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Sustainable Development: On the Dilemma of a Definition

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Abstract: In 1987, the U.N. supported Brundtland Commission gave sustainable development its first definition as *"the development which meets the need of the present without sacrificing the ability of the future generation to meet its needs"*. Herman Daly, one of renowned contemporary economists to express faith in environmental concern in a global system upon which the economic subsystem must rely to be optimal, as opposing dogmatic economic principles and game of numbers, affirmed in 1996 that this definition of sustainable development, although not vacuous, is rather vague, and only agreed upon through a political consensus. In the course of time, the term itself has acquired so much cachet that everything has to be sustainable - to the extent that the relatively clear notion is buried under extensions in the likes of social sustainability, political sustainability, financial sustainability, cultural sustainability, and so on. Observation of recent development around the term tends to truly confirm the vagueness of the sustainable development "cliché", yet, policy makers, governments and practitioners need to keep a clear understanding of what the definition is, to be able to make appropriate decisions on its subject. One is therefore confined to ask the question: to what limit must we stretch "sustainability"? And at what stage could its extension stop to make sense in term of expected gain in understanding and applicability? In the interest of comprehension and the quest to limit a risk of reducing a crucial phenomenon to a simple slogan, this paper attempts to re-examine what sustainable development represents today and, in so doing, open the way for a new consensus definition that may both describe the term and conserve its efficacy.

Keywords: Sustainable development; definitions; environment; economics; development management

1. INTRODUCTION

"Sustainable development is a term that everyone likes but nobody is sure of what it means. (at least, it sounds better than "unsustainable nondevelopment"). The term rose to the prominence of a mantra – or a shibboleth- following the 1987 publication of the UN-sponsored Brundtland Commission Report, Our Common Future……..…While not vacuous by any means, this definition was sufficiently vague to allow for broad consensus. Probably that was a good political strategy at the time – a consensus on a vague concept was better than disagreement over a sharply defined one. By 1995, however, this initial

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> *vagueness is no longer a basis for consensus, but a breeding ground for disagreement. Acceptance of a largely defined term sets the stage for a situation where whoever can pin his or her definition to the term will automatically win a large political battle for influence over the future*[i]*"*
> Herman E. Daly (1996)

From the above quote of Herman Daly spurts the assumption that there is a vacuum created by the blank cheque of generalist definition of sustainable development which may affect peoples' perception of its theme, as well as result-assured embrace of its subject by academics, development and management professionals. In view of this, we argue that such vacuum needs to be filled somehow -- most obviously by beginning to think on whether or not another definition for the term is possible.

But given that the present definition is not wrong in its totality, the unveiling of any possible modification, for us, should start by examining the pros and cons of the latter. When this is done, a venture into the contemporary functioning of the term and workable views of its usage will open the way for the debate towards a more functional definition of sustainable development.

1. 1 OVERVIEW

A good understanding of a subject means that the researcher's knowledge and description of it capture at least 75 percent of its characteristics[ii]. There is also the risk of "off-subject" description, where accounts on such overshoot the caption areas. It is not definite which category the popular definition of sustainable development belongs. While many writers believe that it more or less over generalized the essence of what it stands for, they seem to be comfortable with leaving it as it is, or at the most, twist it to match their specialization.

Factual enough, there is always a good justification for this choice. We can advance different reasons such as one is afraid of giving a different general definition that will exempt some essential characteristics, by assuming that the coverage area is beyond limit, or, just comfortable with the fundamentality of "need", "future" and "generational survival" in the sphere of development as affirmed in the refereed popular definition – "the development which meets the needs of the present without sacrificing the ability of the future generation to meet its own need".

The act of development however has taken an evolving dimension in the way meanings are given to project, process and results. Generally in development management, to say that well defined and clear objectives, expected results, firm rules of engagement and coherence of concepts are all necessary pre-requisite for meaningful activities around specific subjects will be an understatement. Also, the backbone of evolution in science is the fact that contemporary subjects, whose conception does not seize to reveal new findings and action points, need to be constantly reviewed for more grasp on applicability and rules of engagement.

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Sustainable development as a factor in international development has not seized to spread its wings of seeming relevance in many disciplines in existence today, but, the way the concept is expressed is kept intact since it was first defined. Although this first definition has contributed enormously to the attention now given to equitable polity, social-economic and environmental awareness, giving visibility to the diversity of leverage which a concentration of efforts on the essential ingredient of need and future-oriented progressive behaviours can bring to different fields of development endeavours, the fact cannot be ignored that there is still need to re-consider this liberty of unlimited scope of the definition to refocus energy on what its goals really entail in today's context.

At present, everything that is good is sustainable. Development programmes that are upward looking are easily associated with the term. Hardly could development discourses pass nowadays without mentioning sustainable this or sustainable that – to the extent that there is the fear that, if care is not taken, we may come to a stage where, in trying to describe a situation of best practice in the field itself, there will be something called "sustainable sustainability"[iii].

To check this risk of overstretching, which may swallow up the essence of its being, and supposedly lies in the fact that there has not been in-depth attempts to redefining it, we have found it necessary to plead the case of the Brundtland definition (Section 2), while examining the issues leading to the multi-usage of the term (Section 3), to finally suggesting possible openings for review points as to what sustainable development may still or not be (Section 4).

2. A CASE FOR THE BRUNDTLAND DEFINITION

It took some time to understand the urgency in the doctrines of sustainable development. When the Brundtland Commission defined it in "Our Common Future", articulating the implications and remedies for accelerated population growth, uncensored scientific exploration, insensitivity to the real needs of the poor in economic growth equity and common social interest, as well as conserving and enhancing the resource base for human development, it created a renewed opportunity on the international political platform to embrace an essential phenomenon which will reshape global approach to international development management. Since the UN World Summit on the Human Environment held at Stockholm in 1972, a more complete study under the UN auspices into the interconnectivity of the limits to exponential economic and population growth, poverty and environmental management, saw the light of day.

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2.1 Literature Review

Pointers to what will later become a widely acceptable common ground started in the early 70s when the book titled *"The Limits to Growth: a Report of the Club of Rome on the Predicament of Mankind"* was published. The book was produced in 1972, as an outcome of a series of early meetings by the Club of Rome in 1968, made up of 30 intellectuals from different countries[iv]. First seen as doomsday pronouncement and widely criticized on the very grounds of its thesis, the group echoed some of the concerns and predictions of Thomas Robert Malthus in "*An Essay of the Principle of Population*" (1798)[v] . The "Limits to Growth" argued that long term exponential growth was easy to overlook, since human nature leads people to innocently presume that growth rates are linear. It then went ahead to postulate that if a continuation of the exponential growth of the seventies began in the world's population, its industrial output, agriculture and natural resources consumption, and the pollution produced by all of the above would result in severe constrains on all known global resources by 2050-2070[vi]. As at that time the conclusions of the book were stunning. It caused steers, as energy economist attacked it as heresies and something that is far from reality. Happily enough today, humankind has come to realize this and has started taking steps to limit the risk of having to experience the situation predicted in the book. In the 30-year update of the same book, published in 2004, the authors emphasised on the assertions of the predictions, noting then the steps so far and the implications of the activities of the global community on the sustainable development issue[vii].

Like the "Limits to Growth", "Our Common Future" explores the consequences of interaction between the earth's and human systems, and the need to ensure continuity of survival by reducing the pressure on resources through technology, industrial and economic activities, as well as collective consumption patterns, especially in energy. The Brundtland report, however, because of the timing in evidence of the lingering reality of the assertions of the "Limits to Growth", was able to articulate more in practical terms the needs, rather than express situations largely in form of mathematical models[viii], to describe the causes, consequences and the way forward in the sustainable development endeavours.

The keywords in both scenarios remain "needs", collectivism; solidarity, preservation, present and future. Basic needs for mankind are expressed first in survival struggle, which is usually followed by the quest for dignity. Once the threats to survival in basic demands for food, clothing and shelter are taken care of, there is the movement to a state of comfortability, and the quest for future security. This cycle applies in all human beings irrespective of race or regional differences. Poverty reduction, human rights, social welfare and health are therefore essential to social equity or human struggle towards dignifying lives. The relationship between this upward movement of need and the challenge of the environment and development pushed Isaac Asimov to the statement: "How many people is the earth able to sustain? The question is incomplete as it stands. One must modify the question by

asking further: At what level of technology? And modify it still further by asking: At what level of human dignity?[ix]

Consequently, there are three interrelated elements in both views of sustainability. Firstly, the core objective of sustainable development is optimising human welfare. Welfare includes income and material consumption, along with education, health, equality of opportunity and human rights. The second objective is that all physical and economic activity should be compatible with the surrounding biosphere. This element focuses on non-renewable resources, and emphasises that these resources should not be used at a rate that exceeds the rate at which they can be substituted by sustainable renewable resources. Thus, there should be no net degradation of the wide range of indispensable services provided by the natural environment. The third element is the equitable distribution of bio-spherically compatible improvements in human well-being, both today and tomorrow. Sustainability, in this context, implies both intergenerational equity and intergenerational equity. Human betterment on the part of any group should not come at the expense of other groups today or generations in the future[x] .

Our present definition portrays sustainable development as seeking to establish leverage between human activities to meet immediate needs, aspiration and the ability to foresee into the future and be conscious of the needs of the future generations to live to a minimum level of sufficiency. This consciousness cuts across individual consumption pattern, industrial activities as concerns environmental pollution, government actions in policies that affect environmental management and actions that pushes narrow economic growth at the detriment of social equity, environmental sanity and respect for cultural diversity.
The story of the Brundtland definition is true in many aspects of the manifestations of activities around sustainable development today. There is no doubt that sustainable development as a concept has increased our knowledge of what is right or wrong in the way we relate with the environment, take economic decisions, as well as our approaches to wealth generation. It has in no small ways open the eyes of policy makers to hitherto neglected aspects of policy drive which evaluates quality of life rather than accumulated innovations which make life easy for a short term but tends to shorten continuity.

Most importantly, it changed the general view of how we see development. Before development is broadly viewed as a process by which the south will become like the north in terms of consumption levels and patterns. Sustainable development came with the message that consumption level as it is in the north poses threat to both the dwindling of resources without replacement, the risk of pollution, whose consequence will affect the whole planet and the fact that the pattern of living in the North can not be generalized to the whole world. These reasons justifies that the definition is still relevant to the level of activities around the concept. The exception to this is that it has infiltrated the system in a way that many of the good gestures are

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now systematically attributed to the drive towards sustainability. The justification for this is discoursed in the next section.

3. THE ABSORBENCY TREND: FROM ENVIRONOMICS TO EVERYTHING

The inter-linkage of environment protection, industry, technology, economic growth and development, as well as poverty, were the first premises on which forecasts on sustainable development issues are based. The Club of Rome findings saw the human predicament from rather purely ecological point of view. The UN Conference on the Human Environment of 1972 obviously took the same toll as it linked poverty to environmental management and was set to prepare the global community for polity that will stop the isolation of the phenomena. Both placed ecology over man and reproved vertical growth – the "economic myth[xi]" which counts rather than evaluate, with neglect for environmental resources employed in the process.

It is not surprising that economist, especially energy economists, were the first antagonist of the predictions in 1972 of the "Limits to Growth", because the assertions contradict the major principles around which economic theories revolve. Business and scientists were also very concerned in the area of ethics in science and the need to limit the rate at which natural resources to finished products without attempts or possibilities of replacement.

By giving a broader social meaning to sustainable development, the World Commission for the Environment and Development (WCED) paved the way for the United Nations Conference on the Environment and Development (UNCED) held at Rio de Janeiro, Brazil in 1992, where deliberations leading to the adoption of the Agenda 21, as well the United Nations Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCC) were adopted.

The Convention on Biological Diversity called for the protection of the diversity of biological beings, especially endangered species of plants and animals which face the risk of extinction and are essential for life's continuity. The Framework Convention on Climate Change (or the Kyoto Protocol) addressed the role of stakeholders, especially business, in pollution and the effect of global warming which comes as a result of the transformed or the process of transforming of natural resources to consumables. Within this framework, there are provisions to bridge the gap between the West and the South by helping in financing development projects through industries in developing countries, as a way of compensating for carbon emissions, whose consequence touches every part of the planet. The main premise of this provision is the Article 12 of the protocol tagged the Clean Development Mechanism (CMD)[xii].

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These are attempts at preserving continuity in man's activities in respect of the biosphere. Ethics in science as a sustainable measure is also seen as a measure to check scientific excesses that may affect human dignity. The question of a consensus on human cloning and bioethics implications is still an ongoing discussion today[xiii] because it is believed that if it is the act is adopted it will disrupt the natural process of reproduction and can counteract its own strong points of aiding medical aid advancement.[xiv] To these extents, environmental management takes the central stage of the term because all human activities in economics, science and social interaction relate to the environment (It is not rare to see people associate sustainable development with environmental management, urban planning and population management).

The Agenda 21, which has remained the major instrument for implementing sustainable development, differed in outlook. It designed roles for governments and all stakeholders in the management of global affairs without exception. Like the Brundtland report from which its inspiration came, it went beyond ecology to politics, business, the management of cultural diversity, bioethics, consumption patterns, population and human settlement. It most especially canvassed for joint alliance in partnership efforts to coordinate action towards the implementation of the provisions of the agenda[xv]. This is perhaps the beginning the profusion of sustainable development applicability. Since the impression given by the plan is that no action is waste. With it, the enclosure of sustainable development under the general canopy of "development" which matches the Brundtland Commission's view was emphasised and received political seal.

As Neil Carter (2001) righty puts it, "Sustainable development from then became a 'metafix' that will unite everybody from the profit-minded industrialist and risk-minimising subsistence farmer to the equity-seeking social worker, the pollution-concerned or wildlife-loving "First Worlder", the growth-maximising policy maker, the goal-oriented bureaucrat and, therefore, the vote-counting politician".[xvi] From there, Sustainable governance, sustainable culture, sustainable politics, sustainable business, social sustainability, financial sustainability, economic sustainability, and technological sustainability, start to play fussier roles. Everything is so merged to the extent that one only needs to add sustainability beside any word or idea in any of the discipline to make it acceptable[xvii].

There is a reigning confusion on whether truly the extensions of sustainability to many of the concepts in justified or necessary. The world sustainability itself which could be interpreted in many ways made it suitable for qualifying the durability or impact of a programme. Yet, if left alone, it creates harbour for passivity of the actors involved. For example, sustainable business is literarily used for when businesses conforms to the principles of sustainable development. In the same context, there is a vast array of criteria for measuring which business is sustainable. What is hitherto called corporate charity has been converted to sustainability. A company promoting gender, racial, age, ethnic and qualifications equality within its

human resource framework is doing sustainable business. Financing of development projects is sustainable development; using green process or process that reduced carbon emission justifies sustainable; and whether a company is void of child labour in the process of production or does not exploit or discriminate its workers[xviii] or whether it gives support to an NGO working on development programme, or not, determines how sustainable the business. It is possible for companies to put up facades and claim any of these dealings in order to be relevant and continue to sell under the notion of doing "green business".

Another example, during the World Summit on Sustainable Development (WSSD) held at Johannesburg in 2002, UNESCO and UNEP jointly convened a high-level round table on cultural diversity and biodiversity for sustainable development. The basic motivation is to examine the relationship between cultural diversity and the preservation of bio-diversity in view of strategies for sustainable development[xix]. In the background document furnished by UNESCO for the meeting, there was emphasis on the move towards a culture of sustainable diversity – sustainable diversity in the sense that, in as much as there is need to preserve world's cultural diversity, there are diversity which helps in promoting sustainable development and those that does not, hence the need to focus on those indigenous cultures which promotes preservation of bio-diversity[xx].

Do we say an action or gesture is culturally sustainable because it seeks to preserve the environment? Or, is a culture simply sustainable because it is being kept alive for easy transmission to future generations? UNESCO has argued that one of the major motivations for the establishment of the convention on cultural diversity is the reason of sustainable development[xxi]. If sustainable development connotes meeting the present need without compromising the ability of the future generations to meet its own need, then it suffice to say that when a culture is preserved, it is sustainable. In that way, it does not matter whether that culture has or not a negative effect on the environment. This is another of the limit of our generalist definition, which, if left to continue will bar understanding and goal orientation.

In the present context, sustainable politics should literarily mean the politics which meets the needs (transparency, anticorruption, democracy, responsible leadership) of the present without sacrificing the ability of the future generations to meet its political needs. It could also be translated to all political or public policy actions which tend towards the integration of the three pillars of development (economic, social and environmental concerns) into public sector management. Reforms aimed at democratization, anticorruption, responsible leadership has been part of human history. In fact, one of the attributes of the developed world is the fact of political maturity which, in the course of history is shaped by developments to the attainment of satisfactory mastery of the menaces in public management[xxii]. Today, to mention political sustainability still means actions towards the same. This ambiguity calls for redress, unless we want to re-assure ourselves that all good gestures could be qualified as sustainability.

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It is evident that retarding the review towards bridging some of the aforementioned discrepancies will create the possible scenario where there is an ultimate direction – like, to say, sustainable development must be achieved – while stakeholders unconsciously may run in different directions for years unending only to discover the misrepresentation too late. The next section therefore insinuates into the possible basis upon which the justification for a functional definition may be built.

4. BETWEEN "MANAGEMENT TOOL" AND "INTERDISCIPLINARY SCIENCE"

There are two fundamental global angles by which one can view sustainable development in the present dispensation: sustainable development as a management tool and; sustainable development as a multidisciplinary science. Between 1992 and now, our perspectives of the term have been concretised by these two factors. Universities now offer sustainable development as a course of study while governments, business and development organizations continue striving to integrate the concept into working procedures. The former connotes that the subject is developed to the level of academic and professional discipline, taught in classes and the latter represent the fact that it is seen as a tool in public and private institutional management.

According to P.M. Boulanger and Th. Bréchet (2002), the literature on sustainable development and modelling shows five typical aspects of tackling: interdisciplinarity, uncertainty, a long-term perspective, both global and local dimensions, and stakeholder participation[xxiii]. As evoked earlier, achieving sustainable development is originally viewed as striking a suitable balance between the economic, social, and environmental dimensions of development (the "three pillars"). Scientifically, interdisciplinarity means that any comprehensive analysis of a sustainable development issue requires insights from several scientific disciplines, belonging to both the natural and the social sciences (physics, biology, sociology, economics, politics, demography, etc…). The level of integration between the different disciplines (the degree of interdisciplinarity) depends on the subject matter. More interdisciplinarity is certainly also needed if sustainable development is viewed as a process where the various forms of productive capital must stay in line with each other[xxiv] - sustainable development is, in practiocal terms used interchangeably as process, as normative values and as means to enhancing green institutional agenda.

Desmond McNeill (2001) reminded us that in scientific term, Interdisciplinarity means the formulation of a uniform, discipline-transcending terminology or common methodology; cooperation within a common framework shared by the disciplines involved[xxv]. We have touched on certain justifications for the interrelatedness of different domains in the sciences, social sciences, arts and culture in previous

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sections. By offering the discipline of sustainable development, colleges advance the argument of preparing future managers for leadership roles in companies and government to react positively to the challenges of the environment and development in their career.

Since establishing sustainable development objectives, systems and monitoring mechanisms requires leadership on the part of senior management, and a commitment to continuous improvement,[xxvi] the academic community is taking the lead role in ensuring capacity building as, apart from the fact that the subject is being taught as a discipline, science, administration and management faculty offer it as an integrated course and most of the time compulsory.

There is no doubt that sustainable development takes the shape of an applied discipline as it conforms with the description of Richard A. Swanson concerning applied discipline when he said that "applied disciplines almost always have both a strong theory component and a strong practice component"[xxvii]As with other multidisciplinary studies, admissions to sustainable development welcome candidates from all walks of life. Both professional and academic qualifications in sustainable development seek to create additional knowledge in individuals to be able to apply the knowledge into whatever professions they have or eventually will have[xxviii]. This is a strategy to equip students and professionals seeking to upgrade knowledge with the awareness of the environment, the functionality of the economy and interaction with equity, social welfare, poverty and natural resource use. Governments are presently in the race of integrating the Agenda 21 in national policies[xxix] and business will continue the quest for innovative ways of dealing with the environmental and development challenges in order to remain in business.

The teaching and learning of sustainable development is not an end in itself, it is definitely a means to an end. By building the capacity of employees, employers foresee a chain of professionals who can be able to apply the principles as they grow in their career. Universities are increasingly integrating it in their curriculum as part of international and national policies in education for capacity building of future leaders and managers of public and corporate affairs. As asserted by the International Institute for Sustainable Development, if sustainable development is to achieve its potential, it must be integrated into the planning and measurement systems of business enterprises[xxx] When this is the case, sustainable development is a management tool.

We mentioned in section 2 that the agenda 21 incarnates sustainable development. Present endeavour to integrate the former into national policies results in sustainable development as a management tool in the public domain, geared at efficient delivery of national policies and overall management of development in ways that conform with equitable environmental, economic and social standards. Sustainable development is seen as taking a very important part in bringing leverage to all the factors involved in public management – culture, economic, technology, the

environment and social welfare – hence the need to integrate its principles in their management apparatus. Culture experts need environmental education; national economists requires adequate knowledge of the interaction between growth and development and the awareness of ethical principles is a sine-qua-non for scientists require knowledge to perform in conformity with state-of-the-art innovation which promise optimum use of nature's resources.

Our notion of sustainable development floats between its being a multidisciplinary science and a management tool. The justification for putting the term before or after another subject or discipline could be as a result of the intertwining and common relevance of it in the light of the uniting agenda in management and academic discipline. Finally, the popularity of the term itself could own to the fact that it is an emerging subject which promises the prospect of better personal development and relevance in professional and private lives.

5. TOWARDS A CONCLUSION

Most of the attempts to redefine sustainable development dwell more on bringing the concept home to specific domains or the various writers' points of interests. This has left the issue of a general re-definition out of question till date.

Economists justify sustainability on the basis of consideration for the prudent usage of heart's resources by which wealth is generated, so as to leave room for future wealth generation. Growth is questioned vis-a -vis development. As Daly said, there is still need to include in the growth graph another parameter which represents environmental resources, to best evaluate the real value of economic growth in macro economics, if we must recognize that sustainable development is relevant to economics[xxxi]. Konstantinos Papadakis (2006) while mentioning that the "substantive content of sustainable development is indeed vague" added that attention should be given to procedural elements through which the questions can be answered and , as such, it is through participatory (sustainable) governance that the vague and ill-defined definition of sustainable development is expected to be eventually clarified and consolidated"[xxxii]. He has indeed limited the concept to the issue of governance. For the business enterprise, "sustainable development means adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future"[xxxiii].

Milindo Chakrabarti (2002) made a rare attempt to define it as a process of simultaneously ensuring continuation of the economic, social and ecological basis of human life[xxxiv]. This is still not far-fetched from the Brundtland definition which has continued to be relevant, yet, controversial. Thus the question still persists on what

definition is suitable enough to capture the whole pictuire of sustainable development.

We have been able to establish however that sustainable development requires economic, environmental and social policies to be designed and implemented in a mutually reinforcing way. This implies a need for new management thinking to improve policy coherence and increasing the role of knowledge in the formulation and implementation of policies as well as better communication with civil, society and business. Sustainable development should not be conceived as an additional requirement but as overarching principle, which governs the development processes[xxxv].

Pure ecology has seized to dominate discourse on sustainable development. The intertwining of disciplines and the provision for a situation where various actors act in unison of purpose to create a scenario of alliance towards positive and future-oriented development has rendered the subject relevant, to the point of standing alone as an academic discipline, asides its wide use as a management tool in both the public and corporate domains. It is perhaps, on the basis of these affirmations that a new definition for sustainable development will take its form.

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[vii] See Donelle Meadows, Jorgen Randers and Denis Meadows (2004), *Limits to Growth: The 30-Year Update*, Chelsea Green Publishing, 365 p. The book was also refreshed in 1992 in « *Beyond the Limits »*

[viii] "The Limits to Growth" used the World3, a computer simulation of interactions between population, industrial growth, food production and limits in the ecosystems of the Earth, to simulate the consequence of interactions between the Earth's and human systems.

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[xii] See United Nations (1998), *The Kyoto Protocol to United Nations Framework Convention on Climate Change*, p 11. Retrieved on 11th of May, 2009 from http://unfccc.int/resource/docs/convkp/kpeng.pdf

[xiii] See UN Press Release GA/10333, 8 March, 2005

[xiv] Opponents of human cloning argue that the process will likely lead to severely disabled children. For example, bioethicist Thomas Murray of the Hastings Center argues that "it is absolutely inevitable that groups are going to try to clone a human being. But they are going to create a lot of dead and dying babies along the way. See Friend Tim, *The Real Face of Cloning (2003)*, USA Today, January 16, 2003

[xv] Agenda 21 Section III emphasized on strengthening the roles of major groups and called for partnership and multidisciplinary action as pre-requisite to achieving results.

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[xvii] Apart from ecological traditionalist and political theorists, such as Matthew Paterson (2005), who talked about green politics in the theory of international

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