Afe Babalola University: Journal of Sustainable Development Law and Policy
Vol. 2 Iss. 1 (2013), pp. 139-152

ARE WE THERE YET? A LEGAL ASSESSMENT AND REVIEW OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT UNDER INTERNATIONAL LAW

EVGENIA PAVLOVSKAIA·

ABSTRACT

Some of the most consistently utilized terms in international environmental law are "sustainable development" and "sustainability". Sustainable development is mentioned in virtually every domestic, regional and international laws on environment, energy and natural resources. This has led to the contentions by some scholars that the concept of sustainable development has matured into customary international law, or at least has become a general principle of international environmental law. Many researchers, however, argue that the idea of sustainable development is vague, elusive and does not add much to the efficient implementation of international environmental law. This article aims to examine and discuss these views.

In this paper, the content of the widely used concepts "sustainability" and "sustainable development" are studied from the perspective of their implementation in different parts of the world. The article examines the status of the concept of sustainable development under international law, its implementation across sectors, its key contributions to international law and how its practical actualization can be further strengthened.

The article sets out with a broad inter-disciplinary review of the existing definitions of the concepts "sustainability" and "sustainable development". The article will then examine examples of how "sustainability" and "sustainable development" are incorporated in contemporary environmental law, in order to highlight its current status under international law and its overall influence on different spheres of our life. Major difficulties and challenges associated with implementing and enforcing sustainability are also examined. It is suggested that market systems should be supplemented by political processes and legal regulations that include special mechanisms and tools to protect and control the health of the environment. Growing awareness of sustainability, primarily environmental, among produces is viewed in the article as a very positive trend. It is welcomed that more and more industries are engaged in sustainable production throughout the entire product life cycle. The use of such tools as sustainability criteria, sustainability standards and eco-labels must also be promoted.

Keywords: sustainability, sustainable development, implementing sustainability, industrial sustainability.

1. INTRODUCTION

Sustainability is one of the most consistently utilized terms[1] in various spheres of our life and parts of the society, including government, business, academia and the public.[2] Originally, this concept was only occasionally employed, largely to refer to

· Evgenia Pavlovskaia, PH.D Student, Law Faculty, Lund University, Sweden, email: evgenia.pavlovskaia@jur.lu.se

[1] Holdren, J., P., Daily, G., C., Ehrlich, P., R., *The Meaning of Sustainability: Biogeophysical Aspects* (1995); Lütteken, A., Hagedorn, K., *Concepts and Issues of Sustainability in Countries in Transition – An Institutional Concept of Sustainability as a Basis for the Network* (1998); Filho, W., L., *Dealing with misconceptions on the concept of sustainability* (2000), 9.

[2] Farrell, A., *Sustainability and Decision-making: The EPA's Sustainable Development Challenge Grant Program* (1999), 37; Glicksman, R., *Sustainable Federal Land Management: Protecting Ecological Integrity and Preserving Environmental Principal* (2008), 147; Bosselmann, K., *The principle of sustainability: Transforming law and*

methods of using forest resources.[3] Its synonyms were such words as "long-term", "durable", "sound" and "systematic".[4] Since the 1980s, sustainability has rather been understood in the sense of human and environmental sustainability on our planet,[5] in the close connection to the concept "sustainable development", which was introduced and specified by the World Commission on Environment and Development (WCED) in 1987, in the Brundtland report[6]. This report reflected modern ideas of resource scarcity and the wholesale transformation of the Earth by humankind, intensified by rapid population growth and industrialization.[7]

2. ACCEPTED DEFINITIONS OF SUSTAINABILITY

The most common definition of sustainability today is thus linked to the definition of sustainable development made in the Brundtland report,[8] which stated that:

> [s]ustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[9]

It is not the only accepted definition of the concept of sustainable development that exists.[10] Among other widely known examples, there is a definition

---

governance (2008), 1; Heinberg, R., *What is Sustainability?* (2010), 1; Cox, R., H., Beland, D., *Valence, Policy Ideas, and the Rise of Sustainability* (2013), 307.

[3] Filho, W., L., *Dealing with misconceptions on the concept of sustainability* (2000), 9; Brander, J., A., *Viewpoint: Sustainability: Malthus revisited?* (2007), 8.

[4] Filho, W., L., *Dealing with misconceptions on the concept of sustainability* (2000), 9.

[5] Garnåsjordet, P., A., Aslaksen, I., Giampietro, M., Funtowicz, S., Ericson, T., *Sustainable Development Indicators: From Statistics to Policy* (2012), 322.

[6] WCED World Commission on Environment and Development (1987), *Our Common Future* (the Brundtland Report).

[7] Farrell, A., *Sustainability and Decision-making: The EPA's Sustainable Development Challenge Grant Program* (1999), 39.

[8] Pezzoli, K., *Sustainable Development: A Transdisciplinary Overview of the Literature* (1997), 549; Aguirre, B., E., *"Sustainable Development" as Collective Surge* (2002), 10; Pearce, D., *An Intellectual History of Environmental Economics* (2002), 61; George, C., Kirkpatrick, C., *Trade and development: Assessing the impact of trade liberalisation on sustainable development* (2004), 443; Ciegis, R., Ramanauskiene, J., Martinkus, B., *The Concept of Sustainable Development and its Use for Sustainability Scenarios* (2009), 30; Singh. M., *Environment and Energy: Holistic Approach for Sustainable Development* (2009), 83; Saxena, R., Khandelwal, P., K., *Sustainable development through green marketing: The industry perspective* (2010), 60; Padash, A., Khodaparast, M., Zahirian A., Nejadian, A., K., *Green Sustainable Island by Implementation of Environmental, Health, Safety and Energy Strategy in KISH Trading-Industrial Free Zones-IRAN* (2011), 3034; Abbasi, M., Nilsson, F., *Themes and challenges in making supply chains environmentally sustainable* (2012), 518; Ardeleanu, G., Petrariu, R., *Sustainable Development Strategies* (2012), 54; Freihoefer, K., *The Relationship between Sustainable Indoor Environmental Qality (IEQ) and Employees' Satisfaction with their Office Environments* (2012), 6; Moldan, B., Janouskova, S., Hak, T., *How to understand and measure environmental sustainability: Indicators and targets* (2012), 4; Mori. K., Christodoulou, A., *Review of sustainability indices and indicators: Towards a new City Sustainability Index, CSI* (2012), 95; Quental, N., Lourenco, J., M., *References, authors, journals and scientific disciplines underlying the sustainable development literature: a citation analysis* (2012), 361, 375; Harris, J., M., *Sustainability and Sustainable Development* (2013), 1; White, M., A., *Sustainability: I know it when I see it* (2013), 213.

[9] WCED (1987), 43.

[10] In 1992, the UN defined the concept of sustainable development similarly to WCED as the "integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future", see Report of the United Nations Conference on Environment and Development in Rio de Janeiro, 3-14 June 1992, (A/CONF.151/26), § 1.1; in 1999, the US President's Council defined sustainable development in the following way: "Our challenge is to create a future in which prosperity and opportunity increase while life flourishes and pressures on oceans,

from the 2002 *Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific*, which states that sustainable development is

> the process of progressive change in the quality of life of human beings, which places them as the centre and primary subjects of development, by means of economic growth with social equity and transformation of production methods and consumption patterns, sustained by the ecological balance and life support systems of the region. This process implies respect for regional, national and local ethnic and cultural diversity, and full public participation, peaceful coexistence in harmony with nature, without prejudice to and ensuring the quality of life of future generations.[11]

Arguably, one important reason for the continuous popularity of the definition by the Brundtland commission is that it emphasizes the unity of environment and development.[12] The Brundtland report highlights that "the "environment" is where we live; and "development" is what we all do in attempting to improve our lot within that abode. The two are inseparable."[13] Interpreting the Brundtland definition, it can be stressed that the utility and well-being of future generations should be non-declining. The future should be at least as well off as the present in terms of its utility and welfare.[14]

Two key concepts of sustainable development according to the Brundtland report are:

- "the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."[15]

---

earth, and atmosphere - the biosphere - diminish; to create, as the Council's vision suggests, "a life sustaining Earth" that supports "a dignified, peaceful, and equitable existence".", see the US President's Council on Sustainable Development, *Towards a Sustainable America: Advancing Prosperity, Opportunity, and a Healthy Environment for the 21 st Century* (1999), p. I in the Preface.

[11] Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific (2002), Article 3.1.

[12] Pearce, D., Markandya, A., Barbier, E., *Blueprint for a Green Economy* (2000), Preface xiii, Kates, R., W., Parris, T., M., Leiserowitz, A., A., *What Is Sustainable Development? Goals, Indicators, Values, and Practice* (2005), 10; Ciegis, R., Ramanauskiene, J., Martinkus, B., *The Concept of Sustainable Development and its Use for Sustainability Scenarios* (2009), 31; Waas, T., Hugé, J., Verbruggen, A., Wright, T., *Sustainable Development: A Bird's Eye View* (2011), 1641; Jafarzadeh, N., *Indicators and Indices: Keeping the Global Environment Under Review* (2012), 30.

[13] WCED (1987), xi; Jones, S., *The Role of Economics in Environmental Policy* (1991), 62; Clark, B., *Sustainable Development and Sustainability Science* (2009), 81; FAO Fisheries and Aquaculture Technical Paper N. 534, *Measuring the contribution of small-scale aquaculture, an assessment* (2009), 30.

[14] Daly, H., E., *Sustainable Development — Definitions, Principles, Policies* (2002), 39; Daly, H., E., *The Illth of Nations: When Growth Becomes Uneconomic* (2003), 19; the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development, *Measuring Sustainable Development* (2008), 5; Kulig, A., Kolfoort, H., Hoekstra, R, *The case for the hybrid capital approach for the measurement of the welfare and sustainability* . (2010), 120; Hasna, A., M., *Dimensions of Sustainability* (2012), 48; Moe, T., Alfsen, K. H., Greaker, M., *Sustaining Welfare for Future Generations. A Review Note on the Capital Approach to the Measurement of Sustainable Development* (2013), 7.

[15] WCED (1987), 43.

The Brundtland definition of sustainable development, and as a consequence the understanding of the concept "sustainability", has proved extremely influential, and is still widely referred to.[16] It has begun the process of integrating environmental and justice concerns into economic growth.[17] It may be surprising that the Brundtland report did not actually define sustainable development more precisely than this.[18] Many scientists find this definition unsatisfactory,[19] because it is vague, elusive,[20] and can be interpreted in different ways.[21] Its implementation poses serious difficulties to decision-makers and other involved actors.[22]

The research that followed the Brundtland report emphasized the importance of the biogeophysical aspect[23] of sustainable development, which is based on the limitations of the possible supply of ecological goods and services that the biosphere can provide over the long run.[24] These limitations are often called the

---

[16] Elliott, J., A. *An Introduction to Sustainable Development* (2006), 8; Sneddon, Ch., Howarth, R., B., Norgaard, R., B., *Sustainable development in a post-Brundtland world* (2006), Unit 2; the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development, *Measuring Sustainable Development* (2008), iii; Danilov-Danilyan, V., I., Losev, K., S., Reyf, I., E. *Sustainable development in relation to the carrying capacity of the biosphere* (2009), 161; Hasna, A., M., *Dimensions of Sustainability* (2012), 48; Quental, N., Lourenco, J., M., *References, authors, journals and scientific disciplines underlying the sustainable development literature: a citation analysis* (2012), 369, 370.

[17] Adams, Todd B., *Is There a Legal Future for Sustainable Development in Global Warming - Justice, Economics, and Protecting the Environment* (2003), 100; Todorov, V., Marinova, D., *Modelling sustainability* (2011), 1397.

[18] Jordan, A., *The governance of sustainable development: taking stock and looking forwards* (2008), 20.

[19] Huesemann, M., H., *The limits of technological solutions to sustainable development* (2003), 21; Brander, J., A., *Viewpoint: Sustainability: Malthus revisited?* (2007), 9; Costanza, R., *Ecosystem health and ecological engineering* (2012), 26.

[20] Pezzoli, K., *Sustainable Development: A Transdisciplinary Overview of the Literature* (1997), 549; Osofsky, H., M., *Defining Sustainable Development after Earth Summit 2002* (2003), 112; Robinson, J., *Squaring the circle? Some thoughts on the idea of sustainable development* (2004), 373; Hjorth, P., Bagheri, A., *Navigating towards sustainable development: A system dynamics approach* (2006), 75, 90; Fien, J., Goldney, D., Murphy, T., *Rethinking Development: As if the Planet and its People Really Mattered* (2009), 21; Drexhage, J., Murphy, D., *Sustainable Development: From Brundtland to Rio 2012* (2010), 2; Lydgate, E., B., *Sustainable development in the WTO: from mutual supportiveness to balancing* (2012), 628; White, M., A., *Sustainability: I know it when I see it* (2013), 214.

[21] Fogden, S., *2002 Johannesburg Earth Summit on Sustainable Development* (2002); Osofsky, H., M., *Defining Sustainable Development after Earth Summit 2002* (2003), 113; Aras, G., Crowther, D., *Corporate Sustainability Reporting: A Study in Disingenuity* (2009), 280; Ciegis, R., Ramanauskiene, J., Martinkus, B., *The Concept of Sustainable Development and its Use for Sustainability Scenarios* (2009), 28; Clark, B., *Sustainable Development and Sustainability Science* (2009), 81; Danilov-Danilyan, V., I., Losev, K., S., Reyf, I., E. *Sustainable development in relation to the carrying capacity of the biosphere* (2009), 165; Kleine, A., von Hauff, M., *Sustainability-Driven Implementation of Corporate Social Responsibility: Application of the Integrative Sustainability Triangle* (2009), 519; Boström, M., *A missing pillar? Challenges in theorizing and practicing social sustainability: introduction to the special issue* (2012), 3.

[22] Farrell, A., *Sustainability and Decision-making: The EPA's Sustainable Development Challenge Grant Program* (1999), 37; Rebitzer, G., Hunkeler, D., *Life cycle costing in LCM: ambitions, opportunities, and limitations* (2003), 253; Drexhage, J., Murphy, D., *Sustainable Development: From Brundtland to Rio 2012* (2010), 12.

[23] The corresponding concept "biogeophysical sustainability" can be defined as "the maintenance and improvement of the integrity of the life-support system on the Earth." [Holdren, J., P., Daily, G., C., Ehrlich, P., R., *The Meaning of Sustainability: Biogeophysical Aspects* (1995)].

[24] Arrow, K., Bolin, B., Costanza, R., Dasgupta, P., Folke, C., Holling, C., S., Jansson, B. - O., Levin, S., Maler, K. - G., Perrings, C., Pimentel, D., *Economic Growth, Carrying Capacity, and the Environment* (1995), 520; Robèrt, K-H., Daly, H., Hawken, P., Holmberg, J., *A compass for sustainable development* (1997), 85; Pearce, D., *An Intellectual History of Environmental Economics* (2002), 76; Moldan, B., Janouskova, S., Hak, T., *How to understand and measure environmental sustainability: Indicators and targets* (2012), 10, 11; Most complex ecological systems have one or more tipping points beyond which change is irreversible [Cairns, J., *Threats to the Biosphere: Eight Interactive Global Crises* (2010), 1906].

carrying capacity of the biosphere.[25] They require that human beings live within the regenerative capacity of the biosphere.[26] The world economy and production must therefore be limited to the carrying capacity of the Earth's biosphere and ecosystems.[27] Interpretations were made that the ecological capital of our planet should be maintained for future generations.[28] The future should be at least well off as the present in terms of its access to biophysical resources and services, supplied by ecosystems.[29]

At the same time, the world economy and production are endogenous in relation to such factors as technological development, human consumption patterns and utilization of wastes. While there are limitations to the amounts of ecological goods and services that the biosphere can provide, technological advances, efficiency improvements and changes in consumption behavior can sufficiently lower negative impacts on the carrying capacity of the Earth's biosphere and ecosystems.[30]

In 2002, at the World Summit on Sustainable Development in Johannesburg, South Africa, the commitment to sustainable development was reaffirmed.[31]

---

[25] Farrell, A., *Sustainability and Decision-making: The EPA's Sustainable Development Challenge Grant Program* (1999), 40; Del Monte-Luna, P., Brook, B., W., Zetina-Rejón, M., J., Cruz-Escalona, V., H., *The carrying capacity of ecosystems* (2004), 488; Danilov-Danilyan, V., I., Losev, K., S., Reyf, I., E. *Sustainable development in relation to the carrying capacity of the biosphere* (2009), 188; Endl, A., *Barriers and opportunities for taking a long-term perspective in the financial market* (2012), 5; Lei, K., Zhou, S., *Per capita resource consumption and resource carrying capacity: A comparison of the sustainability of 17 mainstream countries* (2012), 603.

[26] Wackernagel, M., Schulz, N., B., Deumling, D., Linares, A., C., Jenkins, M., Kapos, V., Monfreda, C., Loh, J., Myers, N., Norgaard, R., Randers, J., *Tracking the ecological overshoot of the human economy* (2002), 9266; Haberl, H., Fischer-Kowalski, M., Krausmann, F., Weisz, H., Winiwarter, V., *Progress towards sustainability? What the conceptual framework of material and energy flow accounting (MEFA) can offer* (2004), 200; Kitzes, J., Wackernagel, M., Loh, J., Peller, A., Goldfinger, S., Cheng, D., Tea, K., *Shrink and share: humanity's present and future Ecological Footprint* (2008), 467; Cairns, J., *Threats to the Biosphere: Eight Interactive Global Crises* (2010), 1911.

[27] Carpenter, S., R., *Toward Refined Indicators of Sustainable Development* (1997), 19; Wackernagel, M., Schulz, N., B., Deumling, D., Linares, A., C., Jenkins, M., Kapos, V., Monfreda, C., Loh, J., Myers, N., Norgaard, R., Randers, J., *Tracking the ecological overshoot of the human economy* (2002), 9266; Huesemann, M., H., *The limits of technological solutions to sustainable development* (2003), 22; Aras, G., Crowther, D., *Corporate Sustainability Reporting: A Study in Disingenuity* (2009), 280; Spangenberg, J., H., *Pick Simply the Best: Sustainable Development is About Radical Analysis and Selective Synthesis, not About Old Wine in New Bottles* (2013), 102.

[28] Wackernagel, M., Onisto, L., Bello, P., Linares, A., C., Falfán, I., S., L., García, J., M., Guerrero, A., I., S., Guerrero, M., G., S., *National natural capital accounting with the ecological footprint concept* (1999), 376; van den Bergh, J., C., *Externality or sustainability economics?* (2010), 2049; Lei, K., Zhou, S., *Per capita resource consumption and resource carrying capacity: A comparison of the sustainability of 17 mainstream countries* (2012), 603.

[29] Daly, H., E., *Sustainable Development — Definitions, Principles, Policies* (2002), 39 – 40; Daly, H., E., *The Illth of Nations: When Growth Becomes Uneconomic* (2003), 19; Pearce, D., Markandya, A., Barbier, E., *Blueprint for a Green Economy* (2000), 37.

[30] Daily, G., C., Ehrlich, P., R., *Population, Sustainability, and Earth's Carrying Capacity: A framework for estimating population sizes and lifestyles that could be sustained without undermining future generations* (1992); Arrow, K., Bolin, B., Costanza, R., Dasgupta, P., Folke, C., Holling, C., S., Jansson, B. - O., Levin, S., Maler, K. - G., Perrings, C., Pimentel, D., *Economic Growth, Carrying Capacity, and the Environment* (1995), 520; Wright, S., Mallia, C., *The Potential of Eco-Taxes as Instruments for Sustainability. An Analysis of the Critical Design Elements* (2003), 1; Robinson, J., *Squaring the circle? Some thoughts on the idea of sustainable development* (2004), 375; Todorov, V., Marinova, D., *Modelling sustainability* (2011), 1406.

[31] Johannesburg Declaration on Sustainable Development (2002), para. 1; Potschin, M., Haines-Young, R.,*"Rio+10", sustainability science and Landscape Ecology* (2006), 163; Cooley, S., R., Mathis, J., T., *Addressing ocean acidification as part of sustainable ocean development* (2013), 2; the outcomes of the Johannesburg Summit in 2002 did not translate into any highly cited publication [Quental, N., Lourenco, J., M., *References, authors, journals and scientific disciplines underlying the sustainable development literature: a citation analysis* (2012), 376].

Particularly, a collective responsibility[32] was assumed "to advance and strengthen three interdependent and mutually reinforcing pillars of sustainable development — economic development, social development and environmental protection — at the local, national, regional and global levels".[33] Furthermore, it was recognized that sustainable development requires "a long-term perspective and broad-based participation in policy formulation, decision-making and implementation at all levels".[34] It was stressed that "the private sector, including both large and small companies, has a duty to contribute to the evolution of equitable and sustainable communities and societies".[35]

After the World Summit 2002 in Johannesburg, sustainable development as a concept, as a goal and as an approach spread rapidly. It has become central to the missions of international organizations, national institutions, corporate enterprises, sustainable cities and locals.[36] The UN 2005 World Summit Outcome Document[37] also referred to three "interdependent and mutually reinforcing pillars" of sustainable development, which are economic development, social development and environmental protection.[38]

In wide-ranging discussions and use of the concept "sustainable development" since then, there has been a growing recognition of the multiple objectives view of sustainability that is based on balancing or integrating three essential aspects: economic, environmental and social.[39] There are no universally

---

[32] George, C., Kirkpatrick, C., *Trade and development: Assessing the impact of trade liberalisation on sustainable development* (2004), 441.

[33] Johannesburg Declaration on Sustainable Development (2002), para. 6; Hedren, J., *Shaping sustainability: Is there an unreleased potential in utopian thought?* (2009), 222; Kleine, A., von Hauff, M., *Sustainability-Driven Implementation of Corporate Social Responsibility: Application of the Integrative Sustainability Triangle* (2009), 520; Yalcinkaya, E., *Analyzing Primary Social Studies Curriculum of Turkey in Terms of UNESCO Educational for Sustainable Development Theme* (2013), 216.

[34] Johannesburg Declaration on Sustainable Development (2002), para. 26; Elliott, J., A., *An Introduction to Sustainable Development* (2006), 9; Potschin, M., Haines-Young, R.,*"Rio+10", sustainability science and Landscape Ecology* (2006), 163; Maisley, N., *The Case for Large Participatory Conferences as a Means of Decision Making in International Environmental Law* (2013), 120; Roy, R., Chan, N., W., Rainis, R., *Development of an Empirical Model of Sustainable Rice Farming: A Case Study from Three Rice-Growing Ecosystems in Bangladesh* (2013), 455.

[35] Johannesburg Declaration on Sustainable Development (2002), para. 27; Blake, J., *From Protection to Innovation: BT's Journey in Corporate Social Responsibility* (2006), 7.

[36] Jörgens, H., *Governance by diffusion: implementing global norms through cross-national imitation and learning* (2004), 247; Kates, R., W., Parris, T., M., Leiserowitz, A., A., *What Is Sustainable Development? Goals, Indicators, Values, and Practice* (2005), 10.

[37] UN General Assembly (2005), resolution A/60/1, *2005 World Summit Outcome.*

[38] UN General Assembly (2005), resolution A/60/1, *2005 World Summit Outcome*, para. 48, 12; Aras, G., Crowther, D., *Corporate Sustainability Reporting: A Study in Disingenuity* (2009), 282; Todorov, V., Marinova, D., *Modelling sustainability* (2011), 1398; Abbasi, M., Nilsson, F., *Themes and challenges in making supply chains environmentally sustainable* (2012), 518; Freihoefer, K., *The Relationship between Sustainable Indoor Environmental Quality (IEQ) and Employees' Satisfaction with their Office Environments* (2012), 7; Amponsah-Tawiah, K., *Occupational Health and Safety and Sustainable Development in Ghana* (2013), 75.

[39] Farrell, A., *Sustainability and Decision-making: The EPA's Sustainable Development Challenge Grant Program* (1999), 41; Elliott, J., A., *An Introduction to Sustainable Development* (2006), 11; Länsiluoto, A., Järvenpää, M., *Environmental and performance management forces. Integrating "greenness" into balanced scorecard* (2008), 186; Boström, M., *A missing pillar? Challenges in theorizing and practicing social sustainability: introduction to the special issue* (2012), 3; Haghshenas, H., Vaziri, M., *Urban sustainable transportation indicators for global comparison* (2012), 115; Kua, H., W., Gunawansa, A., *Editorial Integrated Sustainability Policy and Governance Framework* (2013), 141; Szekeres, A., Jeswiet, J., *Defining Sustainability: Critical Factors in Sustainable Material Selection* (2013), 584.

agreed definitions or descriptions of the content of each aspect. According to the research of Harris,[40] the three essential aspects include:

- Economic: An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectoral imbalances which damage agricultural or industrial production.

- Environmental: An environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems or environmental sink functions, and depleting non-renewable resources only to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources.

- Social: A socially sustainable system must achieve fairness in distribution and opportunity, adequate provision of social services including health and education, gender equity, and political accountability and participation.[41]

The three essential aspects of sustainability have served as a common ground for numerous voluntary sustainability standards in recent years, in particular in the food industry.[42] As an example, such internationally known sustainability standards can be named as organic, Rainforest Alliance, Fair Trade, UTZ Certified, Bird Friendly and the Common Code for the Coffee Community.

3. SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT IN CONTEMPORARY ENVIRONMENTAL LAW

Law has been internationally accepted as a significant instrument for environmental protection,[43] much because of its ability to create authoritative standards and decision-making procedures for sustainability issues, e.g. land use planning, pollution control and nature conservation.[44] A great recognition has been given to law as an instrument for promoting sustainable development and environmental

[40] *Jonathan* M. *Harris* is a researcher in the field of environmental and resource economics, ecological economics, macroeconomics and environment. Until 2012, he was the Senior Director of the *Tufts* Institute of the Environment (TIE), US, further information can be found at http://ase.tufts.edu/gdae/about_us/cv/harris_cv.html; last visited 19-07-2013.

[41] Harris, J., M., *Basic Principles of Sustainable Development* (2000), 5 – 6; Harris, J., M., *Sustainability and Sustainable Development* (2003), 1; Weischer, M., C., *Corporate Social Responsibility as a tool for sustainable development* (2007), 10; Ozgur, E., *Significance of Efficiency for Sustainable Development: A Practice of Data Envelopment Analysis on Textile Sector* (2010), 762; Roy, M., Borsha, F., H., *Pragmatic Steps towards Sustainable Development in the Economic Arena in Bangladesh* (2013), 15.

[42] Manning, S., Boons, F., von Hagen, O., Reinecke, J., *National Contexts Matter: The Co-Evolution of Sustainability Standards in Global Value Chains* (2012); Reinecke, J., Manning, S., von Hagen, O., *The Emergence of a Standards Market: Multiplicity of Sustainability Standards in the Global Coffee Industry* (2012).

[43] De Silva, S., *The Legal Framework of Environmental Protection and Sustainable Development: A Survey of International Legal Regime and the Relevant Sri Lankan Law* (2005), 16.

[44] Richardson, B., Wood, S., *Environmental Law for Sustainability* (2006), 1.

sustainability.[45] These concepts have been incorporated in international, regional and national legal systems.[46]

At the international level, the International Law Association (ILA) has established the Committee on Legal Aspects of Sustainable Development that issued several reports during the period 1994 – 2002.[47] The Agreement Establishing the WTO has recognized sustainable development and the need to protect and preserve the environment among the main objectives of this organization.[48] Since then, sustainable development has become a standing item on the agenda of the WTO Committee on Trade and Environment (CTE).[49]

In EU, sustainable development became a political objective since 1997, through the changes made by the 1997 Treaty of Amsterdam[50] to the 1992 Maastricht Treaty[51]. According to the contemporary content of Article 3 of the Treaty on EU, which contains the EU objectives, EU shall work for the sustainable development of Europe, based on balanced economic growth and price stability.[52] Article 11 of the Treaty on the Functioning of EU promotes further that the requirements of environmental protection must be integrated into the definition and implementation of the EU policies in different spheres, in particular with a view to promote sustainable development. In such a way, the protection of environment cannot be neglected when regulations within the areas of goods, agriculture and transport are worked out.

In 2001, the EU Council adopted the Sustainable development strategy of EU,[53] which promoted the principle of integrating environmental concerns with European policies that impact on the environment. Current EU policies are based on the renewed Sustainable Development Strategy (EU SDS) of June 2006 that deals with economic, environmental and social issues in an integrated way.

---

45 Yoon, J., *The World Trade Organization: Environmental Police?* (2001), 2005.

46 Bosselmann, K., *The principle of sustainability: Transforming law and governance* (2008), 44; Voigt, C., *Sustainable Development as a Principle of International Law - Resolving Conflicts between Climate Measures and WTO Law* (2009), 21.

47 Voigt, C., *Sustainable Development as a Principle of International Law - Resolving Conflicts between Climate Measures and WTO Law* (2009), 29.

48 The Preamble to the Marrakesh Agreement Establishing WTO of 1994; Yoon, J., *The World Trade Organization: Environmental Police?* (2001), 211; George, C., Kirkpatrick, C., *Trade and development: Assessing the impact of trade liberalisation on sustainable development* (2004), 441; the WTO official web-site, can be found at http://www.wto.org/english/tratop_e/envir_e/sust_dev_e.htm; last visited 24-07-2013.

49 The CTE decided to look at the subject by sector. In 2003 the Secretariat briefed it on relevant developments in the following areas of the negotiations: agriculture WT/CTE/GEN/8, market access for non-agricultural products (NAMA) WT/CTE/GEN/9, rules WT/CTE/GEN/10 and services WT/CTE/GEN/11. In October 2005, the Secretariat organized a WTO Symposium on Trade and Sustainable Development; further information can be found at http://www.wto.org/english/tratop_e/envir_e/sust_dev_e.htm; last visited 24-07-2013.

50 The Amsterdam Treaty, officially *the Treaty of Amsterdam amending the Treaty of the European Union, the Treaties establishing the European Communities and certain related acts*, was signed on 2 October 1997, and entered into force on 1 May 1999; it made substantial changes to the Maastricht Treaty, which had been signed in 1992.

51 The Maastricht Treaty, formally *the Treaty on EU* or TEU, was signed on 7 February 1992 by the members of EU in Maastricht, Netherlands.

52 Article 3.1 of the EC Treaty.

53 Ardeleanu, G., Petrariu, R., *Sustainable Development Strategies* (2012), 54; the Sustainable development strategy of EU was amended in 2005.

The International Court of Justice (ICJ) considered the meaning of the concept of sustainable development in *Gabcikovo – Nagymaros Case*[54] in 1997, stressing the need to reconcile economic development with protection of the environment. The ICJ stated:[55]

> Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind - for present and future generations of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development."

The question whether the concept of sustainable development falls into any of the formal categories of international law, identified by Article 38.1 of the ICJ Statute,[56] has been open to debates. Notions of "legal instruments under international law" are generally based on the broad understanding of the sources of international law. Article 38.1 of the ICJ Statute is recognized as an authoritative statement of the sources of international law.[57] It requires the ICJ to apply, among other things:

> a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
> b. international custom, as evidence of a general practice accepted as law;
> c. the general principles of law recognized by civilized nations;
> d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.[58]

It can be discussed whether the concept of sustainable development belongs to (b) international custom or (c) the general principle of law, recognized by civil nations. Some scholars have argued that the constant recognition of sustainable development in national, regional and international laws, as well as in treaties, case law and state practice indicate that it has become a general principle of international law and is maturing into a custom of international law. Other researchers stress that the reluctance to formalize the distinctive legal status of sustainable development means that it is too early to describe it as a customary rule or principle of

---

[54] *Case Concerning the Gabcikovo-Nagymaros Dam* (25 September 1997) *(Hungary v Slovakia)* I.C.J. Rep., 37 I.L.M. (1998) 162.
[55] See especially the last sentence in the quotation.
[56] Statute of the International Court of Justice (1945).
[57] Statute of the International Court of Justice (1945).
[58] Article 38.1, Statute of the International Court of Justice (1945).

international law.[59] It has also been argued that while sustainable development may not be a customary principle of international law, one of the principles of international law related to sustainable development includes "the principle of integration".[60]

It is my opinion that it is still too early to call the concept of sustainable development an international custom. To attain the status of an international custom, this concept should arguably have been used more broadly in an international legal context, including international legal regulations and practice of international courts and tribunals. At present, the concept of sustainable development should at best be viewed as a general principle of international law.

4. DIFFICULTIES IN ENFORCING AND IMPLEMENTING SUSTAINABILITY

Among the lessons that have been learnt since the Brundtland report from 1987 is that sustainability does not just happen in an automatic way.[61] It needs to be thoroughly discussed, openly debated and carefully planned.[62] It is difficult, perhaps impossible, to enforce sustainability directly through legal rules and systems. This can be explained by the fact that sustainable development is essentially the outcome of a complex set of interlinked processes in particular circumstances.[63] As an example, policies and strategies for the improvement of the environment require continuous strengthening of an institutional and legal framework with official environmental standards besides subscribing to international treaties.[64]

To effectively enforce and implement sustainability, there must be instruments and tools for doing so.[65] Professionals and experts of different competencies and skills, as well as the general public need to be engaged.[66] Each step towards a sustainable future should involve negotiations between different groups of actors, such as representatives of public and private sectors, politicians, businessmen, citizens and consumers.[67]

Until recently, economic growth has failed to give sufficient attention to environmental and social effects.[68] Market developments have given signals that markets often fail to generate necessary warnings for possible environmental damages and insults. Apparently, market systems should be supplemented by political processes and legal regulations that include robust means of explaining,

---

[59] Lowe, V., *Sustainable Development and Unsustainable Arguments* (1999), 36.

[60] International Law Association New Delhi Declaration on Principles of International Law Related to Sustainable Development (2002); Segger, M., C., Khalfan, A., *Sustainable Development Law: Principles, Practices and Prospects* (2004), 45 – 50; French, D., *International Law and Policy of Sustainable Development* (2005), 51.

[61] Singh. M., *Environment and Energy: Holistic Approach for Sustainable Development* (2009), 84.

[62] Carter, N., *The Politics of the Environment* (2007), 224; Jordan, A., *The governance of sustainable development: taking stock and looking forwards* (2008), 19.

[63] Fisher, D. E., *Formulation of Building Standards for Energy Conservation in Buildings* (2006), 1.

[64] Jaria, A., Maidin, B., *Challenges in implementing and enforcing environmental protection measures in Malaysia* (2005).

[65] Jaria, A., Maidin, B., *Challenges in implementing and enforcing environmental protection measures in Malaysia* (2005); Spangenberg, J., H., *Pick Simply the Best: Sustainable Development is About Radical Analysis and Selective Synthesis, not About Old Wine in New Bottles* (2013), 104.

[66] Robèrt, K-H., Daly, H., Hawken, P., Holmberg, J., *A compass for sustainable development* (1997), 80.

[67] Carpenter, S., R., *Toward Refined Indicators of Sustainable Development* (1997), 24.

[68] Jaria, A., Maidin, B., *Challenges in implementing and enforcing environmental protection measures in Malaysia* (2005).

protecting, controlling and assessing environmental health.[69] There is evidence of a governance deficit on sustainability.[70] One of the causes might be that the aim of sustainability to create long-term values, while balancing the economic need for profit with the social and environmental responsibilities, is an unexplored territory for traditional compliance-oriented governance practice.[71]

5. IMPLEMENTING SUSTAINABILITY IN PRODUCTION PRACTICES.[72]

During the last decades, the awareness has risen that commercial and wealth-generation activities that ignore environmental consequences will in the long run be harmful to the development of societies and industries.[73] It has been even expressed that the long term success of a company depends on how compatible its business model is with sustainable development principles. A definition has emerged that a sustainable producer is a producer that meets long term environmental and social goals, while being able to compete effectively with other market participants and achieve prices that cover his production costs and allow him or her to earn an acceptable business margin.[74]

It has become evident within different industries and production branches that environmental problems call for integrated approaches to environmental maintenance and protection, which seek to prevent environmental damage and economize natural resources throughout the entire product life cycle. This has included the initial conception, raw materials extraction, industrial feedstock formulation and the ultimate end-of-life disposal.[75] Calls have been made to move away from the traditional production practices towards the holistic sustainability management, along with the integration of environmental concerns into each step of the production process. It has also been reflected in partial displacement of hierarchical command regulation by mechanisms designed to allow industry to integrate environmental concerns into its own cost and risk calculations, e.g. through economic instruments and the "polluter pays" principle.[76]

The scope and breadth of sustainability's significance is reflected in the explanations industries and production branches use to provide. Though a homogeneous, commonly accepted definition has not emerged yet, there are illustrative examples of the definitions used by the representatives of diverse companies to capture the value and guiding features of sustainability. To take some examples:

---

[69] Carpenter, S., R., *Toward Refined Indicators of Sustainable Development* (1997), 24; **De Zoysa, U.**, *Millennium consumption goals: a fair proposal from the poor to the rich* (2011).

[70] Haas, P., *Addressing the Global Governance Deficit* (2004), 5; Biermann, F., Chan, M. – S., Mert, A., Pattberg, P., *Multi-stakeholder partnerships for sustainable development governance: does the promise hold?* (2007), 240; Besada, H., Denton, F., O'Bright B., *Development and Sustainability in a Warming World: Measuring the Impacts of Climate Change* (2013), 35 – 36.

[71] Spector, J., *The Sustainability Imperative and Governance: Understanding a New Frontier in Corporate Board Oversight* (2012), 42.

[72] This area can be also called "industrial sustainability".

[73] Singh. M., *Environment and Energy: Holistic Approach for Sustainable Development* (2009), 93 – 94.

[74] Giovannucci, D., Koekoek, F., J., *The State of Sustainable Coffee: A study of twelve major markets* (2003), 15.

[75] Richardson, B., Wood, S., *Environmental Law for Sustainability* (2006), 10.

[76] Richardson, B., Wood, S., *Environmental Law for Sustainability* (2006), 10.

- The Baxter Company: "We define sustainability as a long-term approach to including our social, economic and environmental responsibilities among our business priorities."[77]

- The Ford Motor Company: "Sustainability is at the heart of our business. We have thoroughly linked our Company's economic health to the environmental health of our planet and to the broader social health of the communities in which we operate".[78]

- Viera John, Ford's Director of Sustainable Business Strategies: "Sustainability represents the intersection of the environmental, social and economic actions that we take on as a company. The environmental element of sustainability revolves around how we provide vehicles and produce those vehicles in an environmentally friendly way, and we take many different actions to make that happen".[79]

- The Nestlé Company: "We commit ourselves to environmentally sustainable business practices. At all stages of the product life cycle we strive to use natural resources efficiently, favor the use of sustainably managed renewable resources and target zero waste".[80]

- The Shell Global Company: "We commit to contribute to sustainable development, balancing short and long-term interests and integrating economic, environmental and social considerations into our decision-making".[81]

Research on the views of chief executives, made in 2009 by the Business Council in collaboration with the Conference Board, has highlighted that almost two-thirds of the of survey respondents have indicated that sustainability has become a mainstream concern for business. An even larger 81 % have agreed that "business leadership will increasingly be judged by the ability to create enterprises that are economically, socially and environmentally sustainable".[82]

The Deloitte's multi-industry survey of 48 executives, conducted in 2010, have revealed that many respondents have defined sustainability according to the traditional concept of the three pillars, promoting performance in economic, environmental and social spheres. Most of the respondents have also remarked that their companies have primarily invested in environmental initiatives.[83] Many respondents have reported that their companies have been engaged in efforts to improve their products' energy efficiency and to develop new lines of green products.[84] The two main challenges that the respondents have identified in making their products more sustainable have been keeping the product cost-neutral to their consumers and making the sustainable product's quality and functionality

---

[77] Baxter is a global healthcare company with expertise in medical devices, pharmaceuticals and biotechnology. The quotation can be found at the Baxter's web-page under the topic "Sustainability" at http://www.baxter.com/about_baxter/sustainability/index.html, last visited 23-08-2013.
[78] Ford Motor Company, *12th Annual Sustainability Report 2010/2011*.
[79] Ford Motor Company, *Q&A on Ford's Sustainability Strategy*.
[80] Nestlé, *The Nestlé Corporate Business Principles* (2010), 12.
[81] Shell, *Shell General Business Principles*.
[82] The Conference Board, *The Business Council Survey of Chief Executives* (2009); Vidal, D., *Corporate Sustainability Today* (2011), 9.
[83] Deloitte, *Sustainability in business today: A cross-industry view* (2010), 3.
[84] Deloitte, *Sustainability in business today: A cross-industry view* (2010), 4.

comparable to that of the traditional alternative.[85] The same ideas are stressed in the research of Spanish producing companies.[86]

6. REFLECTIONS AND CONCLUSIONS

The materials presented in this article show that the 26 years old definition of sustainable development from the Brundtland report is still the most commonly used and is widely referred to. This is in spite of the fact that extended research indicates that this definition is vague, elusive and does not provide clear understanding for how sustainable development and sustainability should be implemented.[87] It can be suggested that the existing definition does not fully answer its purpose and should be reconsidered. The concepts of sustainable development and sustainability could be shaped in a more precise and clear manner, being of more help for decision-makers at different levels and other involved actors. A differentiation between the meaning of "sustainable development" and "sustainability" could be made. The definitions could be later adjusted to specific spheres of the life of our society and diverse production branches.

Another aspect is that much over-all development has taken place, since the 1987 definition of sustainable development has been introduced. A lot of research has been done, as well as broad practical experience has been gathered and analyzed since then. The achieved results could be reflected in the renewed definitions of "sustainable development" and "sustainability" and guidelines for their implementation.

As an example, sustainable development can be redefined as "development that meets the needs of the present while safeguarding the Earth's life-support system, on which the welfare of current and future generations depends".[88] It is desirable that the new definition takes into consideration such aspects as the ecosystem's regenerating capacity[89] and the limited potential of natural resources.

It can be argued whether the concept of sustainable development falls into any of the formal categories of international law. In accordance with Article 38.1 of the ICJ Statute, which is recognized as an authoritative statement of the sources of international law, the concept of sustainable development can be referred either to an international custom, or to a general principle of law, recognized by civil nations. Possibly, it is early to treat sustainable development as an international custom, because it lacks a widely accepted experience of being used as a legal term. It is more likely that the concept of sustainable development has gained the status of a general principle of law.

---

[85] Deloitte, *Sustainability in business today: A cross-industry view* (2010), 12.

[86] Romiguer, A., T., *Sustainable Development: Objectives, Enablers and Challenges for Spanish Companies* (2011), 1.

[87] This opinion has been expressed by a wide range of scholars, as can be seen from the references in sub-unit one. To take examples, the names of such scholars, who share this view, can be named as Pezzoli, K. (1997), Fogden, S. (2002), Huesemann, M., H. (2003), Osofsky, H., M. (2003), Robinson, J. (2004), Hjorth, P., Bagheri, A. (2006), Brander, J., A. (2007), Aras, G., Crowther, D. (2009), Clark, B. (2009), Danilov-Danilyan, V., I., Losev, K., S., Reyf, I., E. (2009), Fien, J., Goldney, D., Murphy, T. (2009), Boström, M. (2012), Costanza, R. (2012), Lydgate, E., B. (2012) and White, M., A. (2013).

[88] This is a suggestion made by Orion, J., *A New Definition of Sustainability* (2013).

[89] This idea has been initially expressed by Catton, W. (1986). He has meant that the term sustainable development can be defined as "the improvement in the population's quality of life, while taking into consideration the ecosystem's regenerating capacity". The ecosystem's regenerating capacity according to him can be described as the maximal continuous load on the environment.

To function efficiently, different groups of actors, including politicians, law-makers, producers and consumers, can be engaged into the promotion of sustainable development, sustainability and their components, such as the cautious use of natural resources, protection of biodiversity and necessary control mechanisms.

The significance of the environmental aspect of sustainable development and sustainability should be separately emphasized. This aspect is strongly directed by the geophysical limitations of our planet, the finite amount of its natural resources and the necessity to preserve eco-systems. Economic development and production processes should not go beyond what the biosphere of the Earth can bear.

It is a very positive tendency that representatives from different industries have become more aware about the importance of sustainable development in their branches and during production processes. It can be recommended that this tendency continues to expand, including the use of such operational instruments as e.g. sustainability criteria, sustainability standards[90] and eco-labels[91] for different products.

Conclusions can be made that sustainable development and sustainability remain important issues and guiding principles on the international arena, though the exact content of these concept remains unsatisfactory. The importance of striving at sustainable development and sustainability has been widely accepted by producers in different industries and branches.

Efforts to use sustainable development and sustainability as central goals can lead to implementation difficulties. More work should be done to elaborate implementation strategies and mechanisms that can function efficiently in different areas. As an example, the concept of sustainability can be operationalized in various production branches and industries.

ACKNOWLEDGEMENTS

I would like to thank the Law Faculty at Lund University, Sweden, and Vilhelm Persson, its Head, for providing extremely convenient research conditions. I would like to express my deep gratitude to Annika Nilsson, Karin Ericsson and Bengt Lundell, my research supervisors, for their guidance and useful critiques of the present research work. My special thanks are extended to the Johan and Jakob Söderberg Funding in Stockholm for its financial support.

Finally, I wish to thank the OGEES Institute for the very useful and encouraging review of the manuscript of this article.

[90] In comparison to traditional standards that are used to identify and specify the quality of a product, basing on the set of its physical parameters, sustainability standards provide detailed specifications, setting environmental and social characteristics for the production process itself, with clear reference to the main pillars of sustainable development [Daviron, B., Vagneron, I., *From Commoditisation to De-commoditisation and Back Again: Discussing the Role of Sustainability Standards for Agricultural Products* (2011), 91].

[91] The aim of eco-labels can be described as to differentiate products on the basis of their environmental and social impacts, which enables consumers to make informed purchasing decisions. Eco-labels are intended to incentivize better practices by industry [Kirby, D., S., Visser, C., Hanich, Q., *Assessment of eco-labelling schemes for Pacific tuna fisheries* (2013), 1].