

Review

Sustainable Development Goals in the COVID-19 Pandemic: A Narrative Review

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Citation: Clemente-Suárez, V.J.; Rodriguez-Besteiro, S.; Cabello-Eras, J.J.; Bustamante-Sanchez, A.; Navarro-Jiménez, E.; Donoso-Gonzalez, M.; Beltrán-Velasco, A.I.; Tornero-Aguilera, J.F. Sustainable Development Goals in the COVID-19 Pandemic: A Narrative Review. *Sustainability* **2022**, *14*, 7726. <https://doi.org/10.3390/su14137726>

Academic Editors: Paola Cerchiello, Branka Hadji Misheva and Shatha Qamhieh

Received: 16 March 2022

Accepted: 20 June 2022

Published: 24 June 2022

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Abstract: The present narrative review aimed to analyze the impact of the COVID-19 pandemic on the sustainable development goals (SDGs). This information would allow a better comprehension of the actual state of the SDGs and a more efficient programming in future interventions. To achieve the objective of the study, a consensual and critical review was carried out using both primary sources, such as scientific articles, and secondary sources, such as bibliographic indexes, web pages and databases. The Sustainable Development Goals are a global call to action to end poverty, close the gender gap, protect the planet, and improve the lives of people around the world. In 2015, the United Nations General Assembly adopted 17 goals as part of the 2030 Agenda for Sustainable Development, which sets out a plan to achieve the goals in 15 years. However, the COVID-19 pandemic crisis has been a turning point in the achievement of these goals, due to all its consequences at the political, economic, and socio-cultural levels. This review can be used as a guide for future research and reviews in order to understand the status of each of the SDGs and what actions have been taken and proposed in the aftermath of the pandemic in recent years.

Keywords: COVID-19; sustainable development goals; peace; justice; inequalities; energy; gender; education; sanity; industry

1. Background

Sustainable Development has become a catchphrase for international marketing agencies, a slogan for development and environmental activists, and recently a main theme of conferences and academic paper [1]. However, the concept remains unclear as to its meaning and what it represents [2]. The concept of sustainable development dates to 1713, when it only meant ensuring forestry sustainability [3]. Currently, the definition of sustainable development is the one used in the Brundtland Report, which defines it as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” [4].

The Millennium Development Goals (MDGs) have been a historic and effective form of global mobilization to achieve a set of important social goals worldwide. They express

widespread public concern about hunger, poverty, lack of schooling, disease, environmental degradation and gender inequality. By grouping these priorities into eight measurable and time-bound goals, the MDGs help promote political accountability, global awareness, social feedback, improved measurement, and public pressure. The MDGs became a way to measure the fight against poverty during the 15 years from 2000 to 2015 [5,6].

However, it was not possible to achieve all of the MDGs' objectives, so that the Sustainable Development Goals (SDGs) were adopted by the United Nations (UN) in 2015 including: 1. no poverty, 2. zero hunger, 3. good health and wellbeing, 4. quality education, 5. gender equality, 6. clean water and sanitation, 7. affordable and clean energy, 8. decent work and economic growth, 9. industry, innovation and infrastructure, 10. reduced inequalities, 11. sustainable cities and communities, 12. responsible consumption and production, 13. climate action, 14. life below water, 15. life on land, 16. peace, justice and strong institutions and 17. partnerships as a common way of acting to try to end poverty, protect the planet and ensure that by 2030 the entire planet can enjoy prosperity and peace [7]. Even so, it has been stated that by 2030 only 53% of variables regarding sustainable development will have been achieved [8]. This information can be seen in Figures 1 and 2. Figure 1 shows a worldwide spectrum image of the SDGS index, while Figure 2 shows the SGD index countries by order of their achievement regarding the SDGS' 17 goals.

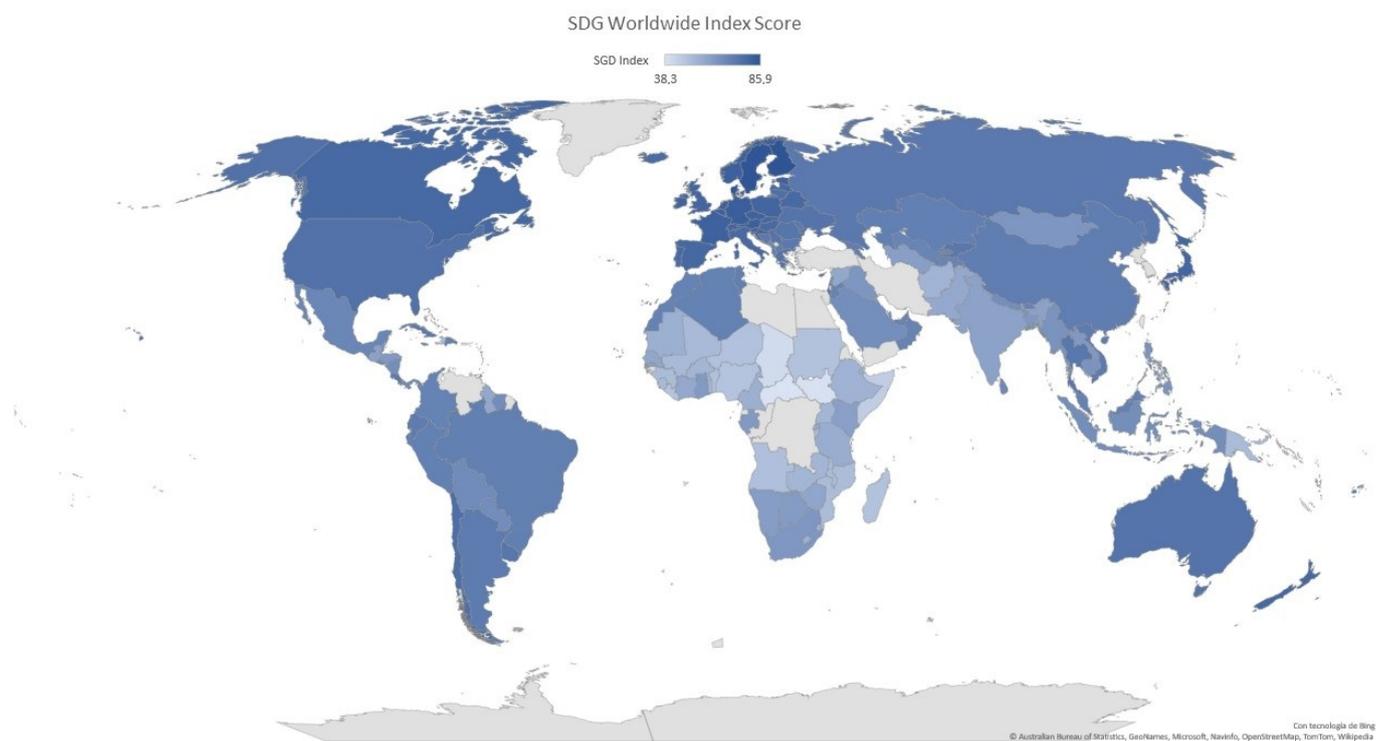


Figure 1. SDGS Worldwide Index Score. Own elaboration, data extracted from the database: www.SDGsindex.org/reports/sustainable-development-report-2020 (accessed on 16 April 2022).

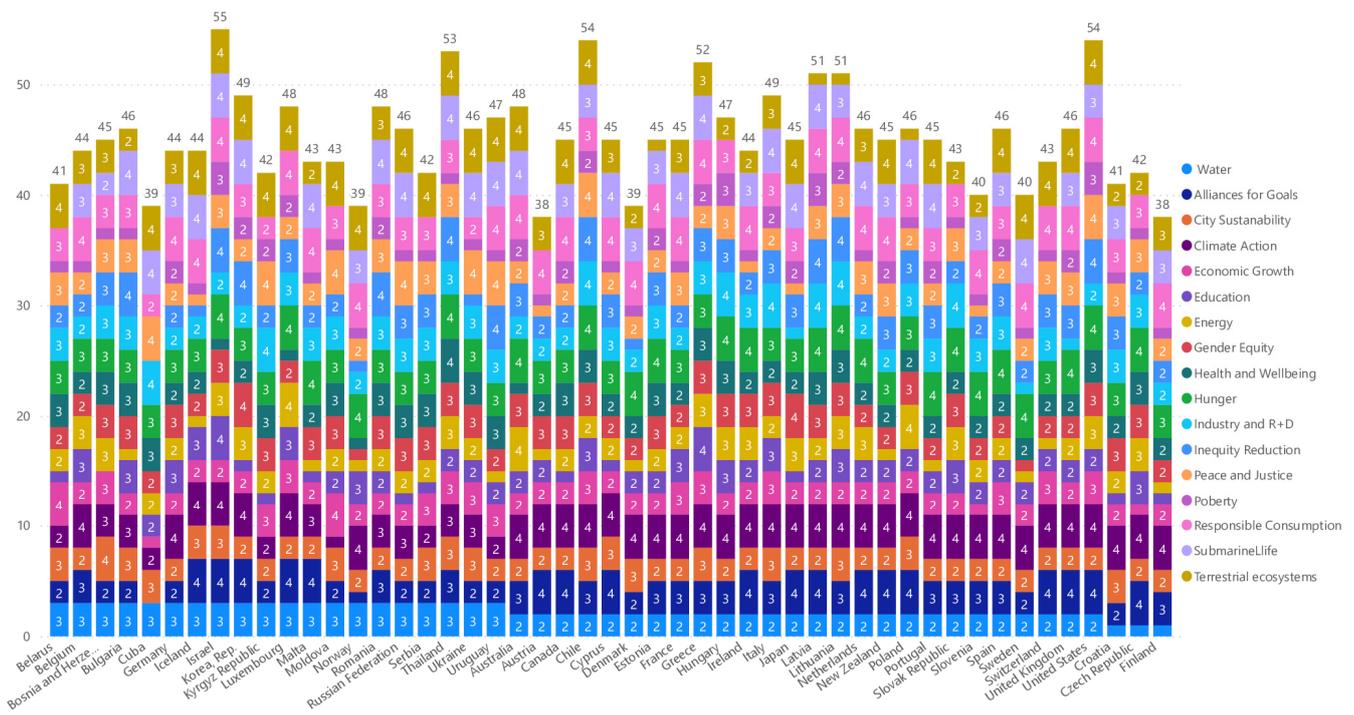


Figure 2. Millennium Development Goals. Own elaboration, data extracted from the database: www.SDGsindex.org/reports/sustainable-development-report-2020 (accessed on 16 April 2022).

This figure of 53% countries with sustainable development will be highly impacted by the arrival in 2019 of the severe acute respiratory syndrome coronavirus (SARS-CoV-2) [9,10]. With an actual impact to date 4 February 2022, of 386,548,962 confirmed cases, including 5,705,754 deaths reported by the World Health Organization (WHO) [11], it has become a new challenge for the world, posing a huge threat to the implementation of the UN SDGs [12]. The COVID-19 pandemic has generated enormous pressure on the world economy and business operations, as well as having major financial implications, just as it has increased poverty and hunger worldwide [12], slowing progress towards sustainability [13]. This jeopardizes our ability to achieve many of the 17 UN SDGs in the framework of the 2030 Agenda for Sustainable Development [14], while reducing the importance of the SDGs for the world's governments [12]; a major part of their resources are being diverted to fighting this crisis, so sustainable development is being put on the back burner [13].

Given the current situation and the volatility of markets, governments and unexpected changes in COVID-19 curves and waves, numerous publications and information is necessary to be able to face the current scenario with scientific rigor. Along these lines, narrative reviews offer an objective and critical analysis of current findings, offering and establishing theoretical frameworks. However, narrative reviews have been criticized because they rarely employ peer-reviewed methodologies, or because they may duplicate evidence, and often do not indicate the inclusion criteria of the studies [15]. However, since the appearance of COVID-19 in 2019, over 1372 reviews have been published and indexed in PubMed up to February 2022. Many of these articles contain a much higher number of citations than the original articles themselves. This is largely due to the vast need for information and thematic frameworks that are needed regarding COVID-19, whether epidemiological models [16], herd immunity [17], specialized nutritional guidelines [18] regarding COVID-19 disease, mental [19] health, new insights, and perspectives [20] or a gender approach [21]. The affected UN SDGs during the COVID-19 pandemic that are analyzed in the present narrative review are:

Poverty and hunger: Today, 736 million people still live in extreme poverty, while the number of people suffering from malnutrition exceeded 821 million in 2017. The goal

of the SDGs is to aim to lift at least half of men, women and children of all ages out of poverty in all its dimensions, as well as to end malnutrition by 2030 [7]. COVID-19 has widened the differences between social classes and different economic strata, with an emphasis on poverty. The authors suggest that the initial response of COVID-19 had to focus on impactful actions, but at the same time neglected the interests of the poorest and most vulnerable population. Thus, these global responses exacerbated the problems of the poorest, due to the disruption of food supplies, as well as the problems of sick people who could not access hospitals [22].

Sanitation and life in water and on land: in 2015, 844 million people were lacking basic drinking water and 2.3 billion people still lacked basic sanitation in 2015. The UN seeks to obtain equitable, affordable, and universal access to safe drinking water, as well as access to adequate hygiene and sanitation systems for all [7]. However, COVID-19 also jeopardized this goal. The authors propose the case of Fiji's aquatic ecosystem as an example. 61.36% of respondents wore masks and 38.64% wore gloves. In Fiji, most citizens use masks, while gloves are used by medical professionals, police officers, municipal waste managers and shopping mall workers. This negligence by Fijian citizens has resulted in damage to the marine ecosystem, which is a grave and worrying concern [23].

Education: the SDGs aim to ensure that, by 2030, all girls and boys have access to a complete free, equitable and quality primary and secondary education, as 103 million young people in the world are still not literate, and most of them are women [7]. Students from infant education to university have suffered a variety of breaks in attendance in classrooms. Restrictive measures and fear from parents have had an impact on education and teaching quality. Only prospective studies will be able to clarify the potential effects of COVID-19 on education.

Gender equality: it is estimated that one third of the world's women have suffered physical and/or sexual violence at some point in their lives. The UN intends to seek ways to eradicate all forms of violence and discrimination against all women and girls worldwide [7]. The authors emphasize that, during the pandemic, an increase in domestic violence and intrafamily violence has been observed, becoming especially acute during the quarantine period and in Latin American countries [24].

Sustainable cities, communities, and climate action: 4.2 billion people lived in cities in 2018 and by 2050 the urban population is projected to reach 6.5 billion. To be sustainable, the UN seeks to ensure access for all to safe and affordable housing, access to basic services, and the achievement of slum upgrading, as well as reducing the impact of cities on the environment, with a focus on ensuring safety and air quality [7].

Work and economic growth: through diversification, innovation and improvements in technology, the SDGs hope to achieve higher levels of economic productivity, especially by focusing on labor-intensive and high value-added sectors [7]. The onset of the COVID-19 pandemic triggered an unprecedented crisis, not only because of health and social shocks but also because of a deep global economic recession, having more than double the impact of the 2008 financial crisis [7].

Clean energy and responsible consumption and production: the UN aims to reduce waste generation through prevention, reduction, recycling, and reuse to achieve a more sustainable and efficient management of natural resources by 2030 [7].

Industry, innovation, and infrastructures: the SDGs seek to develop quality infrastructure, which is sustainable, reliable, and resilient, to support human well-being and economic development, with a focus on equal and affordable access for all, as well as adapting industries to become more sustainable and improving infrastructure, with greater resource efficiency and improved use of clean and environmentally friendly technologies and industrial processes [7].

Inequalities, peace, and justice: by the end of 2017, 68.5 million people were forcibly displaced by conflict, human rights violations, and violence. To combat this situation, the SDGs seek to significantly reduce all forms of violence and all related deaths, end

child exploitation and abuse, trafficking and all forms of torture and violence, and seek to partially reduce bribery and corruption [7].

This Sustainable Development Goals (SDGs) implemented by the United Nations in 2015 comprise the most ambitious global agenda adopted at the international level to direct collective action around common objectives. They aim to fight extreme poverty, while integrating and balancing various essential dimensions of sustainable development such as social, environmental, and economic, providing an outline on how to approach global policymaking. However, the complex architecture under which they have been designed, the criticisms of the international community and their technical limitations, not to mention the worldwide pandemic suffered in recent years due to the COVID-19 virus, point to major limitations in the feasibility and implementation of all these objectives for building a better planet for future generations [25,26].

As indicated above, more than 1732 reviews have been published to date and none is a narrative review of SDGS and COVID-19. Therefore, the present narrative review aimed to analyze the impact of the COVID-19 pandemic on the sustainable development goals. This information would allow a better comprehension of the actual state of the SDGS and more efficient programming in future interventions.

To achieve the objective of the study, a critical and consensual review was carried out among all the authors using both primary sources, such as scientific articles, and secondary sources, such as bibliographic indexes, web pages and databases. The protocol used consisted of a bibliographic review in which primary and secondary sources were used. PubMed, SciELO, Embase, Science Direct, Scopus and Web of Science were used using MeSH-compliant keywords, including COVID-19, Coronavirus 2019, SARS-CoV-2, 2019-nCoV and SDGSs. We reviewed and used articles that were published between 1 January 2020 and 28 February 2022, but also included earlier studies that contained relevant information at various points in the review. The exclusion criteria used were: i. studies with old data (outside COVID-19), ii. those presenting inappropriate topics, which are not relevant to the focus of the review, iii. conference proceedings, PhD dissertations, unpublished studies, abstracts and books. All publications that met scientific methodological standards and had implications for any of the subsections of this review were included. Data processing was performed by all review authors. Finally, the articles were discussed by the authors to draft the review prior to submission.

2. Poverty and Hunger

The 2030 Agenda's Objectives 1 and 2 focus on "*eradicating poverty and hunger in all its forms in the world*". These objectives are especially important in a period of global pandemic [27]. Developing countries have been very preoccupied by the difficulties associated with the presence of COVID-19 over the past two years [28]. In addition to the risk of infection, there are concerns about not being able to earn enough income to buy food, and access essential medicines and basic health services [29]. There has also been a clear decline in school-age children's access to education, increasing the risk of them dropping out of school on a permanent basis [30]. This is related to the decrease in income within the family, as children must be able to contribute to the family economy and are forced to work [27,31].

In addition, the costs incurred by the appearance of the pandemic in the social and health spheres are forcing governments to allocate extraordinary budget allocations and plan programs for prevention, containment, surveillance, and care of the disease [31]. All these budgetary needs are leaving countries with fewer resources in a situation of economic, social and employment inequality, putting at risk that the goals set can be achieved within the stipulated timeframe [32]. The economic debt of developing countries has risen sharply in recent months and income from tourism, normally the largest source of revenue for these countries, has been severely affected by the global measures taken to prevent the spread of the virus, which have halted travel between countries [33].

Although in recent years the data collected on the progress of poverty and its eradication seemed to indicate that the levels of extreme poverty were being significantly reduced,

the appearance of the pandemic and the tendency not to end the risk of contagion and with it, the increase in deaths, is threatening a setback in the progress achieved [34,35]. Countries in Latin America, sub-Saharan Africa and Asia are seeing COVID-19 as having serious consequences for their development as countries [36]. In this context, India, among other countries, has seen a major health crisis grow in recent months, as it has not been possible to reduce the virus propagation in a population in which elementary sanitary measures such as social distancing or confinement at the time of infection cannot be maintained [37]. This, together with the lack of access to the medical system, reaffirms that the most vulnerable people, due to a clear lack of economic resources, will suffer greater comorbidity and will be more affected in terms of contagion and recovery from the disease. In addition, this is combined with the need not to leave the workplace even if they are ill, increasing the number of deaths, without the possibility of a recovery [38].

Along these lines, the COVID Observatory created for Latin America and the Caribbean (ECLAC), with the objective of compiling information on the different actions taken by the governments of these countries to confront the pandemic, has yielded significant data on the advance of poverty and hunger due to the questionable measures implemented, and the damage that has resulted from them and which will continue over time [39]. In these economically depressed countries, rigid confinement may help contain the disease, but will negatively affect an already declining economy [40]. Moreover, poor access to vaccines has prevented the number of contaminations and deaths from declining in the same way as in better-off countries with greater access to pharmaceuticals [41].

The economic and social impact of COVID-19 has highlighted the difficulties countries face in dealing with a global catastrophe. However, this has been exacerbated in developing countries, where the protocols in place have only widened inequalities in the distribution of resources and increased the risk of vulnerability of the most socially disadvantaged [42]. This disease is going to have a very negative effect on poor people, favoring the appearance of hunger, child malnutrition, children dropping out of school, etc. in these already vulnerable contexts [43]. In short, poverty levels will increase considerably, rendering the progress made in the last decade useless and returning to the levels of malnutrition, hunger, and poverty of 8 or 10 years ago [44]. Reversing this situation when the advance of the pandemic seems to be lasting over time is going to be very complicated and will affect people under 18 years of age in a more specific way [45].

It is therefore necessary to review what has happened in recent years and propose new measures, and a new approach to improve the situation in the most disadvantaged countries with the fewest opportunities for economic income [46]. The whole world must look at these countries and think of a way to put in place measures to rebuild the future and propose the most appropriate development paths to contain the economic, social, employment and educational recession as soon as possible [47,48].

3. Sanitation and Life in Water and on Land

The COVID-19 pandemic is a reminder of the vital importance of achieving Sustainable Development Goal (SDGS) 6: Ensure availability and sustainable management of water and sanitation for all [49]. Water has an indispensable and undeniable value in all aspects of life, as it is fundamental to human dignity and survival, as well as necessary for the management and maintenance of ecosystems, agriculture, and the security of the planet. Thus, the global challenges for the coming years are to ensure access to safe drinking water and sanitation in a sustainable manner, and prevent or reduce pollution, as well as shortages and floods [50].

Water supply, hygiene, and sanitation (WASH) has been a necessary measure to mitigate the transmission of COVID-19, as hand washing has been one of the main countries' recommendations to prevent the spread of the virus. However, this pandemic measure has had, and continues to have, detrimental effects on the sustainability and service delivery of water resources. The context of the pandemic has thus varied the severity of these

effects, impacting to a greater extent in countries with governments with deficient water and sewage infrastructures [51].

Over the past two years, the COVID-19 pandemic has affected WASH service delivery in all countries. Various contextual elements and the immediate effects the pandemic has had on the sector are presented below.

The global water, sanitation, and hygiene sector, prior to the pandemic, faced a number of challenges, given the increase in urban population and the effects of climate change, among others, but with COVID-19 this has not only become evident but seems to have worsened [52]. Waste management and cleaning services and access to water and sanitation services are necessary for the prevention and control of the transmission of various respiratory and diarrheal diseases, so it is very likely that territories with limited access to water and sanitation services have faced an increased risk of disease transmission [53].

In addition, routine maintenance of water and sewerage infrastructures has been affected by the restriction or lack of movement of personnel due to confinement and quarantine arrangements, and the increased risk of infection among utility staff, and even deaths among qualified personnel. This has undoubtedly impacted maintenance and operation [51].

The COVID-19 crisis has greatly affected the global economy, especially in low- and middle-income nations, leading to an increase in extreme poverty, higher unemployment, and rising inequality. Restrictions imposed by many governments around the world on the mobility of people have paralyzed business activity and when prolonged over time, many companies have been forced to close, resulting in massive job losses [17,54]. The water and sanitation sector has been no exception, as drilling companies have been closed or service personnel have been reduced due to illness or death.

WASH responses to COVID-19 have highlighted capacity constraints in both government coordination and public policy formulation, which directly affect the nature, quality, and impact of WASH responses. As a result, many non-governmental development partners (e.g., United Nations Children's Fund, UNICEF, USAID) have launched initiatives aimed at identifying these capability gaps and promoting the necessary re-formulations to build the resilience of governments, regulators, and utilities [55]. Specific assistance has focused on coordination and strategic planning to inform communication and decision making to the public [47,56].

Although public spending by governments has been increased to cope with the pandemic, the WASH sector has often been overlooked in plans for response to prevent the outbreak from progressing [57]. Similarly, pre-pandemic estimates already indicated a funding shortfall in the WASH sector, especially in sanitation and hygiene, where the shortfall in services is greatest [58]. Increasing constraints have been observed in the sectoral fiscal space, as governments have been forced to continue to allocate significant amounts of financial resources to priorities generated by the emergency, such as increasing installed hospital capacity and purchasing vaccines [59,60].

As such, it was a major risk to the operational stability of services and the financial viability of providers, due to changes in demand patterns, declining financial resources of users, interruptions in supply and the various emergency measures that governments had to cope with the pandemic [59]. This could limit access to WASH services with optimal quality, especially for all the most vulnerable populations. It may also have slowed investments in the sector worldwide.

Water providers, throughout the pandemic have provided their water services in a difficult situation [53]. In some countries, this has led to a reduction in service levels, disproportionately affecting peri-urban, urban, and rural areas. Now both consumers and service providers must contend with the side effects of COVID response policies, which unintentionally affect the most vulnerable [57,61].

Although major water, hygiene and sanitation infrastructure projects have not been affected during the pandemic closures, mainly because they are considered essential in-

frastructure, future investments and capital expenditures will almost certainly be affected in the short to medium term. This is due to the shift in priorities of local and national authorities in emergency response, as well as that of public utilities, towards maintenance and operating costs [62].

Around the world, authorities have acted in response to the pandemic crisis by partially suspending water billing for the low-income population and delaying payment of water service cuts, which have been justified given the importance of hygiene in order to reduce the spread of the virus [63]. These emergency crisis measures have affected operators' revenues. A World Bank report reveals that collection rates have declined by about 40% in supervised utilities and extended WASH payment deadlines [64]. In addition, because of decreased access and increased prices for supplies and chemicals, public utilities have experienced budgetary problems [53].

Despite the risks and constraints to the functioning of water, sanitation and hygiene services, the pandemic has also left indications for making sanitation and water management more sustainable. In general, various actions have been put in place in response and recovery to ensure access to WASH, which can be managed so that this improvement is not limited to the pandemic, but also after the pandemic ends. Some actions for WASH transformation are listed below:

- Increased access to the human right to water and sanitation for all [65].
- Guaranteeing that all individuals have sufficient access to WASH services has been a major priority since the onset of the COVID-19 crisis, and most governments have implemented actions. However, all these measures have not been useful, as they have not reached the poorest populations, and there is no evidence that WASH responses have been tailored to the needs of vulnerable populations [66,67]. In addition, governments and institutions may not have the political will to make a strong commitment to the realization of the rights to water and sanitation once the pandemic is over [68].
- Improved coordination and communication (both within WASH and with other structures) [58,69].
- The implementation of the response to COVID-19 has required the highest political commitment, as well as the coordination and participation of different sectors (such as education, public policies, health, etc.). Most countries have developed mechanisms for action and coordination of emergencies with all these stakeholders. Similarly, much joint coordination was observed in the WASH, education, and health sectors [58,68–70]. Despite all these efforts, the pandemic has demonstrated that better and greater coordination and collaboration is needed [71,72], including more political will from governments and commitment from all relevant partners at all different scales.

The pandemic has created a viable environment for novel approaches and solutions, which are necessary for effective response and recovery during this period, especially in those populations with low and middle incomes [72]. Not only is innovation in technology necessary, but so are organizational, social, and financial innovations [73]. The COVID-19 crisis may be an opportunity to reform the sector in the direction of resilience, as reforms such as water leakage reduction, digitalization of the WASH sector, and water use, are necessary to ensure that the WASH sector can sustain itself if they occur [70,73].

Therefore, financial, and technical support to service providers, along with capacity building, require significant reinforcement at all levels. The objective of WASH sector partners in the short term is to guarantee the continuity of services for everyone, mitigate the gravity of the COVID-19 impacts, and provide priority to the more fragile populations. In the future, the goal is to improve the resilience of the WASH sector to future crises.

4. Education

During the COVID-19 pandemic, adolescents and children have not only been exposed to adverse social circumstances, but to effects on their mental health, well-being and (lack of) management of school responsibilities and homework [74,75]. This pandemic has greatly impacted education at all levels worldwide, with more than 290 million students

affected by the shutdowns and a rapid face-to-face transformation towards e-learning [76]. This forced transition has raised the question of whether online education would foster inequalities and the challenge of meeting the United Nations Sustainable Development Goal for education [76], “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” [77,78].

Changes in the teaching process have usually been relevant to the stage of pandemic development [79]. The benefits of Information and Communication Media Technologies (ICMTs) have been widely studied and in educational contexts these are multiple. Especially, they enhance holistic learning through an instant access to information and communication all over the world [80], collaborative tools, and more autonomous and conceptual learning [81]. However, there are still some drawbacks associated with e-learning. For instance, the previous experience of the students in the use of ICMTs can affect their academic performance due to lower self-confidence, anxiety, or a higher need for time-management without the immediate help of instructors or classmates [76,82]. However, cultural, and socioeconomic reasons are the most important factors that can affect online education. Over 40% of the global population does not have Internet access (at home or at school), which constitutes a potential risk of educational segregation due to affordability or lack of technical infrastructure [76,83,84].

Cultural differences among countries were particularly obvious in Africa. Concretely, in South Africa they developed a “no students left behind” approach in which an early lockdown and a modification of the academic year were needed, considering that not all the students could afford the technology for online lessons. The efforts of the education system were directed towards promoting partnerships with technology and data providers to give laptops and Internet access to the students who did not have these resources [85]. However, not only technical and curriculum support are key components for success, but well-being and affective support are also determinant factors influencing education success [79,86]. These issues can be developed through the encouragement of a feeling of belonging and identification with the University, so the students have certainty that they are going to be supported and pushed to achieve their degree [87]. In Algeria, similar issues were found: internet access, technology access, motivation and previous knowledge of online teaching culture, and correct teacher’s online training are key factors in making education sustainable in the future [88]. Similarly, research in South America suggests the development of educational institution policies which encourage an agile methodology to provide the students with the competencies and skills demanded in these times of rapid change [89,90]. Specific training methods should address sustainability as a goal for future graduates [78]. Education also has a very significant role to play in preventing the academic community from suffering psychological diseases due to their isolation and lack of socialization, so there is a need to promote contingency plans in case of a pandemic, that fosters both offline and online approaches in case they are needed [79,81]. In Europe, some studies are being carried out which develop a novel method of education of the elderly, such as promoting the quality of life of the students of the newly created U3As in Belarus and Ukraine, which have copied the Polish model. These investigated the general quality of life of university students at the level of three components: level of stress, sense of self-efficacy, and level of life satisfaction [91,92]. Other European studies on the sustainability of education have focused on gender inequalities and labor market impacts. In Poland, the burden of childcare when following online lessons fell mainly on women, yet at the same time economic difficulties left some children unassisted during their online lessons at school [93,94]. In any case, gender inequalities were not increased but maintained over time during the pandemic, along with the challenge of improving the mechanisms to ensure mental well-being of children and adolescents, and to provide more access and technology abilities to people who live in rural areas [95]. If we take the middle school, the most important factors to enhance online education in case of a pandemic situation are attitude and self-efficacy towards technology (internet and computers), instructor response times and behavior during on-line learning [96]. Reflective practice and critical thinking are key

components for teachers to make their students autonomous and self-sufficient in case they have to face online teaching [81,97]. Not only drawbacks, but also opportunities have come up during the pandemic. In Taiwan, a web-based learning system to teach English reading worked better than the paper-and-pencil approach, suggesting a sustainable model for the future in high-schools [98]. Digital literacy and health education are key factors to enhance at all educational levels as transversal knowledge to make sure learning and self-protection standards are maintained during a pandemic [97,99]. Education can be influenced by technical infrastructure as well as other aspects, in a case study in Wuhan, the main challenges were on-line education, medical services, logistics assistance and support for graduate employment development [100,101].

5. Gender Equality

Gender equality is an essential element of social equity. Despite this, gender inequality reduces the chances of many women of living a secure and fair life. UN Women and the Department of Economic and Social Affairs note that women [102] and girls around the world are far more likely to live in extreme poverty than men and boys, a figure that rises to 25% for those aged 25–34 [102]. Currently, more than 40 nations still do not have legislation to protect domestic violence against women. More than 700 million women and girls were forced to marry before the age of 18, and it is calculated that more than 200 million girls and women worldwide have undergone some form of female genital mutilation (FGM). Three out of four victims of human trafficking are girls and women [102,103]. About 15 million school-age girls are not in school. Similarly, in 18 countries around the world, husbands can legally prevent their wives from working, and in 39 countries, inheritance rights are not equal for sons and daughters [102].

The European Union (EU) Gender Equality Database shows that the pay and pension gap in the European Union (EU) has not narrowed [104]. All this indicates that gender inequalities are still present in most countries. The COVID-19 pandemic has impacted all countries in the world, putting a great strain on the economy and the healthcare system, as much as it has contributed to maintaining this gender inequality. In approximately 18 countries, it is calculated that women carry the strain of being responsible for household and family care because of the measures taken to prevent COVID-19 [105]. As a result of school and daycare closures, some mothers have been forced to quit their jobs or try to combine jobs to stay at home and care for their children. If they have managed to work at home, they will certainly have had to cope with the stress of multitasking, which can affect their physical and mental health. It should be noted that grandmothers have also provided a great deal of help, often at risk to their own health, through exposure to the virus [106]. Organizations in Central Asia and Eastern Europe have urged policy makers and the international community to recognize the risks that the pandemic could have on women, potentially a setback to women's rights if adequate answers and recovery plans are not urgently launched [103,107].

Likewise, in relation to violence against women, throughout the pandemic and especially during quarantines, many women have had no choice but to endure their abusive partners, within their homes [108]. On 6 April 2020, UN Secretary General António Guterres alerted the world to the potential increase in domestic violence during quarantines, which threatened SDGS 5, especially focusing on the ending of all violence against all girls and women. Some nations, like the United Kingdom and China, reported that domestic violence doubled during the shutdown period of COVID-19, from February to April 2020, in comparison to the same time period of the year before [109]. Similarly, the Italian National Network of Women's Centers recorded a sharp increase (around 74.5%) in the cases of women contacting the centers during this period of COVID-19 [106]. Belizzi et al. [110] have stated that "COVID-19 and violence against women are interrelated pandemics". These authors [111] state that the COVID-19 restrictions have also led to "significant delays in programs to end female genital mutilation (FGM), which could result in an estimated

2 million more cases of FGM over the next decade and an estimated 31 million more cases of gender-based violence and 13 million more child marriages over the next 10 years [107].

A UN Women's poll [112] analyzed the effects of the COVID-19 pandemic on SDGS 5 in 11 Asia-Pacific countries. The findings noted that "women's economic resources are the most affected". The report also noted that women's emotional and mental health has been disproportionately affected during the pandemic. The data also noted that women's pay has decreased due to reduced hours. The survey also noted that curfews have jeopardized women's security and that "institutional responses are inadequate". Therefore, the major conclusion is that the pandemic has jeopardized the achievement of SDGS 5 in the Asia-Pacific region [107,113].

As has been the case in previous pandemics, the gender impact is being ignored—with exceptions—in global and national solutions to the COVID-19 crisis [114]. To avoid this, the EU should (beyond urging Member States to implement a gender approach to COVID-19) re-evaluate how the Gender Equality Strategy for the next five years will be implemented in this context and seek alternatives over the next five years, along with alternative binding formulas in the face of the refusal of some Member States to sign up to the Istanbul Convention on violence against women. This Istanbul Convention on combating gender-based violence deals with an issue that is likely to be key in this crisis. The leadership of the countries most committed to gender equality will also be essential if Goal 5 of the SDGSs is to be sustained and improved in the coming years of crisis [115].

6. Sustainable Cities, Communities, and Climate Action

Cities are the direct expression of society. They are essential scenarios for mobilizing the actions of humanity, becoming the urban space where innovation, development, creativity and, above all, innovative technologies converge [116]. It is estimated that by 2030 cities will have 5 billion inhabitants and that by 2050 about two-thirds of the world's population will live in them. As COVID-19 continues to hit the economy hard around the world, we must begin to look for other sustainable ways to sustain our planet. However, banishing poverty and inequality, expanding health care, or reversing biodiversity loss, as well as climate change, may not be possible due to lack of money or attention [117]. Because of the financial situation and socio-environmental COVID-19 effects, the transition to sustainable and resilient cities has been questioned. Likewise, as COVID-19 has affected the strategies of different governments, the urgent need to improve all those issues that characterize urban agendas has been pointed out, in order to achieve sustainability and be resilient to the effects of the global ecosystem crisis. This will require the overcoming of urban research and the design and implementation of public policies that address the various socio-environmental problems generated within cities before, during and after COVID-19 [118].

Throughout history, pandemics and epidemics have had an important role to play. The development of playgrounds, squares and walking areas in European cities could be considered as the first means of providing safer urban spaces. These public spaces in cities are the places where people congregate and interact [119]. These spaces throughout the pandemic may have been avoided, for fear of contagion, making the post-pandemic city less convivial. History has shown that pandemics can help change the layout of cities and build safer environments. However [120,121], the current layout of contemporary cities developed after forgetting the impact of previous pandemics. In recent years, the emphasis has been on densely populated urban spaces. However, in the new normal, post-pandemic, there will be the need for further development of the health and safety effects of urban public spaces. However, it is necessary to redesign cities in a society where pandemics may be more frequent because of globalization and climatic change [122–124].

COVID-19 and climate change disproportionately affect the most disadvantaged populations, intensifying global inequalities [125]. The current pandemic has highlighted the fragility of our globalized society, raising concerns about the sustainability of our way of life [126]. Research has presented the implications of COVID-19 in multiple areas, such

as energy and the environment [127]. The pros and cons of the pandemic changes have been outlined, focusing on the impact of the SDGs related to energy and the environment. The results point to a positive impact on sustainable and clean energy and a negative impact on climate action [128]. However, some research suggests that less traffic and a less hectic pace of life, as well as cleaner air and more responsible food consumption are considered positive side effects of confinement policies [129]. This may indicate that there are opportunities to adjust behavioral responses that could serve as positive measures of low-carbon emissions. It is also noted that society is aware of the need for a response to climate change that mirrors the need for our response to the pandemic [130].

In the short term, the pandemic minimized pollution in all countries of the world, especially in China, Europe, and the USA, where carbon dioxide (CO₂) and nitrogen dioxide (NO₂) emissions were significantly reduced. Thus, inadvertently, COVID 19 minimized emissions more than any other intervention or policy proposal to date, in line with the targets of the Sustainable Development Goal for Climate Action, which proposes to keep warming below 1.5 °C above pre-industrial levels [131]. However, this situation may not be sustainable in the future, as the economic slowdown could pose much greater problems. Nevertheless, the pandemic has illustrated that there may be opportunities to implement structural changes along climate-friendly pathways. Therefore, these actions would have to represent permanent and major fundamental changes in energy institutions, economics and transportation. During the pandemic, given the low demand for energy because of the restrictions that forced the shutdown of services and industry, aided by one of the best spring climates in the country's history, sufficient solar and wind power could be generated, achieving a full month without coal-fired electricity consumption [132]. Despite doubts about the global climate crisis in the post-COVID future, the pandemic has helped us realize that the oil and coal industries are permeable systems. Therefore, there is an opportunity to change the system and push policies towards renewable energy projects that will help growth and create jobs while reducing emissions [133].

7. Work and Economic Growth

The pandemic has triggered a major economic crisis with the greatest impact on developing countries, increasing poverty for the first time in three decades [12]. During the pandemic millions of people were laid off or lost their jobs, and others had to quickly adapt to working from home as offices closed. However, needs remained, and many other workers were considered essential and continued to work in hospitals and stores, in garbage trucks and warehouses, although under new protocols to avoid the virus spreading [134].

The International Labor Organization (ILO) reports that due to the COVID-19 crisis, a 14% decline in hours worked is expected in 2020, which meant a 400 million job loss compared to the 4th quarter of 2019 [135]. Low- and middle-income countries were the hardest hit, estimating a fall in working time of up to 23.3%, equivalent to 240 million jobs in the second quarter of 2020. In addition, incomes in emerging countries fell by 15%. Thus, the pandemic is having catastrophic impacts on progress on SDGs 8 in multiple ways [136]. Significant impact has been observed especially in the services sector, such as tourism, as this has had only small recoveries throughout the pandemic, but after each wave of the pandemic they have suffered declines again, thus needing more time to recover [137]. The pandemic has had a major impact on the recovery of several industries. The aviation industry suffered the greatest decline. The International Civil Aviation Organization predicted a worldwide passenger drop of between 2.29 and 3.06 billion passengers by June 2020, resulting in a loss of between \$302 billion and \$400 billion compared to a non-pandemic scenario [136]. In relation to technology and innovation, the pandemic accelerated R&D funding, especially in the pharmaceutical industry, as well as in artificial intelligence, digital infrastructure, and service-based innovations [136].

Added to all the drastic changes that occurred in people's working lives, the pandemic also intensified the demand for home care jobs, especially for parents with young or school-age children amidst daycare/school closures [138]. Thus, teleworking throughout the

pandemic has gained attention, and it is estimated that it may continue in a post-COVID future, adopting the work-from-home methodology as a new form of employment relative to the conventional work scene [139,140]. This may have a potential positive effect on employment by adopting more successful approaches that could enhance progress on SDGS 8. It should also be noted that digital businesses are gaining more attention among the population, as throughout the pandemic many people have turned to them to acquire multiple products more quickly. Therefore, this acceleration of digitalization could soon create more employment opportunities [138].

Economic growth remains the main element for the well-being of countries and the viability of their political systems. However, with the coronavirus crisis, nations' growth trajectories face unexpected challenges. The economic consequences of this crisis are significant and widespread, affecting many areas of the economy, as well as employment and jobs [141]. Initial COVID-19 projections for the global economy predict that, in the case that the virus developed into a worldwide pandemic, by 2020 most developed countries would forfeit about 2.4% of the value of their GDP, leading experts to reduce their expectations for global world economic growth in 2020 from about 3.0% to 2.4% [141,142]. However, these projections were done before COVID-19 qualified as a worldwide pandemic and before all the restrictions to prevent the transmission of the virus were implemented. Thereafter and because of the impact, world stock markets suffered drastic downturns [143]. The International Monetary Fund (IMF) expected the world economy to contract by 3% in 2020 and the major economies to contract by twice as much [144].

Throughout the COVID-19 crisis, short-, medium- and long-term scenarios are likely to play out. For example, if the economic recovery after COVID-19 is V-shaped, multinationals are estimated to maintain their growth and expansion, as they did before the pandemic. This scenario could be indicative of uncertainty about the recovery of the economy after COVID-19 and how multinational companies will play their role in the future [145]. In this COVID-19 crisis context, after the control and protection measures taken by most countries' governments at the beginning of the crisis, the de-globalization process could have been reactivated. In fact, these measures adopted by EU countries to deal with the early stages of the crisis were taken in a national context, without a global consensus among all member countries, which may demonstrate a certain fragility in international institutions [146,147]. However, at the end of April 2020, the EU adopted a common strategy on the COVID-19 crisis, imposing common measures, which were extended within the EU, thus establishing a European recovery plan, aimed at mitigating the pandemic effects. In July of the same year, EU leaders agreed on the overall budget for the years 2021–2027, which focuses on economic recovery from the COVID-19 pandemic, as well as investment in digital and green transitions [147].

8. Clean Energy and Responsible Consumption and Production

Energy has been the keystone in dealing with the socioeconomic problems caused by COVID-19 [148,149]. Specifically, the impact of COVID-19 on energy consumption patterns, energy business models, and renewable energy policies is significant. There is discussion of possible post-pandemic scenarios and how to transform the positive impact of the pandemic into drivers to promote the development and access to clean energy. One significant consequence of the pandemic is the loss of accuracy of the models used to forecast energy consumption for planning the exploitation of energy systems. During lockdowns, while the global energy system experienced a low increment in renewable energy demand, oil demand reduced by 9%, and electricity demand reduced by 2.5% [150]. Given the importance of electricity for health, economic and other activities, policies to guarantee an uninterrupted power supply were issued in several countries, allowing users to delay the payment [149].

Future oil demand will depend significantly on how governments react to COVID-19. Currently, based on the delay of numerous ongoing and future infrastructure and commercial projects, an important decrease in oil demand is forecast. This will affect the

cost of oil which is foreseen to remain low, affecting the transition to renewable energy sources [151]. Overall, COVID's impact on the world oil sector is unprecedented, reducing the demand to 1995 levels and aggravating the crisis initiated in 2014 in oil producer countries [152].

The pandemic is a turning point in historical energy consumption. Therefore, adequate characterization of the energy systems' performance during the pandemic is needed to successfully drive post-pandemic recuperation and to better manage similar events in the future. Different studies highlight a reduction in the hourly energy demand at the local level, while higher consumption moved from the productive and commercial sectors to households [153–155]. In the Iberian Peninsula (i.e., at national scale), the average consumption reduced by 12% to 17% affecting the electricity market [156]. This situation highlighted weaknesses in the market structure, affecting its economic viability. Therefore, based on this experience, policy makers need to restructure the market. One positive impact during the lockdown in Europe was the preference for renewable energy sources over fossil and nuclear sources to meet rapid changes in power demand [156]. In addition, the gases emitted into the atmosphere were significantly reduced during the initial period of confinement, when economic and business activity in non-essential services was halted [157,158]. This has turned out to be a global economic catastrophe [159,160]. The effects in many areas will be visible over the coming years. But this has been a time of rest for natural resources and a time of care for the environment [158].

In a similar vein, tourism activity in countries in which it is the main income source has been greatly reduced. In these countries, part of this income is used to care for natural environments such as forests, aquifers or areas located in the middle of the jungle [161,162]. Therefore, governments will not be able to allocate funds to preserve these natural environments. In addition, workers in these sectors will look for ways to earn income in the same location. This will encourage these people to engage in activities that are a direct damage to these environmental policies, such as logging, poaching or illegal fishing [163,164]. It is precisely in the most depressed countries that income is mostly derived from tourism or from activities such as the export of raw materials [165]. In some countries the natural environment is very extensive, e.g., Peru, Mexico, or Brazil. In these countries, the reduction in income has been very high due to the pandemic. This also means that their indebtedness to the rest of the countries has increased, with debt levels like those of ten years ago [166,167]. These countries are once again in need of external economic assistance. The government's responsibility will be to propose less radical revenue-raising measures that facilitate people's commitment to the common good, the consumption of clean energy, recycling, and the reduction of harmful gas emissions into the ozone layer, etc. [168]. It is evident that the initial effect of the pandemic on the environment has been beneficial in the short to medium term. It is imperative that countries see this as an opportunity to prevent the negative consequences of re-implementing policies that bring back the initial problems [169,170]. Countries should allocate financial resources to resume tourism activities and increase employment in these sectors; they should promote social and economic inclusion; they should address the care of natural resources; they should reduce the emission of harmful gases into the ozone layer and address a climate alert to achieve the objectives set [171,172].

The negatives impact of the pandemic in the development of renewable energy systems drives the need for new and more adequate energy policies to prevent further impacts [173]. Other issues like uncertainties in the supply chain, higher taxes for goods, and the increasing difficulties in accessing governmental benefits and lower interest rate incentives [174], resulted in an electricity generation capacity growth lower than forecast globally for wind (i.e., decreased by 4.9 GW) and solar energy (i.e., by nearly 28%) [175]. In Denmark, where the pandemic seriously affected renewable-based generation, governmental actions are demanded to save the goal of 50 % of renewables in the energy mix by 2030, and total independence from fossil fuels by 2050 [176]. The pandemic resulted in a critical situation for the Ethiopian solar energy industry, which is a cornerstone in the government approach to achieve universal access to electricity [177]. The restrictions from the pandemic

halted solar technology imports in Ethiopia, while barriers such as the availability of qualified personnel were aggravated. Furthermore, a significant reduction in the demand for electricity combined with the deterioration of the energy sector has driven several companies to close. In India, the clean cooking fuel program, significantly delayed by the pandemic, is instrumental in reducing air pollution, improving health, and achieving Sustainable Development Goals [178]. In fact, a significant share of the rural population returned to traditional fuels in face of the impossibility of accessing clean cooking fuels during lockdowns. Moreover, the pandemic restriction stopped construction of renewable energy projects, a situation aggravated by the disruption of the global supply chain, causing the deficit of critical components. Additionally, issues such as a reduced demand for electricity from industry and commerce, high transmission and distribution losses further aggravated the situation [179]. However, the urgent need for a reliable and good quality power supply in rural areas has driven governments to introduce well-thought-out reforms to be rapidly implemented in order to boost the use of renewables [179].

Globally, the lockdowns and restrictions during the pandemic forced production and commerce facilities into a lower demand for electricity, while the increased time of people in households drove a higher demand for electricity in the residential sector [180]. Different studies discuss the influence of people's behavior in households on the electricity demand profile [181,182]. These studies are focused on the interactions between people, social, psychological, and demographic factors and technology, in order to continue to try to embrace technology and energy dynamics in periods of crisis.

The pandemic resulted in some positive effects [183], including aspects such as:

- Increased distance for meeting and learning activities,
- Increased work-from-home activities,
- Growing popularity of e-shopping,
- Intensification of data transmission,
- Sanitary and urban reforms,
- Robotic and remote sanitary control and treatment,
- Preference related to shortening intelligent traffic control while commuting,
- Self-driving autonomous vehicles
- Other more energy efficient forms of human activity.

These aspects contribute to accelerating energy transition and the development of innovative technologies.

A less optimistic view points out that the pandemic occurred at a moment critical for the relationship between politics and sustainable energy transitions [161]. In this case, several drivers of what happens after COVID-19 are a continuation of processes predating the pandemic and casting uncertainties on the future of energy transition.

The COVID-19 pandemic had an impact on clean energy access. In Africa, reliable, sustainable and modern energy access had increased prior to the pandemic [183]. However, the share of people without access to electricity increased by 2% in 2020 (i.e., over 13 million people) [184]. This increment is caused by a lack of financial funds for energy projects (in the government, the private sector, and households), which is a result of the shift of priorities towards the health crisis triggered by the pandemic [185]. The access to clean cooking fuel was also affected, stressing the need for African governments to analyze the lessons learned during the COVID-19 pandemic to rethink existing strategies in order to increase access to green fuels for cooking in the world post COVID-19 [185]. Overall, the strategies must prioritize affordability, accessibility, and compatibility of clean cooking fuels with household needs. The negative impacts during the pandemic stressed the importance of a sustainable energy transition in Africa. In this context, several stakeholders accelerated their efforts to mobilize financial resources to sustain actual progress, and to effectively help African governments to further expand the access to clean energy [177].

Overall, the main question to answer is: What does the COVID-19 pandemic represents for the current energy transition aiming to maintain global warming within safe limits? In this case, there are different viewpoints in the specialized literature, although there is

consensus on taking advantage of the positive impacts of the pandemic to mitigate the short-term consequences of energy and to plan political and technical means to reformulate the energy transition from fossil to renewable energy, providing modern, reliable, affordable and sustainable energy for everyone in the post-pandemic world.

9. Industry, Innovation, and Infrastructures

One of the main axes on which economic and social growth and development is based is the investment in infrastructure and innovation that different countries try to make to improve their main industries, communication networks and energy sources.

At present, and especially because of the recent pandemic caused by COVID-19, various challenges of an economic, social, technological, and environmental nature are emerging, which global policies must face [186]. Today, more than ever, the progress of societies is closely linked to the promotion of industries based on sustainable energy and investment in scientific research and innovation. If anything has come out of the health situation that has occurred, it has been the need to continue betting on investment in scientific research and innovation as guarantors of a more encouraging future in all spheres of life. Certainly, the main global industries need to continue counting on scientific-technological progress to acquire greater autonomy and independence in generating profits and optimizing results.

Despite these great purposes aimed at promoting global progress within a framework of sustainability, progress and equality, there are still significant social and economic gaps that show the setback that an important sector of the population continues to experience. The pandemic has only increased these population differences and sharpened the existing gaps around industry, innovation, and infrastructure.

An example is the fact that millions of children and young people have seen their access to education limited during the pandemic by not having internet access or computer equipment in their homes. Similarly, workers from various sectors have also suffered the alteration of their work functions because of COVID-19, which shows the need to prioritize and increase access to ICT resources in less developed countries [187].

Thus, considering the 2030 Agenda and its main goals in relation to the field of innovation, infrastructure and industry that concern us, the pandemic has once again highlighted the need for societies to approach what Beck, Giddens and Lash [188] have already called "reflective modernity".

Leaving behind the excesses of globalization in all spheres of life, and betting on human progress and well-being stands as the main target to which global policies must approach.

Developing industries [189] and infrastructures [190] that are sustainable and accessible to all, where the promotion of employability and the promotion of the entrepreneurial spirit constitute essential elements that contribute to the significant development of the main world economies, is one of the main centers of attention in the immediate future.

Furthermore, the pandemic has shown that industry and infrastructure require the assistance of scientific-technological research and innovation to give rise to true global progress [191].

Consequently, the current planetary situation requires taking effective measures aimed at safeguarding human well-being while increasing the progress of industries, infrastructure, and innovation.

10. Inequalities, Peace and Justice

The inequalities caused by the pandemic have only increased the inequalities that existed before the pandemic. Inequalities in social, educational, economic opportunities and in access to basic services such as medical care and health care have been accentuated by the measures globally taken by the governments of all countries [192,193]. It is during the period of initial confinement, when mobility is paralyzed and people are prohibited from leaving their homes, that the fundamental rights of the poorest people are most

affected [194]. Children from the poorest families, who did not have digital technology, were unable to continue with the basic educational processes guaranteed by law, resulting in inequality between people in the same country and between different countries [195].

Another group that was severely disadvantaged during the pandemic were workers in basic services or other sectors where actually being present for work is necessary. In these cases, companies had to choose to lay off workers they could not afford to keep without generating income [196]. For these cases, governments fought to adopt measures that would prevent mass redundancies in companies as much as possible, but the measures did not arrive in time, and it has not been easy for companies to opt for them [197]. Once again, people in low-wage jobs suffered from economic and social inequality and were left helpless, jobless and without support to survive in a period of great uncertainty [198].

Along the same lines, gender-based violence and domestic violence have increased during the pandemic, especially at the beginning with the restrictive confinement implemented in practically all countries [199]. This indicates an increase in inequalities in the home itself, which people from the most at-risk groups have had to suffer due to the lack of tools to avoid breaking the balance within the family and to establish a healthy coexistence [200]. Within the family environment, there has also been a growing development of mental illnesses, especially mood-related illnesses such as depression and anxiety [201]. In addition, where there is no access to adequate health care, there has been an increase in the severity of previous disorders that could not be treated during the pandemic due to a lack of financial resources for private medical care [202].

This has resulted in many people not being able to access mental health intervention and has caused an increase in the suicide rate explained by these reasons. There has also been an increase in the number of divorces and domestic violence [203]. In this context, countries with fewer resources and financial support were unable to make decisions that would prevent inequality and promote justice [204]. This has posed challenges that had previously been studied and actions had been planned to reduce and eliminate [205,206]. However, such actions have not been able to be implemented [207]. Food shortages, the difficulty or impossibility of accessing basic resources, the rise of disease, environmental degradation and other issues that foster inequality have in recent years become factors that put peace at great risk [208].

As an example, Latin American countries such as Argentina, Brazil, and Ecuador have reported, during the pandemic years and up to the present day, growing statistics on inequalities within and outside households, within the family environment, but also between different strata of society and according to the socio-economic level of individuals [209]. In Mexico, the data collected highlight the fact that women were deprived of their opportunities and their rights [210]. This is determined by the impossibility of making decisions about the spaces where life takes place: the place where they work, the place where they live, and the difficulty of deciding for themselves about such basic things as continuing to work or having to give up working outside the home, in order to guarantee the decision-making power of the men in the family home [211].

Conflicts between countries seem to be on the rise currently. Thus, we can see countries opposing each other in the measures to be taken at the economic and social level, and continents confronting each other in armed conflict due to political and social decisions that confront interests and call into question the decisions taken by each government [212–215]. This current scenario is having a very negative effect on the objectives initially set out to achieve peace, equality, and justice. It will be necessary to review the measures being carried out in each region of the world and check their suitability today, given the current global situation [216–218].

11. Conclusions

In 2015, the United Nations General Assembly proposed the 2030 Agenda for Sustainable Development, with 17 Sustainable Development Goals, which have been a global hope to end gender disparities and poverty, protect the planet and thus improve the lives

of people around the world. However, the COVID-19 pandemic crisis has been a turning point for the achievement of these goals, with all its consequences at the political, economic, and socio-cultural levels. Some of these goals have been affected, such as poverty and hunger, education, gender equality, work, and economic growth. Numerous investigations have been carried out on how the COVID-19 pandemic has affected the achievement of the Sustainable Development Goals proposed by the UN. This review can be used as a guide for future research and reviews to understand the status of each of these goals and what actions have been taken and proposed in the aftermath of the pandemic in recent years. This actual situation could be taken as an opportunity to learn from lessons taught, plan a more efficient agenda, and adapt to the current changing times.

Author Contributions: Conceptualization, V.J.C.-S.; methodology, J.F.T.-A. and V.J.C.-S.; Writing—V.J.C.-S., S.R.-B., J.J.C.-E., A.B.-S., E.N.-J., M.D.-G., A.I.B.-V. and J.F.T.-A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

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