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## Measuring social progress by sustainable development indicators: Cases of Croatia and Slovenia

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### Abstract

This paper presents an overview of the progress in the development of indicators of sustainable development (SDI) in Croatia and Slovenia in the context of global challenges. The analysis of indicators is based on the national sets of SDIs developed in recent time by different developers with focus on the EU level in comparison with other regions in the world. Key challenges include: (1) comparability and aggregation variability of SDI in relation to the quality of data determined by the sustainable development policies; (2) impacts and reflections of compiled SDIs on different kinds of user needs; and (3) Social responsibility, as a contribution to, and framework of sustainability. The paper concludes with a consideration of a critical role of SD in measurement of progress in society and some key lessons learned related to the difficulties in implementation of SDI coming from highly fragmented compilation of SDI that usually depends on the needs of the end-users.

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### 1. Introduction

The grand challenges the world is exposed today in the economy, society and environment are usually considered as sustainable development (SD) open up a series of questions about the existing models of

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life, labour, communications, consumer and re-allocation of limited natural resources. In this context the essential objective of SD is to harmonise economic growth and human welfare in order to preserve economic, social, and environment bases for the future generations. The key issue is how to increase the capacity of society to create values that contributes to economic, societal and environmental progress. This process will depend on the activities and cooperation of all actors in society such as governments, companies, investors, civil society, academic institutions and cultural communities. The concept of “working closely together” involves building mutual trust and the distribution of responsibilities among all the stakeholders.

The common efforts of many governments in the world already provide an overall policy framework for SD and start cooperative projects on sustainable development research such as those in energy efficiency, natural resources preservation, waste minimisation, pollution prevention, etc. A good example is the Agenda 21 adopted by the “Earth Summit” in 1992 in Rio de Janeiro, a plan of action to stimulate progress towards SD and current global initiatives related to Rio+20 activities.

In the framework of Europe, it is worth mentioning the first European initiative is related to the adoption of the first EU Sustainable Development Strategy (EU SDS) by the European Council in Göteborg in 2001. The turning point for sustainable development in the EU was attained in 2006 when the recognition of climate change and energy use as a threat to the social and economic life and national security has reached its peak. The European Council stated (Council of the European Union 2006: 2) that the problems related to the public health, poverty and social exclusion, demographic pressure and ageing, management of natural resources, biodiversity loss, land use and transport still persist and new challenges are arising. Therefore, the main challenge is to gradually change our current unsustainable consumption and production patterns and the non-integrated approach to policy-making.

## **2. The concept and measurement of sustainability**

There are over 100 definitions of sustainability and SD, but the best known is the World Commission on Environment and Development’s (GDRC 2009). It defines sustainable development as a pattern of resource use that aims to meet human needs while preserving the environment so that these needs could be met not only in the present, but also by future generations. The term was used by the Brundtland Commission (UNWCED 1987). Based on this definition and using the available SD strategy and sets of individual indicators and composite indices, this paper attempts to assess the extent to which we can measure a country’s progress toward SD/sustainability/sustainable future. The assessments are based on comparisons between standard indicators and recently developed core indicators for SD (SDI).

The increased interest in measurements and new indicators and indices is directly linked with a growing effort to strengthen the evidence-based policy-making culture across the countries. The political interest lies in the pressure to base the monitoring of the governmental policies and programmes on indicator-based policy-analysis.

According to Giovannini (2004) there are several ways to measure the overall situation of a country but three of them attract particular attention: - the first way extends traditional economic accounts based on GDP; the second is to develop composite indicators of well-being that combine detailed information into a single measure; and the third seeks to identify a certain number of key indicators covering economic, social, and environmental domains, without deriving any particular single measure.

The fact that countries have different views on concepts and meanings of SD within their national boundaries makes the measurement SD far more complex. At the same time the demand for information about the SD, from both private and public users, is constantly increasing. It calls for further harmonisation of the concepts of SD as well as for improvement of measuring methods and indicators. It

is also a true that today more information and databases of SDI, forums, initiatives, and projects around the world are available and obtainable on public websites.

For example, the EU countries define indicators according to their national strategies for SD which depends on their national focus on development priorities and on their level of socio-economic maturity. Usually they include indicators of environmental protection in the more developed countries and social and economic changes in the less developed countries. In order to harmonise these different national foci on SD, the ten common themes are agreed upon, on the level of EU, as follows: Socio-economic development; Sustainable consumption and production; Social inclusion; Demographic Changes; Public Health; Climate Change and Energy; Sustainable Transport; Natural Resources; Global Partnership, and Good Governance.

In contrast to EU, the OECD countries are focuses mainly on ecological/environmental sustainability and have adopted different types of frameworks for developing SDI. According to Stevens (2005:2) they are based, firstly, on the Brundtland Report's definition of SD which involves four integrated themes: efficiency, contribution and equality, adaptability, and values and resources for coming generations. Secondly, there is a "capital" approach where the focus of measurement is on the stocks and flows of different national assets: natural capital, financial capital, produced assets, human capital, etc. Finally, some countries use their national strategies for sustainable development as the organizing framework for SDIs.

Today, as a result of the activities of a large number of countries in the measurement of SD within the "Beyond GDP initiative", a global platform for sharing information in order to evaluate societal progress - the "Wikiprogress platform" was initiated. Wikiprogress is also the official platform for the OECD-hosted Global Project on "Measuring the Progress of Societies". The Global Project includes, among others, the following indices important for measurement of the progress of society:

- Canadian Index of Wellbeing
- EEA Core Set of Indicators
- EU Sustainable Development Indicators
- Human Development Index
- Genuine Progress Indicator
- Happy Planet Index
- MDG Dashboard of Sustainability
- Sustainable Society Index
- World Happiness Index
- Global Peace Index
- The Climate Competitiveness Index
- The International Property Rights Index (IPRI)
- The Better life Index
- The Global Creativity Index
- The Legatum Prosperity Index.

On the world level, the United Nations Commission on Sustainable Development and United Nations Environment Programme (UNCSD/UNEP) compiles information on sustainability from a wide range of data sources that are reported by various countries. It includes economic, social, environmental and institutional aspects of sustainable development. However, there is no standardized set of indicators, resulting in inconsistencies. Therefore, a common challenge in data processing and analysing is harmonisation of indicators and quality of input data.

It can be concluded that despite many international efforts there is still no general consensus on a more systemic/holistic and systematic/analytical approach to measuring progress and on how to use these measures in policymaking more effectively. Even in cases where there is consensus on the indicators, due

to the different priorities or unsystematic design of monitoring efforts in the past, availability and quality of data, time series data in particular, is a major problem (OECD 2010).

### 3. Sustainable development indicators: the “state of the art” in Croatia and Slovenia

#### 3.1. Croatia’s experience about Progress towards sustainable development

Development of the conceptual frameworks of SDI and related set of key indicators are provided in Croatia at the national level by the Croatian Environment Agency (AZO). The first national lists of indicators by thematic fields (fresh and sea waters, soil, agriculture, air, climate change) have been worked out for the period 2005-2007. The list consists of 15 thematic fields and data sheets for a total of 266 indicators. The National List of SDI (cro) is coherent with the objectives and priorities of the National Strategy for Sustainable Development of Croatia (NSSD) adopted in February 2009. The following issues were taken into account:

- The Driving force-Pressure-State-Impact-Response (DPSIR) methodology;
- EEA (the Core Set Indicators)
- Obligation of the Republic of Croatia to follow EU standards in data collection coming from the accession negotiations of Croatia and EU;
- Obligation of the Republic of Croatia to follow international legal acts, conventions and protocols;
- Specific national SDIs.

The structure of the Croatian National List of SDI by topics suggests that Croatian priorities are mainly focused on environment and social domains.

Sustainable development is closely linked with (corporate) social responsibility (C/SR) which is officially supposed to support SD and includes SD in the list of activities (ISO 2010; EU 2011). According to the UN Global Compact initiative and the EU activities for the promotion of CSR Croatia has developed *CR Index* for measuring CSR at the national level. The initiative was initiated by the Croatian CSR Association and Croatian Business Council for Sustainable Development (HRPSOR) supported by UNDP and USAID in relation with BitC. The index is based on the Corporate Responsibility Index (CRI) developed and run annually by the British organization Business in the Community to measure CSR performance at the country level. The development of the CRI was completed in June 2008. The primary practical purpose of the CRI is to allow for self-ranking of the Croatian companies, and for benchmarking their performance against the economy and their particular sectors. The CRI covers five broad areas: *Company Profile, Business Performance, and Strategy; Workplace; Environment; Marketplace and Community* (UNDP 2010: 10).

#### 3.2. Slovenia’s experience about Progress towards sustainable development

In its Slovenian Development Strategy until 2013, the Government of the Republic of Slovenia defined SD as one of the key elements of development in Slovenia. The main objectives of this document include (Government 2005:7):

- Exceed the average level of the EU’s economic development (in GDP per capita in PPP) and increase employment in line with the Lisbon Strategy goals in the next ten years;
- Improve the quality of living and the welfare of each individual, measured by the indicators of human development, health, social risks, and social cohesion;
- Enforce the sustainability principle as the fundamental quality criterion in all areas of development, including the goal of sustained population growth;

- Develop into a globally recognisable and renowned country through a characteristic development pattern, cultural identity and active engagement in the international community.

Table 1. Sustainable Development Indicators by topics, EU, Croatia, and Slovenia

	EEA Indicators <sup>1</sup>	Croatia's SD Indicators <sup>2</sup>	EU SD Indicators <sup>3</sup>	Slovenia's SD Indicators <sup>4</sup>	Slovenia's Environmental Indicators <sup>5</sup>
1	Agriculture	Water	Socio-economic development	Well-being (Quality of natural resources; Economic growth; Safety)	Air
2	Air pollution	Sea	Sustainable consumption and production	Balance and modesty (natural resources; R&D; Population, gender equality and poverty)	Climate change
3	Biodiversity	Climate change	Social inclusion	Intergenerational cooperation (Intensity of use natural resources; Government debt; Care for all generation)	Energy
4	Chemicals	Soil	Demographic changes		Forestry
5	Climate change	Nature	Public health		Household consumption
6	Coasts and seas	Sector impacts	Climate change and energy		Human and ecosystem health
7	Default	Waste	Sustainable transport		Industrial production
8	Energy	General issues	Natural resources		Instruments of environmental policy
9	Environment and health		Global partnership		Nature and biodiversity
10	Environmental scenarios		Good governance		Sea
11	Environmental technology				Soil and land use
12	Fisheries				Socio-economic development
13	Green Economy				Tourism
14	Household consumption				Transport
15	Industry				Waste and material flow
16	Land use				Water
17	Natural resources				
18	Noise				
19	Policy instruments				
20	Soil				
21	Specific regions				

22	Tourism
23	Transport
24	Urban environment
25	Various other issues
26	Waste and material resources
27	Water

Sources: [http://www.eea.europa.eu/data-and-maps/indicators#c7=all&c5=&c0=10&b\\_start=0](http://www.eea.europa.eu/data-and-maps/indicators#c7=all&c5=&c0=10&b_start=0)

<http://www.azo.hr/Indicators>

<http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/indicators>

[http://www.stat.si/eng/tema\\_okolje\\_kazalniki\\_trajnostnega\\_razvoja.asp](http://www.stat.si/eng/tema_okolje_kazalniki_trajnostnega_razvoja.asp)

[http://kazalci.arso.gov.si/?data=group&group\\_id=6&lang\\_id=94](http://kazalci.arso.gov.si/?data=group&group_id=6&lang_id=94)

The Strategy outlined 68 indicators to review progress, along with other evidence, in four priority areas: *Sustainable consumption and production; Climate change and energy; Protecting natural resources and enhancing the environment; and Creating sustainable communities and a fairer world.*

The first SDI set in Slovenia was formulated in April 2009. The five key objectives of SD include: *prosperity, long-term balance, modesty, cooperation, and integrity.* During further public consultation and coordination one identified key objectives and indicators (SORS 2010:9). The final SDI set was grouped into three sections and nine different themes/priority-areas defined through environmental, economic and social aspects:

- Well-being (quality of natural resources; economic growth; safety);
- Balance and modesty ( natural resources; research and development; population, gender equality, poverty);
- Intergenerational cooperation (intensity of use of natural resources; government debt; care for all generation).

The structure of Slovenian national SDI set by sections suggested that Slovenia SD priorities are mainly focused on the environment and natural resources domain, demography, and social domain (like in Croatia).

#### 4. The social responsibility

SD requires the social responsibility (SR) as a way to requisite holism (RH) of human behaviour backed by interdependence; it is human behaviour and its background values, culture, ethics and norms (i.e. VCEN) that must be innovated, e.g. by (C) SR (Potocan and Mulej 2007). This is reflected also in SDIs and SDs preconditions. The common denominator reads: enterprises' social responsibility is their responsibility for their impacts on society (EU 2011). This statement may create basis for SR indicators anew.

People, times and conditions define differently what is a socially acceptable, i.e. SR behaviour. Criteria have always depended on VCEN of the most influential ones, the power holders. Their values became VCEN, when attracting other people as followers by appeal or force. Their VCEN reflect also in criteria of SD and SDI. This is why SR matters crucially. These VCEN, according to official definition of SR tackle manners of the influential ones in treatment of their (EU 2001; 2006a; 2006b; 2011):

- Co-workers;
- Other business partners;
- Government, non-governmental organizations etc., i.e. broader social environments; and
- Natural environment as the natural precondition of survival.

The ISO 26000 (ISO 26000: 2010) sees SR as support to SD and adds some crucial attributes:

- Governance and management of organizations (not enterprises, only);
- Human rights
- Customers

What is even more crucial, the ISO 26000 defines two crucial common denominators:

- Holism
- Interdependence

Thus, SR faces social-economic invention-innovation-diffusion process (IIDP) for humankind to overcome its current blind-alleys as crucial ‘side-effects’ of neoliberal economic theory and practice of the decades after the 2<sup>nd</sup> World War. Success depends on humans, of course, especially on the influential ones; they define also what SD data are collected and used.

Hence, SR/SD is a grand challenge; it tackles humankind’s survival as an alternative to neo-liberal destructive economics. SDI belongs into this process. SDI supports solving the grand challenges of the current times and generation of humans (Mulej 2011; Mulej et al 2012).

## 5. Conclusion

We can conclude that no universal set of environmental indicators exists. Croatia and Slovenia are suffering from the problems which are common for the world SD community. First of all, the process of construction of indicators is exposed to many difficulties related to the aggregation of different indicators and their meaningful compilation which would be of use for specific needs of national development and internationally. Although many indicators are taken into account by various analyses, most indicators are developed narrowly by an agency or organization for its specific, mission-oriented needs. Many indicators that constantly appear are simply accepted by people as another piece of information without thinking about what they mean and thinking even less about how they are produced and what are the actual problems in their production. The modern statistical software packages enable the use of methods that users do not understand or do not know, containing a multitude of tests that are meaningless or of little meaning in terms of content to them. The term 'Sustainable Development' has been used in a variety of ways by different groups and entities - and there is a constant needed to rethink its basic meaning, and adopt/contextualize it to different situations and scales. Therefore, it is important to take into consideration how Croatia and Slovenia could revise the existing indicators SDI/SRI and indices and develop new ones for their specific local and international needs.

Due to different approaches and slightly different sets of SDIs in many countries, individual capacity building should be embedded in a framework of building the SD and SR specifically in both the countries. They should involve local staff and address local issues and assist in building up new and more effective ways of linking local knowledge with the sustainable development of nations. The main challenges are to develop:

- National scientific base for SD and environmental research;
- International research cooperation, especially within EU programmes;
- Public-private partnership in order to link (private) finance, technologies, and entrepreneurial experience with the (public) scientific competences, research equipment, etc.

Scientific research can help to identify and measure the problems related to SD and points to the ways of solution. It raises the awareness of the importance of SD and especially social responsibility. Compared to Slovenia, Croatia is still lacking the critical mass of well-trained technicians, engineers, and scientists, who are required to generate and/or apply innovation. In this context intensive interaction among education, scientific, and industrial spheres is needed to achieve the synergy, and the critical mass

for international cooperation. This issue may be critical for SR and SD to support human well-being, which is the basic essence of any economic effort.

A number of challenges and consequent limitations are present in SDI collection and international comparability in Slovenia and Croatia. The key challenges for both countries in further development of SDI are to improve the following aspects of SDI:

- Coverage, meaning and statistical validity of SDIs;
- Variability in the quality of data available in the context of adopted sustainable development policies;
- Issues arising on how the compiled SDIs should reflect different kinds of user needs;
- Implementation of SDIs in comparison on national, regional and international levels;
- Shifting the focus of current measurement system from the market production to a concept that focuses on people's well-being and ways to improve it over time.

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