.59	Yes
High-income countries	2.69	2.65	Yes
Latin America and Caribbean	8.01	6.99	Yes
Middle East and North Africa	8.02	8.72	No
South Asia	17.27	13.92	Yes

Table A2. *Cont.*

Region	Before	After	Reduced Undernourishment? *
Sub-Saharan Africa	20.78	18.98	Yes
World	10.35	8.08	Yes

Test Statistic: 3.000; $p < 0.05$; * Assessed variable: prevalence of undernourishment (% of the population); Source: The World Bank; Range: 2001–2020.

Table A3. SDG#3—Good Health and Well-being.

Region	Before	After	Reduced Mortality? *
Africa	674.75	554.56	Yes
Americas	62.47	61.59	Yes
Eastern Mediterranean	266.88	186.98	Yes
Europe	18.10	11.96	Yes
South-East Asia	247.73	131.48	Yes
Western Pacific	56.50	40.69	Yes
World	1326.43	987.26	Yes

Test Statistic: 0.000; $p < 0.05$; * Assessed variable: maternal mortality rate per 100,000 live births; Source: WHO; Range: 2000–2020.

Table A4. SDG#4—Quality Education.

Region	Before	After	Fewer Children out of School? *
East Asia and Pacific	3.94	5.83	No
Eastern Europe and Central Asia	1.99	2.32	No
Eastern and Southern Africa	21.25	9.98	Yes
Latin America and Caribbean	1.98	2.23	No
Middle East and North Africa	9.50	3.07	Yes
South Asia	22.45	8.50	Yes
West and Central Africa	31.88	22.02	Yes
Europe and Central Asia	n/a	1.80	n/a
World	15.01	7.17	Yes

Test Statistic: 6.000; $p > 0.05$; * Assessed variable: out-of-school children rate; Source: UNICEF; Range: 2010–2020.

Table A5. SDG#5—Gender Equality.

Region	Before	After	Increased Female Education? *
East Asia and Pacific	15.58	17.33	Yes
Europe and Central Asia	21.96	37.7	Yes
Latin America and Caribbean	17.71	7.3	No
Middle East and North Africa	17.88	35.8	Yes
South Asia	5.33	10.92	Yes
Sub-Saharan Africa	3.71	4.87	Yes
World	11.97	12.02	Yes

Test Statistic: 23.000; $p > 0.05$; * Assessed variable: female education (%) higher level; Source: WHO; Range: 2000–2019.

Table A6. SDG#6—Clean Water and Sanitation.

Region	Before	After	More Drinking Water Safely Managed? *
Central and Southern Asia	51.91	60.60	Yes
Europe and Northern America	93.03	95.43	Yes
Latin America and the Caribbean	73.80	75.32	Yes
Northern Africa and Western Asia	72.64	78.19	Yes
Sub-Saharan Africa	21.32	28.96	Yes
World	62.54	67.70	Yes

Test Statistic: 21.000; $p < 0.05$; * Assessed variable: drinking water safely managed service (%); Source: United Nations; Range: 2000–2020.

Table A7. SDG#7—Affordable and Clean Energy.

Region	Before	After	Increased Renewable Energy? *
Australia and New Zealand	11.01	12.63	Yes
Central Asia	3.19	3.39	Yes
Eastern Africa	11.46	11.74	Yes
Eastern Asia	4.43	8.87	Yes
Europe	9.74	13.70	Yes
Latin America and the Caribbean	23.56	25.36	Yes
Middle Africa	17.34	14.23	No
North America	8.70	11.51	Yes
Northern Africa	4.35	3.86	No
Oceania (exc. Australia and New Zealand)	10.42	10.74	Yes
Southern Africa	4.39	5.71	Yes
Southern Asia	9.13	10.88	Yes
South-eastern Asia	8.70	11.92	Yes
Western Asia	4.71	4.01	No
Western Africa	6.57	6.01	No
World	8.33	10.90	Yes

Test Statistic: 108.000; $p < 0.05$; * Assessed variable: share of modern renewables in total final energy consumption (%); Source: IEA; Range: 2000–2019.

Table A8. SDG#8—Decent Work and Economic Growth.

Region	Before	After	Larger GDP Annual Growth? *
Africa Eastern and Southern	4.03	1.86	No
Africa Western and Central	7.95	-2.18	No
Central Europe and the Baltics	5.85	1.94	No
East Asia and Pacific	7.19	-1.54	No
Europe and Central Asia	4.48	3.04	No
Latin America and Caribbean	1.71	0.90	No
Middle East and North Africa	4.17	1.18	No
North America	4.89	1.28	No
Pacific Island small states	2.72	-0.57	No
South Asia	6.94	3.17	No
Sub-Saharan Africa	-0.75	-0.55	Yes
World	1.98	0.91	No

Test Statistic: 1.000; $p < 0.05$; * Assessed variable: GDP annual growth per capita; Source: The World Bank; Range: 2000–2021.

Table A9. SDG#9—Industry, Innovation and Infrastructure.

Region	Before	After	Increase in R&D? *
Central Europe and the Baltics	0.86	1.44	Yes
East Asia and Pacific	2.34	1.65	No
Europe and Central Asia	1.75	1.50	No
European Union	1.92	1.45	No
Latin America and Caribbean	0.64	0.67	Yes
Middle East and North Africa	0.91	1.57	Yes
North America	2.59	2.97	Yes
South Asia	0.72	0.63	No
World	2.02	2.27	Yes

Test Statistic: 24.500; $p > 0.05$; * Assessed variable: research and development expenditure (% of GDP); Source: The World Bank; Range: 2000–2020.

Table A10. SDG#10—Reduced Inequality.

Region	Before	After	Reduced Inequality? *
East Asia and Pacific	3.39	2.84	Yes

Table A10. *Cont.*

Region	Before	After	Reduced Inequality? *
Europe and Central Asia	8.40	6.85	Yes
Latin America and Caribbean	7.27	6.07	Yes
Middle East and North Africa	0.94	0.76	Yes
South Asia	0.85	1.64	No
Sub-Saharan Africa	3.25	2.51	Yes
World	4.53	3.66	Yes

Test Statistic: 4.000; $p > 0.05$; * Assessed variable: Gini Index; Source: The World Bank; Range: 2000–2021.

Table A11. SDG#11—Sustainable Cities and Communities.

Region	Before	After	Reduction in People Living in Slums? *
Africa Eastern and Southern	57.99	54.80	Yes
Africa Western and Central	62.67	48.69	Yes
Latin America and Caribbean	25.00	16.38	Yes
South Asia	55.02	50.91	Yes
Sub-Saharan Africa	60.28	51.90	Yes
World	260.97	211.77	Yes

Test Statistic: 0.000; $p < 0.05$; * Assessed variable: people living in slums (% of urban population); Source: The World Bank; Range: 2000–2020.

Table A12. SDG#12—Responsible Consumption and Production.

Region	Before	After	Less Fossil Fuels? *
Africa	383,991,855	396,224,729	No
Asia and the Pacific	3,306,638,570	3,789,079,737	No
Europe	1,409,854,499	1,335,227,496	Yes
Latin America and the Caribbean	454,981,983	455,914,025	No
North America	1,766,377,903	1,871,667,759	No
World	8,553,931,287	10,062,117,427	No

Test Statistic: 31.000; $p > 0.05$; * Assessed variable: fossil fuels consumption (tons); Source: UNEP; Range: 2000–2019.

Table A13. SDG#13—Climate Action.

Region	Before	After	Reduced Fossil Fuels? *
Central Europe and the Baltics	6.70	6.45	Yes
East Asia and Pacific	4.68	6.05	No
Europe and Central Asia	7.47	4.33	Yes
European Union	7.47	6.39	Yes
Latin America and Caribbean	2.59	2.62	No
Middle East and North Africa	4.98	5.44	No
North America	17.91	5.82	Yes
South Asia	1.02	1.46	No
Sub-Saharan Africa	0.78	3.63	No
World	4.40	4.59	No

Test Statistic: 27.000; $p > 0.05$; * Assessed variable: CO₂ emissions (metric tons per capita); Source: The World Bank; Range: 2000–2019.

Table A14. SDG#14—Life Below Water.

Region	Before	After	More Protected Areas? *
Oceania (exc. Australia and New Zealand)	17.82	20.65	Yes
Northern Africa and Western Asia	21.97	25.02	Yes
Eastern and South-Eastern Asia	28.59	32.61	Yes
Central and Southern Asia	33.98	34.28	Yes
Sub-Saharan Africa	38.06	41.12	Yes

Table A14. *Cont.*

Region	Before	After	More Protected Areas? *
Latin America and the Caribbean	37.74	41.48	Yes
Australia and New Zealand	51.48	54.48	Yes
Europe and Northern America	61.80	64.36	Yes
World	43.17	46.03	Yes

Test Statistic: 45.000; $p < 0.05$; * Assessed variable: mean percentage of each marine key biodiversity area covered by protected areas; Source: United Nations; Range: 2010–2019.

Table A15. SDG#15—Life on Land.

Region	Before	After	Less Tree Cover Loss? *
East Asia and Pacific	3,430,732	4,737,269	No
Europe and Central Asia	3,942,659	6,926,284	No
Latin America and the Caribbean	4,706,182	6,274,758	No
Middle East and North Africa	10,846	23,717	No
North America	4,362,358	4,255,521	Yes
South Asia	96,642	186,419	No
Sub-Saharan Africa	1,954,293	4,102,907	No
World	18,503,712	26,506,875	No

Test Statistic: 33.000; $p < 0.05$; * Assessed variable: tree cover loss (hectares); Source: Global Forest Watch; Range: 2001–2022.

Table A16. SDG#16—Peace, Justice and Strong Institutions.

Region	Before	After	Improved Justice? *
East Asia and Pacific	9.046	8.997	No
Eastern Europe and Central Asia	8.280	6.798	No
EU + EFTA + North America	15.741	19.459	Yes
Latin America and Caribbean	8.541	16.312	Yes
Middle East and North Africa	3.706	3.828	Yes
South Asia	2.513	2.684	Yes
Sub-Saharan Africa	8.527	12.787	Yes
World	56.353	70.866	Yes

Test Statistic: 31.000; $p > 0.05$; * Assessed variable: Rule of Law Index; Source: World Justice Project; Range: 2014–2018.

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