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Article

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The role of the concept of sustainable development and its indicators in a study on the progress of the new UN goals

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Abstract: Nowadays the world is facing a serious problem related to climate change and its repercussion for human beings. At the same time, world societies are struggling with the consequences of the last economic crisis. These issues have not escaped the attention of the United Nations, and therefore in 2015 the organization adopted 17 goals to improve the social, economic and environmental situation. The Sustainable Development Goals are not the first priorities announced for the world. In 2000, the Millennium Development Goals were adopted. They dealt with important issues of the day, encouraging the global community to take necessary actions. This paper addresses two issues. Firstly, it describes the evolution of the range of adopted goals to improve the socio-economic situation of people, taking into consideration the relation with the concept of sustainable development. Secondly, it uses the indicators as the main instruments to assess the progress in achieving accepted aims

Keywords: development, Millennium Development Goals, progress, sustainable development, Sustainable Development Goals, sustainable development indicators.

JEL codes: O10, O20, Q56

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1. Introduction

The discussion on sustainable development, launched in the 1970s and the 1980s, in subsequent period resulted in defining objectives which allowed to implement this concept. In

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2000, the United Nations adopted eight Millennium Development Goals (MDGs), taking into consideration the most serious problems of humanity. 15 years later, the General Assembly of the United Nations passed the Sustainable Development Goals (SDGs) as 2030 Agenda. Since the mid-1990s, there have been works on establishing indicators to determine progress in the implementation of the principles of sustainable development, which are now used to measure the achievement of the MDGs. Currently, works related to the preparation of tools for assessing the implementation of the SDGs are in progress.

The article takes up the issue of priorities adopted by the United Nations in two different periods of time: the Millennium Development Goals (2000) and the Sustainable Development Goals (2015), as well as indicators to measure the progress in achieving them. The first aim is to present the evolution of adopted goals, taking into consideration implementation of the sustainable development concept. The second aim is to point to the role of indicators in measuring the progress related to the adopted goals. The article also undertakes the problem of qualitative aspects of measurement as major determinants of development.

Thesis: the issue of sustainable development and its measurement is more widely undertaken by the Sustainable Development Goals than by the Millennium Development Goals.

Hypothesis: the more detailed the scope of the objectives of development is, the greater the precision of the measurement is.

The value added provided in this paper is based on the presentation pointed out in what way the goals adopted on the level of the United Nations have changed in terms of their details related to the concept of sustainable development and its operationalization. This, in turn, can help clarify operational goals for states and local communities.

2. Shaping of the concept of sustainable development

Economics is a study on managing in conditions of limited resources. It is therefore important to identify methods of overcoming shortages through increased productivity. This issue was partially undertaken in “Our common future” report (UN, 1987), in which the concept of sustainable development was defined: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” According to Remigiusz Rosicki, nowadays the world is facing the need to maintain homeostasis of three key elements of this concept: economy, environment, and society. Our civilisation has to “minimize the dilemma – something for something” (Rosicki, 2010: 45). Therefore, we are

obliged to avoid thinking that, on the one hand, the environment is a natural barrier for economic growth, and that on the other one – men can operate without solidarity of societies. The progress of civilization, which occurred due to the development of abstract thinking, has led to the situation in which man has crossed natural barriers or even, in some cases, has gone over natural barriers (Rockström et al., 2009). In this way, man has contributed and still does to social and environmental risks (Skowroński, 2006: 48-49).

H. Rogall writes about a triangle of goals of sustainable development economy: ecological goals, economic goals, and socio-cultural goals, which should serve to face problems in the three dimensions mentioned above (Rogall, 2010: 37-48). Another component of sustainable development – the stability, which means that none of the components of development should be reduced in a super-long period of time, is another important thing (Czaja and Becla, 2012: 190).

Back in the early days of the concept, in 1975, the 30th session of the United Nations Environment Programme recognized “the need for a complex and integrated analysis of the over-all concept of development, which would include the environmental dimension. Furthermore, population, resources, environment and development are interrelated problems.” Simultaneously, it was emphasized that the term 'eco-development' (the previous name of the concept) should be analysed on the basis of both theoretical and practical aspects, with economic and political realities of a country involved, and with environmental problems of specific industries and the role of technology taken into account (UNEP, 1975: 34-35, 87-88).

Since the 1970s and the 1980s, the issue of sustainable development has gained importance due to international organisations, NGOs, and research institutions. Some countries accepted documents for planning, implementation and regulation of sustainable development, supported by the 27 principles laid down during the Earth Summit in Rio de Janeiro in 1992 by the “Declaration on Environment and Development” (UN, 1992).

However, the implementation of the concept of sustainable development, since its creation in 1987, has faced and still faces a number of barriers which include: hunger, poverty, social and military conflicts, the lack of United Nations' effective action to stimulate cooperation between states in the field of sustainable development, little effective support system for the Third World countries, the imperfections of the market economy, culture of continuous consumption and short product use, and limiting education (Janiak, 2014: 33-34). This situation was primarily due to the lack of political support from many countries, on one hand, and on the other one – the lack of commercial element, important for business, to achieve financial benefits from such sustainability practices. The lack of consideration of environmental costs in the Gross Domestic Product is symptomatic in this respect.

It should be pointed out that the first attempts to change the situation described above took place at the time of oil shocks, when the concept of energy efficiency and the use of energy from renewable sources appeared. The aim was to reduce the costs related to the need to import expensive oil.

The next step towards the realization of the concept of sustainable development, under the auspices of the United Nations, was made during the Johannesburg Summit in 2002. During the summit, decisions were made to adopt a plan of implementation of the concept for the whole world, with a particular emphasis on the least developed countries, particularly in Africa (UN, 2002: 37-38).

Ten years later, in Johannesburg, promotion of “the integration of the three components of sustainable development – economic development, social development and environmental protection – as interdependent and mutually reinforcing pillars” (UN, 2002: 2) was pointed out. Twenty years later the Heads of State and Government and high-level representatives, during the world summit “the Rio 20+”, in the document “Future we want” renewed the “commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations” (UN, 2012: 1).

At the same time it was emphasized that the concept of sustainable development should be realized in practice in individual countries, by creation of programs of the *green economy*, which would take into account the diversity of national circumstances and simultaneously “contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth’s ecosystems” (UN, 2012: 10). This declaration was strongly related to the 2008-2010 economic downturn, during which it became clear that the issue of a systemic transformation in the area of the economy for a sustainable development was a way to overcome crisis and create new possibilities of competitive advantages (Szyja, 2016: 208, 211) and to “spread prosperity and sustain our planet” (Kumar, Kumar, 2011: 961-962). It became increasingly common to talk about the operationalisation of sustainable development (Ryszawska, 2013: 50). Scientific and political circles began to use the terms of the transition of economic system aimed at enhancing the role of the environmental factor: *Green New Deal* [GNDG, 2008], *Global Green New Deal* (Barbier, 2009), *green economy* (UNEP, 2011), *green growth* (OECD, 2009), and *green development*. Other terms, such as *low-carbon economy*, *low-carbon development* (UN, 2016), also started to be used as an element of implementation of a new economy, i.e. the green economy, by

increasing the efficiency of the use of resources and energy as well as production of energy from renewable sources, increasing the productivity of production and service processes, creating jobs and improving working conditions, cutting down the emission of greenhouse gases, and mitigating climate change (Barbier, 2009; Pollin 2009; UNEP, 2011; Tol, 2014). The green economy is based on improvement of human well-being and social equity, together with reduction of environmental risks and ecological scarcities (UNECE, 2016). To talk practically about sustainable development, these three elements should be taken into account.

It cannot be forgotten that sustainable development covers not only development in the conditions of environmental development, but also social inclusion, which also means shaping appropriate material conditions by creating jobs (as social protection) and improvement of living conditions. According to the World Bank, “social inclusion is central to ending extreme poverty and fostering shared prosperity. Social inclusion is both an outcome and a process of improving the terms on which people take part in society” (WB, 2016). In turn, during the European Council in Nice in December 2000, the following areas of action in this regard were established: more and better jobs, anticipating and capitalising change in the working environment by creating a new balance between flexibility and security, fighting poverty and all forms of exclusion and discrimination in order to promote social integration, modernising social protection, promoting gender equality, and strengthening the social policy aspects of enlargement and the European Union's external relations (EC, 2000). It should also be pointed out that, according to the concept of sustainable development, the social dimension is closely linked not only to the provision of material conditions but also to the provision of adequate quality of life through environmental care. The lack of the latter affects health and life. However, poor societies are not able to protect the environment because their main purpose is to provide basic subsistence needs. It is only when the basic necessities are satisfied that efforts for the environment may be made.

However, the European Commission in the document “A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development” emphasized that “in the long term, economic growth, social cohesion and environmental protection must go hand in hand” (EC, 2001).

The awareness of the existence of this triangle of dependence was first reflected in the UN Millennium Development Goals (MDG), in which eight problem areas requiring changes were included (UN, 2000):

- eradicating extreme poverty and hunger,
- achieving universal primary education,

- promoting gender equality and empowering women,
- reducing child mortality,
- improving maternal health,
- combating HIV/AIDS, malaria and other diseases,
- ensuring environmental sustainability,
- developing a global partnership for development.

Among other things, the MDGs focus more on poverty and hunger issues than on the environment. It should not be surprising, given the drama of thousands and even millions of human lives. The MDGs put forward the concept of needs more than the notion of limitations, both mentioned in “Our common Future” report definition of sustainable development (Janiak, 2014:29).

Nevertheless, fifteen years later, the Sustainable Development Goals (UN, 2015b) were expanded and they stressed the current challenges for implementation of sustainable development, emphasizing limitations of the environment and taking into account its role for human beings. Emphasis was also put on the development in the form of the green economy as indicated by the objectives related to, among others: promoting sustainable agriculture; ensuring sustainable consumption and production; ensuring access to affordable, reliable, sustainable and modern energy; promoting sustained, inclusive and sustainable economic growth; promote inclusive and sustainable industrialization; making cities and human settlements inclusive, safe, resilient and sustainable.

3. Indicators for measuring sustainable development

The first action to adopt indicators to measure sustainable development for the international community was taken by the Commission on Sustainable Development (CSD) in 1995. The indicators were tested as part of the implementation of the Work Programme on Indicators of Sustainable Development adopted by the CSD (UN, 1995:3). In 2007, the third edition of CDS indicators was published. It addressed their relation to the outcomes of the major international conferences on sustainable development in 1992 and 2002, as well as their relation to the Millennium Development Goals Indicators. MDGI were related to the establishment of the “Road map towards the implementation of the United Nations Millennium Declaration”, published in 2001 (UN, 2001). Each year, the Secretary-General presented a report on progress achieved towards implementation of the Declaration, based on data of

selected indicators, aggregated at global and regional levels (Millennium Development Goals Indicators, 2016). With four new targets agreed by the member states at the 2005 World Summit (development, peace and collective security, human rights and the rule of law, and strengthening of the United Nations) taken into account, official MDG framework was published in 2008. Eight goals were assigned with a total of 60 indicators, with economic, social and environmental aspects taken into account.

In the first area, it should be noted that there is a limited range of tools related to the economic growth (indicators: growth rate of GDP per employed person). The direct role of sustainable development, which is related to the basic idea of the Millennium Development Goals, should also be emphasized. The need for progress in the area of minimizing poverty and improving conditions to increase income of the poorest were highlighted as crucial elements in improvement of living conditions. It may also be achieved through macroeconomic tools in the area of export and import of commodities, and non-discriminatory trading and financial system, particularly for developing countries. Therefore, the issue of research on indicators related to market access was also pointed out. We should mention here Professor Joseph Stiglitz and his statements on unfair support policy for developing countries from international institutions, such as the World Bank and the International Monetary Fund, which caused some serious social and economic damage for countries as a whole in the 1990s (Stiglitz, 2004). The damage was caused by the application of Milton Friedman's liberal doctrine which highlighted the need to counteract inflation as the main way out of the predicament of these countries. Meanwhile, the solutions applied repeatedly by international organisations were ineffective, or even harmful for the social and economic situation of those countries.

Furthermore, the main areas of concern were social security, food supply, and health, including particularly decreasing maternal mortality and combating HIV/AIDS, malaria and other diseases. However, the areas mentioned address the minimum living and subsistence requirements in terms of food and treatment due to the situation in developing and poor countries that face conflicts, disasters, etc., and which do not have properly developed infrastructures for health care, sewerage systems or foodstuffs.

The next issue was gender equality and empowering women, measured by girls to boys ratios at schools, share of women's employment in the non-agricultural sector, and the presence of women in national parliaments.

The environmental objective was based on four pillars: including sustainable development principles into countries' policies, reducing biodiversity loss, rational use of natural resources and living quality in the poorest outskirts of the cities. In particular, attention

was paid to two aspects: improvement of living conditions of the poorest inhabitants of towns and cities by providing them with access to sanitary facilities, as well as the scope of the use of the environment in production and consumption processes. Taking care of the living conditions of the poorest in terms of access to sanitary conditions has priority here.

Another emphasized issue was to develop international cooperation to implement the concept of *development* in general, not only *sustainable development*. This issue is difficult to measure because we have to point to two elements: international cooperation, on the one hand, and *development*, on the other one. In both of these elements there is a need to use quantitative indicators and qualitative aspects. In the first case – international cooperation in the quantitative dimension could be measured by indicators like: the number of international organizations, agreements between countries, the number of related stakeholders, or financial contributions. In the same area in the qualitative aspect: e.g. strength of the cooperation in the meaning of willingness to cooperate – behavioural aspects. In the second case (development), we have to remember that the term is wider than *growth* and we have to measure not only Gross Domestic Product, but also – primarily – qualitative changes in the socio-economic structure in countries (Woźniak, 2008:20).

Millennium Goals and indicators for their measurement focused mainly on improvement of life of the most vulnerable society groups in underdeveloped and developing countries. The level of income, access to education, disease and sanitary facilities seem to be the determinant of these problems. For example, in 2000, 2.4 billion people lacked access to basic sanitation and 1.1 billion people did not have access to safe water supply (Marshall, 2004: 234). Ensuring decent living conditions was the main challenge 15 years ago. Therefore, the Millennium Development Goals do not include the issue of climate change, or the need to increase the efficiency of raw materials and energy production processes due to natural limitations of the environment. As it was mentioned, the MDGs were concentrated on the needs of the poorest rather than on limitations.

The goals were adopted for the years 2000-2015, with 1990 as the starting point. Soon, both the limitations of the goals and their inaccuracy were criticized (*Missing Millennium Developments Goals*, 2005: 24-25). Furthermore, the criticism covered inconsistency of the objectives, which included the failure to take into account physical capabilities of full employment. Also, capabilities of halving the number of people living on less than 1 USD per day, and those suffering hunger, were not considered. Differences between communities and cultures in terms of priorities and preferences related to universal primary education were also of great importance (Khan, 2010: 155-156).

Despite the indicated imperfections of the objectives, the indicators matched the main aim of the MDGs and were recommended as a starting point for research in various countries. Therefore we should take a look at other indicators of indices developed to assess the progress of development in global or regional perspective with its objectivity and details. An example is the Social Progress Index, created by the team of Prof. M.E. Porter (SPI, 2016). The Index is based on three areas, each analysed from the perspective of four detailed ranges. With the SPI taken into account, the number of indicators clarifying the issue of measurement of the development of societies on the basis of access to knowledge should be pointed out. This issue is presented not only in the area of access to primary, but also higher education: the first in Foundations of Well-being, by access to basic knowledge, and the second in Opportunity, by access to advanced education. In comparison to the MDGs indicators, we have to deal with the issue which is widely recognized and studied. However, it should be noted that the idea of the MDGs is related to overcoming the key problems in the most vulnerable communities. The indicated limitations of elaborated goals affected the choice of measuring instruments. In turn, the SPI does not consider economic themes that emerged from the UN study.

In turn, the Indices of Social Development based on 200 indicators show differences in societies' performance in six dimensions of social development: civic activism, clubs and associations, intergroup cohesion, interpersonal safety and trust, gender equality, and inclusion of minorities (ISD, 2016). The economic level of income and employment are not included there. It is very surprising that these issues directly affect the level of satisfaction of people's needs.

Summarizing, attention should be paid to several issues related to the considerations above.

First, the Millennium Development Goals are related to overcoming the delay in socio-economic development of less developed and developing countries. Hence, the solution of the most pressing problems is emphasized. Second, the aim of the MDGs indicators was to measure the progress of achieving the goals set by the UN for 2015. Third, these instruments were limited due to low complexity of set objectives and their limited detail. Fourth, a catalogue of indicators adopted by the United Nations became a basis for a broader research undertaken within countries. Fifth, measuring development progress is an extremely difficult issue due to the analysis of the qualitative factors. On the one hand, this may lead to reduction in the number of measurement instruments and on the other one – there may be difficulties when it comes to choosing tools and in technical aspects of measurement, e.g. in one of the MDGs, which is to

develop a global partnership for development. Sixth, there is a problem concerning identification of the three components of sustainable development. The MDGs point to them indirectly and not directly.

To discuss this issue, the areas and indicators of the European Union's Sustainable Development Strategy will be used. The Sustainable Development Indicators, based on the Eurostat, are much more strongly related to environmental aspects than the indicators of the Millennium Development Goals were. The differences include sustainable consumption and production, climate change and energy, sustainable transport, and natural resources. It is also worth emphasizing that the most pressing problems in this issue are production and consumption processes which cause harm to the environment and are responsible for the climate change. Further indicators correspond to the main challenges in the area of improving opportunities of shaping the principles of sustainable development in countries with entirely different problems from those diagnosed in the United Nations' Millennium Goals, because they are related to a specific situation of developed countries rather than developing ones. In addition, they are characterized by greater experience and a higher level of commitment in the area of ensuring the sustainability of three components: economy, environment and society. However, the SDIs are the regional version of the indicators developed by the UN bodies, and therefore they take account of differences and specific conditions of the European Union.

In 2014 and 2015, a report on progress in achieving the Millennium Development Goals was published (UN, 2000; UN, 2014; UN, 2015). It is said in the 2015 UN report that “the MDG monitoring experience has clearly demonstrated that effective use of data can help to galvanize development efforts, implement successful targeted interventions, track performance and improve accountability. Thus sustainable development demands a data revolution to improve the availability, quality, timeliness and disaggregation of data to support the implementation of the new development agenda at all levels.” Indeed, data and indicators allowed monitoring of the situation in all the pointed areas. Their role is significant because of the improvement of statistical methodologies and information systems, data collections and an increase in the awareness of objectives and the need for their implementation on the basis of tools to diagnose the situation in countries and regions of the world.

4. 4. Indicators of the Sustainable Development Goals

During the summit Rio 20+ the need for “advancing integration, implementation and coherence: assessing the progress to date and the remaining gaps in the implementation of the

outcomes of the major summits on sustainable development and addressing new and emerging challenges” was indicated. At the same time, progress in sustainable development and poverty eradication were mentioned. Furthermore, it was highlighted that there was a “need to accelerate progress in closing development gaps between developed and developing countries,” with dynamics of economic, social and environmental changes, and a number of new challenges, e.g. diversification of actors and stakeholders engaged in the pursuit of sustainable development, and – what is more important – the multiple crises affecting the world, which are taken into account (UN, 2012: 4-5). Particularly, very serious implications of the financial and then the real economy crisis in 2008-2010 were indicated.

Decisions were made to intensify activities to continue works towards the development of sustainable development, with the following issues, among others, taken into consideration:

- 1) adoption of new objectives which take into account previous achievements and the need to meet new challenges,
- 2) creation of a new framework for development based on the green economy,
- 3) developing a new catalogue of indicators.

As a result, in September 2015, a new range of objectives set for the international community with time perspective up to 2030 was announced (UN, 2015: 14), aiming to:

- 1) end poverty in all its forms everywhere,
- 2) end hunger, achieve food security and improved nutrition and promote sustainable agriculture,
- 3) ensure healthy lives and promote well-being for all at all ages,
- 4) ensure inclusive and equitable quality education and promote lifelong learning opportunities for all,
- 5) achieve gender equality and empower all women and girls,
- 6) ensure availability and sustainable management of water and sanitation for all,
- 7) ensure access to affordable, reliable, sustainable and modern energy for all,
- 8) promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all,
- 9) build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation,
- 10) reduce inequality within and among countries,
- 11) make cities and human settlements inclusive, safe, resilient and sustainable,
- 12) ensure sustainable consumption and production patterns,

- 13) take urgent action to combat climate change and its impacts,
- 14) conserve and sustainably use the oceans, seas and marine resources for sustainable development,
- 15) protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss,
- 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,
- 17) strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

The new 17 goals of the UN directly indicate the issue of *sustainable development*, not only by their title but also through the fact that the term is used 13 times. In some areas, the targets include the continuation of the objectives previously set in areas such as: poverty, hunger, gender equality, availability of drinking water and sanitation, and Global Partnership for Sustainable Development. Particularly, in the first two areas, the use of the word 'end' emphasizes that these objectives must be ultimately achieved. In the other areas, there is a need to take action to achieve progress. Furthermore, some of them are associated with formation of a new quality. For example, in the field of education, not only access to primary education, but also improvement of its quality, have been mentioned. Moreover, other objectives (such as: creation of economic sustainable growth, promotion of sustainable industrialisation, access to sustainable energy, and combating climate change by cooperation between countries) point to the need of structural changes in economy – the green economy, which underlines the provisions made in the report of Rio 20+ (UN 2012: 10).

The Sustainable Development Goals differ from the targets of the Millennium Development Goals; they are more aimed at developed countries than the MDGs are, as they include some aspects of higher level of development. For example, “Making cities and human settlements inclusive, safe, resilient and sustainable” is indicated. Therefore, it is no longer just about reducing the phenomenon of slums in cities in developing countries, but also about the creation of sustainable cities in countries which do not have problems like that. Simultaneously, the SDGs indicate some challenges which require engagement of all countries, regardless of their level of development. In some cases, the errors of the previous MDGs were repeated, for example the possibility of full employment (highlighted in part 3) or generality of meaning (the

Global Partnership). These limitations are partially offset by areas specific to each (UN, 2015b).

Taking into consideration the realisation of the SDG, on 6 March 2015, at its forty-sixth session, the United Nations Statistical Commission created an Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), providing a proposal of a global indicator framework (and associated global and universal indicators) for Statistical Commission's consideration at its forty-seventh session in March 2016. On 4 March 2016, the Expert Group received a compilation of metadata from the UN Agencies, Funds and Programmes, other UN offices and entities, Regional Commissions, and other international and regional organizations, concerning the suggested global indicators. Table 1 presents two examples of them (Columns 1 and 2).

Table 1. A compilation of suggested and finally adopted global indicators – examples

Targets	Indicators and their authors, availability of data	Adopted indicators
1.1. By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.	1.1.1. Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural) – from International Labour Organization; Update to the ‘International Poverty Line’ (defined earlier as ‘Proportion of population below \$1.25 (PPP) per day per capita’) – from World Bank	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural).
1.2. By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions.	1.2.1. Proportion of population living below the national poverty line, by sex and age – from International Labour Organization, ILO ; 1.2.2. Proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions - No metadata received on current indicator formulation.	1.2.1 Proportion of population living below the national poverty line, by sex and age. 1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions.
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.	1.3.1. Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, the newborn, work-injury victims and the poor and the vulnerable - No metadata received on current indicator formulation.	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, the newborn, work injury victims and the poor and the vulnerable.

Targets	Indicators and their authors, availability of data	Adopted indicators
<p>1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance</p>	<p>1.4.1. Proportion of population living in households with access to basic services - No metadata received on current indicator formulation.</p> <p>1.4.2. Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure – from UN-Habitat</p>	<p>1.4.1 Proportion of population living in households with access to basic services.</p> <p>1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure</p>
<p>1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters</p>	<p>1.5.1. Number of deaths, missing persons and persons affected by disaster per 100,000 people¹ - from the United Nations Office for Disaster Risk Reduction, UNISDR*</p> <p>1.5.2. Direct disaster economic loss in relation to global gross domestic product (GDP) - from UNISDR**</p> <p>1.5.3. Number of countries with national and local disaster risk reduction strategies - No metadata received on current indicator formulation</p>	<p>1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population</p> <p>1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)</p> <p>1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030</p> <p>1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.</p>
<p>1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.</p>	<p>1.a.1. Proportion of resources allocated by the government directly to poverty reduction programmes- No metadata received on current indicator formulation.</p> <p>1.a.2: Proportion of total government spending on essential services (education, health and social protection) - No metadata received on current indicator formulation.</p>	<p>1.a.1 Proportion of domestically generated resources allocated by the government directly to poverty reduction programmes</p> <p>1.a.2 Proportion of total government spending on essential services (education, health and social protection)</p> <p>1.a.3 Sum of total grants and non-debt-creating inflows directly allocated to poverty reduction programmes as a proportion of GDP.</p>
<p>1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and</p>	<p>1.b.1: Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups</p>	<p>1.b.1 Proportion of government recurrent and capital spending to sectors that disproportionately</p>

Targets	Indicators and their authors, availability of data	Adopted indicators
gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	- No metadata received on current indicator formulation	benefit women, the poor and vulnerable groups
8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	8.1.1: Annual growth rate of real GDP per capita - No metadata received on current indicator formulation 8.1.2. Annual growth rate of real GDP per employed person - from ILO	8.1.1 Annual growth rate of real GDP per capita.
8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	8.2.1: Annual growth rate of real GDP per employed person - from ILO	8.2.1 Annual growth rate of real GDP per employed person.
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	8.3.1: Proportion of informal employment in non-agriculture employment, by sex - from ILO	8.3.1 Proportion of informal employment in non-agriculture employment, by sex.
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	8.4.1: Material footprint, material footprint per capita, and material footprint per GDP- from United Nations Environment Programme, UNEP; 8.4.2: Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP - from United Nations Environment Programme	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP. 8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with	8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities - from ILO; 8.5.2: Unemployment rate, by sex, age and persons with disabilities - from ILO	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

Targets	Indicators and their authors, availability of data	Adopted indicators
disabilities, and equal pay for work of equal value		8.5.2 Unemployment rate, by sex, age and persons with disabilities.
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	8.6.1: Proportion of youth (aged 15-24 years) not in education, employment or Training - from ILO	8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training
8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.	8.7.1: Proportion and number of children aged 5-17 years engaged in child labour, by sex and age - from ILO	8.7.1 Proportion and number of children aged 5-17 years engaged in child labour, by sex and age.
8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	8.8.1: Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status - from ILO	8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status. 8.8.2 Level of national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status.
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.1: Tourism direct GDP as a proportion of total GDP and in growth rate from World Tourism Organization, UNWTO; 8.9.2: Number of jobs in tourism industries as a proportion of total jobs and growth rate of jobs, by sex - from UNWTO	8.9.1 Tourism direct GDP as a proportion of total GDP and in growth rate 8.9.2 Proportion of jobs in sustainable tourism industries out of total tourism jobs
8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	8.10.1: Number of commercial bank branches and automated teller machines (ATMs) per 100,000 adults - from United Nations Capital Development Fund (UNCDF); 8.10.2: Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider - from UNCDF	8.10.1 (a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults 8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider.

Targets	Indicators and their authors, availability of data	Adopted indicators
8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries	8.a.1: Aid for Trade commitments and disbursements - from Organization for Economic Cooperation and Development	8.a.1 Aid for Trade commitments and disbursements
8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization	8.b.1: Total government spending in social protection and employment programmes as a proportion of the national budgets and GDP - from ILO	8.b.1 Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy

* This indicator is proposed as “multi-purpose indicator”, target: 1.5, 11.5, 13.1, 1.3, 14.2, 15.3, 3.9, 3.6, 3.d

** This indicator is proposed as “multi-purpose indicator”, target: 1.5, 11.5, 13.1, 2.4, 14.2, 15.3, 3.d, 13.b

Source: IAEG-SDGs Inter-agency Expert Group on SDG Indicators; UN 2015.

In order to indicate only the most significant changes and suggestions on indicators, this study presents only two examples of proposition of indicators: one constituting a reference to the goal adopted in 2000 – as a continuation (Goal 1.), and a whole new one of 2015 (Goal 8.). In the first case, a greater emphasis is put on indicators for measuring qualitative changes, among others, those related to the definition of national poverty. An example of such an indicator should also be emphasized: direct disaster economic loss in relation to global gross domestic product, which is a suggestion of a “multi-purpose indicator”. The UN considered the role of GDP and pointed to “broader measures of progress to complement gross domestic product in order to better inform policy decisions.” This issue is reflected by eight goal indicators: material footprint, material footprint per capita, and material footprint per GDP; total government expenditure on social protection and employment programmes as a proportion of national budgets and GDP.

The analysis of available materials can indicate only the nature of proposed indicators due to the limited measurement tools or a lack of measurements. In both cases, further consultation and cooperation among national and international organizations' statistical offices is required, first to create definitions of terms, and second – to measure the phenomena, actions, and behaviour related to them. It is simpler thanks to the fact that more and more of such entities engage nowadays in specific statistical sifts. (Szyja, 2015:435-436). For example, the

International Labour Organization, the Organisation for Economic Co-operation and Development and the American Bureau of Labour Statistics prepared a definition of green new jobs, which is helpful to develop an indicator which may describe the specificity and number of these jobs (Szyja, 2013: 198-200). There are also individual scientific studies, e.g. Baeting et al., present a method to estimate and compare the cooperative behaviour of countries within the international climate change regime (Baeting et al., 2008; Almer, Winkler, 2017). There are also indexes of the green economy or the green growth: the Global Green Economy Index (GGEI, 2017), or the OECD's Green Growth Indicator Framework (OECD, 2015: 72). The latter includes areas such as carbon and energy productivity, biodiversity and ecosystems, or environmental goods and services (OECD, 2017: 135-137). They are included indirectly within the UN's indicators. For example, the number of countries with sustainable consumption and production (SCP) national action plans, or SCP mainstreamed as a priority or a target into national policies, are presented in Goal 12. The issue of environmental goods and services is not mentioned explicitly. In turn, Polish researcher Bożena Ryszawska evolved the Index of Green Economy (Ryszawska, 2013), based on seven areas (ecosystems/biodiversity/natural capital; emissions, contaminations, waste; use of sources; poverty and social inequalities; economy; environmental policy and strategies; sectors of green economy) and 21 indicators. The examples of specific ones, not included in the UN collection, include: share of environmental taxes in total tax revenue, or green patents *per capita*. In turn, green public procurement has been included: sustainable public procurement (UN's 12.7.1 indicator) (UN, 2017).

The final list of indicators to measure the progress of the SDG covers 232 indicators, on the basis of which general agreement has been made (UN, 2017) (Table 1, Column 3). Comparison of index proposals and their final version highlights some of the key differences, based on the two objectives set out above. It is important that Goal 1.5 emphasizes more strongly the issue of triangle elements of sustainable development in meaning of threats in these areas: the climate-related extreme events and other economic, social, and environmental shocks and disasters. Moreover, the indicator proposed at first was limited to countries and implementation special strategy. In the adopted one, local authorities are also included. *Ipsa facto* in support for the poorest, particular levels of public administration have been taken into account. This is important because in this way a comprehensive range of activities may be monitored. The same example (its scale) refers to Goal 1.a, which includes not only government's expenditure but all the available expenditure.

According to the new Goal 8.8, there are included national compliances of labour rights and not only statistics based on fatal and non-fatal occupational injuries. In Goal 8.9 (sustainable tourism), the adopted indicator, opposite to the proposed one, was marked by sustainable/green jobs in tourism in general. That element could be verified by indicators implemented by the American Bureau of Labour Statistics according to the principle that “the development of the indicator framework is a work in progress” (UN, 2015: 38). In turn, in Goal 8.b, the adopted indicator is much more detailed than the proposed one because it takes into account national strategy for youth employment, and not employment strategy in general.

5. Conclusions

The idea of sustainable development evolved in the period of almost thirty years, in theoretical, methodological, and operational terms. Big contribution in this regard was made by international organizations such as the United Nations. The role of the latter included the establishment of the Commission on Sustainable Development, the Work Programme on Indicators of Sustainable Development, organisation of three Earth Summits (in 2000, 2002, 2012), and adoption of the Millennium Development Goals, together with measurement of their progress, actions for their implementation, the Sustainable Development Goals, and current works on indicators framework.

The UN contribution to popularization of the idea of sustainable development is undeniable. However, some restrictions related to the objectives and the instruments to measure their implementation should be mentioned. The Millennium Development Goals, adopted in 2000, drew attention to the necessary actions for sustainable development on a global basis, but in an indirect way. From the triangle of sustainable development elements, the social and the economic have been most dominant. Further the MDGs are much more concentrated on underdeveloped or developing countries than on the developed ones. This was related to most pressing problems such as hunger, poverty, or mortality in the developing countries. Second, stated goals, according to experts, are characterized by vagueness, both in meaning and range. This problem was already partially solved at the stage of announcement of the MDG by emphasizing that they represent the direction in which a country should aim to deal with the challenges of sustainable development. Third, the indicators for measuring the progress in achieving the MDG are focused more on measuring quantitative aspects than the quality. It is the aftermath of seeing a qualitative change on the level of life as one of the indicators of the progress. Defining and measuring progress is both a definitional and methodological problem.

In 2015, the United Nations adopted the Sustainable Development Goals. The new 17 goals of the UN provide for the continuation of previously set objectives, and some are characterized by the need to take action to achieve progress, and some are associated with formation of a new quality. The SDGs emphasize much more the concept of *sustainable development*, which is underlined in the title of Goals, and then in the priorities which are continued and in the new ones. Moreover, the consideration of environmental aspects is more important. One new element are the challenges related to the climate change and its threats, and the need to create economic sustainable growth. It is symptomatic to link the latter with the response to the global crisis of the real economy and to respond to it through environmental actions. In the same way, the SDGs respond to the anti-crisis programmes and possibility of operationalization of sustainable development. Compared to the 2000 targets, the new targets take into account not only the urgent problems of the most vulnerable communities of the globe, but also the issue of challenges of sustainable development in the more developed countries.

The analysis of the two examples of two SDGs, the first (end poverty in all its forms everywhere) and the eighth (promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), according to indicators, results in the following conclusions:

- more complexity because of: integration triangle elements of sustainable development on each goal and in indicators,
- much more detailed information to gain according to the level of measurement (not only the government level, but also that of local authorities),
- an open process of development and improvement (based on cooperation with institutions from all over the world).

The main obstacles for the indicators are: scale, complexity, and differences in meaning which can provoke serious problems with unification of statistical methods. The latter is taken into account and emphasized by the UN Statistical Commission.

Specifying goals on a global scale, adopted by UN, allows implementing an appropriate agenda for individual countries, taking into account their conditions and corresponding indicators for measuring progress in terms of their achievement. Indicators developed under the auspices of the UN constitute a database of research tools that should be developed constantly, verified so as to allow for a comprehensive analysis of actions undertaken for sustainable development.

Further studies should comment on the issue of possibility of using those instruments in different countries of the world and local communities taking into account their coherent definitions and methods of measurement.

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**ROLA KONCEPCJI ZRÓWNOWAŻONEGO I TRWAŁEGO ROZWOJU ORAZ WSKAŹNIKÓW
W BADANIU POSTĘPU WDRAŻANIA NOWYCH CELÓW
ORGANIZACJI NARODÓW ZJEDNOCZONYCH**

Streszczenie

Obecnie świat boryka się z poważnymi problemami związanymi ze zmianami klimatu i ich konsekwencjami dla człowieka i środowiska naturalnego. Jednocześnie wiele społeczności podejmuje wysiłki ukierunkowane na przezwycięzenie skutków ostatniego kryzysu gospodarczego. Te kwestie nie uszły uwadze Organizacji Narodów Zjednoczonych. Dlatego też pod jej auspicjami w 2015 roku przyjęto 17 celów ukierunkowanych na poprawę sytuacji społecznej, gospodarczej i środowiskowej. Cele Zrównoważonego Rozwoju nie są jednak pierwszymi tego typu priorytetami ogłoszonymi dla świata. W 2000 r. przyjęto Milenijne Cele Rozwoju, które swoim czasie podejmowały ważne kwestie, wymagające niezbędnych działań społeczności globalnej.

Niniejszy artykuł dotyczy dwóch kwestii. Po pierwsze opisuje ewolucję zakresu przyjętych celów ONZ w zakresie poprawy sytuacji społeczno-gospodarczej ludzi na świecie, z uwzględnieniem znaczenia koncepcji zrównoważonego i trwałego rozwoju. Po drugie, podejmuje zagadnienie roli wskaźników jako głównych instrumentów służących ocenie postępów w realizacji nakreślonych priorytetów.

Słowa kluczowe: Cele Zrównoważonego Rozwoju, Milenijne Cele Rozwoju, postęp, rozwój, wskaźniki zrównoważonego rozwoju, zrównoważony rozwój

Kody JEL: O10, O20, Q56

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