The idea of sustainability dates back more than 30 years ago. It was a key theme of the United Nations Conference on the Human Environment in Stockholm in 1972. The Brundtland Report (1987) presented the definition of sustainable development (SD) as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The concept and SD definition are holistic, attractive but not exact and precise. The conventional understanding of sustainable development based on three dimensions is incorrect because it implies that trade-offs can always be made between environmental, social and economic dimensions of sustainability. In fact, three SD dimensions cannot be treated equally or as if equivalent. The economy is an institution that emerges from society, and these are in many ways the same, but environment is not created by society and supports both society and economy. That is why, in practice, development decisions by governments, businesses and other actors do allow trade-offs and put the biggest emphasis on economy. At the same time, the earth’s capacity to yield products for human consumption, absorb wastes and provide ecosystem services are limited. Therefore, the problem with sustainability is not that the values are wrong, but according to the current formulation they are too loose to drive effective transformations that demand new concepts, new macroeconomic ideas and new ways of engaging population, scientists and opinion leaders in the search for solutions. The sustainability idea has been and continues to be very powerful, but it cannot be globally implemented using metaphors, slogans and ideas that are currently available.

Therefore, to express widespread public concern about poverty, hunger, disease, inequality and environmental degradation for the 15 years from 2000 to 2015, Millennium Development Goals (MDGs) were introduced globally. It is a set of eight easily understandable goals, which help to promote global awareness, political accountability, improved metrics, social feedback and public pressures. There is widespread feeling that by 2015 most countries have made meaningful progress towards the goals, but there is also the understanding that worldwide environmental objectives need a higher profile alongside the poverty-reduction objectives. At the same time, the probable shortfall in achievement of the MDGs represents a set of operational failures that implicate many stakeholders, in both poor and rich countries. For example, promises of official development assistance by rich countries have not been kept. According to J. D. Sachs’s estimation, meeting of the major goals of poverty reduction, biodiversity conservation, climate change mitigation and primary health for all would need perhaps 2–3% of global income. The small amount, if properly invested, would be transformative (Sachs, 2012).

Since 2015, the world has started the implementation of the Agenda 2030 for sustainable development based on 17 development goals (SDG) and 169 targets. The SDG framework should promote and encourage the trans-
formations across all three dimensions of sustainable development – economic, environmental and social – in an integrated way. At the same time, some targets lack the focus to enable effective implementation, some may also contribute to different goals, the majority of goals and targets are interconnected and sometimes may conflict. The goals are formulated using the so-called “silo approach”, where they are addressed as separate and isolated from each other elements. In this case, there are important relations and trade-offs among several goals and targets. Going forward, it is crucial to systematically collect scientific evidence on how development strategies could reach the goals. Therefore, science should play an important role in formulating problems, assessing progress, identifying emerging risks, limitations and opportunities, providing and testing solutions. It means that a generation of possible algorithms, scenarios or pathways for the transformations towards sustainability should be based on the application of systems theory methods. The main purpose is by using the systems approach for SDGs implementation to contribute to strengthening the science-policy interface by showing policy-makers how key interlinkages are analysed and highlighting areas for policy-relevant research.

Global Sustainable Development Report is one important component of the follow-up to review the process for the SDGs and the 2030 Agenda. In July 2016, Member States agreed on the scope, frequency and methodology for Global SD Report, which will inform the high-level political forum and shall strengthen the science-policy interface and provide a strong evidence-based instrument to support policy-makers in promoting poverty eradication and sustainable development. The report should incorporate scientific evidence in a multidisciplinary manner in order to reflect the universal, indivisible and integrated nature of the 2030 Agenda. In this connection, Member States requested the creation of an independent group of scientists to draft the quadrennial Global Sustainable Development Report. The independent group of scientists comprises 15 experts representing a variety of backgrounds, scientific disciplines and institutions, ensuring geographical and gender balance. The group will be appointed for each Global Sustainable Development Report by Secretary-General in open, transparent and inclusive consultations with Member States, including the possibility of taking nominations from Member States. Before leaving office in December, 2016, Secretary-General Ban Ki-moon appointed 15 eminent scientists and experts to draft the Global Sustainable Development Report. The members of the independent group of scientists are from Austria, Belgium, Cameroon, Denmark, Finland, France, Ghana, Indonesia, Jamaica, Jordan, Lithuania, Mexico, Republic of Korea, Switzerland and the USA. The group will continue through to the high-level political forum on sustainable development in the fall of 2019, where its report will be considered as part of the global review of progress on the 2030 Agenda. The Group is supported by a task team co-chaired by six entities: the United Nations Secretariat; United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Environment Programme (UNEP); United Nations Development Programme (UNDP); United Nations Conference on Trade and Development (UNCTAD); and the World Bank.

The Group during the first meeting inter alia has identified main building blocks of a future Report:

- New concept of SD (sustainable development and human well-being from Brundtland to Agenda 2030);
- Role of science for SD (methodology, science-policy interface, etc.);
- Interactions between SDGs (analysing and managing trade-offs and co-benefits at different levels);
- Pathways to transformation (policies, power, opportunities and obstacles defining progress);
- Thinking outside the box (emerging and neglected issues, data, thinking beyond SDGs).

The world has entered a new era in which central part is being played by human activity, because it pushing crucial global ecosystem functions past a dangerous threshold, where potentially devastating outcomes for human being and life generally may occur. To avoid this phenomenon, we need new concepts and new thinking:

- The resilience of the biosphere is critical to the sustainability of human existence on earth;
- The relevant metric of sustainability is the production of human well-being (not necessarily material goods) per unit of extraction from or imposition upon nature;
The new macroeconomic system and indicators, arising from the consensus about aims and means and new debates about human goals, and telling the economic truth, especially about externalities of industrial, economic and social processes;

New thinking based on a different language of sustainability: from the language of risk to the language of future possibilities. “In the past sustainability has engaged the mind, the future demands an engagement of hearts and emotions as well” (IUCN, 2006).

“The SDGs will therefore need the unprecedented mobilization of global knowledge operating across many sectors and regions. Governments, international institutions, private business, academia, and civil society will need to work together to identify the critical pathways to success, in ways that combine technical expertise and democratic representation” (Sachs, 2012). Special attention should be paid to academia and empowering of educators, because they are important agents for effective transformations towards sustainability. Although since 1980s, globalisation and neoliberalism have put increasingly strong pressures on universities to behave in a business like way, human development needs to be critically evaluated, and an alternative mission and the so-called social contract between academic science and society is urgently needed. There are many good examples, where co-creative partnership for sustainability is implemented, which is fundamentally different from conventional third mission activities (Staniškis, 2016).

Successful implementation of SDGs comprising three broad dimensions on economic development, environmental sustainability, and social inclusion, where achievement of any of them strongly depends on global efforts to achieve all of them, will need good governance at all levels: local, national, regional, and global.

References

