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Achieving Sustainable Development Goals (SDG): Implementation of the 2030 Agenda in Romania

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Abstract: Romania needs a change of the current development paradigm to face the challenges of the 21st century. As a member of the European Union, leaders in Romania are interested in implementing the principles of sustainable development at a national level to reduce development gaps, to increase citizens' well-being, and to preserve a clean environment. The purpose of this research is to determine the implementation status of the 2030 Agenda sustainable development goals (SDG) in Romania and to explore to what extent Romania will be able to reach, for the 2030 horizon, EU average values for the selected indicators. The research is based on 107 indicators that monitored the Sustainable Development Goals (SDGs). Eurostat database (sustainable development indicators) was the source of data in terms of their availability and integrity. The research results showed that the implementation status of SDG is sub-optimal. In the case of 40 indicators out of the 107 analyzed, forecasts indicate the possibility of reaching the EU average values by 2030. However, the country can remain on the path to sustainable development only by involving all stakeholders and increasing concrete and well-targeted measures to improve SDG indicators.

Keywords: sustainable development; 2030 agenda; sustainable development goals (SDG); Romania; European Union; SDG indicators

1. Introduction

The 2030 Agenda is an action plan designed for the prosperity of people and the planet. In the current economic, political, and social context, the Agenda promotes global peace, eradicates poverty in all its forms and dimensions, and represents the world's greatest challenge today. In addition, it is an indispensable requirement for sustainable development [1].

Since the Brundtland Report [2], the concept of sustainable evolved greatly beyond the initial projected framework, to a more integrative approach, with a focus on "socially inclusive and environmentally-sustainable economic growth." Equally important in this new development becomes the life quality of the residents of the country or a region, as in the integrated view on socio-economic development of the society [3–6].

Starting from 2004, the concept of sustainable development was adopted and introduced as an orientation measure to guide the economic and social development of Central and Eastern European

countries and to build on the experience of more developed countries in the European Union [7–10]. Although progress has been slow in the early stages, mainly due to the acute problems registered by the countries in the region due to the adaptation to the market economy and the rigors of democracy, with time, progress has become more visible due to the involvement of more consistent non-governmental organizations and an increase in public-private cooperation [11].

The 2030 Agenda is a complex, multi-faceted approach, which is an important reference framework for preserving the values of nature, humanity, and human rights. The benefits and limits of sustainable development are evident through the results and progress of society. In this unique context, sustainability communication is one of the most important steps in stimulating the interest and commitment of the target audience. This involves identifying the right recipients and ensuring that the message reaches them.

Building on a rigorous and complex system of indicators, the 2030 Agenda has proposed effective communication of requirements and objectives with the main purpose being to avoid problems and difficulties. This is justified by the fact that communication based on specific indicators often presents difficulties because the indicators complicate communication by imposing solid knowledge of the users involved [12]. Moreover, the problem is not trivial. It is not merely about understanding the figures, but people have to understand many concepts underlying the processes with which they are often unfamiliar [13,14].

On the other hand, in the current context of the 2030 Agenda for Sustainable Development, indicators for monitoring the implementation of SDGs become fundamental. We are seeing an increasing concern of the bodies involved in estimating outcomes, risks, threats, and also supporting pro-active decision-making in the context of sustainable development.

Practically, the launch of the UN 2030 Agenda for Sustainable Development was based on 17 Sustainable Development Objectives (SDGs) and 169 indicators, reflecting the severity of the global situation. Introducing sustainable development as a global concept of balanced development adds a challenging level of complexity to any nation. Thus, identification of future risk assessment tools and methodologies needed for decision-making and precautionary measures in terms of sustainability is extremely important.

Currently, there are three ways to analyze and identify the direction of economic development. The first approach concerns the analysis of a set of indicators and parameters to monitor, measure, and describe sustainability. The second concerns the proper implementation of the strategies and directions of action. The third is to print sustainability to development goals, actions, and phenomena [15].

From the perspective of sustainable growth, Romania, as a member of the United Nations, but also from the perspective of belonging to the European Union, has assumed economic development by implementing and respecting sustainable principles, which makes it an important step in connection with the sustainable future. Romania's connection to the new philosophy of development, adopted by the European Union and widely shared on a global scale, aimed at strategic objectives in the short, medium, and long term, as follows:

- For the 2013 horizon: Inclusion of sustainable development principles and practices in all Romania's public programs and policies as an EU Member State;
- For the 2020 horizon: Achieving the current EU average for key sustainable development indicators;
- For the 2030 horizon: A significant approach to the average performance of EU Member States in terms of Sustainable Development Indicators [16].

For Romania, adapting to global development strategies appears to be a challenge but also a major requirement in economic, political, social, and environmental processes. Thus, Romania has acknowledged and endorsed sustainable development strategies by addressing and implementing SDGs in line with its current status as a member country of the European Union and a developing country [17,18]. At the same time, as a UN member, Romania joined the 2030 Agenda for Sustainable

Development within the UN Summit on Sustainable Development of September 2015. In the same context, the EU Council, in response to the adoption of the 2030 Agenda, adopted for all member states on 20 June, 2017 the “Sustainable Europe Future” program. As a result, in December 2018, Romania adopted the National Strategy for Sustainable Development of Romania 2030 (NSSD), to set out concrete measures for the implementation of the 2030 Agenda for sustainable development [19].

Romania, as well as the other 192 states, has undertaken implementing strategies to support the 2030 Sustainable Development Agenda by addressing a Global Action Plan that focuses on alleviating poverty, reducing social inequalities, and protecting the environment by 2030. In the above context, Romania has established the national framework for the implementation of the 2030 Agenda measures and the implementation of the 17 SDGs set. The strategy concerns Romania’s development on the basis of three pillars (economic, social, and environmental pillars), focusing on the individual, on his needs, and on their fair, efficient, and integrated approach.

Thus, the starting point of our research resulted from the considerations related to the status currently held by Romania as a member country of the EU, as well as the importance of the implementation of the sustainable development concepts, according to the new directions established by the 2030 Agenda. The importance of this approach is also generated by the fact that the 2030 Agenda is primarily a plan of measures aimed at people, the planet, and prosperity by creating a safe environment in which “no one will be left behind” [1]. This is also supported by the fact that the Global Action Strategy, which Romania has adopted and which will come to fruition in the next few years, aims at alleviating poverty, eliminating inequalities and social disparities, and protecting the planet until the year 2030 [20].

Currently, Romania is one of several countries where efforts for sustainable development of society and the economy, the protection of the environment and the individual, were evident and reflected by the results obtained after the 2008 global crisis. Thus, the NSSD implementation report after the first decade is a positive one that highlights the sustainability of implemented strategies and programs, as well as Romania’s membership of the EU. This is supported, in particular, by the size of Romania’s GDP, calculated at purchasing power parity, which has risen from 39% of the EU average in 2006 to 63% in 2017, with growth projections up to 80% in 2020 [19]. In addition, the Eurobarometer survey of 2018 reflects the fact that Romanian citizens are optimistic in terms of further development (65% compared to the European average of 58%), which supports the idea that there is a premise to implement and achieve positive results that are further in line with the requirements of the 2030 Agenda for Sustainable Development [21]. Although the results are positive for a number of target indicators, Romania has a long way to reach the performance of the world’s most developed countries, which requires studies and analyzes results to identify the most profound and fragile causes that create inequality and reduce the sustainable progress of the economy and society in the long run.

In order to highlight the progress and the main shortcomings that still exist in Romania, in view of reaching the objectives of the 2030 Agenda, the results obtained from 2007 to 2017 were analyzed as a result of the implementation of the NSSD. From the perspective of poverty eradication, Romania aimed to significantly reduce the number of those living in severe poverty. As a consequence, the relative poverty rate was assessed at 24.6% to 25.3%, compared to the EU average of 16.6% to 17.3% (2007–2016). At the same time, in 2016, 49.2% of children aged 0–17 had an increased risk of social exclusion compared to the EU average of 26.4% [22].

Although legal norms have been created or revised in the field of social services, social exclusion, and the prevention of poverty, Romania has significant gaps compared to other European countries. In response to this situation, strategies, plans, and programs have been created, approved, and implemented, which can generate significantly better results, with direct and profound effects on the eradication of poverty and sustainable growth of the quality of life.

Eradicating hunger, ensuring food security, improving nutrition, and promoting sustainable agriculture is another goal under the 2030 Agenda. Romania, a country with an important agricultural potential at the European level (the 6th as an agricultural area), is still poorly capitalized in terms

of sustainable and environmentally-friendly agriculture. These aspects are evident through the contribution of agriculture to GDP, which, from 1995 to 2016, recorded a major decrease from 14.7% in 1995 to 4.7% in 2016. At the same time in 2015, the employed population in agriculture, was 25.9%, which is well above the European average of 4.4%. These issues raise significant problems from the perspective of productivity and relatively low yield of agricultural production [23,24].

In addition, Romania faces an excessive fragmentation of agricultural holdings (75% of Romanian farms have an area of less than 2 ha and 70% have less than 2000 euros) plus the lack of cooperation with specialized bodies, low technology levels, and low farmer training. In other words, the 2030s horizon from the perspective of agriculture is a real challenge for Romania, which has to considerably improve its productive potential, favoring sustainable investments, increasing the technological level of specific labor, and rehabilitating the general and specific infrastructure.

From the point of view of the population's health and well-being, Romania has a number of peculiarities compared to other European countries. Thus, according to Eurostat data, with an average life expectancy below the European average of 75.3 years compared to 81 years, Romania faces real problems from the point of view of the medical system and the aging population. On the other hand, the decline in birth rates and the emigration of an important share of young people to developed countries are real challenges in the 2030 horizon.

In addition, the percentage of the budget allocated to the health and well-being of the population accounted for only 4.5% of GDP in 2018, compared to about 8% of GDP as a share on average in Europe. From the perspective of this indicator, Romania is at last place in Europe. On the other hand, as a consequence of the adopted legislative measures and the implementation of the National Health Strategy 2014–2020, Romania has made progress in terms of remuneration for medical and associated staff, increased investments in specific medical infrastructure, investments in laboratories, medical centers, and medical emergency logistics.

Since a sustainable society is based on sustainable education, in Romania, access to education is unlimited. Young people and adults are incentivized to develop their skills and competencies. This society is ready for a sustainable future. However, Romania, from the point of view of specific indicators, has a lower position than the European average, which is relevant for the OECD Program for International Student Assessment (PISA) [25]. School abandonment, poor infrastructure, and lack of investment in sustainable education have led to a marked depreciation of Romanian education.

From the perspective of continuous training, Romania has not promoted a tradition that stimulates lifelong learning. This is justified by the fact that only 1.1 out of those aged 25 to 64 have attended training courses in the last four months compared to the European average of 10.5%. These unfavorable aspects can mainly be supported by the poor financing of this sector. Romania has the lowest percentage allocated for education from the national budget in 2016, which reached 3.7% compared to the European average of 4.7% [26].

From the perspective of women's role in society, gender equality and chances represent Romania's strategic priority, supported by the strategies implemented at political, economic, and social level. With women representing 51% of the population, Romania shares good positions compared to the European average, such as "Wage Disparity," "Violence Against Women," and "Women in Leadership". Thus, Romania ranked first, with the smallest gap, of 5.2%, compared to the European average of 16%. From the point of view of the managerial positions occupied by women, however, Romania held 11% compared to the European average of 25.3% (Eurostat). With sustainable legislation appropriate to global requirements, in Romania, gender gaps are monitored and regulated in such a way that the goal of equal opportunities is attained.

Another priority objective of the 2030 Agenda reflected in development strategies is the creation of water and sanitation infrastructure, drinking water management, and wastewater and waste management. This is justified by the direct connection of water and sewerage infrastructure with the increase in the quality of life, citizens' health, and life expectancy. Although it is one of the strategic priorities in Romania in the year 2016, only 65.2% of the population has access to the water supply

system, which means it is the least developed country in the EU in this regard. Major differences exist in urban and rural areas, with 30.8% of the rural population being connected to the water supply system. At the same time, the wastewater collection level was 63.46% and the sewage treatment was 56.71%. The low value of these indicators is mainly due to the scarce infrastructure at a national level and due to the limited investment especially in rural areas [27].

From the point of view of the priority objective of clean energy and affordable energy, the harmonious and balanced development of the economy and society with a focus on renewable energy consumption is being pursued. In Romania, the provision of clean, affordable energy is a strategic priority. Thus, in a regional context, Romania has a competitive position. The degree of energy dependence in 2016 was only 22.3% compared with the EU average of 53.6%.

However, Romania also suffers from malfunctions by staying behind in terms of connectivity to the general electricity and gas transmission networks. These include the obsolete technological installations and the high percentage of people at risk of social exclusion and poverty, which registered in 2016 at the lowest value of primary energy consumption per capita at the level of EU countries. The result of 1,582 toe/inhabitants was below the EU average of 2997 toe/inhabitants [28].

Decent work and growth, which is an important objective of the 2030 Agenda, is the subject of sustainable strategies, with a focus on competitive growth. Thus, sustainable and competitive economic growth has also been a governmental priority for Romania, as an EU member state. However, with a service contribution of over 50% (in 2016), Romania is below the European average (66% in 2016). Additionally, from the point of view of regulated professions in the field of services, in Romania, out of 189 regulated professions, 22.2% are in services, which is below the European average [19]. From the point of view of the employment rate, in 2017, Romania recorded 68.8%. With an unemployment rate of 4.9%. The most dynamic segment is the information and communication technology sector, with a contribution to GDP of 5.3% in 2016 [27].

“Industry, innovation, and infrastructure through promoting sustainable industrialization and innovation” is one of the vital strategies that underpin the growth of life quality and sustainable economies. The strategy focuses on the modernization of infrastructure and the sustainable development of the economy through the rational use of resources, the implementation of eco-technologies, and the technological modernization of all industrial sectors.

A relevant indicator of this aspect is the road transport infrastructure. In Romania, motorways, and roads of national and European interest represent 21%. This situation puts Romania first in Europe at the rate of road deaths, 94 deaths per 1 million inhabitants, compared to only 60 in the EU. On the other hand, the rail transport network also registered a decline, with 72% being of the simple line type, compared to the European average of 59%. This unfavorable aspect has generated a considerable reduction in rail freight transport and passenger numbers. Thus, the market share of rail transport diminished from 19.1% in 2011 to 15.4% in 2017, and the number of passengers decreased in the same period by 30.3%. [19]. From the perspective of air transport, Romania has risen and reached 20.2 million passengers in 2017 compared to 783,000 in 2007 [27].

Eliminating discrimination by creating policies that promote equal opportunities, reducing disparities within the country regions as well as urban and rural areas, and especially those of the EU, are subjects of great interest to Romania’s governance. Thus, through the European funds allocated to sustainable economic and social development, Romania managed to attract funding, absorbing 83.44% of European funds (Ministry of European Funds) from 2007 to 2013. In addition, the degree of financial intermediation is the lowest among the EU Member States. The share of banking assets in GDP is 50%, compared to 255% in the EU and 288% in Europe.

With regard to the continuous growth of the urban population, sustainable development implies permanent costs in order to create a safe, economically, socially, and environmentally sustainable environment. Thus, the concept of “Smart city” appears to stimulate local authorities in sustainable investments to protect cultural values, increase air quality, and improve quality of life. From the perspective of sustainable communities and decent housing, Romania ranks first in Europe in terms of

overcrowding, at a rate of 48.4%, compared to the EU average of 16.6%. Romania is also a country with a high seismic risk, with increasingly frequent floods and landslides, but also with a high quality of increasingly polluted air, especially in large cities.

At the same time, responsible consumption and production is required by ensuring sustainable consumption patterns and production, which favors transition to the circular economy, focusing on recycling and reuse, reducing consumption, implementing sustainable strategies at the level of all companies, and changing the lifestyle by all citizens. Thus, in Romania, from the point of view of the production of the industry (including constructions), 30.2% of GDP was recorded in 2016, which is higher than the EU average of 22%. This shows a downward trend in favor of services, which has also been encountered in most European countries [19].

From the point of view of resource productivity, Romania is in a lower position at a European level due to being an exporter of raw materials and products with a low level of processing. Moreover, from the perspective of organic labeling of products and services, Romania has a lower position, with 246 products/services. Regarding waste recycling, although many programs are in place, the recycling rate in Romania was 13% in 2016 and the storage rate was 69%, which is not favorable compared to the European average.

In terms of actions in the field of climate change, Romania's adaptation to global policies is a priority strategy mainly aimed at increasing the level of education and awareness of the risks posed by climate change. This is supported by the fact that, in Romania, the average annual temperature recorded an increase of 0.5 °C in the period from 1981 to 2010 when compared to the 1961–1990 climatic period. There has also been an increase in burning intensity, especially after 1981 [19].

It is, therefore, necessary to adapt Romania to global policies by implementing measures to ensure water and water resources for both agriculture and the population by increasing resilience capacities and adapting to climate change. These changes will also emphasize the need for balance between demand and water resource providers over time. Thus, Romania will be obliged in the coming years to implement demand reduction measures, while identifying new sources to ensure water resources for the coming decades. Adaptation must be done with the reduction of greenhouse gas emissions as well as the increase and frequency of extreme weather events present in Romania.

At the same time, Romania has proposed both the prevention and reduction of marine pollution, the implementation of sustainable protection policies, the preservation of coastal areas, and the promotion of sustainable fishing. With 245 km of coastline, with the presence of the Danube River, and the Black Sea collector of pollutant discharges/emissions from riparian countries, we are witnessing a reduction in the quality of Danube waters, the Danube Delta, and the Black Sea Coast. In this respect, Romania has implemented the Marine Strategy Framework Directive and is a party to the Black Sea Convention, creating protected areas of national interest and natural areas protected by European interest (Natura 2000 sites) for the coastal zone. However, at present, the indicator of the sufficiency of marine sites of Community importance has risen above the 100% threshold. For this reason, Romania is the co-initiator of the European Union Strategy for the Danube Region, together with Austria, proposing actions to protect the environment in the Danube region, water protection and quality, biodiversity conservation, and protect landscapes, soil, and air quality.

From the point of view of "Terrestrial Life," as the objective of the 2030 Agenda, through rigorous and sustainable management, the conservation and sustainable use of terrestrial ecosystems, forests, combating desertification, developing green infrastructure, and implementing measures specific to the circular economy are being pursued. In Romania, according to the European Commission's report on Habitats and Species Conservation status, 63% of biogeographical habitats assessments were appropriate in 2013 compared to the EU average of 16%. In addition, 28% were considered inappropriate—inadequate, while the EU average was 47% [19].

Considering the national forestry fund, Romania recorded 6565 thousand ha in 2017. The statistical data for the period 2010–2017 showed an increase of the forest fund by 0.77%. The land use index for urban development and infrastructure (per capita) has been increasing since 2012. This situation has

negative impacts on flood risk, biodiversity loss, and generates global warming over time. However, it also reduces land for agriculture. This situation requires the rapid implementation of procedures, with a long-term vision, with reference to agricultural policy and sustainable rural development.

Measures have been implemented in Romania to promote tolerance, eradicate violence, reduce corruption, promote institutional transparency, ensure a transparent decision-making process, represent citizens at all levels, provide public access to information, and protect individual freedoms.

To highlight these aspects, we currently identify a summative indicator of the sustainable balance of society known as the Global Happiness Index that quantifies the happiness rate in 156 states. From this point of view, in 2017, Romania ranks 52 out of 117 countries. Another important indicator is also the perception of the freedom to make decisions, for which 84% of respondents in Romania stated in 2017 that they had “the freedom to make decisions” compared to the 69% response in 2007 [29].

A relevant indicator of a sustainable society is also the demographic status of each country. Demographic growth is, in fact, a major problem affecting society in general. From this perspective in Romania, the natural population growth rate per 1000 inhabitants fell from 3 in 1990 to -1.4 in 2008 and -3.1 in 2017. This situation greatly affects the sustainable future of Romanian society since it has a negative effect on Romania’s capacity to develop. We are also talking about a real lark signal because the estimates show that, although Romania’s population in 2015 was 19,511 million, it is estimated to decrease to 17,639 million in 2030, to 15,205 million in 2050, and 2100 to 10.7 million [27,30].

Although Romania’s situation as a whole at the level of the analyzed period (2007–2017) is still a specific one for developing countries, the implementation of sustainable development strategies was largely achieved through a regional and global partnership. This has led to the creation of an active community to address global issues, including public funding (national and international). In this respect, Romania has assumed international commitments by joining the Eurozone, the Schengen area, and the Organization for Economic Cooperation and Development, which have an active role at the European and international level.

2. Materials and Methods

According to NSSD provisions, the National Institute of Statistics will update, within 2 years, the set of national indicators, based on the new priority objectives set out in the strategy and taking into account the UN and EU set of indicators for implementing Agenda 2030 for Sustainable Development. In addition to a functional institutional framework, the existence of concrete action plans and the coherence of sustainable development policies are essential to achieving NSSD targets. Thus, no later than the end of 2019, an Action Plan for Goal Making will be drawn up, which takes into account the proposals submitted by all organizations in the consultation and public debate phase of the strategy, involving all the actors involved in the implementation.

Given that Romania has not yet adopted a framework of indicators to track the fulfillment of SDG, we considered that it would be relevant for the scientific community and beyond, to carry out an analysis of the prognoses for fulfilling the SDG assumed, based on the set of indicators used at the EU level and selecting those indicators for which Eurostat provides relevant information. The set of Eurostat indicators designed to monitor the 17 SDGs comprises a total of 100 indicators. Each objective has 6 indicators, with the exception of Objectives 14 and 17, which have only 5 allocated indicators. Of the 100 indicators, 42 are multipurpose, and are used to monitor more than one SDG. Likewise, 55 of the indicators are currently aligned with the UN SDG indicator [31,32].

To investigate the extent to which Romania could achieve the objectives assumed by the NSSD, we started from the analysis of the statistical data related to the selected indicators provided by Eurostat for the period of 2007 to 2017. Through the dynamic analysis methods and the forecasting tools provided by the Excel 2016 software, individual dynamic indexes were calculated for each of the indicators including the possible existence of a point of convergence between the trend recorded by the indicators’ evolution at the level of Romania and the trend recorded by the evolution of the corresponding indicators in the EU average in year 2030 (as noted Tables 1–17, in the last column, “INT”).

Table 1. SDG 1—End poverty in all its forms everywhere.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
People at risk of poverty or social exclusion (%)	EU	23.7	23.5	22.4	23.49	22.71	0.95	0.99	0.96	NO
	RO	37.4	38.8	35.7	34.21	25.4	0.95	0.91	0.68	
People at risk of income poverty after social transfers (%)	EU	17.3	17.3	16.9	17.46	18.2	0.98	1.01	1.05	NO
	RO	25.4	25.3	23.6	24.13	25.89	0.93	0.95	1.02	
Severely materially deprived people (%)	EU	8.0	7.5	6.6	7.34	5.9	0.83	0.92	0.74	YES
	RO	22.7	23.8	19.7	16.66	1.66	0.87	0.73	0.07	
People living in households with very low work intensity (%)	EU	10.7	10.5	9.5	11.02	11.96	0.89	1.03	1.12	YES
	RO	7.9	8.2	6.9	6.53	4.92	0.87	0.83	0.62	
In work at-risk-of-poverty rate (% of employed persons aged 18 or over)	EU	9.5	9.6	9.5	10.13	11.57	1.00	1.07	1.22	NO
	RO	18.8	18.9	17.4	17.73	18.83	0.93	0.94	1.00	
Population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor by poverty status (%)	EU	15.3	15.4	13.3	12.6	9.66	0.87	0.82	0.63	YES
	RO	12.8	13.3	11.1	6.31	−9.77	0.87	0.49	−0.76	
Self-reported unmet need for medical examination and care (% of population aged 16 and over)	EU	3.2	2.5	1.7	2.42	1.83	0.53	0.76	0.57	YES
	RO	9.4	6.5	4.7	5.64	0.89	0.50	0.60	0.09	
Population having neither a bath, nor a shower, nor indoor flushing toilet in their household by poverty status (%)	EU	2.0	1.9	2.0	1.61	0.31	1.00	0.81	0.16	NO
	RO	30.5	30.0	27.2	22.95	8.39	0.89	0.75	0.28	
Population unable to keep home adequately warm by poverty status (%)	EU	9.4	8.7	7.8	8.72	7.03	0.83	0.93	0.75	YES
	RO	13.1	13.8	11.3	9.52	0.94	0.86	0.73	0.07	
Overcrowding rate by poverty status (%)	EU	16.5	16.4	15.5	14.76	12.1	0.94	0.89	0.73	NO
	RO	49.7	48.4	47.0	46.56	36.75	0.95	0.94	0.74	

Source: Eurostat, own calculations.

Table 2. SDG 2—End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Agricultural factor income per annual work unit (AWU) (source: Eurostat, DG AGRI) (<i>Index, 2010 = 100</i>)	EU	110.0	112.3	125.2	133.0	167.1	1.14	1.21	1.52	YES
	RO	116.7	120.5	136.6	151.3	210.1	1.17	1.30	1.80	
Government support to agricultural research and development (<i>Million euro</i>)	EU	3087.2	3141.2	3228.5	3068.3	3009.2	1.05	0.99	0.97	NO
	RO	23.0	24.1	20.7	10.3	−14.1	0.90	0.45	−0.62	
Area under organic farming (<i>% of utilized agricultural area</i>)	EU	6.2	6.7	7.0	7.8	10.6	1.13	1.26	1.70	NO
	RO	1.8	1.7	1.9	2.2	3.2	1.09	1.26	1.83	
Gross nutrient balance on agricultural land by nutrient (<i>kg/ha</i>)	EU	51	48 (*)	47 (*)	46.04	41.82	0.93	0.90	0.82	YES
	RO	9	4	−3 (*)	−7.38	−28.23	−0.33	−0.82	−3.14	
Ammonia emissions from agriculture (source: EEA) (<i>Million tonnes</i>)	EU	3.596	3.611	3.524 (*)	3.496	3.403	0.98	0.97	0.95	YES
	RO	0.151	0.147	0.139 (*)	0.129	0.097	0.92	0.86	0.65	

Source: Eurostat, own calculations. (*) Estimated values.

Table 3. SDG 3—Ensure healthy lives and promote well-being for everyone at all ages.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Life expectancy at birth (<i>years</i>)	EU	80.6	81.0	81.3 (*)	82.81	84.05	1.01	1.03	1.04	NO
	RO	75.0	75.3	75.7 (*)	76.4	78.89	1.01	1.02	1.05	
Share of people with good or very good perceived health (<i>% of population aged 16 or over</i>)	EU	67.0	67.6	69.8	69.62	70.83	1.04	1.04	1.06	YES
	RO	70.0	70.5	70.9	75.09	76.6	1.01	1.07	1.09	
Smoking prevalence by sex (source: DG SANTE) (<i>% of population aged 15 or over</i>)	EU	26	26 (*)	26	23.15	16.35	1.00	0.89	0.63	NO
	RO	27	27 (*)	28	26.35	22.45	1.04	0.98	0.83	
Death rate due to chronic diseases (<i>number per 100,000 persons aged less than 65</i>)	EU	122.1	117.4 (*)	114.2 (*)	107.34	72.72	0.94	0.88	0.60	NO
	RO	230.9	222.1 (*)	216.2 (*)	198.73	140.73	0.94	0.86	0.61	
Self-reported unmet need for medical examination and care (<i>% of population aged 16 or over</i>)	EU	3.2	2.5	1.7	2.42	1.83	0.53	0.76	0.57	YES
	RO	9.4	6.5	4.7	5.64	0.89	0.50	0.60	0.09	
People killed in accidents at work (<i>number per 100,000 employees</i>)	EU	1.82	1.71	1.59 (*)	1.52	0.78	0.87	0.84	0.43	NO
	RO	5.56	4.52	4.49 (*)	5.26	2.22	0.81	0.95	0.40	
Population living in households considering that they suffer from noise, by poverty status (%)	EU	18.1	18.0	17.5	15.48	9.96	0.97	0.86	0.55	YES
	RO	22.2	20.3	19.3	11.67	−3.31	0.87	0.53	−0.15	
People killed in road accidents (source: DG MOVE) (<i>rate</i>)	EU	5.1	5.0	4.0 (*)	2.8	−1.18	0.78	0.55	−0.23	NO
	RO	9.6	9.7	7.8 (*)	5.87	−0.18	0.81	0.61	−0.02	
Exposure to air pollution by particulate matter (source: EEA) ($\mu\text{g}/\text{m}^3$, <i>Particulates < 2.5 μm</i>)	EU	14.5	14.9 (*)	14.5 (*)	13.49	10.04	1.00	0.93	0.69	YES
	RO	17.0	15.2 (*)	14.6 (*)	13.22	8.19	0.86	0.78	0.48	

Source: Eurostat, own calculations. (*) Estimated values.

Table 4. SDG 4—Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Early leavers from education and training (% of population aged 18 to 24)	EU	11.0	10.8	10.6	9.01	4.04	0.96	0.82	0.37	NO
	RO	19.1	18.5	18.1	19.48	21.14	0.95	1.02	1.11	
Tertiary educational attainment (% of population aged 30 to 34)	EU	38.8	39.3	40.0	43.58	53.65	1.03	1.12	1.38	NO
	RO	25.6	25.6	26.3	27.86	33.27	1.03	1.09	1.30	
Participation in early childhood education (% of the age group between 4-years-old and the starting age of compulsory education)	EU	94.9	95.3	96.0	97.65	103.54	1.01	1.03	1.09	NO
	RO	87.6	88.2	87.3	87.59	88.29	1.00	1.00	1.01	
Underachievement in reading, maths, or science (source: OECD) (% of 15-year-old students)	EU	22.2	22.1 (*)	22.1 (*)	22.07	21.92	1.00	0.99	0.99	NO
	RO	39.9	37.2 (*)	36.2 (*)	33.14	22.47	0.91	0.83	0.56	
Employment rates of recent graduates (% of population aged 20 to 34 with at least upper-secondary education)	EU	77.1	78.4	80.3	76.82	74.42	1.04	1.00	0.97	NO
	RO	68.1	69.3	76.0	64.94	53.86	1.12	0.95	0.79	
Adult participation in learning (% of population aged 25 to 64)	EU	10.8	10.8	11.0	11.58	13.46	1.02	1.07	1.25	NO
	RO	1.3	1.2	1.1	1.09	0.61	0.85	0.84	0.47	
Young people neither in employment nor in education and training (% of population aged 15 to 29)	EU	14.8	14.2	13.4	14.82	15.46	0.91	1.00	1.04	NO
	RO	20.9	20.2	17.8	22.38	27.93	0.85	1.07	1.34	

Source: Eurostat, own calculations. (*) Estimated values.

Table 5. SDG 5—Achieve gender equality and empower all women and girls.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Gender pay gap in unadjusted form (% of average gross hourly earnings of men)	EU	16.6	16.3	16.4 (*)	16.09	15.03	0.99	0.97	0.91	YES
	RO	5.8	5.2	3.5	1.48	−4.95	0.60	0.26	−0.85	
Gender employment gap (percentage points)	EU	11.6	11.6	11.6	10.43	6.51	1.00	0.90	0.56	NO
	RO	17.5	17.6	17.1	18.78	22.76	0.98	1.07	1.30	
Inactive population due to caring responsibilities (% of inactive population aged 20 to 64)	EU	20.7	21.1	21.4	22.14	24.82	1.03	1.07	1.20	NO
	RO	21.5	21.8	22.5	24.46	31.45	1.05	1.14	1.46	
Seats held by women in national parliaments and governments (source: EIGE) (% of seats)	EU	28.0	28.2	29.0	31.09	38.05	1.04	1.11	1.36	NO
	RO	12.1	12.0	19.1	20.96	27.15	1.58	1.73	2.24	
Positions held by women in senior management positions (source: EIGE) (% of positions)	EU	22.7	23.9	25.3	29.47	43.38	1.11	1.30	1.91	NO
	RO	11.8	10.1	11.0	8.27	2.36	0.93	0.70	0.20	
Early leavers from education and training (% of population aged 18 to 24)	EU	11.0	10.8	10.6	9.01	4.04	0.96	0.82	0.37	NO
	RO	19.1	18.5	18.1	19.48	21.14	0.95	1.02	1.11	
Tertiary educational attainment (% of population aged 30 to 34)	EU	38.8	39.3	40.0	43.58	53.65	1.03	1.12	1.38	NO
	RO	25.6	25.6	26.3	27.86	33.27	1.03	1.09	1.30	
Employment rates of recent graduates (% of population aged 20 to 34 with at least upper-secondary education)	EU	77.1	78.4	80.3	76.82	74.42	1.04	1.00	0.97	NO
	RO	68.1	69.3	76.0	64.94	53.86	1.12	0.95	0.79	

Source: Eurostat, own calculations. (*) Estimated values.

Table 6. SDG 6—Ensure availability and sustainable management of water and sanitation for all.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Population having neither a bath, nor a shower, nor indoor flushing toilet in their household by poverty status (%)	EU	2.0	1.9	2.0	1.61	0.31	1.00	0.81	0.16	NO
	RO	30.5	30.0	27.2	22.95	8.39	0.89	0.75	0.28	
Biochemical oxygen demand in rivers (source: EEA) (<i>mg O₂ per liter</i>)	EU	1.87 ^(f)	1.82 ^(f)	1.77 ^(f)	1.62	1.13	0.95	0.87	0.61	NO
	RO	2.88 ^(f)	2.84 ^(f)	2.81 ^(f)	2.72	2.41	0.98	0.95	0.84	
Phosphate in rivers (source: EEA) (<i>mg PO₄ per liter</i>)	EU	0.064 ^(f)	0.063 ^(f)	0.062 ^(f)	0.06	0.053	0.98	0.94	0.83	YES
	RO	0.053 ^(f)	0.049 ^(f)	0.044 ^(f)	0.032	−0.011	0.84	0.61	−0.21	

Source: Eurostat, own calculations. ^(f) Estimated values.**Table 7.** SDG 7—Ensure access to affordable, reliable, sustainable, and modern energy for all.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Primary energy consumption (<i>Million tons of oil equivalent</i>)	EU	1531.9	1542.7	1491.0 ^(*)	1425.9	1240.8	0.97	0.93	0.81	YES
	RO	30.6	31.3	31.3	28.1	17.2	1.02	0.92	0.56	
Final energy consumption (<i>Million tons of oil equivalence</i>)	EU	1086.2	1107.7	1065.7 ^(*)	1037.8	913.5	0.98	0.96	0.84	NO
	RO	21.9	22.3	21.3 ^(*)	21.8	18.6	0.97	1.00	0.85	
Energy productivity (<i>Euro per kilogram of oil equivalent</i>)	EU	8.3	8.5	8.6 ^(*)	9.04	10.54	1.03	1.09	1.27	YES
	RO	4.5	4.7	4.8 ^(*)	5.26	6.92	1.06	1.17	1.54	
Share of renewable energy in gross final energy consumption (%)	EU	16.7	17.0	18.1 ^(*)	20.3	27.84	1.08	1.22	1.67	YES
	RO	24.8	25.0	26.2 ^(*)	27.1	34.07	1.06	1.09	1.37	
Energy dependence (<i>% of imports in total energy consumption</i>)	EU	53.9	53.6	53.6 ^(*)	54.2	53.45	0.99	1.01	0.99	YES
	RO	17.1	22.3	15.9 ^(*)	13.45	2.17	0.93	0.79	0.13	
Population unable to keep home adequately warm by the poverty status (%)	EU	9.4	8.7	7.8	8.72	7.03	0.83	0.93	0.75	YES
	RO	13.1	13.8	11.3	9.52	0.94	0.86	0.73	0.07	
Greenhouse gas emissions intensity of energy consumption (source: EEA and Eurostat) (<i>Index, 2000 = 100</i>)	EU	89.1	87.9	87.0 ^(*)	84.27	75.11	0.98	0.95	0.84	NO
	RO	91.3	87.3	88.1 ^(*)	85.92	77.92	0.96	0.94	0.85	

Source: Eurostat, own calculations. ^(*) Estimated values.

Table 8. SDG 8—Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Real GDP per capita (<i>Chain linked volumes (2010), euro per capita</i>)	EU	26,700	27,100	27,700	27,544	29,046	1.04	1.03	1.09	NO
	RO	7300	7700	8300	9938	15,536	1.14	1.36	2.13	
Investment share of GDP by institutional sectors (<i>% of GDP</i>)	EU	20.27	20.5	20.77	19.23	16.9	1.02	0.95	0.83	NO
	RO	24.77	22.87	22.41	17.9	5.82	0.90	0.72	0.23	
Young people neither in employment nor in education and training (<i>% of population aged 15 to 29</i>)	EU	14.8	14.2	13.4	14.82	15.46	0.91	1.00	1.04	NO
	RO	20.9	20.2	17.8	22.38	27.93	0.85	1.07	1.34	
Employment rate (<i>% of population aged 20 to 64</i>)	EU	70.1	71.2	72.3	71.45	73.25	1.03	1.02	1.04	NO
	RO	66.0	66.3	68.8	68.32	71.91	1.04	1.04	1.09	
Long-term unemployment rate (<i>% of active population</i>)	EU	4.5	3.9	3.4	4.89	6.34	0.76	1.09	1.41	YES
	RO	3.0	3.0	2.0	2.48	2.46	0.67	0.83	0.82	
People killed in accidents at work (<i>number per 100,000 employees</i>)	EU	1.82	1.71	1.61 ^(*)	1.54	0.8	0.89	0.85	0.44	NO
	RO	5.56	4.52	4.79 ^(*)	3.96	1.57	0.86	0.71	0.28	
In work at risk of poverty rate (<i>% of employed persons aged 18 or over</i>)	EU	9.5	9.6	9.5	10.13	11.57	1.00	1.07	1.22	NO
	RO	18.8	18.9	17.4	17.73	18.83	0.93	0.94	1.00	
Inactive population due to caring responsibilities (<i>% of inactive population aged 20 to 64</i>)	EU	20.7	21.1	21.4	22.14	24.82	1.03	1.07	1.20	NO
	RO	21.5	21.8	22.5	24.46	31.45	1.05	1.14	1.46	
Resource productivity and domestic material consumption (DMC) (<i>chain linked volumes (2010), euro per kilogram</i>)	EU	1.980	2.028	2.040	2.227	2.714	1.03	1.12	1.37	NO
	RO	0.268	0.290	0.329	0.287	0.339	1.23	1.07	1.26	

Source: Eurostat, own calculations. ^(*) Estimated values.**Table 9.** SDG 9—Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Gross domestic expenditure on R&D by sector (<i>% of GDP</i>)	EU	2.04	2.04	2.07	2.10	2.23	1.01	1.03	1.09	NO
	RO	0.49	0.48	0.50	0.44	0.40	1.02	0.90	0.81	
Employment in high- and medium-high technology manufacturing sectors and knowledge-intensive service sectors (<i>% of total employment</i>)	EU	45.8	45.9	45.9	46.9	50.0	1.00	1.02	1.09	NO
	RO	27.4	27.8	28.2	29.1	33.3	1.03	1.06	1.22	
R&D personnel by sector (<i>% of active population</i>)	EU	1.212	1.236	1.270	1.334	1.582	1.05	1.10	1.30	NO
	RO	0.354	0.371	0.370	0.404	0.479	1.05	1.14	1.35	
Patent applications to the European Patent Office (source: EPO) (<i>number</i>)	EU	57,237	55,984	54,649	54,340	52,196	0.95	0.95	0.91	YES
	RO	93.5	98.9	99.6	131.3	216.8	1.06	1.40	2.32	
Share of busses and trains in total passenger transport (<i>% of total inland passenger-km, Trains, motor coaches, buses, and trolley buses—sum of available data</i>)	EU	17.3	17.1	17.4	17.58	18.14	1.00	1.02	1.05	NO
	RO	20.1	19.9	19.2	17.50	12.10	0.95	0.87	0.60	
Share of rail and inland waterways activity in total freight transport (<i>% of total inland freight tonne-km, Railways, inland waterways—sum of available data</i>)	EU	24.7	23.6	24.7	25.00	25.38	1.00	1.01	1.03	YES
	RO	62.0	59.7	65.6	69.90	85.58	1.06	1.13	1.38	
Average CO ₂ emissions per km from new passenger cars (source: EEA, DG CLIMA) (<i>g CO₂ per km</i>)	EU	119.5	118.1	118.5	104.50	62.29	0.99	0.87	0.52	NO
	RO	125.0	122.0	120.6	107.53	66.51	0.96	0.86	0.53	

Source: Eurostat, own calculations.

Table 10. SDG 10—Reduce inequality within and among countries.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Purchasing power adjusted GDP per capita (<i>Real expenditure per capita, in PPS_EU28</i>)	EU	29,200	29,300	30,100	32,155	38,476	1.03	1.10	1.32	NO
	RO	16,300	17,400	18,800	19,738	26,150	1.15	1.21	1.60	
Adjusted gross disposable income of households per capita (<i>Purchasing power standard (PPS) per inhabitant</i>)	EU	21,865	21,846	22,151	23,018	26,071	1.01	1.05	1.19	NO
	RO	10,535	11,835	12,798	13,168	17,811	1.21	1.25	1.69	
Relative median at-risk-of-poverty gap (<i>% distance to poverty threshold</i>)	EU	24.8	25.0	24.1	24.97	27.5	0.97	1.01	1.11	NO
	RO	38.2	36.2	34.5	34.23	33.32	0.90	0.90	0.87	
Income distribution (<i>Quintile share ratio</i>)	EU	5.2	5.2	5.1	5.25	5.5	0.98	1.01	1.06	NO
	RO	8.3	7.2	6.5	6.53	6.62	0.78	0.79	0.80	
Income share of the bottom 40% of the population (<i>% of income</i>)	EU	20.9	20.9	21.1	20.84	20.51	1.01	1.00	0.98	NO
	RO	16.8	17.5	18.6	18.62	18.68	1.11	1.11	1.11	
Asylum applications by state of procedure (<i>number per million inhabitants, first time applicant</i>)	EU	2467	2361	1278	2531	4415	0.52	1.03	1.79	NO
	RO	62	94	240	213	357	3.87	3.44	5.76	
People at risk of income poverty after social transfers (<i>%</i>) (<i>Million euro, current prices</i>)	EU	17.3	17.3	16.9	17.46	18.2	0.98	1.01	1.05	NO
	RO	25.4	25.3	23.6	24.13	25.89	0.93	0.95	1.02	
EU imports from developing countries by country income groups (<i>Billion euro</i>)	EU	881.4	861.2	956.5	1017.3	1257.2	1.09	1.15	1.43	YES
	RO	0.010	0.011	0.013	0.012	0.015	1.29	1.23	1.49	

Source: Eurostat, own calculations.

Table 11. SDG 11—Make cities and human settlements inclusive, safe, resilient, and sustainable.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Overcrowding rate by poverty status (<i>% of population</i>)	EU	16.5	16.4	15.5	14.76	12.1	0.94	0.89	0.73	NO
	RO	49.7	48.4	47.0	44.68	36.75	0.95	0.90	0.74	
Population living in households considering that they suffer from noise, by poverty status (<i>% of population</i>)	EU	18.1	18.0	17.5	15.48	9.96	0.97	0.86	0.55	YES
	RO	22.2	20.3	19.3	11.67	−3.31	0.87	0.53	−0.15	
People killed in road accidents (source: DG MOVE) (<i>rate</i>)	EU	5.1	5.0	4.0	2.8	−1.2	0.78	0.55	−0.24	NO
	RO	9.6	9.7	7.8	5.9	−0.2	0.81	0.61	−0.02	
Exposure to air pollution by particulate matter (source: EEA) ($\mu\text{g}/\text{m}^3$, <i>Particulates < 2.5 μm</i>)	EU	14.5	14.9	14.5	13.49	10.03	1.00	0.93	0.69	YES
	RO	17.0	15.2	14.6	12.42	6	0.86	0.73	0.35	
Recycling rate of municipal waste (<i>% of total waste generated</i>)	EU	44.9	46.2	46.6	50.54	62.34	1.04	1.13	1.39	NO
	RO	13.2	13.3	13.9	20.58	34.85	1.05	1.56	2.64	
Population living in a dwelling with a leaking roof, damp walls, floors or foundation or rot in window frames of floor by poverty status (<i>% of population</i>)	EU	15.3	15.4	13.3	12.6	9.66	0.87	0.82	0.63	YES
	RO	12.8	13.3	11.1	6.31	−9.77	0.87	0.49	−0.76	
Share of busses and trains in total passenger transport (<i>% of total inland passenger-km, Trains, motor coaches, buses, and trolley buses—sum of available data</i>)	EU	17.3	17.1	17.4 ^(*)	17.58	18.14	1.00	1.02	1.05	NO
	RO	20.1	19.9	19.2 ^(*)	17.5	12.1	0.95	0.87	0.60	
Population reporting occurrence of crime, violence, or vandalism in their area by the poverty status (<i>% of population</i>)	EU	13.7	13.1	12.0	11.98	8.96	0.88	0.87	0.65	YES
	RO	13.1	14.1	11.3	6.66	−8.51	0.86	0.51	−0.65	

Source: Eurostat, own calculations. ^(*) Estimated values.

Table 12. SDG 12—Ensure suitable consumption and production patterns.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Resource productivity and domestic material consumption (DMC) (<i>Chain linked volumes (2010), euro per kilogram</i>)	EU	1.980	2.028	2.040	2.227	2.714	1.03	1.12	1.37	NO
	RO	0.268	0.290	0.329	0.287	0.339	1.23	1.07	1.26	
Average CO ₂ emissions per km from new passenger cars (source: EEA, DG CLIMA) (<i>g CO₂ per km</i>)	EU	119.5	118.1	118.5	104.5	62.3	0.99	0.87	0.52	NO
	RO	125.0	122.0	120.6	107.5	66.5	0.96	0.86	0.53	
Circular material use rate (% of material input for domestic use)	EU	11.4	11.7	12.2 (*)	12.84	15.24	1.07	1.13	1.34	NO
	RO	1.4	1.5	1.3 (*)	0.72	−0.95	0.90	0.51	−0.68	
Generation of waste excluding major mineral wastes by hazardousness (<i>kg per capita</i>)	EU	1734 (*)	1783	1783 (*)	1780	1770	1.03	1.03	1.02	YES
	RO	1050 (*)	1084	1084 (*)	672	−558	1.03	0.64	−0.53	
Primary energy consumption (<i>Million tons of oil equivalent</i>)	EU	1531.9	1542.7	1491.0 (*)	1425.9	1240.8	0.97	0.93	0.81	YES
	RO	30.6	31.3	31.3 (*)	28.1	17.2	1.02	0.92	0.56	
Final energy consumption (<i>Million tons of oil equivalent</i>)	EU	1086.2	1107.7	1065.7 (*)	1037.8	913.5	0.98	0.96	0.84	NO
	RO	21.9	22.3	21.3 (*)	21.8	18.6	0.97	1.00	0.85	
Energy productivity (<i>Euro per kilogram of oil equivalent</i>)	EU	8.3	8.5	8.6 (*)	9.04	10.54	1.03	1.09	1.27	NO
	RO	4.5	4.7	4.8 (*)	5.26	6.92	1.06	1.17	1.54	
Share of renewable energy in the gross final energy consumption by sector (%)	EU	16.7	17.0	18.1 (*)	20.3	27.84	1.08	1.22	1.67	YES
	RO	24.8	25.0	26.2 (*)	27.1	34.07	1.06	1.09	1.37	

Source: Eurostat, own calculations. (*) Estimated values.

Table 13. SDG 13—Take urgent action to combat climate change and its impacts.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Greenhouse gas emissions (source: EEA) (<i>Greenhouse gas emissions (in CO₂ equivalent), base year 1990</i>)	EU	78.0	77.6	74.0 (*)	69.45	52.79	0.95	0.89	0.68	YES
	RO	47.2	45.8	42.3 (*)	37.93	21.54	0.90	0.80	0.46	
Greenhouse gas emissions intensity of energy consumption (source: EEA and Eurostat) (<i>Index, 2000 = 100</i>)	EU	89.1	87.9	87.0 (*)	84.27	75.11	0.98	0.95	0.84	NO
	RO	91.3	87.3	88.1 (*)	85.92	77.92	0.96	0.94	0.85	
Primary energy consumption (<i>Million tons of oil equivalent</i>)	EU	1531.9	1542.7	1491.0 (*)	1425.86	1240.83	0.97	0.93	0.81	YES
	RO	30.6	31.3	31.3 (*)	28.1	17.2	1.02	0.92	0.56	
Final energy consumption (<i>Million tons of oil equivalent</i>)	EU	1086.2	1107.7	1065.7 (*)	1037.8	913.5	0.98	0.96	0.84	NO
	RO	22.3	21.4 (*)	21.2 (*)	20.25	19.02	0.95	0.91	0.85	
Share of renewable energy in gross final energy consumption by sector (%)	EU	16.7	17.0	18.1 (*)	20.3	27.8	1.08	1.22	1.66	YES
	RO	24.8	25.0	26.2 (*)	27.1	34.1	1.06	1.09	1.38	
Average CO ₂ emissions per km from new passenger cars (source: EEA, DG CLIMA) (<i>g CO₂ per km</i>)	EU	119.5	118.1	118.5	104.5	62.3	0.99	0.87	0.52	NO
	RO	125.0	122.0	120.6	107.5	66.5	0.96	0.86	0.53	

Source: Eurostat, own calculations. (*) Estimated values.

Table 14. SDG 14—Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Surface of marine sites designated under NATURA 2000 (source: DG ENV, EEA) (<i>km</i> ²)	EU	360,350	395,528	532,417	637,911	1,122,009	1.48	1.77	3.11	YES
	RO	1894	6362	6362	8542	16,834	3.36	4.51	8.89	

Source: Eurostat, own calculations.

Table 15. SDG 15—Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Surface of terrestrial sites designated under NATURA 2000 (source: DG ENV, EEA) (% of total land area)	EU	787,606	789,081	790,213	804,771	843,620	1.00	1.02	1.07	NO
	RO	53,781	54,214	54,214	54,337	54,747	1.01	1.01	1.02	
Biochemical oxygen demand in rivers (source: EEA) (<i>mg O</i> ₂ <i>per liter</i>)	EU	1.87	1.82	1.77	1.62	1.13	0.95	0.87	0.61	NO
	RO	2.88	2.84	2.81	2.72	2.41	0.98	0.95	0.84	
Phosphate in rivers (source: EEA) (<i>mg PO</i> ₄ <i>per liter</i>)	EU	0.064	0.063	0.062	0.0602	0.0532	0.98	0.95	0.84	YES
	RO	0.053	0.049	0.044	0.0317	−0.0107	0.84	0.60	−0.20	

Source: Eurostat, own calculations.

Table 16. SDG 16—Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Death rate due to homicide (<i>number par 100,000 persons</i>)	EU	0.7	0.6 (*)	0.6 (*)	0.47	0.06	0.87	0.68	0.09	NO
	RO	1.6	1.7 (*)	1.6 (*)	1.26	0.23	0.98	0.79	0.14	
Population reporting occurrence of crime, violence or vandalism in their area by poverty status (% of population)	EU	13.7	13.1	12.0	11.98	8.96	0.88	0.87	0.65	YES
	RO	13.1	14.1	11.3	6.66	−8.51	0.86	0.51	−0.65	
General government total expenditure on law courts (<i>Million euro</i>)	EU	49,743	49,819	50,720 (*)	52,305	57,838	1.02	1.05	1.16	NO
	RO	573	657	631 (*)	705	924	1.10	1.23	1.61	
Population with confidence in EU institutions by institution (source: DG COMM) (% of population)	EU	38	42	45	36	24	1.18	0.95	0.63	YES
	RO	59	55	56	50	37	0.95	0.85	0.63	

Source: Eurostat, own calculations. (*) Estimated values.

Table 17. SDG 17—Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Indicators		2015	2016	2017	2020	2030	2017/2015	2020/2015	2030/2015	Int.
Official development assistance as the share of gross national income (source: OECD) (% of gross national income)	EU	0.46	0.53	0.50	0.52	0.63	1.09	1.13	1.37	YES
	RO	0.09	0.15	0.12 (*)	0.14	0.19	1.34	1.56	2.11	
EU imports from developing countries by country income groups (Million euro, current prices)	EU	881.4	861.2	956.5	1017.3	1257.2	1.09	1.15	1.43	YES
	RO	0.010	0.011	0.013	0.012	0.015	1.29	1.23	1.49	
General government gross debt (% of GDP)	EU	84.40	83.30	81.70	88.86	112.75	0.97	1.05	1.34	NO
	RO	37.80	37.30	35.10	42.88	68.82	0.93	1.13	1.82	
Shares of environmental and labor taxes in total tax revenues (% of total taxes)	EU	6.31	6.30	6.14	6.31	6.38	0.97	1.00	1.01	YES
	RO	8.66	9.02	7.66	9.11	10.88	0.88	1.05	1.26	

Source: Eurostat, own calculations. (*) Estimated values.

Dynamics indices are a measure of the ratio between the size of the economic phenomenon analyzed between two different time periods. It is known that the dynamic indicators refer to homogeneous phenomena, described in a single temporal series. Such indices are termed indices of individual dynamics [33–35]. Assuming the year 2015 as the base period ($t = 1$) and the analyzed period $t = n$, the individual indices with the fixed base of each analyzed factor are calculated by the formula shown below.

$$I_{n/1} = \frac{Y_n}{Y_1} \times 100\% \quad (1)$$

where Y_n is the indicator value in a given moment and Y_1 is the indicator value in a comparative period.

The forecast for the possibility that the value of the indicators calculated at the level of Romania could reach the value of similar indicators calculated as the average of the EU member states in the horizon 2030 was made by extrapolating the trend recorded by the analyzed indicators from 2007 to 2017, using the FORECAST.ETS function from Excel 2016 software. This function predicts future values based on historical time-based data using the AAA (Holt-Winters) version of the exponential smoothing (ETS) algorithm with the weights assigned to data variances over time in proportion to the terms of their geometric progression based on the following exponential scale $\{1, (1 - \alpha), (1 - \alpha)^2, (1 - \alpha)^3, \dots\}$. [36–38]. The predicted value is a continuation of the historical values in the specified target date, which should be a continuation of the timeline, using the basic equations for the Holt-Winters' multiplicative method [39].

$$\text{level : } L_t = \alpha \frac{Y_t}{S_{t-s}} + (1 - \alpha)(L_{t-1} + b_{t-1}) \quad (2)$$

$$\text{trend : } b_x = \beta(L_t - L_{t-1}) + (1 - \beta)b_{t-1} \quad (3)$$

$$\text{seasonal : } S_x = \gamma \frac{Y_t}{L_t} + (1 - \gamma)S_{t-s} \quad (4)$$

$$\text{forecast : } F_{t+m} = (L_t + b_t m) + S_{t-s+m} \quad (5)$$

where s is the length of seasonality (e.g., number of months or quarters in a year), L_t represents the level of the series, b_t denotes the trend, S_t is the seasonal component, and F_{t+m} is the forecast for m periods ahead.

3. Results and Discussions

The problem of poverty is manifested everywhere, and its effects are felt both locally and globally. Although the phenomenon of globalization has led to a reduction in the number of people living in absolute poverty, more measures need to be taken to help reduce relative poverty, so that everyone can live a dignified life. Through this objective, Agenda 2030 highlights the need to include all segments of society that are excluded today. By achieving the proposed goals, Agenda 2030 will help create a fairer society in which all will be able to enjoy prosperity and live in dignity. Among the main measures that can support this goal are reducing the number of those at risk of poverty, and promoting social inclusion as ways to fight poverty.

The targets proposed for Romania in the 2030s focus mainly on issues that converge towards poverty eradication at the level of each individual, the decrease by at least half of the number of citizens living in relative poverty, and the strengthening of the system of emergency services that are extremely important in case of natural disasters or other unfavorable events.

As can be seen from Table 1, the evolution of key indicators monitoring the achievement of SDG 1 is generally favorable for achieving the proposed targets. However, unfavorable developments can be noted in the indicator "People at risk of income poverty after social transfers," which predicts an increase in the percentage of people at risk of income poverty in the EU and Romania. As for the indicator "People living in households with very low work intensity," this percentage is seen at the EU level, unlike in Romania where a significant decrease is forecast.

With regard to the indicator “In work at the risk-of-poverty rate,” our forecasts indicate a degradation of the economic and social situation, with an increase in the number of people at risk at the EU average and at the Romanian level.

Also, in the case of Romania, it is necessary to mention the extremely high values projected at the horizon of 2030 for the indicators “Population without a bath, nor the shower, nor the indoor flushing toilet in their household by poverty status” (8.39% in Romania versus the 0.31% EU average) and “Overcrowding rate by poverty status” (36.75% in Romania versus 12.10% EU average).

Of the 10 indicators analyzed, Romania can reach, in the year 2030, the European average values for only 5 of them.

The importance of agriculture is indisputable. Sustainable agriculture is essential to creating and maintaining a healthier and more productive society. Although Romania currently has the 6th largest agricultural area in Europe, further efforts are being made to increase the efficiency of agricultural processes and reduce food waste. Agenda 2030 proposes that one of the objectives is to increase agricultural productivity and reduce food waste in order to end hunger and achieve a food safety goal.

The targets proposed for this indicator for the 2030 horizon are mainly to: eradicate malnutrition and reduce the obesity rate below 10%, double the share of agriculture in Romania’s GDP compared to the reference year 2018, increase domestic indigenous production, increase the share of organic farming, and increase the number of agricultural products with specific characteristics in terms of geographical origin.

In order to monitor the achievement of SDG 2, 5 indicators were selected (Table 2). It is important to note that, in the case of the “Agricultural factor income per annual work unit (AWU),” Romania’s growth rate is well above the European average growth rate. Romania ranks last among the EU member states in terms of regarding the absolute value of this indicator.

For the “government support to agricultural research and development” indicator, although increases in EU financial support for R & D in agriculture have been recorded in recent years, our forecasts indicate a negative evolution of this indicator if things continue on the same trend as before now. Furthermore, a significant decrease is anticipated for Romania, even though it will probably not reach the predicted negative values.

Of the 5 indicators taken into account, we anticipate that Romania will be able to reach the European average value in 2030 for only three of them.

Facilitating access to healthcare and increasing the quality of the medical act are essential priorities for any sustainable society. The medical care act must be centered on people and their needs, regardless of the country they are in. Ensuring a healthy life and promoting the well-being for everyone at all ages involves promoting a healthy lifestyle, emphasizing prevention rather than treatment, helping people overcome dependencies of any kind, promoting an active lifestyle, and encouraging community sentiment.

The 2030 targets for this indicator mainly refer to: access to information, education and counseling services to promote a lifestyle without risk, complete digitization of the health system, reduction of the prevalence of maternal and infant mortality, incidence of breast cancer, or cervical and adolescent pregnancy, reduction of maternal mortality and neonatal mortality, promotion of awareness of mental illness, an end to tuberculosis and prevention of hepatitis and other communicable diseases, a reduction of mortality caused by coronary heart disease, and a reduction of harmful substance use.

At the EU level, the monitoring of SDG 3 is achieved through 9 indicators, the evolution of which is summarized in Table 3. For all indicators analyzed, improvements can be observed, both in the EU and Romania. Of the 17 goals of sustainable development, this is one of the few for which Romania has made visible progress for all indicators, and forecasts indicate a continuation of the trend. Clearly, to recover existing gaps from the media, a more alert recovery pace is needed.

The forecast shows that, keeping the current trend, for 5 of the 9 indicators, Romania will not be able to reach the EU average.

Ensuring access to good quality education is an essential process in the process of becoming a sustainable society. Participation in the educational process must take place throughout their entire life and this should be encouraged regardless of age or location. Through this objective, the 2030 Agenda aims to encourage innovation and meritocracy, alongside the promotion of a culture of leadership and responsibility. To do this, we must work to reduce school early leavers rates and strive to improve the quality of education, regardless of the geographical location or situation of someone. After all, sustainable development aims to keep this planet in better conditions for future generations, and education is vital to the success of the 2030 Agenda.

For 2030, Romania has as its main targets reducing the rate of the early educational system, education focused on skills and centered on the student's needs, ensuring that all students acquire the knowledge and skills necessary to promote sustainable development, modernization of the education system by adapting the teaching-learning methodologies to the use of information technologies, and increasing the quality of the educational act. Other factors include organizing vocational and technical education in specially equipped and equipped campuses, developing curricula in line with labor market requirements, expanding lifelong learning and lifelong learning facilities, increasing the number of young people and adults with relevant skills, and increasing the level of financial education of citizens.

For Romania, the indicator "Early Leavers from Education and Training" shows increasing values, compared to the declining trend registered at European level, which lead to an increase in the current gap, from 8.1 percentage points in 2015 to a forecasted 17.1 percentage points in 2030.

A special situation is encountered in the case of the "Employment rates of recent graduates" indicator, both at the EU level and at the level of Romania. Although the values recorded in recent years are on the rise, forecasts for the 2020 and 2030 horizons indicate a reduction in employment among graduates, which should draw the attention of the authorities responsible for optimal management of the situation. A similar situation is recorded for the indicator "Young people in employment nor in education and training" for which growth values are projected if the trend recorded from 2007 to 2017 is maintained.

Table 4 summarizes the data on the 7 indicators selected to monitor the achievement of SDG 4. The projected evolution for Romania indicates that none of the monitored indicators will converge to the EU-wide average values by 2030, which may have a dramatic effect on the chances offered to younger generations, coupled with a drop in interest in lifelong learning for adults.

Gender equality is the hallmark of any modern and developed society. Globally, women account for more than half of the world's population, but there are still many inequalities between the two sexes—such as lower wages, family violence, or lack of empowerment—to name just a few. The road to transforming into a sustainable society is where the genre with which it is born has no impact on dignity and quality of life.

For this purpose, Romania has set itself the following targets for the 2030s: continuing to reduce the gender pay gap, eliminating all forms of violence against women and girls, ensuring full and effective participation of women and equal opportunities in occupation of leading positions in political, economic, and public life.

The achievement of SDG 5 is monitored through 8 indicators in which the evolution is summarized in Table 5. As with SDG 4, if Romania's current trend is met, Romania will be able to meet only one of the 8 indicators, namely "gender pay gap in unadjusted form."

A special situation is found in the indicator "Early Leavers from Education and Training" where EU average values are decreasing, as is the forecast for the 2030 horizon, while, in Romania, there is an upward trend, starting from 2 times higher in 2015 (19.1% from the EU average of 11.0%), up to five times higher than what was projected in 2030 (21.14% vs. EU average of 4.04%). A similar, but not as dramatic, situation can be seen for the "Employment rates of recent graduates" indicator, where values in recent years are rising, but the forecast for 2020 and 2030 indicates declining values.

Ensuring availability and sustainable water management and sanitation is a desideratum of all citizens, no matter where they live and work. State responsibility is to provide both better sanitation services for all and to promote sustainable water management. Through this objective, Agenda 2030 aims to cover a wide range of topics, ranging from protecting the ecosystem of rivers and lakes and the Danube Delta, to increasing the efficiency of water use and providing all people with clean and safe drinking water.

As targets for 2030, Romania aims to increase the efficiency of water use in industrial, commercial, and agricultural activities, expanding the rational reuse of treated and recycled water, increasing water efficiency in all sectors and ensuring a sustainable drinking water abstraction and supply process, connecting households in cities, communes, and compact villages to the drinking water and sewerage network in proportion of at least 90%, which increases access to drinking water for vulnerable and marginalized groups and improves water quality by reducing pollution.

SDG 6 is monitored through three indicators, which are summarized in Table 6. For each of the indicators analyzed, one can see an improvement trend both at the European Union level and at the level of Romania. However, for Romania in 2030, the values of 2 out of the 3 indicators will not reach the European average, which implies greater attention from the authorities for the proposed targets.

Worldwide, energy demand is steadily rising—and we, as a society, need to prepare and adapt ourselves. Sustainable energy means renewable energy and Romania's renewable energy supply has risen from 18.3% in 2007 to 25% in 2016 (Eurostat)—reaching the EU 2020 renewable energy target of 5 years earlier. Only by sustaining innovation in energy and promoting renewable energies will we be able to keep our technological progress steady while protecting the environment and limiting the effects of global warming.

For the 2030 horizon, the following targets are proposed by Romania: extending the transmission and distribution networks for electricity and natural gas at acceptable prices, ensuring cyber security of the platforms for monitoring the production, transmission and distribution networks of electricity and natural gas, decoupling economic growth, the depletion of resources, the degradation of the environment, increasing the share of renewable energy sources and low carbon fuels in the transport sector (electric vehicles), and ensuring a stable and transparent regulatory framework for energy efficiency.

Table 7 summarizes the information on the 7 indicators selected to monitor progress toward SDG 7. For all the indicators under review, progress is made, which are sometimes significant over the current period. Following the current trend, in 5 cases out of 7, Romania will be able to reach the European average for the analyzed indicators. In the remaining 2 cases, the differences are marginal.

However, in the case of the “energy dependence” indicator, the privileged position of Romania has to be highlighted, which indicates a very low level of energy dependence compared to the average recorded in the EU countries, and, at the level of 2030, our expectations are even more favorable. The degree of dependence was reduced from 17.1% in 2015 to 2.17% in the year 2030, since the average of EU countries is expected to remain relatively constant and oscillates between 53.9% in 2015 and a forecast of 53.45% in 2030.

Sustainable development is trying to decouple economic growth from its negative impact on the environment by taking into account its social dimension. This can only be achieved by implementing a model of sustainable economic growth that promotes decent work for all, regardless of gender, geographical location, or background. In addition, this objective aims to generate economic growth based on support for small and medium-sized enterprises, diversification of the economy, and economic development of less developed areas.

To monitor progress in meeting SDG 8, nine indicators were selected and analyzed (Table 8). In general, some improvements are visible, but some indicators may also be mentioned where negative developments are projected (e.g., “Young people in employment nor in education and training,” “Long-term unemployment rate,” and “In work at risk of poverty rate”), which should turn into an alarm signal for the responsible authorities.

A significant case is the indicator “Investment share of GDP by institutional sectors,” which forecasts unfavorable developments for the 2020 and 2030 horizons, with a strong negative impact on Romania, as it moves from a positive gap to the EU average by 4.5 percentage points to a negative gap in 2030 by more than 11 percentage points. A similar situation can be noticed in the case of the resource productivity and domestic material consumption (DMC) indicator, for which there are more consistent growth rates at the European average compared to Romania. This leads to the amplification of the existing differences.

It should be mentioned that, in the case of Romania, given the continuation of the current trend, our forecasts indicate that, for 8 out of the 9 indicators analyzed, the average values at the European level will not be reached.

In an ever-moving economy, at an ever-increasing pace, the only way a country can remain competitive is through resilient infrastructure, inclusive and sustainable industrialization, and encouraging innovation. A safe, sustainable, and resilient infrastructure is the key to sustainable growth, on the basis of which an inclusive and sustainable industrialization can be promoted. However, for innovation to be both inclusive and sustainable, innovation is essential. Therefore, through innovation, we can create the necessary competitive advantage to do this in the 21st century.

From this point of view, Romania aims to achieve targets for 2030 including to maintain a rhythm of higher GDP growth than the EU average, to promote development-oriented policies, to achieve higher levels of productivity through diversification, technological upgrading, and innovation, long-term competitiveness, development of agro tourism, ecotourism, rural tourism, balneary, and cultural tourism, and improvement of Romania’s image as a tourist destination, which strengthens the capacity of domestic financial institutions.

To monitor progress in SDG 9, seven indicators were analyzed (Table 9). If, in general, there are positive developments in the European Union, the situation is not that good for Romania. For example, for the “Gross domestic expenditure on R & D by sector” indicator, the average value is on an upward trend, while, in Romania, the values are on a downward trend, which leads to a potential amplification of the existing differences. A similar evolution can be seen in the indicator “Share of buses and trains in total passenger transport”, with an unfavorable prognosis for Romania, which decreases from 20.1% in 2015 to a projected value of 12.10% in 2030.

On the whole, however, out of the 7 selected indicators, in the case of Romania, the European average is forecast to reach only 2 by 2030.

We can consider inequality as one of the biggest obstacles on the road to a sustainable society. Inequality can be manifested in several forms—gender, race, access to education, and financial, to name but a few. It is important to know that the benefits of economic development can be achieved by all those involved and that the ideal of a meritocratic society can be achieved.

The targets set for Romania 2030 refer mainly to adopting policies, especially fiscal, wage, and social protection, in order to progressively reduce inequalities for the proportion of disadvantaged groups, Romania’s appropriation of the EU average, corresponding to 2030, which takes into account indicators of sustainable development and reduces discrimination by supporting non-governmental organizations active in the field of human rights.

In order to monitor the convergence towards SDG 10, eight indicators were analyzed at the EU and Romanian level (Table 10). Although, the evolution of indicators for the 2030 horizon is positive both for the EU member states and for Romania, there is an under-performance in Romania regarding the slow pace of convergence toward the European average. For this reason, we can state, on the basis of forecasts, that, for 7 of the 8 indicators analyzed, Romania will not reach the EU average by 2030.

In Romania, the percentage of the urban population has increased over the last half century from 34% to 55%. Considering that this trend will continue for the coming years, it is imperative that cities adapt to new challenges. One of the goals of the 2030 Agenda is to make all cities inclusive, safe, and sustainable. In addition, those who have chosen to live in rural areas should not be omitted from having the right to a dignified life, no matter where they choose to live.

For the year 2030, Romania proposes the following: ensuring access to adequate housing conditions for all citizens, significantly reducing economic losses caused by floods and landslides, ensuring access to secure, fair, accessible, and sustainable transport systems for all by expanding public transport networks, developing and implementing a general spatial planning and spatial planning program, educating and empowering the population for seismic risk, mitigating the effects of atmospheric pollution on human health and the environment by paying particular attention to air quality, substantially reducing the number of deaths and diseases caused by hazardous chemicals from pollution and air, water, and soil contamination, strengthening the protection and safeguarding of cultural heritage, implementing legal provisions for the production, transport, storage, use, and disposal of chemicals, including pharmaceuticals, which may pose dangers to human and animal health and to the integrity of the environment.

In order to monitor the fulfillment of the SDG 11, eight indicators have been selected, which are presented in the synthesis in Table 11. Overall, the evolution of indicators is favorable and we can observe the same difference in the rate of convergence of values toward the European average. There is a single indicator showing trend differences, respectively, including the indicator “share of buses and trains in total passenger transport” for which the EU average is registering an increase in the share of the registered values in Romania, which are on a downward trend.

From a total of 8 indicators analyzed, based on our calculations, we can state that Romania will be able to achieve the European average values in the year 2030 for only half of them.

By making the consumption and production process sustainable, it is possible to decouple economic growth from climate change in order to mitigate the negative effects that may arise. This SDG pursues the entire production and consumption process, and, by adopting sustainable measures to save scarce resources, we can make sure that our dependents have the same quality of life we currently have. These measures will also have implications for citizens’ consumption behavior by promoting durable goods as opposed to discarding the old ones in favor of a newer model and, implicitly, by ensuring a better environmental protection.

For the 2030 horizon, Romania has adopted the following targets: a phased transition to a new development model based on the rational and responsible use of resources, the halving per capita of food waste at retail and consumer levels, and the reduction of food waste alongside the production and supply chains, 55% recycling of municipal waste by 2025 and 60% by 2030, recycling 65% of packaging waste by 2025 and 70% by 2030, collection of separate household hazardous waste by 2022, bio-waste by 2023, and textiles by 2025, the establishment of mandatory wholesale manufacturers’ liability schemes for all packaging by 2024, and the implementation of sustainable green procurement practices in line with priorities at national and European policies.

In order to monitor SDG 12, eight indicators were taken into account, which can be seen in Table 12. At the EU level, the evolution of these indicators is favorable, which cannot be said for the case of Romania. A relevant example is the “Circular Material Use Rate” indicator, which indicates an upward trend for the EU average, but, for Romania, the trend is downward with a significant gap between values.

On the other hand, the particularly favorable evolution of Romania’s share of renewable energy in gross final energy consumption by sector shows values much higher than the European average, with a slight tendency to reduce the gap long.

Overall, of the 8 indicators analyzed, Romania has registered favorable developments in only three of these indicators.

Climate change is already seen as certainty and requires urgent action to limit negative effects on our society. While the entire 2030 Agenda is trying to address the cause of climate change, the risk of maintaining this uncontrolled phenomenon is quite high. Its effects can be seen in all, from population health, to quality of life, to diminishing and even loss of biodiversity, and, only by decisive action, can we mitigate its impact.

For the year 2030, Romania has set as targets the following: Strengthen Romania's resilience and capacity to adapt to climate and natural disaster risks, improve the capacity to react quickly to extreme weather events of high intensity, improve education, raise awareness, and human and institutional capacity on climate change mitigation, adaptation, mitigation, and early warning, stepping up Romania's efforts to make the transition to a green, low-carbon, climate-resilient economy and to integrate adaptation measures into climate change in vulnerable economic, social, and environmental sectors, in line with EU policies.

Recognizing the importance of SDG 13, six indicators were selected to track the progress made in achieving the objectives (Table 13). The recorded and projected values for all six indicators are favorable, but there are differences in pace between the average of the EU member countries and the values in Romania in favor of one or the other.

Based on the forecast, we can say that, by 2030, Romania can reach the European average for three of the six indicators analyzed.

Approximately 70% of the Earth's surface is covered with water, and mankind depends on it much more than just for fishing or trade. Additionally, more than two-thirds of the oxygen in the atmosphere is produced by marine plants and, as a consequence, their role in the ecosystem is vital and must be protected. Climate change and unsustainable consumption patterns are detrimental to seas and oceans. Even if Romania has only 245 km of coastline, we have to take our part in protecting oceans, seas, and marine resources.

The main targets set for Romania 2030 relate mainly to: the prevention and significant reduction of marine pollution of all types, the minimization and management of the impact of acidification of the marine environment, including increased scientific cooperation at all levels, and the responsible and sustainable development of fishing activities, which attracts the other states bordering the Black Sea to the sustainable management of living aquatic resources.

To monitor the achievement of SDG 14, a single indicator (Table 14) was selected for which data were available for analysis. Comparing the growth rate of NATURA 2000 sites, we see a favorable evolution of Romania toward the average growth rate at the EU level. For the 2030 horizon, an almost nine-fold increase of the surface compared with 2015 is forecast.

The scope of SDG 15 is broad and covers a number of different aspects that highlight our role as part of the ecosystem of this planet. Our imprint on the environment and on terrestrial ecosystems also comes with our responsibility to manage them sustainably and protect them to be passed on to the next generation.

The 2030 targets set out for Romania concern the development of green infrastructure and the use of services provided by natural ecosystems, the preservation and protection of wetlands, including the Danube Delta Biosphere Reserve, the preservation of mountain ecosystems, including their biodiversity, the support of research and development institutions and infrastructures of national and European interest for studying, managing, protecting, and preserving the diversity of natural heritage, sustainable forest management, development of the integrated information system for the monitoring and exploitation of timber transport, afforestation, and reforestation of the land forest and degraded or deserted areas, the planned planting of forest curtains for the protection of crops and infrastructure elements in order to limit the impact of climate change, and transition to a circular economy, combating desertification, restoring land and degraded soils, including land damaged by desertification, drought, and floods.

In order to monitor the progress registered in relation to SDG 15, three indicators were selected and analyzed (Table 15). Although their overall evolution is favorable, both at the EU and Romanian level. Different rates of change over time can be observed. Thus, in the case of Romania, according to the forecast for the 2030 horizon, only one indicator will be comparable to the European average. For the other two indicators, Romania is registering lower rates of adjustment.

Sustainable development is not merely another smart policy. It is a new paradigm for the development of human society, based on a solid foundation in which the benefits of sustainable

development can be enjoyed by everyone. It is also important to ensure access to justice for all and to foster a sense of acceptance and belonging in one's community.

For the 2030 horizon, Romania set itself the following targets: to administer justice on impartiality and celerity in accordance with established laws and procedures, respecting the principle of presumption of innocence, ensuring and supporting dialogue with national minorities in order to improve decision-making, to significantly reduce all forms of violence and related deaths, to stop abuse, exploitation, trafficking, and all forms of violence and torture of children, to significantly reduce illicit financial and arms trafficking, to strengthen the recovery and return of stolen goods, and to combat all forms of crime organized, to produce inclusive, participative, and representative decision-making at all levels, to develop efficient, accountable, and transparent institutions at all levels, and to improve the professionalism of all institutions of central public administration.

A number of four indicators (Table 16) were selected to monitor the fulfillment of SDG 16. In the case of three of the four indicators selected, a favorable evolution over time can be observed. In contrast, the indicator "Population with confidence in EU institutions by institution" shows a gradual erosion of the percentage of confidence, both in Romania and across the European Union, which is not a very promising perspective.

However, as a whole, you can say that Romania can reach the European average by 2030 for two of the four indicators analyzed.

It is well known that global issues require global solutions. This global approach to the 2030 Agenda requires the identification of international financing modalities, ways to improve access to technology and science to enable innovation, and capacity building to enhance regional efforts to tackle regional problems.

Romania's 2030 Targets for this objective mainly relate to the gradual increase of the official development assistance provided by Romania in the ODA programs by reaching 0.33% of the gross national income in the year 2030, the increase and diversification of the official aid for development as Romania's economic potential increases and encouraging Romanian economic agents to invest, Romania's accession to the Eurozone, the Schengen Area, and the Organization for Economic Cooperation and Development, the support of international commitments, and proactive involvement at the European and international level.

In order to follow the progress in SDG 17, four indicators were selected (Table 17). In the case of three out of four indicators, significant progress can be seen, both at the EU level and at the level of Romania. However, we cannot ignore the worrying evolution of the values of the "General government gross debt" indicator, which, although recording slight declines in recent years, remains at an extremely high average level at the EU level (84.40% of GDP in 2015) with pessimistic forecasts about the 2030 horizon (112.75% of GDP in 2030). Even if Romania recorded a significantly lower level than the EU average for this indicator (37.80% in 2015 and 68.82% in 2030, respectively), we considered that due to the high growth rate of spending, Romania may find itself in the long run in difficulty, jeopardizing the maintenance of a sustainable macroeconomic stability.

Thus, on the basis of forecasts, we can state that, for the 2030 horizon, Romania will be able to achieve the European average values for three of the four selected indicators.

As we can see from the perspective, the objectives and targets of the 2030 Agenda for Sustainable Development promotes a new vision of the development of the society. Although strongly promoted and monitored, we still identify concerns and deficiencies in terms of implementation and achievement of the estimated results. These aspects are explained by the complex and interconnected nature of the objectives, but also by the fact that the success of materialization depends exclusively on all the actors involved, including every citizen.

In this new context, the National Strategy for Sustainable Development 2030 aims to connect Romania to the regional, European, and global partnerships with the main purpose of increasing the efficiency and effectiveness of the implemented policies.

Starting from these premises, the targets to be achieved for each of its 17 goals established by the 2030 Agenda for Sustainable Development as well as from the research results made in the present paper, we continue to highlight a series of deficiencies related to the expected results and also to which they will materialize. We find this to be a degradation of Romania's economic and social situation in relation to its own established targets and in relation to the identified growth trends in the EU average.

As we can see from the analysis of Romania's evolution from the 2030 Agenda perspective (Table 18), the discrepancies identified both at the European average and at the level of its own estimates are noticeable in some very high situations. It is clear that a successful implementation of the SDGs implies a series of urgent measures as well as a well-founded legislative and institutional framework with functional mechanisms and rigorously defined roles. There is a need for close collaboration between government representatives at a national and international level, as well as between local authorities, focusing on sustainable development.

Table 18. Achieving the sustainable development goals in Romania.

Sustainable Development Goals	No. of Analyzed Indicators	No. of Indicators Forecast to Reach the EU Average Value in 2030	Percentage of Achievement
SDG 1—No poverty	10	5	50%
SDG 2—Zero hunger	5	3	60%
SDG 3—Good health and well-being	9	4	44.4%
SDG 4—Quality education	7	0	0%
SDG 5—Gender equality	8	1	12.5%
SDG 6—Clean water and sanitation	3	1	33.3%
SDG 7—Affordable and clean energy	7	5	71.4%
SDG 8—Decent work and economic growth	9	1	11.1%
SDG 9—Industry, innovation, and infrastructure	7	2	26.8%
SDG 10—Reduced inequalities	8	1	12.5%
SDG 11—Sustainable cities and communities	8	4	50%
SDG 12—Responsible consumption and production	8	3	37.5%
SDG 13—Climate action	6	3	50%
SDG 14—Life below water	1	1	100%
SDG 15—Life on land	3	1	33.3%
SDG 16—Peace, justice, and strong institutions	4	2	50%
SDG 17—Partnerships for the goals	4	3	75%
TOTAL	107	40	37.38%

Source: own calculations.

4. Conclusions

Achieving the targets of the 2030 Agenda depends exclusively on an effective approach for the implementation of objectives by ensuring a continuous dialogue between all the entities directly and indirectly involved. Sustainable development depends on coherence between the development policies of recipients and the providers of development assistance, but achieving coherence is difficult and requires a lot of collaboration between all stakeholders [40].

In this context, it was absolutely necessary to create a government department—the Department for Sustainable Development, which was created in 2017 by Government Decision no. 313/2017. Along with this, there are also mandatory associations, including representatives of civil society and active in all areas to inform, implement, monitor, and analyze how economic, social, and environmental activities are conducted in accordance with 2030 Agenda requirements. By adopting good international practices, Romania could pay more attention to e-services delivery, quality, and reliability, so the government should initiate different programs to disseminate knowledge on the use, adoption, and benefits of e-government (e-services) to increase the chances of reaching the proposed targets [41].

Although at the government level, there is a plan of measures and actions proposed to be finalized by the end of 2019. There is a need for new directions and a new vision to identify the real causes of Romania's inability to keep pace with the upward trend of the state's members of the EU.

Our research highlights the strong dualism of the European regional economy. The significant difference between the most economically and technologically advanced economies and other

economies, namely the economy of Romania, is evident, even if the general trend begins to change substantially until the end of 2030.

The relatively slow growth trend of the whole European economy can be explained mainly by exhausting the creative and innovative local potential in some cases, which generates radical global changes in the context of emerging countries still far from using their potential innovation. Therefore, increasing the involvement and use of the human resource to the creative and innovative maximum capacity, represents a starting point for Romania in creating significant added value in the work processes. Increasing per capita GDP by bringing Romania closer to the current levels of the most developed countries is a consequence of using creative and innovative capacities.

Romania's economic growth depends not only on GDP and on the creative capacity of the population, but also on the level of development of technology and science. Considering this, it is clear that the need to implement good practices adapted to the Romanian market conditions was promoted by the current leaders in the field of technology and science.

In practice, a new approach to the economy is needed by creating programs that support the creative potential of people and stops on the increasingly intense migration process of the most competitive human resources in Romania to developed countries.

We support the launch by the government of Romania of innovative projects that encourage the creation and implementation of sustainable, radical solutions through a proper financing performance. In this context, the creation of more incubators and business accelerators can be a permanent solution for stimulating the performance and creativity of human resources.

Monitoring the implementation of the 2030 Agenda in Romania is also a current problem. Thus, priority is given for the need to define a new set of national indicators to properly measure the implementation of sustainable development objectives while also taking into account the set of indicators established at the UN and EU level to implement the 2030 Agenda.

In this context, the National Institute of Statistics must take this action, update its set of indicators, measure the implementation of the objectives of sustainable and sustainable development, and ensure the transparency and accuracy of the information. On the other hand, the many and various aspects of sustainable development greatly complicate its monitoring using single indicators. Some authors have argued that integrated frameworks are necessary to consider the interdependence of social, economic, and environmental aspects holistically, and even these metrics still cannot properly and effectively reflect the individual effect of multi-country interactions on each nation [42].

The collection and accurate analysis of data provided by central and local public administration authorities for sustainable development indicators is also a challenge. This action depends on the whole decision-making process and the implementation of corrective measures in a timely and effective manner. In fact, Romania has proposed to continue monitoring and reporting at the European Commission level by the year 2030 on a regular basis. According to the General Secretariat of the Government, Romania intends to present at least two reports up to the horizon of 2030.

The significantly weak results of Romania from the SDG 1 perspective are related to the failure of the authorities to properly identify the factors/causes that generate a negative situation. The lack of communication and of the real partnership between the government and the local authorities is one of the causes that contributes to the stagnation and even the involution of certain social categories of the population in some cases. Proper planning is required, including time, money, and voluntary work by creating organizations and communities to work locally. Although the role of the government is undeniable in creating legal systems, local organizations are implementing change and reaching out to communities affected by poverty.

Another sustainable solution that responds to this global goal is related to the correction of the minimum wage growth in the economy. This is also a solution that combats poverty, increases access to healthcare, and directly contributes to reducing the inflationary process. Creating jobs in communities severely affected by poverty is also a solution that helps reduce poverty. Stimulation by the government and local authorities of local infrastructure investments and the development of

renewable energy sources, the renovation of abandoned homes coupled with rising minimum wages are merely some of the most practical solutions with unquestionable effects in the national and regional poverty eradication process.

If we take into account the significant agricultural potential of Romania, we can observe a continuous depreciation of agriculture, especially of sustainable agriculture. The indicator “Agricultural factor income per annual work unit (AWU)” places Romania on the last place among EU member states. Against this backdrop, not at all favorable to the sustainable future of Romania and consequently to the EU, the launching of agronomic revolution programs based on advanced technology implementation and labor intensive use combined with local services to support them seem to be quick and viable solutions.

Thus, through sustainable investments in the agricultural infrastructure, through the access to specific know-how, through people, knowledge, specific education, services such as roads, irrigation, electricity, internet, storage, processing, and Romanian agriculture has real chances to correct and reduce the gap with the European countries.

The role of the government and local authorities to implement programs to keep people in rural areas by investing in a healthy and sustainable lifestyle is not to be neglected. The new small-scale business financing programs for sustainable agriculture that integrate farm marketing programs with domestic and export markets are solutions that can create and promote value added for Romania in this context.

In addition, investing in local agricultural professionals’ education, boosting digital business development through local consulting, and promoting innovative technologies and knowledge are solutions for the new generation of farmers. Providing low-cost financing and technical support for local businesses and farmers, along with government subsidies (and also limited), directly contributes to increased productivity and efficiency, which will reduce the gaps in average values of EU countries.

Although Romania had a positive gap with the EU average of 4.5 percentage points, from the perspective of “Investment share of GDP by institutional sectors,” there is a shift to a negative gap, which is a situation that generates the amplification of the differences between Romania and EU countries. It is clear that the achievement of high levels of economic productivity is a consequence of Romania’s economic, social, and political disability, but a major objective to be achieved by profound, radical changes of the national political-social-economic system. It is, therefore, clear that achieving high levels of economic productivity can only be achieved through advanced technological upgrading, innovation, and also by focusing the Romanian economy on high added-value and labor-intensive sectors.

On the other hand, we can add the increase in productivity and investments in the intensive fields of work, such as the tourism industry that can bring added value for Romania through the uniqueness and diversity of the natural and anthropic resources held in conjunction with their precarious use. Major investments in tourism infrastructure can be a strategic alternative with a significant multiplier effect for all other areas of activity. Tourism is also a job-creating specific job, which stimulates entrepreneurship, creativity, and innovation and encourages the creation and growth of micro-enterprises of small and medium-sized enterprises. The tourism industry can also contribute to the creation of new productive jobs by 2030 but also decent jobs for both women and men, including for young people and people with disabilities. This is a strategy that helps increase the competitiveness of the economy Romanians have in the new sustainable context by 2030. The promotion of sustainable local culture and products is a consequence of tourism activities and is a starting point for stimulating the Romanian and regional local economy.

The findings of our study have shown that there is a long and difficult road for Romania with the 2030 horizon. In fact, it does not seem to be an easy task neither for the rest of the EU member countries to fulfill the assumed SDG. More firm and better targeted measures are necessary to meet the established indicators. The results of our research, the interpretations, and the possible recommendations for the stakeholders are only one of the stages for monitoring the implementation

of sustainable development objectives (SDG) in Romania. Future research directions can be directed toward a permanent monitoring of Romania's progress toward sustainable development at local, national, regional, and global level.

We hope the results obtained from the research to serve as a starting point for the competent authorities of Romania in defining the appropriate policies to achieve the established objectives as well as in the elaboration of concrete action plans that take into account the deficiencies identified and amplify the positive effects.

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References

1. United Nations. Transforming Our World: The 2030 Agenda for Sustainable Development. 2015. Available online: [www.https://sustainabledevelopment.un.org](http://www.sustainabledevelopment.un.org) (accessed on 15 March 2019).
2. Brundland, G.H. Report of the World Commission on Environment and Development—Our Common Future. UN Documents, Gathering a Body of Global Agreements. 1987. Available online: <http://www.un-documents.net/wced-ocf.htm> (accessed on 15 March 2019).
3. Faucheux, S.; O'Connor, M.; Straaten, J. (Eds.) *Sustainable Development: Concepts, Rationalities and Strategies*; Springer Science & Business Media: New York, NY, USA, 1998.
4. Barrientos, S.; Gereffi, G.; Rossi, A. Economic and social upgrading in global production networks: A new paradigm for a changing world. *Int. Labor Rev.* **2011**, *150*, 319–340. [[CrossRef](#)]
5. Stimson, R.; Stough, R.; Roberts, B. *Regional Economic Development: Analysis and Planning Strategy*; Springer: Heidelberg, Germany, 2006.
6. Dokurno, Z.; Fiedor, B.; Scheuer, B. *Contemporary Macroeconomics from the Perspective of Sustainable Development*; PWN, Polish Scientific Publishers: Warsaw, Poland, 2017.
7. Smith, B. *Good Governance and Development*; Palgrave Macmillan: New York, NY, USA, 2007.
8. Agere, S. *Promoting Good Governance: Principles, Practices and Perspectives*; Commonwealth Secretariat, Management Service Training Division: London, UK, 2000.
9. Diamond, J. Leadership and the voluntary and community sector. In *Leadership and Change in Sustainable Regional Development*; Sotarauta, M., Horlings, L., Liddle, J., Eds.; Routledge, Regional Studies Association, Regions and Cities: New York, NY, USA, 2012; pp. 80–102.
10. Gibney, J. Leadership of place and the dynamics of knowledge. In *Leadership and Change in Sustainable Regional Development*; Sotarauta, M., Horlings, L., Liddle, J., Eds.; Routledge, Regional Studies Association, Regions and Cities: New York, NY, USA, 2012; pp. 20–36.
11. Edwards, M.; Hulme, D. NGO Performance and Accountability. Introduction and Overview. In *Non-Governmental Organisations: Performance and Accountability, Beyond the Magic Bullet*; Edwards, M., Hulme, D., Eds.; Earthscan Publications: London, UK, 1995.
12. Mascarenhas, A.; Coelho, P.; Subtil, E.; Ramos, T.B. The role of common local indicators in regional sustainability assessment. *Ecol. Indic.* **2010**, *10*, 646–656. [[CrossRef](#)]
13. Stanciulescu, G.C.; Bulin, D. Indicators of Sustainable Development—A comparative Analysis between Bulgaria and Romania in European Context. *Int. J. Econ. Pract. Theories* **2012**, *2*, 91–98.
14. Nardo, M.; Saisana, M.; Saltelli, A.; Tarantola, S.; Hoffman, A.; Giovannini, E. *Handbook on Constructing Composite Indicators: Methodology and User Guide*; OECD Statistics Working Papers, No. 2005/03; OECD Publishing: Paris, France, 2005. [[CrossRef](#)]
15. Lehner, A.; Erlacher, C.; Schlögl, M.; Wegerer, J.; Blaschke, T.; Steinnocher, K. Can ISO-Defined Urban Sustainability Indicators Be Derived from Remote Sensing: An Expert Weighting Approach. *Sustainability* **2018**, *10*, 1268. [[CrossRef](#)]
16. Romanian Government. National Sustainable Development Strategy Romania 2013–2020–2030. 2008. Available online: [www.https://sustainabledevelopment.un.org](http://www.sustainabledevelopment.un.org) (accessed on 15 March 2019).

17. Sirbu, R.M.; Popescu, A.D.; Borca, C.; Draghici, A. A study on Romania Sustainable Development. *Procedia Technol.* **2015**, *19*, 416–423. [CrossRef]
18. Bocean, C.G.; Del Baldo, M.; Sitnikov, C.S. Responsible Leadership for Corporate Responsibility. *Emerg. Issues Manag.* **2018**, *1*, 139–167.
19. Romanian Government. National Strategy for Sustainable Development of Romania 2030. 2018. Available online: <https://sgg.gov.ro> (accessed on 15 March 2019).
20. Toba, D.; Simion, D.; Vochita, L.; Toba, E. Natural Dimension of Sustainable Development and Economic and Ecological Integration in the Evaluation of Social Welfare. *WSEAS Trans. Environ. Dev.* **2011**, *1–7*, 13–22.
21. European Commission. Standard Eurobarometer 89—Spring 2018 “Public Opinion in the European Union—First Results”. 2018. Available online: <http://ec.europa.eu/commfrontoffice/publicopinion/> (accessed on 15 March 2019).
22. Eurostat. Income and Living Conditions, EU Children at Risk of Poverty or Social Exclusion. 2019. Available online: <https://ec.europa.eu/eurostat/data/database> (accessed on 15 March 2019).
23. European Parliament. Annual Strategic Report on the Implementation and Delivery of the Sustainable Development Goals (SDGs). 2019. Available online: <http://www.europarl.europa.eu> (accessed on 15 March 2019).
24. Enescu, M.; Enescu, M. Foreign direct investments in the economic development of Romania. *Stud. Bus. Econ.* **2015**, *10*, 128–136. [CrossRef]
25. OECD. PISA 2015—Results in Focus. 2018. Available online: <https://www.oecd.org> (accessed on 15 March 2019).
26. Eurostat. Government Expenditure on Education. 2019. Available online: <https://ec.europa.eu/eurostat/data/database> (accessed on 15 March 2019).
27. National Institute for Statistics Romania. 2019. Available online: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table> (accessed on 15 March 2019).
28. The National Energy Regulatory Authority. Report on the Progress Achieved in the Fulfillment of National Energy Efficiency Objectives. 2018. Available online: https://ec.europa.eu/energy/sites/ener/files/documents/ro_annual_report_2018_en.pdf (accessed on 15 March 2019).
29. Helliwell, J.; Layard, R.; Sachs, J. *World Happiness Report 2018*; Sustainable Development Solutions Network: New York, NY, USA, 2018.
30. Pîrvu, R.; Bădîrcea, R.; Manta, A.; Lupănescu, M. The Effects of the Cohesion Policy on the Sustainable Development of the Development Regions in Romania. *Sustainability* **2018**, *10*, 2577. [CrossRef]
31. Eurostat. Sustainable Development in the European Union—Monitoring Report on Progress towards the SDGs in an EU Context. 2018. Available online: <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-01-18-656> (accessed on 15 March 2019).
32. Eurostat. SDG Indicators: Goal by Goal. 2018. Available online: <https://ec.europa.eu/eurostat/web/sdi/indicators> (accessed on 15 March 2019).
33. Box, G.; Jenkins, G.; Reinsel, G.; Ljung, G. *Time Series Analysis: Forecasting and Control*, 5th ed.; John Wiley&Sons: Hoboken, NJ, USA, 2016.
34. Anghelache, C.; Manole, A. Dynamic/chronological (time) series—Theoretical presentation, structure, relationships between indices. *Roman. Stat. Rev.* **2012**, *10*, 78–87.
35. Baltac, A. Economic and Financial Analysis Based on Time Series Method. *Int. J. Acad. Res. Account. Financ. Manag. Sci.* **2015**, *5*, 77–82. [CrossRef]
36. Kays, H.M.E.; Karim, A.N.M.; Daud, M.R.C.; Varela, M.L.R.; Putnik, G.D.; Machado, J.M. A Collaborative Multiplicative Holt-Winters Forecasting Approach with Dynamic Fuzzy-Level Component. *Appl. Sci.* **2018**, *8*, 530. [CrossRef]
37. Akpınar, M.; Yumusak, N. Year Ahead Demand Forecast of City Natural Gas Using Seasonal Time Series Methods. *Energies* **2016**, *9*, 727. [CrossRef]
38. Held, B.; Moriarty, B.; Richardson, T. *Microsoft Excel Functions and Formulas*, 4th ed.; Mercury Learning and Information LLC: Dulles, VA, USA, 2018.
39. Makridakis, S.G.; Wheelwright, S.C.; Hyndman, R.J. *Forecasting Method and Applications*, 3rd ed.; John Wiley & Sons: New York, NY, USA, 1998.

40. Fourie, W. Aligning South Africa's National Development Plan with the 2030 Agenda's Sustainable Development Goals: Guidelines from the Policy Coherence for Development movement. *Sustain. Dev.* **2018**, *26*, 765–771. [[CrossRef](#)]
41. Rehman, K.; Shah, A.A.; Ahmed, K. E-Government Identification to Accomplish Sustainable Development Goals (UN 2030 Agenda) A Case Study of Pakistan. In Proceedings of the 2018 IEEE Global Humanitarian Technology Conference (GHTC), San Jose, CA, USA, 18–21 October 2018.
42. Diaz-Sarachaga, J.M.; Jato-Espino, D.; Castro-Fresno, D. Is the Sustainable Development Goals (SDG) index an adequate framework to measure the progress of the 2030 Agenda? *Sustain. Dev.* **2018**, *26*, 663–671. [[CrossRef](#)]



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