Sustainable future replaces sustainable development concept by systemic behaviour via social responsibility

Matjaz Mulej*, Anita Hrast, Vojko Potocan, Timi Ečimović and Zdenka Ženko

Faculty of Economics and Business, University of Maribor, IRDO Institute for Development of Social Responsibility, Maribor, Slovenia
Email: matjaz.mulej@um.si
Email: anita.hrast@irdo.si; info@irdo.si
E-mail: vojko.potocan@um.si
Email: timi.ecimovic@bocosoft.com
Email: zdenka.zenko@um.si
*Corresponding author

Abstract: This is no engineering issue, but a conceptual issue with impact on engineering and other professional work and humankind’s survival. Humankind has put itself in existential troubles by its one-sided behaviour over the entire industrialisation period, which provided a big material progress, but to a very small minority of humans only. The natural preconditions of human survival are in danger. The concept of ‘sustainable development’ has not solved the problem. The ‘sustainable future’ concept is supposed to replace it by introducing the requisite systemic approach, which is now enjoying worldwide organisations’ support with the concept of ‘social responsibility’. But many crucial issues are still unsolved, including the information, measurement, diffusion and synergy of them in non-technological innovation of the inherited habits, etc.

Keywords: diffusion; humankind; information; measurement; non-technological innovation; requisite holism; social responsibility; sustainable future; synergy; systemic behaviour.


Doctorates in Economics/Systems Theory and in Innovation Management. In 2013 - 2016 12 book and articles collections were published under him as editor or guest editor. Addresses: Mail: UM EPF, Razlagova 14, SI-2000 Maribor, Slovenia; E-mail: mulej@uni-mb.si; EPF homepage: epfip.uni-mb.si; IRDO (Institute for development of social responsibility): www.irdo.si.

Anita Hrast is the Founder and General Manager of IRDO - Institute for the Development of Social Responsibility (www.irdo.si) and at the same time, Researcher at Slovenian Research Agency. She is researching and publishing texts from the social responsibility and marketing at international scientific and expert conferences and is involved in several projects in the field of social responsibility. Her vision of raising awareness on social responsibility is realised also through IRDO Institute and Horus award (www.horus.si). As a Researcher and Development Manager, she is working in communication, marketing, social responsibility and is developing new methods, new projects, products and services for different clients (companies, media, individual). She links many Slovene and international organisations, experts, with purpose to develop and implement social responsibility in theory and practise, also drafting Slovene national Strategy on Social Responsibility.

Vojko Potocan, PhD in Business, is a Professor of Management and Organisation at the Faculty of Economics and Business (FEB), University of Maribor (Slovenia). He received his doctoral degree from FEB Maribor. He teaches in three universities in Slovenia and in four universities abroad (Germany, Croatia, Poland and Czech Republic). He is also the Head of the postgraduate study program of Management and Organisation at FEB. He takes part in different international scientific conferences and has conducted a number of study visits abroad. He has published over 450 texts (over 300 in foreign languages in 40 countries), including 12 books, edited proceedings and textbooks. He has published over 80 articles in peer-reviewed scholarly journals including but not limited to Systemic Practice and Action Research, Journal of International Business Studies, Journal of Business Ethics, European Journal of Management, Engineering Economics and International Journal of Physical Distribution & Logistics Management.

Prof Dr Timi Ećimović is an eminent international scientist, independent researcher, lecturer, founder and head of SEM Institute for Climate Change, and Chairman of The World Thinker’s Forum in Vienna, Austria. Since June 2004 he has been appointed professor and chair of environmental sciences at Ansted University, the Rector of WPF University in Athens, Greece, and the Vice-Chairman of the World Philosophical Forum. He is international consultant of the UN - FAO and international consultant for sustainable development and sustainable future of humankind of USO. Together with many researchers in co-operation worldwide within philosophy, global studies, systems thinking, networking and complexity and universal education, he is contributing a systemic, requisite holistic and a better understanding of the present. For researches of the climate change system and his international publications he was nominated for the Nobel Prize in 2003, 2007 and 2010 - more about his publications see at: www.institut-climatechange.si.

Zdenka Ženko, Ph.D. teaches courses at undergraduate and graduate level at the Faculty of Economics and business, University of Maribor in Slovene and English for international students. Is Associate Professor of Innovation management and Assistant Professor of System Theory. She was employed in Apis, the Jozef Stefan Institute, Lek, ASUCLA, and Tehnološki transfer (manager and 51% owner). As doctoral student, she studied management and defended a thesis Comparative analysis of management models in Japan, United States of America and Western Europe. Shorter or longer periods she
worked and acquired knowledge in Czech republic, Greece, Belgium, USA, Austria, Ukraine, Finland. She lectured in Graz Austria; Kharkov, Ukraine and Lahti, Finland. Her research interests lie in innovating, creativity, ethics and intellectual property. In her research, she applies the systems theory for holistic understanding and problem solving based on ethical and sustainable socially responsible innovating.


1 The selected problem and viewpoint

Sustainable development is a concept that is supposed to allow both the current and future generations to meet their needs. Good two decades of its application have demonstrated that development in terms of economic growth and profit has been more favoured than sustainability; this is dangerous. The shortest proof of this humankind’s blind alley was published in spring 2013: Institute located in Hawaii islands, far away in the ocean, measured a CO2 concentration like three million years ago - when humankind was impossible due to lack of oxygen (http://hawaii.co2, published on 10 May, 2013). And: ‘The planet Earth will get very warm: not two, but four degrees [Celsius] more are expected by the end of this century, which is very dangerous’ (Carrington, 2014). As long as ‘sustainable development’ concept makes more room for development than for sustainability, like so far, humankind faces existential dangers. The planet Earth can live without humans, but humans cannot live without a healthy planet (quote from Hrast et al, ed., 2013).

2 ‘Sustainable future’ - replacement for ‘sustainable development’ by dialectically systemic behaviour via social responsibility

The above quoted facts make Ečimović and his international team (including M. Mulej) right, who claim the need for the concept of sustainable future to replace the sustainable development. Sustainable future is supposed, in their definition, to become a methodology supporting a philosophy aimed at creating a new reality in which humankind will be able to survive. (Ečimović et al, see data in text and footnotes later in this contribution)

Unfortunately, people are difficult to persuade about their own need for a new reality without concrete data with which the current reality is measured in terms of its trends; short-term trends are favoured over the long-term ones, unfortunately, and the current situation, although measured with narrow criteria, is found more crucial than the future one. (For details see: Mulej and Dyck, editors, 2014)

Therefore measuring of quality of the natural environment has, over recent years received big national and international attention. Bečić et al. (2013) collected them for an overview (we will come back to them). Measures are very many and very partial, because
there are so many viewpoints to cover, and these viewpoints are very difficult to put in synergy without using the dialectical-systemic\(^1\) behaviour (Mulej, 2013, and earlier, since 1974).

Obviously, a more systemic, i.e. requisitely holistic, approach is necessary for systemic rather than one-sided behaviour to implement the concept of sustainable future. This transition might be supported with application of the dialectical systems approach (Ženko et al., 2013).

Persons with a poor or no education in systems sciences might have hard times, if they attempted to apply systems theory. They might receive a good support from the concept of social responsibility from ISO 26000 and the European Union’s document on support to social responsibility with three summarising concepts (EU, 2011; ISO, 2010):

1 Social responsibility is one’s responsibility for one’s impacts on society. It is also aimed at support to sustainable development.

2 Interdependence of several viewpoints is one of two common denominators interlinking all topics that are found crucial in efforts to promote social responsibility as the prevailing general practice.

3 Holism is the second common denominator. It results obviously from systemic behaviour supported by ethics of interdependence.

They enjoy support from the seven principles of social responsibility in ISO 26000 (ISO, 2010): accountability, transparency, ethical behaviour, respect for stakeholders, for the rule of law, for international norms and for human rights. Thus, social responsibility fortifies systemic behaviour replacing the dangerous one-sidedness that has been prevailing so far and must become the new socio-economic order for humankind to survive (For details see: Mulej, ed., 2014).

An especially crucial viewpoint, when one discusses sustainable future is the viewpoint of interdependence between humans and the other nature (Bricage, 2014).

Sustainability is one of the seven topics in the ISO 26000 on social responsibility, and an official goal of the effort to promote social responsibility (EU, 2011). Where should one hence start from to attain a sustainable future? A possible starting point might be offered by the seven principles of social responsibility and the seven steps to promote social responsibility in organisations (ISO, 26000). This approach might innovate (i.e. improve with new benefit of its users) human values, culture, ethic and norms, resulting in a requisitely holistic knowledge and behaviour.

3 The concept of sustainable future\(^2\)

The philosophy of sustainable development and sustainable future of humankind is the search for knowledge and understanding of the nature and meaning of the universe and life. Education, knowledge and understanding are the most important achievements of the Homo sapiens’ present civilisation (Ečimović, 2013). But they are narrowly specialised per schools and provide a poor basis for the requisite holism to replace the current one-sidedness. On this basis the concept of sustainable development has promised more of requisite holism than it provided in practice over the recent decades: development was favoured to sustainability, hence the nature has been increasingly put in danger and has put humankind in danger: with no change in human care for the too abused nature and too
big differences in human quality of life there might be only ten percent of the current
humankind around in two decades (e.g.: Plešnar, 2014).

The suggested concept of nature is based on the concept of the sustainable future
rather than a current tool for humans to use as one pleases; it is novelty of understanding
that sees the natural environment of humans as a part of the basic humankind’s
environment, which is the Universe or the Cosmos, not only a single garden, wood, mine,
etc. Within the Cosmos the Nature exists in countless forms, dimensions and contents. It is
**interdependence, interaction and co-operation** of all matter, energy, information,
dimensions, light, rays, forces, powers, particles and yet unknown contents of the Nature,
which is the basis of life. (Ečimović, Mulej, ed., 2013).

Under the progressive threat of the impact of the climate change system on the
biosphere of the Planet Earth, which is changing the humankind’s environment and living
conditions, our civilisation has to meet its challenges and establish a path for its long-
term survival.

The present global social order, life style, education, peace, respect, ethics/morality,
wisdom and daily practice of humans needs to undergo a fundamental renewal to meet
the needs for long term survival during and after the third millennium.

The sustainable future concept presents a contemporary scientific approach to the
present ‘**Nature, energy, drinking water, food, banking, credit and societal crisis**’ of
humankind in 2008 - 2013. The present civilisation or global community of humankind is
facing the largest complex societal crisis, which is also closely inter-related with the
impact of the climate change system or the evolving Planet Earth Biosphere crisis.

The impact of the climate change system may in the long run change: biology,
geography and living conditions within the biosphere, from suitable ones of the last
12,000 years, to environment not suitable for Homo sapiens to live. It is making more
complicated and complex the present social crisis of: energy, drinking water, food,
banking and credit. In 2008 humankind entered difficult times, which humans still face
now. The world governing, the Federation of the Earth, the Constitution, the Parliament
and planetary government are a crucial possibility for fighting the corruption,
mismanagement and for action towards the sustainable future of global community of
humankind.

World top official bodies, as summarised earlier here, found that the corporate and
individual social responsibility is a part of our society with much more importance as
most humans are thinking now: the possibility for humankind’s survival is at stake. We
suggest it is closely connected with what we call social technology/technique of the
Sustainable Future of Humankind or harmony of our civilisation with the
Nature/Biosphere of the planet Earth. The corporate and individual social responsibility
will have to play a more important part in future, for new great achievement of our
civilisation to overcome the crisis of living conditions within the biosphere of the planet
Earth and present biosphere, societal, money-master’s global and local leadership,
banking, credit, energy, drinking water and food - crisis of our global community of
humankind in the current decade.

The short definition is - **The Sustainable Future of Humankind is Harmonious and
Complementary Coexistence of the Global Community of Humankind and the Nature
of the Planet Earth.**

The sustainable future of humankind is, hence in the suggested definition, a
methodology, social technology or technique coming from the sustainable development
concept and over-coming its one-sided practices.
Thus it is a step ahead from the sustainable development concept and practice, mainly because of taking the real Nature as it really is, and the Nature of the Planet Earth as the most important part of the solution for survival and a long life of Homo sapiens on the Planet Earth. Hopefully, the ancient Maya people’s Calendar is right with its suggestion that December 2012 denotes the switch from Homo Sapiens to Homo Ethicus civilisation (Jere Lazanski, 2013). This may mean prevailing of social responsibility, based on ethic of interdependence enabling requisite holism/wholeness of human action to replace the over-specialisation with poor interdisciplinary cooperation of so far.

The said concept was fortified: on 25th September 2011 in Xiamen, China the declaration by “The World Thinker’ Panel on the Sustainable Future of Humankind” “WTP - SFH” was announced, which you may see at www.institut-climatechange.si.

The declaration was a first step for the implementation of the sustainable future of humankind on the planet Earth. It is “my” declaration, “your” declaration, “our” declaration and declaration of local communities, regions, continents and global community of humankind.

But, to make it happen, one needs information as the basis for action.

4 Measuring progress towards sustainable development (SD) in European Union

Today vast information about guidelines for SD indicators is available, including databases of SD indicators, forums, initiatives and projects around the world. The increased interest in measurements and new indicators and indices causes a growing effort to strengthen the evidence-based policy-making culture in many countries. The political interest responds to pressures of the governmental policies/programs to use indicator-based policy-analysis. Accordingly, many indicator projects, publications and networks were launched; many more indicators than ten years ago are available nowadays. Recent lists of indicators include (Bečić, Mulej and Švarc 2012):

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian index of well-being</td>
<td>The natural capital index framework</td>
</tr>
<tr>
<td>Capability index</td>
<td>Regional index of sustainable economic welfare</td>
</tr>
<tr>
<td>Comparing welfare of nations</td>
<td>System of environmental-economic accounting</td>
</tr>
<tr>
<td>Corruption perceptions index</td>
<td>MDG dashboard of sustainability</td>
</tr>
<tr>
<td>EEA core set of indicators</td>
<td>Sustainable society index</td>
</tr>
<tr>
<td>European benchmark indicators</td>
<td>Time-distance method</td>
</tr>
<tr>
<td>Ecological footprint</td>
<td>World happiness index</td>
</tr>
<tr>
<td>Environmentally sustainable national income</td>
<td>Global peace index</td>
</tr>
<tr>
<td>EU set of sustainable development indicators</td>
<td>The climate competitiveness index</td>
</tr>
<tr>
<td>Human development index</td>
<td>The international property rights index</td>
</tr>
<tr>
<td>Index of individual living conditions</td>
<td>The better life index</td>
</tr>
<tr>
<td>Genuine progress indicator</td>
<td>Legatum prosperity index</td>
</tr>
<tr>
<td>Happy planet index</td>
<td>The global creativity index</td>
</tr>
<tr>
<td>JFS sustainability vision and indicators</td>
<td></td>
</tr>
</tbody>
</table>


International efforts, though, generated no general consensus on a more holistic and socially responsible approach to measuring progress about sustainable development and using these measures in policy-making more effectively, or even in synergy. Even if one agrees on indicators, the different priorities or unsystematic design of the previous monitoring, availability and quality of data, particularly time-series data, cause major problems.

None of the listed indicators covers ‘sustainable future’ concept, which is more recent than these indicators.

In addition, the names of the listed indicators clarify that these indicators have been created to follow selected viewpoints with no or poor attempt to consider synergies of impacts. Even the ‘EU set of Sustainable Development Indicators’ is called a set (rather than a system), which indicates the absence of consideration of synergies of the included indicators.

Emira Bečić and other authors of the article (2013) from which we quote here, summarise data about the Croatian case: “The first national lists of indicators (NLI) by thematic fields (fresh and sea waters, soil, agriculture, air, climate change) covered the period 2005-2007. The NLI had 15 thematic fields and data sheets including 266 indicators. The new NLI 2011-2013, contains 245 datasheets for 27 topics. The NLI are coherent with objectives and priorities of the Strategy for Sustainable Development of Croatia (SSD) adopted in February 2009 and match the EEA (European Environment Agency) indicators by themes (see table 1 in the quoted article). The structure of the Croatian National List of SDI suggests that Croatian priorities are mainly focused on environment and social domains.”

They have no empirical ground to mention synergies of indicators.

Similar is the Slovenian experience, according to data in the same article:

“In Development Strategy until 2013, the Government of the Republic of Slovenia defined SD as one of the key elements of development in Slovenia (Government 2005). The Strategy outlined 68 indicators to review progress 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 SDI set (SORS 2010:9) was grouped into three sections and 9 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 suggests that Slovenia SD priorities are mainly focused on the environment and natural resources domain, demography, and social domain (like in Croatia).”

Again, there are no synergies in sight. This means that principles that link systemic behaviour and social responsibility (and humankind’s survival on the Planet Earth) are
not taken in account: (1) interdependence and (2) holism. Along with methodological issues tackling making of these synergies possible, the issues of making the two principles workable in terms of human attitudes are also tabled. One may suggest application of the seven steps procedure from ISO 26000 and the model of the diffusion process. Both of them can innovate (i.e. renew with benefit) attitudes towards sustainable future as a requisite holistic concept.

5 The seven step procedure from ISO 26000

Chapter seven in ISO 26000 suggests seven steps of the procedure of introduction of social responsibility into the organisation:

1. The relationship of an organisation’s characteristics to social responsibility.
2. Understanding the social responsibility of an organisation.
4. Communication on social responsibility.
5. Enhancing credibility regarding social responsibility.
6. Reviewing and improving an organisation’s actions and practices related to social responsibility.
7. Voluntary initiatives for social responsibility.

Step 1 covers insight into the given state as it is. Step 2 makes the insight deeper. Step 3 handles transition towards more practice of social responsibility as a usual attitude becoming normal gradually. Step 4 covers making this new practice known. Step 5 helps people, inside and outside, the given organisation trust the new practice as a socially responsible behaviour.

Thus, step by step, a more holistic, hopefully, requisite holistic approach can be attained. Step 6 is here because the practice may tend to get spoiled. Step 7 broadens the circles of persons in the organisation becoming and being active rather passive participants.

In this process it is good to recall what the holistic approach and interdependence are about:

Holistic approach and interdependence are defined (lines 896–900 in ISO 26000) as follows:

*An organisation should look at the core subjects holistically, that is, it should consider all core subjects and issues, in their interdependence, rather than concentrating on a single issue. Organisations should be aware that efforts to address one issue may involve a trade-off with other issues. Particular improvements targeted at a specific issue should not affect other issues adversely or create adverse impacts on the life cycle of its products or services, on its stakeholders or on the value chain.*
Holistic approach and interdependence between process participants are addressed indirectly in ISO 26000, too.

Thus, the above mentioned 7 principles of social responsibility (ISO, 2010: 10-14) can become reality.

On this basis, the transition from sustainable development to sustainable future has a better chance. Though, this transition remains a non-technological invention-innovation-diffusion process (IIDP). Hence it makes sense to bring into the scene the diffusion process.

6 The diffusion process

We would use our completed-up summary of the theory of diffusion of innovation that presents a reminder of what one needs to think about, when one starts an IIDP in order to attain an innovation, including the one considering SR (Ženko, Mulej, 2011, a, b):

Table 1. Matrix of Essential Attributes of Diffusion Process from the Viewpoint of Change Agents (A case) (see online version for colours)

<table>
<thead>
<tr>
<th>VIEWPOINTS TO BE CONSIDERED (IN SYNERGY)</th>
<th>Phases of users’ decision making about a novelty aimed to become innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Awareness</td>
</tr>
<tr>
<td>Novelty customers (potential)</td>
<td></td>
</tr>
<tr>
<td>Customers - innovators</td>
<td></td>
</tr>
<tr>
<td>Early customers</td>
<td></td>
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<tr>
<td>Early majority</td>
<td></td>
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<tr>
<td>Late majority</td>
<td></td>
</tr>
<tr>
<td>Laggards</td>
<td></td>
</tr>
<tr>
<td>Opponents</td>
<td></td>
</tr>
<tr>
<td>Requisite holism of potential suppliers/ authors of novelty - to-be innovation</td>
<td></td>
</tr>
<tr>
<td>Requisite holism of potential customers of novelty - to-be innovation</td>
<td></td>
</tr>
<tr>
<td>Requisite holism of pressure of market, government and bosses concerning novelty - to-be innovation</td>
<td></td>
</tr>
<tr>
<td>Requisite holism of information system concerning novelty - to-be innovation for suppliers and customers to know enough</td>
<td></td>
</tr>
</tbody>
</table>
Table 1 Matrix of Essential Attributes of Diffusion Process from the Viewpoint of Change Agents (A case) (see online version for colours) (continued)

<table>
<thead>
<tr>
<th>VIEWPOINTS TO BE CONSIDERED (IN SYNERGY)</th>
<th>Phases of users’ decision making about a novelty aimed to become innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
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<tr>
<td>Systemic quality of novelty - to-be innovation (based on requisitely perfect products, processes, leadership and commitment, linked in a synergy by organisation, and expressed in the system (= network) price, quality, range, uniqueness and social responsibility, incl. environmental care)</td>
<td></td>
</tr>
<tr>
<td>Requisitely holistic vision, mission, policy, strategy, tactic, operation, and control of the entire process with suppliers (and users)</td>
<td></td>
</tr>
<tr>
<td>Opinion leaders</td>
<td></td>
</tr>
<tr>
<td>Attributes of novelty</td>
<td></td>
</tr>
<tr>
<td>Relative advantage</td>
<td></td>
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<tr>
<td>Compatibility</td>
<td></td>
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<td>Complexity</td>
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<td>Testability</td>
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<td>Visibility</td>
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<td>Communication channels</td>
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<tr>
<td>Public</td>
<td></td>
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<tr>
<td>Interpersonal</td>
<td></td>
</tr>
<tr>
<td>Nature of the culture of customers</td>
<td></td>
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<tr>
<td>Decision type about novelty</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td></td>
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<tr>
<td>Authority</td>
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<tr>
<td>Desired</td>
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<td>Undesired</td>
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<tr>
<td>Indirect</td>
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<tr>
<td>Direct</td>
<td></td>
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<tr>
<td>Anticipated</td>
<td></td>
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<tr>
<td>Unanticipated</td>
<td></td>
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</tbody>
</table>

Note: the darker the area, more change agents’ effort is needed. The items in italic are our novelties.
7 Conclusions

Transition from the concept of sustainable development to the concept of sustainable future can be seen as a non-technological invention-innovation-diffusion process, which has very much in common with introduction and diffusion of social responsibility with its 7 contents, 7 principles and 7 steps of introduction exposing the three most crucial notions:

1. One’s responsibility for one’s impacts over society.
2. Interdependence.
3. Holistic approach.

With one-sided information these notions are very difficult to realise. Hence the three notions are tackling also the data collection and information production and application, including the ones on humans’ behaviour towards humans’ natural environment. Due to lack of room, see for additional information on social responsibility and related suggested measures: Mulej and Dyck, ed., 2014, Mulej, ed., 2013a, Mulej, ed., 2013b, Mulej et al, 2013, Lebe and Mulej, ed., 2014; including about 160 authors from about 30 countries with contributions on various aspects of social responsibility and holistic/systemic behaviour. For methods supporting holistic behaviour see e.g.: Mulej and Mulej, 2006; Steiner, 2011.

References


Sustainable future replaces sustainable development


Notes

1By definition, a dialectical system includes a synergy of all crucial systems as mental pictures of the object under consideration; these mental pictures represent the selected parts of attributes of the object under consideration. Every system matters, but none is sufficient for a requisitely holistic insight, although the term system is supposed to present a whole. This wholeness cannot be attained from a single viewpoint, which is usual with those among (the unavoidable, but insufficient) specialists, who are over-specialists, i.e. unable and unwilling to apply interdisciplinary creative cooperation. The real, i.e. total wholeness covers totally all attributes that could be observed and/or managed from totally all viewpoints/specialisation of human knowledge; this reaches beyond human capabilities. Therefore, Mulej introduced the concept ‘dialectical system’ in 1974 in order to up-grade the concept of Bertalanffy, who created his General Systems Theory against over-specialisation. (For details see: Mulej, 2013.)

2For details see: Ečimović, Mulej (2013).

3Here ‘system’ means a complex entity that one considers from any selected viewpoint, rather than a mental picture of the object under consideration (For details see: Mulej, 2013).

4For details see: Martin G. T. ed (2013).

5For details see: Ečimović et al. (2007), and Bozicnik, Ečimović, Mulej et al. (2008).

6For details see Ečimović ed (2010), (2012) and (2013).

7See for details: Bečić, Piciga, Hrast (2013).