

Final draft

Development toward sustainability

***The need for a Comprehensive Conceptual and Methodological
Framework for new politics and policies:
A social quality perspective.¹***

***A contribution to the Rio+ 20 Conference
on the sustainability of human existence on Earth***

***A Report presented by the International Association
on Social Quality (i.s.n.)***

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Section 1: Goal and Scope of this Report

This Report describes what should become the main focus of development toward sustainability. It will identify what is currently absent or underrepresented in the discussions on this topic and what helpful new approaches can be contributed towards achieving sustainability.

The Report argues that until now an integrated approach of the dimensions of sustainability has been lacking: (i) this is the result of applying the concept of the 'social dimension' as an amorphous technocratic 'black box', which is for logical reasons separated from the economic and environmental dimensions of sustainability; (ii) and the maintenance of the current way of economic thinking, which in consequence leads to increasing materialism; (iii) and, finally, the underdevelopment of the theoretical and practical connection with sustainable urban development as a condition for overall sustainability. The lack of integration of these three aspects of the current discourses on sustainability prevents a sound theoretical and methodological framework for coping with the most important challenges of human existence on earth.² Therefore we miss essential indicators for determining what really matters for human existence on earth, now and in the future. The new approach to social quality presented here addresses these three aspects and paves the ways for the framework as point of departure for new politics and policies.³ It goes beyond the confused and inadequate understanding of the 'social dimension' of sustainability arising from inconsistent 'black box' thinking and delivers an alternative to traditional based economic GDP-indicators, necessary for improving the quality of sustainability on a day-to-day basis. The incessant use of the black box is not merely a minor blemish but a fundamental root problem that brings about: a misunderstanding of well-being, as well as societal dynamics and also what could be effective policy responses. GDP-indicators measure the state-of-affairs of a small aspect of human existence. Used in isolation and as evidence *sui generis* they have devastating consequences.

Inspired by this new approach, we are able to present a **preliminary definition** of sustainability: *'a state of dynamic equilibrium between the entire interactive ensemble of non-living and living entities, functioning within the boundaries of a resilient system'* These living entities include the complexities of human actions. These complexities can cause either sustainable or unsustainable societal relationships as well as sustainable or unsustainable conditions concerning the resilience boundaries. Therefore we will distinguish between the small and the broad aspect of sustainability.

The key point for increasing sustainability concerns how to cope with the immediate effects of the complexities of our world (including those of human actions), because these complexities may cause serious societal conflicts and/or the crossing of the resilience

² According to a very important conference of the European Commission on sustainable development, it is argued that *'achieving a transition towards sustainable development is one of the most important challenges to modern society, finding solutions requires not only a shift in technology, but also a shift in behaviour and a transition to a decision-making process where choices for action are made differently'*, in: Eur 24053 En (2009), *People, the economy and our planet: Sustainable development insights* (Luxembourg: Publications Office of the European Union), p.8.

³ Laurent J.G. van der Maesen and Alan Walker (eds) 2012, *Social Quality: From Theory to Indicators* (Basingstoke: Palgrave Macmillan). This study is based on the input of more than fifty universities in Europe, Asia and Australia. It explains the differences between the social quality approach and other approaches: quality of life, social capital, social development, human development, human security, capability and social harmony.

boundaries.⁴ As will be argued below, to cope with these conflicts and for returning to boundaries of resilience implies imply new forms of governance at local, national, regional and global levels as well.⁵ We recognise a manifold of proposals for increasing sustainability, one of the most topical of which the attention being paid to developing 'green economy'. This is highly important but if it remains an approach, which merely 'cures the symptoms'. Also important is the attention to human dignity as a goal in the context of discourses on sustainability. But the dominant worldwide economic orientation is logically geared towards values that are based on highlighting individualist orientations. For the same reason it also denies the value of the Commons as a central feature of current debate on classical economic thinking.⁶ For logically reasons it also denies the meaning of such values as human dignity, solidarity, social justice and equal value (see the four normative leading principles of social quality). This is also stimulated by denying the meaning of 'the social'⁷ It is due to especially Western politics, that this economic orientation is accepted. The outcomes of this logic will result – without new politics and policies on global level (*ceteris paribus*) – into the commodification of all facets of human and other natural systems, a consequence of the rapidly expanding proliferation of information technologies, the dynamics of this logic will be strengthened. This new social quality approach opens the path forward for a change in the relations between economics and politics, and challenges its normative leading principle most notably, that the allocation of resources (by those in power) is fundament of all politics and that only economics can determine the principles upon which society is based.⁸

With this in mind we will discuss the following main points. In the second section we discuss the past and current discourses on sustainability, and their connection to studies on the resilience of planetary boundaries. We examine the need to change the existent economic paradigm. In the third section we discuss the question of sustainable urban development as a condition for overall sustainability. In the fourth section we discuss the main characteristics of the new social quality approach and its meaning for renewing discourses on the overall sustainability. In the fifth section we present our conclusions and recommendations with which to pave the way for new strategies, politics and policies.

Section 2: The Past and Present Sustainability Debate

2.1 Introduction

In this section we start of a short overview of the history of the discourses on sustainability. Herewith we may determine the nature of these discourses in 1972 with the publication of the Report by the Club of Rome until now. This may pave the way for an exploration of the current semantics of sustainability and its development in connection with the outcomes of

⁴ The related relationships and interactions existed objectively before. However, today we are more aware and knowledgeable of the new consequences. They are, due to the increased density (urbanisation, amount of emissions etc), more pressing.

⁵ See for example the new study: T. Cadman (2011) *Quality and Legitimacy of Global Governance: Case Lessons from Forestry* (Basingstoke: Palgrave Macmillan).

⁶ E. Ostrom (1990), *The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press).

⁷ This explicitly happened by: N. Piper (1997) Friedrich von Hayek und die unheimliche Revolution, *Die Zeit*, September 5.F. von Hayek

⁸ D. Gasper (2010) *Influencing the Climate Explorations in Interpretive And Value-Critical Policy analysis* (The Hague: ISS/Erasmus University).

studies on the planetary boundaries. The outcomes of these explorations deliver arguments for discussing the dominant economics as main causes for crossing the planetary boundaries.

2.2 History

In 1972, a team of the Massachusetts Institute of Technology (MIT) published “Limits of Growth,”⁹ the report of a study in which a computer model (World 3) was used to examine the interactions of five subsystems of the global economic system, namely: population, food production, industrial production, pollution, and consumption of non-renewable natural resources. This well-known and much criticized study was aimed at the public and served as an eye-opener with regard to the mounting pressure of humanity on the Earth’s resources. The first real, collective international sign of concern about sustainability came in that same year, in 1972, with the U.N. Conference on the Human Environment, held in Stockholm. As a result of this conference, the United Nations Environment Programme (UNEP) was established, as well as a large number of national environmental protection agencies. The 1980 World Conservation Strategy, aimed at advancing sustainable development by identifying priority conservation issues and key policy options, forged a collaboration between the International Union for the Conservation of Nature (IUCN), the World Wildlife Fund (WWF) and UNEP. In 1983, the World Commission on Environment and Development (WCED) was established by the U.N. This commission, chaired by Norwegian Prime Minister Gro Harlem Brundtland and composed of representatives of both developed and developing countries, produced in 1987 the famous report “Our Common Future” .¹⁰ This report defined sustainable development as “Development that meets the needs of current generations without compromising the ability of future generations to meet their own needs.”

From then onward, sustainable development was on the agenda. The WCED’s report led – inter alia – to the 1992 Rio Summit, which resulted in the “Rio Declaration on Environment and Development” and “Agenda 21,” and gave rise to the U.N. Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), the non-legally binding “Statement of Forest Principles,” and the U.N. Commission on Sustainable Development (CSD). In 2002, the World Summit on Sustainable Development (WSSD), initially mainly aimed at reviewing progress toward sustainable development, was held in Johannesburg. In this Summit, social and economic development (with regard to sustainable development), pushed by developing countries and the Millennium Development Goals, were important issues – just as environmental concerns (which dominated most earlier world meetings on sustainable development.) In addition, during the WSSD, the need for protection of biodiversity was added to the Millennium Development Goals. However, as will be discussed in Section 8, up to today, the notion of ‘social’ development has never been adequately conceptualized. This has left the work on sustainable development conceptually weak and without a “social motor for change.” Since the WSSD, most of the high-level, international attention for sustainable development has been focused on the climate change debate. The U.N. Conference on Sustainable Development (or Rio+20 Earth Summit,)

⁹ D. H. Meadows. et al. (1972) *The Limits to Growth, A Report for the Club of Rome’s Project on the Predicaments of Mankind* (New York: Universe).

¹⁰ UN (United Nations) (1987) *Commission for Sustainable Development: the Brundtland Report* (New York: UN). For an integral text of this report (“Our Common Future”) see: <http://www.un-documents.net/ocf-ov.htm>

planned for summer 2012, will revolve around two themes: “Green Economy in the Context of Sustainable Development and Poverty Eradication” and “Institutional Framework for Sustainable Development.” Once more, no real effort to define an integrated (including the “social” dimension) approach to development toward sustainability is being made.

2.3 Relative achievements in sustainable development

Over a span of 40 years (1972-2012), some successes have been booked:

- Sustainable development is now permanently on the agenda of international (multilateral) organizations like the U.N., The World Bank, the International Monetary Fund, and the World Trade Organization, of national and regional governments, of the private sector, and of many scientific institutions and NGOs
- New Multilateral Environmental Agreements have been established or entered into force. Examples are the U.N. Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), agreements related to chemicals (Basel, Rotterdam and Stockholm Conventions,) and the U.N. Convention to Combat Desertification (UNCCD).¹¹
- There is an urgent sense that climate change needs to be tackled as evidenced by the tenacious efforts, as shown during the Conventions of Parties (COPs) in Copenhagen (2009), Cancun (2010) and Durban (2011), to establish legally binding, international agreements on the limitation of greenhouse gas emissions
- Even though the use of renewable energy such as wind and solar energy and biofuels is – in a global sense – still small, it is on the rise
- The implementation of some international agreements (e.g., Agenda 21 and the U.N. Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation, REDD) seems to be making (some) headway
- To a certain extent, national and local governments do implement sustainable development programs

Nevertheless, in that same time period overall human activity has become more unsustainable. Over the last 20 years, it has become clear that anthropogenic climate change is under way (as evidenced by rising, average global temperature and increased frequency and severity of droughts and flooding’s, melting of polar ice sheets, retreat of glaciers, etc.), that the loss of biodiversity is progressing, that an increasing scarcity of clean water is threatening the lives of hundreds of millions of people and other living beings, that (at least on average) global deforestation continues, and that marine ecosystems are on the decline. In addition to these ecosystem pressures, the extreme poverty problem is far from having been solved. Over the last (almost) two decades, the world economy, in terms of real GDP, will have more than doubled¹², the global, total Greenhouse Gas (GHG) emissions per year will have increased by more than 40%¹³ and the world population will have increased with some 1.6 billion people (from approximately 5.4 billion in 1992 to approximately 7 billion

¹¹ UNEP (2011) *Keeping Track of Our Changing Environment; From Rio to Rio+20* (New York: UNEP).

¹² According to IMF data and projections.

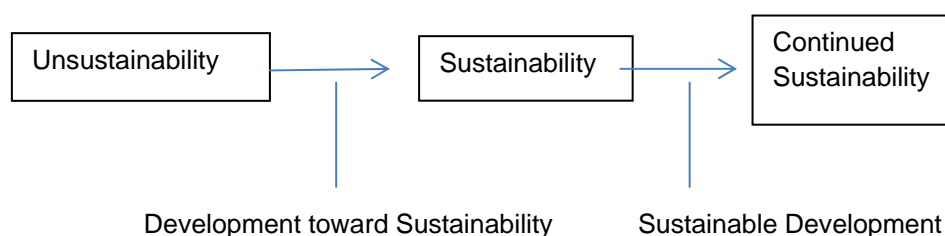
¹³ DOE/EIA data, with minor extrapolations.

in 2012).¹⁴ More importantly, none of these phenomena and numbers shows a significant tendency to go in a different direction. The only conclusion can be that humanity's activities on the planet are becoming increasingly unsustainable. An interesting look into what the "Anthropocene" has, thus far, delivered in terms of increasing pressure of humans on the Earth system is given in a recent Science NewsFocus.¹⁵ There is a need for a deep, systemic change in the way we behave with regard to each other and the natural world of which we are part. Such systemic change needs to refocus the point of reference: sustainability - before defined as a state of dynamic equilibrium of entire interactive ensemble of non-living and living entities which remain within its resilience boundaries - has to be the centre of the entirety of political action. This also underlines that the understanding of sustainability has to go beyond seeing it as 'way of doing things', focusing on 'the things we do'.

2.4 Sustainability and its four dimensions

In the previous section we presented our definition of sustainability in the broad sense as a "state of dynamic equilibrium of the natural system which remains within its resilience boundaries." Few would disagree if we would classify the ensemble of human activities on the planet – at this point in time - as 'unsustainable'. This means we are in a state of 'unsustainability'. As we will argue below, we are severely challenging the resilience of the entire natural system of the planet. Unsustainability turns into sustainability once that resilience is no longer challenged. Resilience is the long-term capacity of a system to deal with change and continue to develop.¹⁶ Thus, we need to transition from a state of unsustainability to one of sustainability (or: resilience). The trajectory for this transition should be called 'development toward sustainability'. Once a (dynamic) state of sustainability has been reached, further, non-resilience-challenging development should be called 'sustainable development'. This is visualized – in a simple way – below.

Figure 1: Development toward sustainability



¹⁴ <http://esa.un.org/UNPP>. Just to get an impression of what this means: it translates into 47 people per square km of total land surface and into approx. 500 people per square km of arable land. In 2009, the total number of cattle and buffalo, sheep and goats, and pigs and chicken was estimated by the FAO as 4.5 billion.

¹⁵ A Global Perspective on the Anthropocene. Science (2011): 334: 34-35.

¹⁶ See the definition of resilience used by the Stockholm Resilience Centre.

Accordingly, we will use the following definition for sustainability: sustainability is a state of dynamic equilibrium of the natural system which remains within its resilience boundaries. And with the “natural system” we mean the whole socio-ecological system, because of the existing, important interlinkages between society and nature.¹⁷

As we argued, the nature and change of the complexities of human activities play a crucial role in preventing or stimulating ‘sustainable development’. Thus for understanding sustainability we need an adequate framework for determining its consequences for the whole of the natural system. The traditional accent on the **environmental dimension** as well the **economic dimension** (according the dominant economic paradigm)¹⁸ – without being able to integrate the consequences of politics and policies concerning both dimensions¹⁹ – prevents a real understanding of the ‘state of dynamic equilibrium’ of the natural system. This refers to the most crucial problem of current discourses on sustainability. The global acceptance of the third one, namely the **social dimension** of sustainability has taken on the property of an unstructured, internally incoherent and inconsistent ‘black box’. With such a black box nothing could be done – not surprisingly – in terms of formulation of strategies for development toward sustainability. Examples of hallmark studies that suffer from this black box are the 1987 report by the Brundtland Commission.²⁰ The application of this black box was also the case during the important European conference on sustainability.²¹ We should go beyond this state of affairs. We propose, first, to distinguish between four dimensions of sustainability: the economic, the socio-political, the cultural and the environmental. This will be further explained below. Second, we propose to design a conceptual and methodological framework with which to analyze these four dimensions from a same point of view (conceptually and methodologically). This will enable us, third, to integrate analyses of the outcomes of these four dimensions. This will deliver, fourth, a comprehensive understanding of the nature and changes of the complexities of human actions for the resilience boundaries.

According to also Bernard, Darkoh and Khayesi, up till now we lack a theoretically grounded interpretation of the concept of sustainability. Therefore the concept has come to mean ‘*many different things to different people within different settings, partly because the concept is vague and partly because of the need to use the concept for different purposes and within different situations*’.²² This is not acceptable because, according to the European high level conference of the EC on sustainability, “*The consequent economic distortions and excessive use of environmental assets are devastating for global sustainability. The availability of knowledge at prices based on individual ‘willingness to pay’ would increase welfare compared to present reality where consumers face intellectual monopoly prices in*

¹⁷ Cf. Gallopin, G. (2003) A systems approach to sustainability and sustainable development, in: Serie Medio Ambiente y Desarrollo, No. 64; Sustainable Development and Human Settlements division, U.N. Economic Commission for Latin America (CEPAL).

¹⁸ M. Lehtonen (2004), The Environmental – Social Interface of sustainable Development: Capabilities, Social Capital, Institutions, *Ecological Economics*, 49 (2): 199-214.

¹⁹ As a consequence of the dominant economic orientation based on utilitarian propositions, all approaches discussed in the new study on social quality, see note-2, are in principal individualistic oriented and therefore not concerned with societal structures and processes. For understanding the complexities of human actions we need – and see the SQA – to explore these structures and processes.

²⁰ See note-10 .

²¹ In the document about this European conference (see note-2) again the three dimensions (economic, social and environmental) are accepted as point of departure. New is their attention for the cultural dimension.

²² M. Bernard, K. Darkoh and M. Khayesi (2009) Spatializing Development and Environmental Discourses: The Case of sustainable Development and Globalization, in: M. a. Salih (ed) *Climate Change and Sustainable Development. New Challenges for Poverty Reduction* (Cheltenham UK: Edward Elgar), pp. 179-92.

pharmaceuticals, educational materials, financial instruments, agricultural inputs, computer software and even entertainment. Such radical change would involve new forms of governance for knowledge and reward for innovators. Socio-economic sciences and humanities research would be critical to the search for these new arrangement"²³ Explicitly the participants of the conference argue, that the cultural dimension – which influences the cognitive aspects of human people, their conventions, values and attitudes - is essential for sustainable development: *'Long-term energy scenarios show that current life styles in industrialized countries are not sustainable on a worldwide scale (...) To be sustainable, life styles will have to adapt to low energy use (...) Long-term behavioral changes to adapt to low energy use are conditioned by several important social factors (...) Changes tends to be slow and must start at school. In most industrialized countries population is aging and retired people life styles will dominate; this trend will extend in due course to developing countries'*.²⁴

The socio-political dimension is as important as the cultural dimension. According to Easton, it refers to processes of *'those interactions through which values [resources] are authoritatively allocated for a society'*.²⁵ It is embedded in the intra-societal and the extra-societal environment. Between these interactions and those of the cultural dimension exists a strong reciprocity. Both, the socio-political and cultural dimension, function as decisive influences on and intermediates between the economic and environmental dimensions. Both they are responsible for the role of the dominant Western economic paradigm, creating a disconnection and disengagement from the political and cultural (ethical) standards self. Due to these politics, its frame of reference also causes a handmaiden position of all other policies to the reductionist economic ones. It is at the end of the day not the economic dimension but the socio-political dimension which is responsible for the lack of sustainability at this stage of human existence. According to De Gaay Fortman, the UN Brundtland Report²⁶ mirrors this state of affairs, because it assumes a positive connection between economic growth and the sustainable use of environmental resources.²⁷ The ideology of economic growth as a product of this dominant paradigm guides decisions regarding the use of scarce resources and the quality of the physical environment. Additional aggregate economic expansion is still assumed to offer solutions to a broad spectrum of societal challenges. And according to Gasper²⁸, this is also the case for well-known studies by Stern²⁹, Friedman³⁰, and Giddens³¹. In section-4 we will elaborate the conceptual framework for a new approach of the four dimensions of sustainability and their integration.

2.5 Planetary boundaries

As long as we reside on this planet, we are subject to the physical reality of this planet. Facing this physical reality, we have to learn to obey certain limitations to our actions lest we

²³ EC's conference, see note-2, p.10.

²⁴ EC's conference, see note-2, p. 17.

²⁵ D. Easton (1967), *A Systems analysis of Political Life* (New York: John Wiley & Sons).

²⁶ See note-10.

²⁷ B. de Gaay Fortman (2009) *Environmental Security, Politics and Markets*, in: M.A. Salih (ed), see note-22, p. 116.

²⁸ D. Gasper, see note-7.

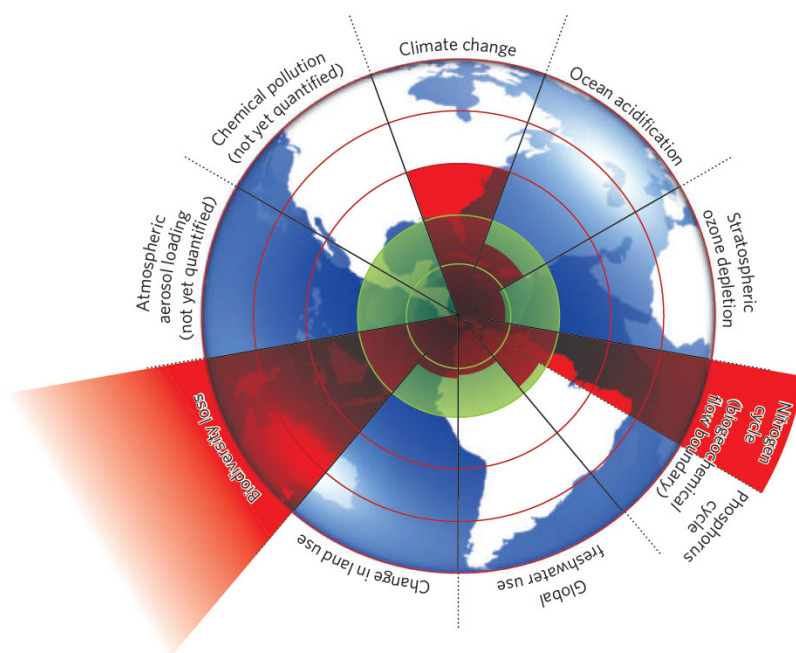
²⁹ N. Stern (2010), *A Blueprint for a Safer Planet: How Can We Save the World and Create prosperity* (London: Vintage Books).

³⁰ T.L. Friedman (2009), *Hot, flat and Crowded – Release 2.0* (New York: Picador).

³¹ A. Giddens (2009). *The Politics of climate Change* (Cambridge: Polity)

want to risk being mercilessly put back in place by nature. As early as in 1987, useful metrics for these limitations were being developed. The most well-known ones are The Environmental Space and the Environmental Utilization Space.³² In a recent, seminal article, Rockström et al. called for “identifying and quantifying planetary boundaries that must not be transgressed” to “help prevent human activities from causing unacceptable environmental change.”³³ They coined the term “safe operating space for humanity” for the space contained within those (interlinked) planetary boundaries. The planetary boundaries, associated with the planet’s biophysical subsystems or processes, are defined as values for control variables that are either at a “safe” distance from thresholds – for processes with evidence of threshold behavior – or at dangerous levels – for processes without evidence of thresholds.³⁴

Figure 2: *Beyond the boundary*³²



For source and explanation see Footnote 32.

According to Rockström et al., the planet’s boundaries rest upon nine critical Earth-system processes and their associated thresholds: climate change, rate of biodiversity loss (terrestrial and marine), interference with the nitrogen and phosphorus cycles (usually due to excessive pesticide use and industrial agricultural practices); stratospheric ozone deletion;

³² See, for example: Opschoor, J.B. (2010) *Environ Resource Econ.* 45: 3-23.

³³ Rockström, J. et al. (2009) *Nature* 461: 472-475 and Rockström, J. et al. (2009) *Ecology and Society* 14(2):32.

³⁴ Such thresholds are often referred to as “tipping points.” As Rockström et al. (see footnote 32) point out, many of the Earth’s subsystems react in a nonlinear, often abrupt way, and are particularly sensitive around threshold levels of certain key variables. As an example they mention the monsoon system. Another example is the melting of arctic ice as a result of global warming: Once a certain percentage of the ice has disappeared, the loss of surface reflecting the Sun’s light back into space may become critical and, as a result, accelerate global warming. Tipping points are usually not included in predictive models because of the difficulties of gauging the degree of nonlinearity of the processes involved and locating the exact position of the tipping points. In addition to tipping points, there are “tipping elements,” large-scale components of the Earth system that may pass a tipping point (Lenton, T.M. et al. (2008) *PNAS* 105: 1786-1793).

ocean acidification; global freshwater use; change in land use; chemical pollution and atmospheric aerosol loading.

Based on available data with regard to control variables they conclude that 3 (out of 9 so far identified) interlinked planetary boundaries have already been overstepped, i.e., those for climate change (parameters: atmospheric carbon dioxide concentration and change in radiative forcing), the rate of biodiversity loss (parameter: extinction rate) and the nitrogen cycle (parameter: amount of nitrogen removed from the atmosphere for human use); see Figure-2. They mention that humanity may soon be approaching the boundaries for global freshwater use, change in land use, ocean acidification and interference with the phosphorus cycle (part of a boundary together with the nitrogen cycle.) The rather complex boundary for chemical pollution, which includes non-recycled chemical waste, radioactive waste and plastic debris, will be quantified in the near future.³⁵

The message is clear. Whatever we wish to do economically, socio-politically, culturally or otherwise, we should operate within certain 'earth-safe' limits. Unfortunately, there's no room for experimenting around a bit, neglecting the boundaries. We simply may never have a chance to analyze what went wrong and why. Any activity we undertake in development toward sustainability must include clear measures to revert on boundary transgressions already committed and to stop approaching other boundaries too closely. At any rate, the precautionary principle should be applied ubiquitously.³⁶ As indicated, we have to take into account the possible occurrence of critical transitions – or 'tipping points'. Recent research suggests that there are generic early-warning signals for critical transitions in complex dynamical systems.³⁷ Nonetheless, much about the behavior of such systems, such as the climate system or ecosystems, remains unknown. Hence, in absence of such knowledge it would make good sense to steer well clear of the planetary boundaries mentioned above. Unfortunately, there are no effective governance mechanisms in place to watch over the planetary boundaries.³⁸

The still increasing size of the world population is another matter of concern. According to the Population Division of UNDESA, the world population is to reach 9.3 billion 2050, in the medium variant of the estimate.³⁹ This means an additional 2.3 billion fellow humans compared to today. The largest part of the increase is expected to occur in developing countries and - to a large extent - in cities – although not in megacities. It will be a daunting task to ensure that these new fellow humans will be able to experience a decent quality of everyday life without partaking in further dangerous pressure on the carrying capacity of the planet or in further challenging planetary boundaries. Factoring demographic trends into charting development towards sustainability is still a controversial issue. This is, however, on the brink of changing (as it should.)⁴⁰ For example, UNDESA recently stated that the world population would reach 10 billion by 2100 if fertility in all countries converges to replacement

³⁵ J. Rockström, personal communication.

³⁶ The Precautionary Principle, which states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is *not* harmful falls on those taking the action. This Principle, in a somewhat softer formulation known as the Precautionary Approach, has been made part of the Rio Principles of Sustainable Development (UNCED, 1992) and is an essential point of departure for a (future) international climate agreement.

³⁷ M. Scheffer, et al. @009) Nature 461: 53-59.

³⁸ B. Walker, et al. (2009) Science 325: 1345-1346.

³⁹ 2010 Revision of World Population Prospects, Population Division, UNDESA.

⁴⁰ See, for example, B.C. O'Neill et al. (2010) in PNAS 107:17521-17526. (www.pnas.org/cgi/doi/10.1073/pnas.1004581107)

level.⁴¹ The U.K.'s Royal Society has recently published a major contribution to the 2012 Rio+20 Earth Summit on the "role of global population in sustainable development."⁴²

2.6 The economy and sustainability

2.6.1 Introduction

One of the present document's theses is that the necessity for a new approach is mainly caused by the politically accepted current dynamics of global capitalism. The outcomes of its logic will result – without new politics and policies on global level – in the commodification of all facets of human and other natural life for the accumulation of capital by profits as a goal sui generis. And as a consequence of a specific application of the outcomes of the revolutionary development of information technologies, the dynamics of this logic will be strengthened. Following this logic for making profits for better or worse these technologies will enable the monetary system to make a 'qualitative leap' for becoming an instrument for making money with money on global level. This caused already enormous debts in Western middle and lower class income groups and strengthened worldwide inequalities, including precarity.⁴³ And as a consequence, the rich becomes richer and the poor becomes poorer. The gap is increasing strongly the last decades.⁴⁴

The qualitative leap of the monetary system divides financial markets from existing challenges in production systems and especially existential questions in daily circumstances. Also for these markets – going beyond the traditional machine oriented production systems - we may notice a devaluation of the value of labor power, not complemented by the valuation of the worker but of the consumer. A combination of these economic elements results into an ecological crisis. The increase of pollution relates to the same system at work in the financial markets, with the waste of material resources, in production as well as in consumption. Aiming for sustainable development' as is commonly argued, from both the left and the right, will be insufficient without other forces and funding that are incompatible with the requirements of international applied capital.

2.6.2 The limits of the current global economic system

In its essence, the anatomy of the modern market economy is fairly simple, as is shown in Figure-3, published by the UK Sustainable Development Commission.⁴⁵ Several things are not included in this Figure, such as, inter alia: the public sector and the financial sector. Also, it does not show net natural resources absorbed by the cycle and waste produced by it.

⁴¹ U.N. Press Release 3 May, 2011.

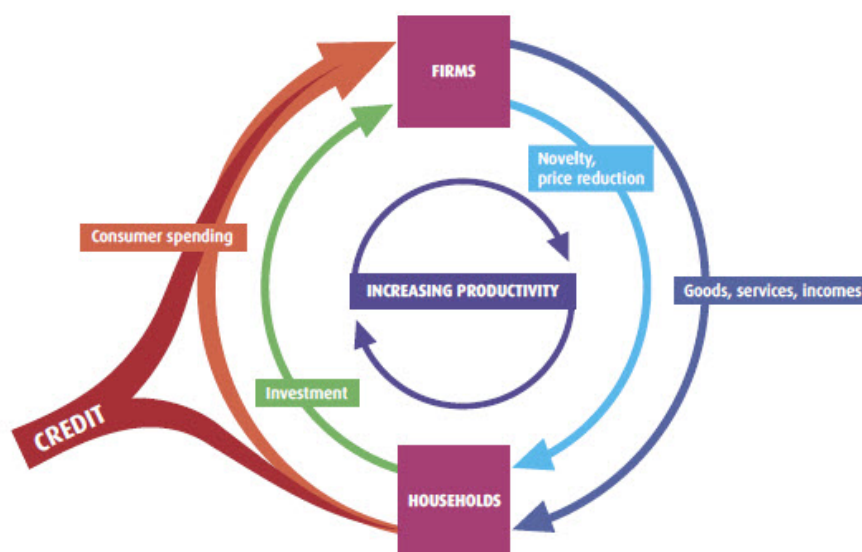
⁴² <http://royalsociety.org/people-and-the-planet/>

⁴³ P. Herrmann and L.J.G. van der Maesen (2008), *Precarity – Approaching New Patterns of Societal (Dis-) Integration* (The Hague: EFSQ, Working Papers Series no. 1, www.socialquality.org)

⁴⁴ For the United States of America see for example the recent Congressional Budget Office Report and its conclusions of the latest evidence of the alarming rise in income inequality, *International Herald Tribune*, October 27, 2011, p.5

⁴⁵ U.K. Sustainable Development Commission (2009) *Prosperity without growth? – The transition to a sustainable economy* (London: SDC).

Figure 3: The growth cycle in a market economy



Source: Prosperity without growth? (See footnote-45)

The driving force behind the cycle is profit. Profit to be used as working capital, to pay off debts and to attract investments. To maximize profit, productivity needs to be continuously increased, at the expense of employment. To avoid this negative effect on employment, output has to increase, and so forth. Thus, growth (in terms of ever-increasing output) is inherent to this kind of macro-economic system. The system is linear or open-ended, in contrast to a circular economy.⁴⁶ Unfortunately, the growth in the current system is (still) rather tightly coupled to an increasing net use of the Earth's natural resources and the increasing production of non-recyclable waste. Another, unfortunate feature of continuous growth in this kind of economic system is the disproportionate growth of its "lubricant," the financial sector. The latter effect has been, to a large extent, responsible for the recent credit crises, which – in turn – left their marks on the "real" economy.

The global economy is reaching (and most likely has already reached) its limits with regard to operating within planetary boundaries. In a 'full' world, the economy has to be different from what it was in an 'empty' world. In the (relatively) 'empty' world (say, at the beginning of the industrial evolution), economic growth – with ever-increasing resource throughput – has brought prosperity to many, but at an increasing cost to the stability of the biosphere.⁴⁷ There is wide consensus now that continuation of business-as-usual – in terms of seemingly unabated, material plus non-material economic growth⁴⁸ - has a high probability of resulting in a catastrophic destabilization of the biosphere, also because the increasing environmental efficiency of technology cannot compensate for the negative environmental effects of a continuous, average annual growth of the world economy of 3% per year. Among the many

⁴⁶ See, for instance, <http://www.ellenmacarthurfoundation.org/about/circular-economy>

⁴⁷ H. E. Daly, and J. Farley (2004) *Ecological Economics: Principles and Applications* (Island Press).

⁴⁸ Just to get a clear picture: if the world economy would continue to grow (BAU) at an average rate of 3% per year, it would double in size in roughly 23 years and more than triple in 40 years from now. If, for example, China and India were to proceed (BAU) with an average economic growth of 8% per year and the rest of the world would have zero economic growth, the world economy would grow by an average factor of 2.7 in 23 years and 8.4 in 40 years from now (not taking into account growth of the world population over that same time interval.)

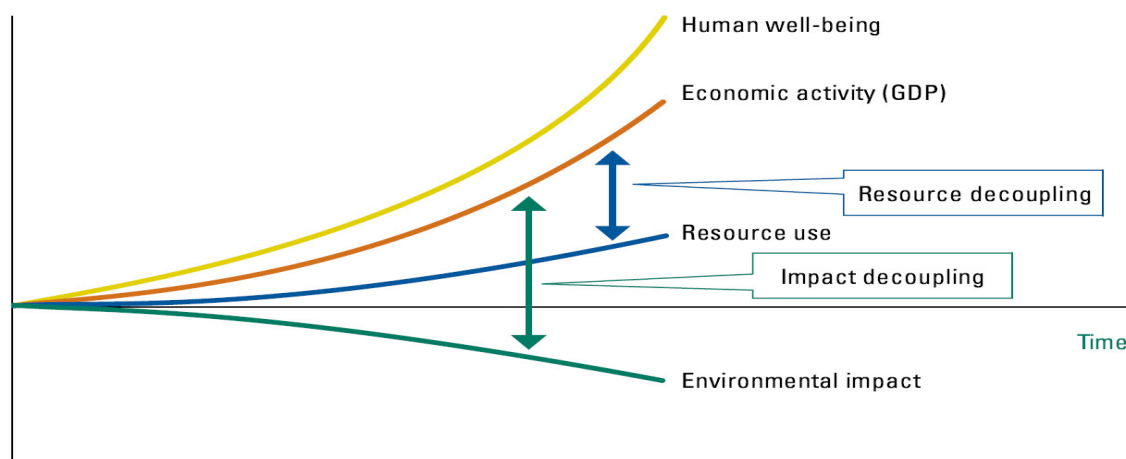
objective negative effects, those of an ongoing anthropogenic climate change may be most easily felt. Among the many objective negative effects, those of an ongoing anthropogenic climate change may be most easily felt. All this shows – paradoxically – that any strategy of sustainable development cannot be focused on aiming on accepting the limitations of natural resources etc. Rather, the focus has to be on tackling the limitations of growth strategies. These are not least the limits of translating wealth and well-being into commoditized forms. Here, the fundamentally innovative idea of social quality comes to the fore, offering a different focus of societal politics.

2.6.3 How to get the economy onto a path toward sustainability?

To (i) avert/halt the destabilization of the Earth System and (ii) change track onto a path of development toward sustainability, the reigning economic paradigm needs to change fundamentally and within a relatively short period of time (at most 1-2 decades.) The currently most frequently discussed – interconnected - options for achieving this are: (a) decoupling of economic growth from natural resource throughput and impacts on the environment and (b) building up or enhancing natural capital (in a more strict sense: investing in natural capital), in a transition to a ‘green’ economy.⁴⁹

The first option, decoupling, is schematized in Figure-4, taken from a recent UNEP report.⁵⁰

Figure 4: Two aspects of decoupling



Source: UNEP

It shows two different, but overlapping aspects of decoupling: resource decoupling and impact decoupling. Resource decoupling is a ‘relative decoupling, as resource use still increases over time, whereas impact decoupling is an ‘absolute’ decoupling, as environmental impact decreases with time. Resource decoupling means reducing the rate of

⁴⁹ (financial) investment to enhance natural capital is close to “commodifying’ natural resources.

⁵⁰ Decoupling Natural Resource Use and Environmental Impacts from Economic Growth (2011), UNEP.

use of (primary) resources per unit of economic activity. Impact decoupling means increasing economic output while reducing negative environmental impacts. Human well-being and economic activity (measured as GDP) are depicted in Figure-4 as progressively increasing over time and resource use is still (albeit much more slowly) growing. Economic activity has to increase, in part because decoupling requires investment. Resource decoupling is about resource efficiency. The question is: how much resource decoupling is achievable in an ever-growing economy? The same goes for impact decoupling. In its 2009 report “Prosperity without growth?”⁵¹ The U.K. Sustainable Development Commission dismisses the decoupling solution as a myth as long as the (market) economy (strictly speaking: the production-consumption cycle) keeps growing, and puts in a plea for zero (material) growth (without putting limits on non-material growth.) In many ‘rich’ countries, average resource and energy intensity have decreased over the last three decades, yet global, net total use of resources and energy has steadily increased over that same time period. Decoupling should be pursued, but is unlikely to be an all-out solution by itself.⁵²

The second option, the transition to a ‘green’ economy, in which natural resources are capitalized and invested in, is described in detail in another UNEP publication, which is considered to be a key contribution to the 2012 Rio+20 Earth Summit (along one of the latter’s two main themes).⁵³ UNEP’s working definition of a ‘green’ economy is that of one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. The main conclusions of the report are that:

- “Public and private investments should be reallocated to build up or enhance natural capital such as forests, water, soil, and fish stocks, in a drive to enhance new sectors and technologies that will be the main sources of economic development and growth of the future.”
- “A green economy supports growth, income and jobs, and that the so-called trade-off between economic progress and environmental sustainability is a myth, especially if one measures wealth as stocks of useful assets, inclusive of natural assets, and not narrowly as flows of produced output.”
- “In a number of important sectors, such as agriculture, buildings, forestry and transport, a green economy delivers more jobs in the short, medium and long terms than business as usual and that in the longer term – 2020 and beyond – moving towards a green economy would outperform business as usual by both traditional measures (GDP growth) as well as more holistic measures (per capita growth).”
- “Although the bulk of the investments required for the green transformation will come from the private sector, public policy will also play a leading role in overcoming distortions introduced by perverse subsidies and externalized costs” and “in addition, public investment will be required to jump-start an effective transition to a green economy.”

⁵¹ See note-45: Prosperity without growth?

⁵² “As an escape from the dilemma of growth it [decoupling] is fundamentally flawed. Ever greater consumption of resources is a driver of growth”. As industrial ecologist Robert Ayres [Ayres, R. (2008) *Ecological Economics* 67: 281-310] has pointed out: “consumption (leading to investment and technological progress) drives growth, just as growth and technological progress drives consumption” (see footnote 25).

⁵³ UNEP (2011) *Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication* (New York: UNEP).

- “There is much more private capital available than the financial resources of the public sector. However, many developing countries have limited access to private capital. A large amount of the funds needed for green investments at scale in the initial stages of the transition towards a green economy must come from new and innovative financing mechanisms. In this regard, the new Green Climate Fund and nascent REDD+ funding mechanisms offer significant hope for achieving the finance required. Where national budgetary conditions are limited, multilateral development banks are ideally positioned to offer financial assistance to enable these countries to embark on a green development trajectory.”

2.6.4 The need for a new paradigm

The ‘green’ economy as meant above incorporates many other concepts of a more sustainable economy, notably: A Low-Carbon Economy, a Circular Economy, Sustainable Consumption and Production (SCP), Green Growth and the Green New Deal (GND).⁵⁴ Even though a ‘green’ economy has numerous advantages over the current system, its building blocks are not very different from the ones that make up today’s free market economy. Growth and profit are still central items. It is interesting to see how putting the transition to a “green” economy into practice is mostly left to the free markets, even though it is acknowledged that “world leaders, civil society and leading businesses should collaboratively engage in this transition” and that “a sustained effort will be required on the part of policy makers and their constituents to rethink and redefine traditional measures of wealth, prosperity and well-being.” If wealth, prosperity and well-being are the ultimate goal(s) of the transition to a ‘green’ economy, shouldn’t the rethinking and redefinition of their traditional measures receive more thought beforehand? Shouldn’t civil society be much better informed about what is lying ahead in the business-as-usual scenario and what kind of transition out of that scenario might be possible? Shouldn’t new, effective public institutions be established to accompany and survey a (any) transition instead of expecting that the free markets will bring it about?⁵⁵ Economic growth (not just immaterial growth) is, once more, a central theme. Not a dynamic equilibrium of the entire natural system is pursued but growth. Yet, even in a totally “green” economy, (material) growth has a limit, imposed by the regenerative capacity (resilience) of the entire natural system. Might not our entire, current, socio-ecologic and economic regime be up for a systemic redesign?⁵⁶ The flaws in the current regime have been recognized by many and in recent years also by the United Nations General Assembly and the U.N. Secretary General in the context of Global (Economic) Governance, and consensus is building about the need for change toward “equitable, sustainable and inclusive development.”⁵⁷

As important as the attention for ‘green economy’ is, maintaining its context – namely the current, macro-economic paradigm of relentless, free market based economic growth, claiming the pursuit of ‘happiness’, for all – is again curing the symptoms. ⁵⁸ It should be abandoned and replaced by a new macro-economic paradigm in which human kind’s

⁵⁴ Sheng Fulai (2010); see: <http://www.unep.org/civil-society/Portals/59/Documents/GMGFS12-GE-Conceptual-Issues.pdf>

⁵⁵ B. Walker, et al, note-38: 1345-1346.

⁵⁶ R. Beddoe, et al. (2009) PNAS:106:2483-2489.

⁵⁷ See: <http://www.un.org/esa/ffd/economicgovernance/index.htm>

⁵⁸ The orientation on ‘happiness’ of individual people prevents logically the orientation on processes in and between societal wholes which are decisive for unsustainable or sustainable conditions.

balance with the rest of nature is strived at, and in which equitable and qualitative - rather than quantitative – development toward sustainability is the focal point. In that case politics for stimulating ‘green economy ‘ are supporting values, connected with processes leading to the development of sustainability (Figure-1). In its hallmark 2009 report “Prosperity without Growth? the U.K. Sustainable Development Commission presents 12 steps – divided over 3 (more-or-less classical) themes: Building a macro-economics for sustainability, protecting capabilities for social flourishing, and respecting ecological limits - to a sustainable economy (see note-45). Especially the second theme is of interest as it is not mentioned often in this way, but – in our view – of crucial importance in achieving well-rooted sustainability. The Commission offers five policy areas in which capabilities for social flourishing can be protected: (i) sharing work and improving the work-life balance; (ii) tackling systemic inequality; (iii) measuring prosperity; (iv) strengthening human and social capital; and (v) reversing the culture of consumerism. And in this plea we recognize again the application of the adjective ‘social’ without any relation with a theoretical based understanding of the noun ‘the social’ as intellectual instrument for analyzing processes and changes of complexities of human actions. And in the same vein, ‘social capital’ is neither ‘social’, nor ‘capital’ It remains without any meaning.⁵⁹ With regard to the advocates of the concept of ‘social capital,’ Hayek (see footnote 7) was completely right.

Seeing sustainability as a matter consisting of four dimensions – namely economic, socio-politically, culturally and environmentally – it is from a social quality perspective obvious that we need a new theoretical framework that allows their integration in order to elaborate a sound understanding and ways for implementing a strategy of development toward sustainability. It is of utmost importance that such theoretical framework will only be possible if the understanding of the economic dimension is re-grounded in an elaborated understanding of political economy. The advantages of letting the social quality theory (in complementarity with the human security discourse) fulfill this role are discussed in section-3. In the following subsection we will address our attention to sustainable urban development as a condition for the overall sustainability. It is here where all dimensions of sustainability are ‘realized’ and will produce forces and circumstances which will provoke highly unsustainable conditions or a change into the development of sustainability. This is an urgent question, because ‘urban research and policy are still highly sectoral and not adapted to handle the complexity of urban sustainability’.⁶⁰ Because also the ‘economic dimension’ will be realized in the urban circumstances it will be possible by reflecting sustainable urban development to pave the way for a new economic orientation as well. These circumstances function as point of departure for the paradigm shift.

2.6.4 Two approaches for addressing sustainability and its economic dimension

2.6.4.1 A new hallmark report: Economic performance and social progress⁶¹

⁵⁹ See for a different comments on social capital, Laurent J.G. van der Maesen and Alan Walker (eds), see note-2, A highly interesting comment is by: D. Coole (2009), Repairing Civil Society and Experimenting with Power: A Genealogy of Social Capital, *Political Studies*, 57 92), pp. 374-96.

⁶⁰ See the European conference on sustainability, note-2, p. 26.

⁶¹ This subsection is based on the article by Peter Herrmann about ‘Economic performance, social progress and social Quality (to be published in: The International Journal of Social Quality, forthcoming)

On the initiative of the French president in 2008 a 'Commission on the Measurement of Economic Performance and social Progress' started its work under the lead of Stiglitz, Sen and Fitoussi. They published their first study soon after.⁶² It refers to increasing concerns in assessing the traditional mainstream measures as they are in particular based on GDP-indicators. In fact the main source of inspiration is the discontent with respect to recent developments rather than being based on a strategic vision. Their question is how to transform or to translate material wealth into social wealth.⁶³ From many sides this question is taken on board. Not least the debate on the 'Green Deal' as it is performed in very different frameworks, belongs in this row. Secondly, a wide range of economic schools play a role. The starting point is an eclectic one. The economic perspective relies on a classical emphasis of demand as driving force, where in the supply side, it entrusts Keynesian emphasis of supply as driving force. Against this background, the main thread of the report spins around three questions or dimensions, namely: (i) the traditional GDP-issues, (ii) the quality of life, and (iii) sustainable development.⁶⁴ By isolating these three subjects systematically from each other, Stiglitz et al prevents ex ante a genuinely integrated view. But as noticed, it is neither their source of inspiration.

By separating these subjects they refer to a technical rapprochement, explicitly restricting their work to a pragmatic approach with help of limited-scope 'synthetic indicators'.⁶⁵ Herewith they tackle the fundamental parameters of the present systems as unquestionable, only looking for possible parameters for incremental changes and improvements. And this reflects very much the current concerns of policy-makers. These are more about ways of better administering different aspects of life, rather than about making a change to real life of people in such a way it will contribute to development of sustainability. Therefore they are in favor of even more piecemeal approaches to polity development, and the outcome is contrary to the actual claims for empowering people to better manage their lives. As such it is undermining any systematic and holistic policy development of different interests. Governance and evidence-based or indicator-oriented political practice are then very much an issue of dealing helplessly with existing and recognized complexities, proposing a misleading understanding of indicators as measurement instruments.

Essential of their study is to consider the three aspects, referred to above, as distinct dimensions (or subsystems), preventing the understanding of the functional dependencies that go beyond the three dimensions. Therefore this study fails for logically reasons to acknowledge the distinct functional role of the socio-political dimension of sustainability as power system with a reach that goes much beyond a self-referential system. Again, it is for the same logically reasons unable to perceive sustainability as an overarching concept. The serious consequence is that their approach does not even allow to ask the question if and in which way for example the current thinking and actions/strategies within the economic dimension of sustainability is worth to be maintained. They will explicitly develop mechanisms that allow a reduction of the production of externalities. However, the core important question, namely do we want to maintain the current thinking and related

⁶² J. Stiglitz, A. Sen and J-P Fitoussi (2009) *Report by the Commission on the Measurement of Economic Performance and Social Progress* (www.stiglitz-sen-fitoussi.fr).

⁶³ And again in this case, it remains totally unclear what the adjective 'social' means: what is 'social wealth'?

⁶⁴ Also unclear remains what they mean with 'quality of life'. This concept has the same status as the concept of the 'social dimension' of sustainability. It therefore, lacks a heuristic meaning for understanding 'development toward sustainability'.

⁶⁵ J. Stiglitz, A. Sen, and J-P Fitoussi (2010) *Report by the commission on the Measurement of Economic Performance and social Progress: Reflections and Overview* (www.stiglitz-sen-fitoussi.fr) p.59

actions/strategies and/or what exactly do we aim at, remains unanswered. They are not able to engage seriously in debates on economic development without growth.

To change lifestyles in order to act more responsible towards societal relationships and the environment – concerning respectively the small and broad interpretation of sustainability – implies an economic orientation which goes beyond managerial technocratic based piecemeal approaches. At stake is the need to acknowledge the fact of accumulation regimes “*as stabilization over a long period of the allocation of the net product between consumption and accumulation which implies some correspondence between the transformation of both the conditions of production and the conditions of the reproduction of wage earners*”.⁶⁶ This points out that production processes, forms of distribution and patterns of consumption as well as the treatment of the environment can only be understood as an ‘organic whole’ and implies an comprehensive approach and understanding. According to this way of reasoning, the separation of the different realms of societal existence – economic activity, quality of daily (mostly urban) circumstances and environment – as it is maintained in their study runs into danger of not only perpetuating the given patterns but moreover to move them towards serious mal-developments. Namely, better management as further segmentation and tight-fastening the borders between the different dimensions. Notwithstanding its important aspects, their study lacks a theoretically well-grounded conceptual framework for integrating all relevant dimensions which determine the nature of sustainability.

The study by Stiglitz et al as one of the current relevant endeavors addressing the challenge of sustainability - allows by its very pragmatic approach the justification for a substantial and ongoing separation, here of the economic dimension, the so-called social dimension (or quality of life) and the ecological dimension. Also in this case – and in line with nearly all studies on sustainable development conducted over the past three decades – the so-called social dimension remains also in their perspective a bin liner of all aspects of societal wholes outside of artificially separated economic and ecological realms. And at the same time – and this is crucial – ‘the social’ itself is very much issued in an individualist way.⁶⁷ This is already getting clear by the orientation on the concept of Quality of Life, which is itself highly problematic.⁶⁸ Furthermore, mainstream debates on social policy and its relationship to economy - as they are implicitly underlying the concept in the report by Stiglitz et al - are characterized by two perspectives. On the one hand - and dominantly – we find the emphasis of economy. It is suggested that we first need to produce the material resources which are then, via social policy, (re-)distributed. On the other hand the productive role of social policy is emphasized, implicitly defining all other policies in a handmaiden position compared to economic policies.. Both perspectives are caught in a traditional model which does in no way question the market as dominant and only pattern of a productive system.

Generating values is not seen as matter of what people are doing, as core of the productive process itself and as such linked to use values. On the contrary, such argument proposes that generating values is equal to generating money. A fundamental consequence of their

⁶⁶ A. Lipietz (19876), New tendencies in the International Division of Labor: Regimes of Accumulation and Modes of Regulation, in: A.J. Scott and M. Michael (eds) *Production, Work, Territory. The Geographical Anatomy of Industrial Capitalism* (Boston/London/Sidney: Allen & Unwin), pp. 16-40, p.19.

⁶⁷ This is also completely clear in the presentation by the OECD of the main conclusions of the Third OECD World Forum Measuring the Progress of Societies and proposals for future work: OECD (2009).

⁶⁸ Laurent J.G. van der Maesen and Alan Walker, see note-3, Chapter-11.

proposal of pragmatic 'synthetic indicators' is that they are not based in processes which determine the impossibility or possibility of sustainable urban development. Sustainable urban development - as a condition of development toward sustainability - is not the subject of their analysis. And this is the case with nearly all recent studies about sustainability. They remain two worlds apart. Their pragmatic based indicators cannot function as mediators between both worlds, because they are neither theoretically nor methodologically related to both worlds. For relevant politics and policies to address the most important challenge of human mankind this point is highly crucial and should be addressed for making progress.

2.6.4.2 European Sustainability Indicators (SDI)

Interesting is to notice that the ideas about 'pragmatic indicators' in the hallmark report, discussed in the previous subsection, Stiglitz et al remain in the actual tradition of the Western world to work with 'at random' indicators for understanding a subject – in this case 'social progress' – which remain undefined. This is called pragmatism.⁶⁹ A familiar approach concerns the European commission's approach of the elaboration of 'sustainability indicators'. It is an outcome of the strategy for sustainable development adopted by the European Council in Gothenburg in June 2001. The aim was and is to monitor the implementation of related policies.⁷⁰ The European Commission requested researchers to prepare a set 'sustainable development indicators' (SDI). This may be a Freudian slip. They should be indicators measuring the nature of sustainability rather than developing 'sustainable indicators'. One of the challenges is to connect economic and environmental sustainability by relating the Gothenburg strategy and the Lisbon Strategy for making the European Union the most competitive part of the world. Therefore, a framework has been produced by experts within the SDI Task Force, elaborating the conclusions of the European Council held in Barcelona⁷¹, and the Declaration of the Johannesburg World Summit on Sustainable Development.⁷²

The Commission is aware of the need for a framework for the selection and development of indicators. Notwithstanding this, it is recognised that any framework on its own would be an imperfect tool for expressing complexities and interrelationships encompassed by this threefold sustainability as concluded in the United Nation's report.⁷³ Independent of this conclusion, an ad random choice has been made for ten themes to explore the threefold sustainability: economic development, poverty and social exclusion, ageing society, public health, climate change and energy, production and consumption patterns, management of natural resources, transport, good governance, global partnership.⁷⁴

⁶⁹ This is also the case with the study about social inclusion and its indicators by: T. Atkinson, B. Cantillon, E. Marlier and B. Nolan (2002) *Social Indicators: The EU and Social Inclusion* (Oxford: oxford University Press). At random indicators are also used in the quality of life, social development and social capital approaches.

⁷⁰ European Commission (2001), '*A Sustainable Europe for a Better World: A European Strategy for Sustainable Development*' (Brussels: Commission Communication COM ,264 final).

⁷¹ European Commission (2002), '*Towards a global partnership for sustainable development*' (Brussels: Commission Communication COM , 82 final).

⁷² European Commission (2003), '*The World Summit on Sustainable Development one year on: implementing our commitments*' (Brussels: Commission Communication COM , 829 final).

⁷³ UN Division for Sustainable Development (2001), '*Indicators of sustainable Development: Guidelines and Methodologies*, (New York: United Nations).

⁷⁴ European Commission (2005), '*Sustainable Development Indicators to monitor the implementation of the EU Sustainable Development Strategy*' (Brussels: Commission Communication SEC ,161 final).

These themes as such are relevant, but what are the arguments for this choice? Furthermore, how to understand the nature of these empirical expressions as consequences of mechanisms and policies which transform societies in a comprehensive way? In other words, what are the characteristics of the framework used to recognise these mechanisms and to interrelate these (and other) themes? Again, the Commission recognises the overlap of the themes *“and that the scope of these themes differs considerably as some themes address a very specific domain (e.g. climate change and energy) and some (e.g. production and consumption patterns) encompass a wide variety of general socio-economic and environmental issues. Accordingly, the framework is based on a strict prioritisation of indicators inside each theme, but it ensures, with the help of standardised concepts, definitions and classifications, the structuring of information in a manner that facilitates the use of indicators in the monitoring of progress in other themes too.”*⁷⁵ With regard to the set of selection criteria the Commission remarks that it is close to that used for the Laeken indicators.⁷⁶ According to the Commission, an indicator *“should capture the essence of the problem and have a clear and accepted normative interpretation, an indicator should be robust and statistically validated, (...) the portfolio of indicators should be as transparent and accessible as possible to the citizens of the European Union”*.⁷⁷ This is important but it concerns the formal aspects of indicators.

How to determine the indicators of the ten themes mentioned by the Commission (and the SDI Task Force)? We may conclude, indicators to measure the tendencies and policy outcomes with regard to the ten themes are based on a common sense understanding of the ‘realities’ concerning these themes. They are based on inductive forms of reasoning without confronting (or connecting) this with deductive forms of reasoning. In fact, it is a form of empiricism which was supposed to be functional for the implementation of the Lisbon Agenda, for making the European Union the most competitive region of the world.⁷⁸ This Agenda did not clarify and address the possibilities of a structural contradiction between the dominant interpretations of competitiveness and sustainability in a global context.

3. Urban development towards sustainability

3.1 Introduction

Exploring the different dimensions of sustainability should be connected with explorations of urban processes and developments on global level, because it is here, where sustainability will be destroyed or increased. The conclusions by UN Habitat are important for taking on board this topic for looking to new strategies, politics and policies. It says, that *“the first decade of the twenty-first century has been marked by overwhelming challenges including a food crisis, an energy crisis, a financial crisis, and growing realization of the consequences of climate change. Thousands of organizations are developing tools and offering policy options to meet these challenges. But these activities are disparate and tend to ignore an equally unprecedented mega trend: that the world is undergoing an irreversible process of rapid*

⁷⁵ See note- , page-5.

⁷⁶ These so-called ‘Laeken indicators’ concern the indicators presented by Atkinson et al, see note-69.

⁷⁷ See note-74 , page-5.

⁷⁸ Council of European Union (2000), *Presidency conclusions* (Lisbon: Release SN 100/100).

urbanization. Failure to accommodate this mega trend has resulted in unsustainable forms of production and consumption, poverty and social exclusion, and pollution.”⁷⁹ We agree, and with this in mind we discuss this topic as a condition for a meaningful discourse on sustainability.

3.2 Cities and their ecological footprint

As compared to 2008, when 50% of the world population lived in cities, by 2050 this number will have risen to more than 70%, with most of the growth occurring in developing regions.⁸⁰ Even though many new megacities (more than 10 million inhabitants) and hypercities (more than 20 million inhabitants) will emerge over the next few decades, most of the new city inhabitants will be found in smaller, often institutionally weak, settlements of 100,000 – 250,000 people. If we also take into account that, today, about 1 billion people (one-third of the world’s urban population) live in slums in inequitable and life-threatening conditions and are directly affected by increasingly frequently occurring environmental and societal crises, it becomes clear that much of the developmental work toward sustainability will have to be directed at cities - and (ultimately) be carried out by cities. The two Figures below show the contribution of cities to today’s unsustainable activities of humanity.

Figure 5: Ecological Footprint vs. Human Development Index

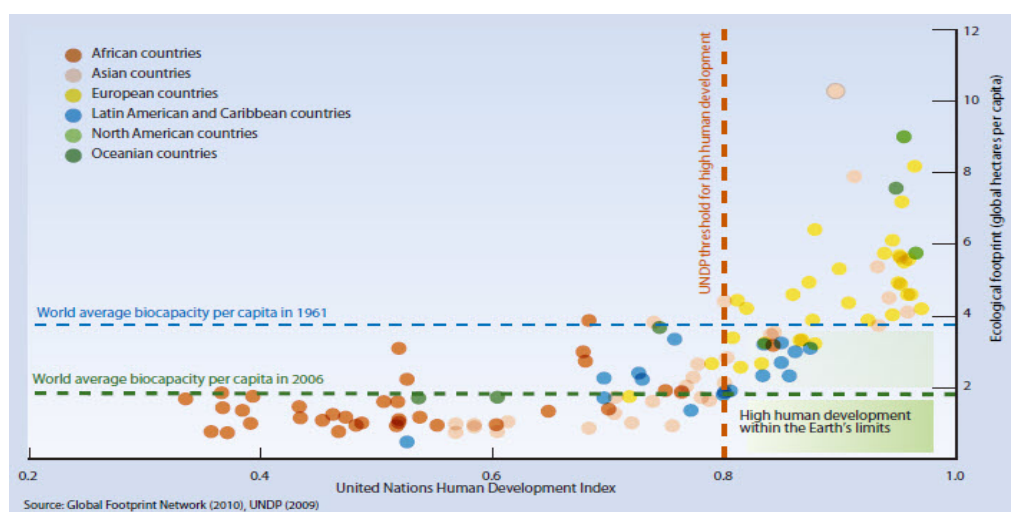


Figure-5 shows the relationship between the Ecological Footprint⁸¹ (in global hectares per capita) and the U.N Human Development Index (HDI)⁸², a composite index, comprising inter alia education, life expectancy at birth, gross income per capita, health, living standards, years of schooling, etc.) for various countries grouped by continent. It also shows the world average biocapacity for 1961 and 2006 (which is about 50% of what it was in 1961 and largely attributable to population size increase over that period of time) and the UNDP

⁷⁹ UN Habitat (2009) *For a better Urban Future* (Paris: UN).

⁸⁰ UN Habitat (2009) *Global Report on Human Settlements 2009 - Planning Sustainable Cities* (New York: UN habitat).

⁸¹ See: <http://www.footprintnetwork.org/en/index.php/GFN/>

⁸² See: <http://hdr.undp.org/en/statistics/hdi/>

threshold for high human development.⁸³ The Ecological Footprint tends to progressively rise above the world average biocapacity per capita when the HDI becomes larger than approx. 0.7. The area in which high human development (HDI > 0.8) would be within the Earth's resource limits (i.e., within its biocapacity) is indicated in green in the lower right corner of the graph.⁸⁴

Figure 6: National Ecological Footprint vs. Human Development Index

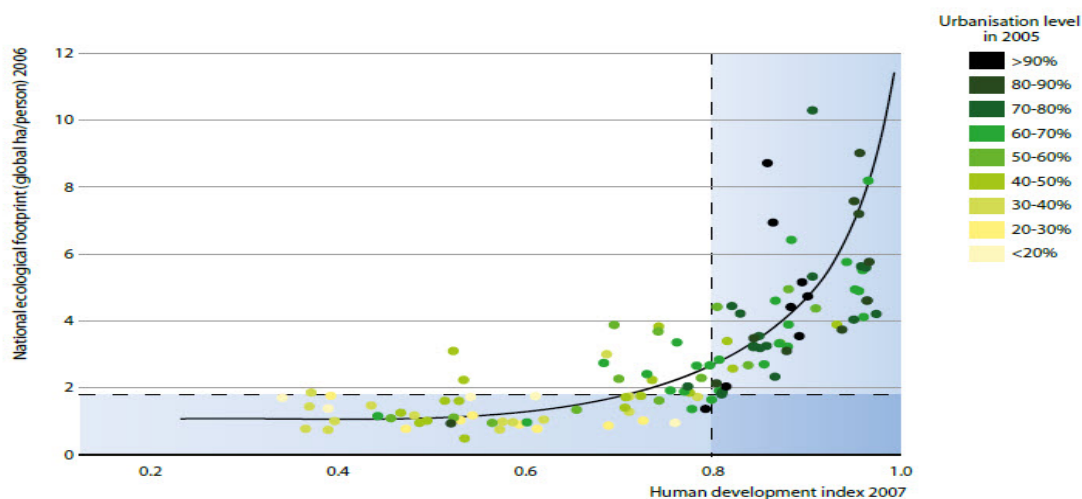


Figure 2: Ecological footprint, HDI and urbanisation level by country

Source: LSE Cities based on multiple sources

Figure-6 shows the relationship between the National Ecological Footprint and the Human Development Index for various countries *with different degrees of urbanization*. Many countries with an HDI > 0.7 have a National Ecological Footprint well above the world average biocapacity per capita. These same countries also have a relatively high degree of urbanization. Figure-6 is essentially a copy of Figure-5 but with the countries color-coded according to their level of urbanization. Some caution is called for when interpreting Figure-5 and Figure-6. Both the Ecological Footprint (EF), a composite index which gives an impression of the extent to which humanity is using nature's resources faster than they can regenerate, and the Biocapacity (BC), which is a (composite) measure of the bioproductive supply, do not represent the full range of environmental problems. A critical analysis of the shortcomings (and advantages) of EF/BC accounting can be found in a Eurostat working paper by Schaefer et al.⁸⁵ However, for our purpose of showing that there is a direct relationship between the level of urbanization and unsustainability, the Figures are adequate.

3.3 Sustainable cities

⁸³ The HDI applies similar methodologies as discussed above (see note-69 and subsection 2.6.4.2)

⁸⁴ Interestingly, at a very high HDI (0.95), the Ecological Footprint can vary between 4 and 9. One might be tempted to ask the question: What would happen to a country's high HDI if it were to reduce its Ecological Footprint?

⁸⁵ See: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-AU-06-001/EN/KS-AU-06-001-EN.PDF

In order to develop politics and policies for development toward sustainability we should know more about the urban context people live in and what should be changed in order to contribute to this development, since this context is decisive for sustainable conditions.⁸⁶ In other words in what cities do we live and do we want to live? Recently, it became clear from a European-wide research in 60 cities, that more and new instruments are needed to successfully implement and execute politics and policies for development toward sustainability. But the outcomes demonstrated, that no consensus exists on what sustainable urban development is and which urban methodological framework should be applied for supporting this development. Therefore pleas are made for new types of professional knowledge, relationships between planning systems and property development, links between public and private sector organisations, ideas about long term responsibilities and new working practices for engaging with the public. There is an urgent need for insights into “role models” and “good practices” of sustainable integrated urban development. New instruments are also needed to improve governance. Important elements of improved governance include the realm of cooperation (improved multi-level government cooperation or coordination, stimulating cross-regional cooperation, etc.) and citizen participation (facilitating bottom-up initiatives, increasing the influence of citizens, businesses and social organisations, etc.)⁸⁷ This lack of consensus and the lack of acceptable and meaningful strategies are also caused by missing a connection between the discourses on the overall sustainability and on sustainable urban development. They are two totally separated ‘worlds’.

Cities are not isolated entities; they interact with their (sometimes far-out) surroundings – economically, socio-politically (as part of a sovereign nation) and environmentally. Hence, urban development (or: local development) toward sustainability has to take into account the carrying capacity of the entire ecosystem supporting such development, including the prevention and mitigation of adverse environmental impacts occurring outside urban areas.⁸⁸ (Sub)urban sprawl, slums at the periphery of a city, transport of people, goods and resources in and out of a city, waste removal from a city, rural land use by a city, GHG emissions by a city, are all examples of factors that blur the socio-ecological boundary of a city with regard to its surroundings. Thus, international and national (and urban) strategies and policies for development toward ‘overall’ sustainability not only have to have a strong emphasis on development toward sustainability of cities themselves (internal sustainability) but also – simultaneously - address the development toward sustainability of the cities’ surroundings (‘Hinterland’.) This systemic approach is often lacking, and should be addressed at the 2012 Rio+20 Earth Summit, as it requires streamlining and integration of international, national, regional, and urban strategies to development toward sustainability. Although very informative on its own, the 2009 U.N. Habitat Global Report for a better urban future (see footnote-61) for example, is very much directed at the internal sustainability of cities. The 2011 UNEP Report “Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication” devotes a chapter to the role of cities (without making a distinction between internal and external sustainability) in a transition to a “green economy,” but gives

⁸⁶ J. Zghao, d. Dai, T. Lin, and L. Tang (2010) Rapid Urbanisation, Ecological Effects and Sustainability city construction in Xiamen, *Sustainable Development and World Ecology*, 17 (4): pp. 271-73.

⁸⁷ K. van Dijken, M. Grisel, W. Hafkamp (2008), *Levers of public action for the development of sustainable cities* (The Hague: Nicis Institute).

⁸⁸ Opschoor, J.B. (2011) Local sustainable development and carbon-neutrality in cities in developing and emerging countries. *International Journal of Sustainable Development & World Ecology* 18(3), in the press.

relatively few handles on how cities in developing and emerging countries can/should be enabled to make such a transition.⁸⁹

An Expert Group Meeting, convened by U.N. Habitat in early February 2011, to explore the linkages between the “Green Economy” agenda and U.N. Habitat’s traditional “Urban Agenda,” stated that: “The notion of a ‘low carbon economy’ or ‘green economy’ is really the ideological manifestation of this attempt to decouple growth from a dependence on abundant cheap resources.⁹⁰ How this kind of decoupling relates to urban infrastructure investments is what connects the ‘low carbon’ green economy’ agenda to the ‘sustainable urban development’ agenda,” and “in a world where the majority are urbanised, the global economy’s production and consumption systems are dependent on the urban infrastructures of the cities for conducting the most important resource flows (energy, water, sanitation, solid waste, mobility, food). How these urban infrastructures are configured determines how these resources are deployed, used and re-used. However, the urban infrastructures in many (mainly developing country) cities are totally inadequate or (as is the case in many developed country cities) inappropriately configured from a sustainable resource use perspective.” Their message is that “to ensure that green economy initiatives achieve the goal of shared prosperity with societal resilience against future shocks and surprises, a clear and shared definition of what it means for sustainable urban development will be required before the Earth Summit 2012.”

In any drive toward sustainability of cities, all aspects of society (economical, socio-political, cultural and environmental) have to be included. Cities are complex entities, with population densities that are often – especially in megacities and hypercities – well over 2,000 per square kilometer. Apart from the economic and environmental aspects, which traditionally receive most of the attention, the socio-political and cultural dimensions of cities will need to be drawn explicitly into the discussion. A transition to a state of sustainability will profoundly alter the way in which people live in cities. Governance, the availability of shared (public) goods or ‘commons’, existing inequalities (for example in standard of living) and inequity, participation, education, ‘livability’ of cities and the sustainability-awareness of city dwellers, just to name a few topics, will need to be put into the equation. For this to be achieved, an adequate **societal theory framework** is needed (inter alia.) In other words, the approach to development toward sustainability of cities needs to be fundamental, integral and systemic.

Too often, it is thought that a drive toward a ‘green’ economy will automatically and largely – and in the time frame of a few decades or less - take care of the issues mentioned above.⁹¹ This is problematic. It hasn’t worked in the – still dominating – classic economic growth system; why would it work in an economy that takes away much of the pressure on the environment? The argument is often used that the transition to a ‘green’ economy creates numerous new jobs but what about the “old” jobs that will become obsolete? How is extreme poverty eradicated in the type of ‘green’ system which is currently proposed? In the end, one might ask the legitimate question whether, for example, megacities and hypercities can ever

⁸⁹ UNEP (2011) *Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication* (New York: UNEP).

⁹⁰ What does the Green Economy Mean for Sustainable Urban Development? Expert Group Meeting; see <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3096>

⁹¹ UNEP’s Report “Towards a Green Economy” (see note-89) even hints at 2020 as kind of turning point.

reach a state of internal and external sustainability. If they – theoretically - can, the actual, fundamental and systemic changes they will need to undergo may take generations instead of a couple of decades, especially in the developing world.

3.4 Conclusions and the meaning of social innovation

We may conclude from previous subsections, that the notion is strengthened that, **first**, discussions and research on the overall sustainability and sustainable urban development should be intrinsically connected in order for both to be meaningful. **Second**, politics and policies for as well development toward sustainability as sustainable urban development should be for theoretical and practical reasons refer to a same conceptual and methodological framework. It is especially the UN-Habitat which permanently tries to connect both themes. **Third**, especially the practices of sustainable urban development may demonstrate the consequences in daily circumstances of the economic, socio-political, cultural and environmental dimensions. In this ‘praxis’ we will find the decisive arguments why the economic dimension should be supportive to overarching societal goals and related values and norms. In the enormous and voluminous preparation of the RIO+ conference in June 2012 we miss the dedication to and the elaboration of these three topics.

This is an argument to take on board the social quality approach for developing a new perspective. There is also another argument. It is the European Commission, which launched the ‘Flagship initiative Innovation Union’ or the so-called ‘social innovation policies.’⁹² But here we may recognize the same problem as with the concept of the ‘social dimension’ of sustainability: what is the meaning of ‘social innovation’. This remains unclear in theories about social innovation.⁹³ The reason is the lack of theorizing the adjective ‘social’ of ‘social innovation’. This theorizing happens in the social quality approach. In fact it transcends ‘social innovation’ into ‘societal innovation’, which can be highly important for connecting the main challenges, namely the overall sustainability and sustainable urban development. The first endeavors are made in the Dutch City of The Hague to connect both challenges in one of its urban parts with innovative projects (societal innovation strategies) based on the social quality approach.⁹⁴

Section 4 An integrated approach to development toward sustainability

4.1 Introducing the concept of social quality

⁹² European commission (2009) *Social Innovation as part of the Europe 2020 Strategy* (Brussels: Bureau of European Policy Advisers); European Commission (2010) *Europe 2020 Flagship Initiative Innovation Union* (Brussels: Commission of the European Communities); European Commission (2010) *A Rationale for Action. Accompanying Document to ‘Europe 2020 Flagship Initiative Innovation Union* (Brussels: Commission of the European Communities’.

⁹³ P. Oeij, S. Dhondt and T. Korver (2011) Social Innovation, Workplace Innovation and Social Quality, *International Journal of Social Quality*, 1 (2): 31-49

⁹⁴ L.J.G. van der Maesen and P. Herrmann (2012) *Welfare Arrangements, Sustainable Urban Development and New forms of Governance: the recent ‘demonstration project’ of the city of The Hague* (The Hague: EFSQ, working paper nr.8, www.socialquality.org) T

Nearly all studies on sustainable development conducted over the past three decades discern three dimensions in the approach toward sustainability: the economic, the environmental, and the 'social' dimension. In those studies, the 'social' dimension has more or less fulfilled the role of a reservoir for all things not strictly economical or environmental. As such, this dimension has taken on the property of an unstructured, internally incoherent and inconsistent black box, with which – not surprisingly – little has been done in terms of formulating strategies for development toward sustainability. Examples of hallmark studies that suffer from this black box are the 1987 report by the Brundtland Commission (see footnote-10) and the recent report on the measurement of economic performance and social progress by Joseph Stiglitz and colleagues.⁹⁵ The latter report implicitly concludes that more research is needed to qualitatively and quantitatively assess the 'social' dimension and that 'quality of life' is more than just a matter of economics.⁹⁶

If, for analytical reasons, a multi-dimensional view of development toward sustainability is to be maintained, the 'social dimension' should be replaced by a socio-political dimension and a cultural dimension. In the 2009 report "People, the Economy and the Planet," the participants of the European conference on sustainability implicitly discriminate between a socio-political and a cultural dimension.⁹⁷ The socio-political dimension represents the authoritative (re)allocation of human and non-human resources⁹⁸ whereas the cultural dimension represents the whole of attitudes, motives and cognitive orientations of people as 'social beings', which influences sustainability and (lack of) development towards it.⁹⁹ Societies are not aggregates of people in an atomistic sense but ensembles of people as social beings. Per capita approaches may be interesting from a statistical point of view but they evade the relationships between people as well as the differences between people within the population for which the averages are calculated. Notwithstanding this, there is an increasing awareness of the fact that the most widely used indicator of economic progress, the Gross Domestic Product (GDP), does not necessarily reflect the well-being of all people (e.g., the people living in a given country) involved in producing that GDP. In addition, there is ample evidence that human well-being does not increase above a certain GDP value.¹⁰⁰ Yet, the Ecological Footprint does. Also, the GDP does not take into account externalities like damage to the environment as a result of economic activity.¹⁰¹

In reaction to the long-standing subordination of all policies oriented on societal aspects to economic policy, in the mid-1990s, in Europe, the idea of a comprehensive conception of the quality of people's everyday lives started to get developed into a new, all-encompassing theory: the theory of social quality.¹⁰² Social quality is defined as "*the extent to which people*

⁹⁵ J. E. Stiglitz et al, see note-62.

⁹⁶ J. E. Stiglitz et al, see note-65.

⁹⁷ See European conference, note-2.

⁹⁸ D. Easton (1967) *A systems analysis of Political Life* (New York, London, Sydney: John Wiley & sons).

⁹⁹ See for example the important work by Jean Piaget: E. Howard, e. Gruber and J.J. Voneche (1977), *the Essential Piaget* (New York: Basic Books).

¹⁰⁰ In their book "The Spirit Level: Why More Equal Societies Always Do Better" (2009, Allen Lane, London, U.K.), Wilkinson and Pickett show that equality is much more important for well-being than income (or GDP) by itself. Also see:

<http://www.equalitytrust.org.uk/>

¹⁰¹ Ironically, work done to repair the damage inflicted on the environment is included in the GDP.

¹⁰² W. Beck, L.J.G. van der Maesen, T. Thomese and A.C. Walker (eds) (2001) *Social Quality: A Vision for Europe* (The Hague/London/Boston: Kluwer Law International).

*are able to participate in social relationships under conditions which enhance their well-being, capacity and individual potential.*¹⁰³

This definition refers to the first assumption of social quality, namely people are essentially social beings. This means that individuality is an expression of the social nature of people. This refers to an Aristotelian principle, rejected by philosophers such as Hobbes, Kant, and Hume and more recently, by Sartre. According to this assumption, people are not atomized economic agents. Nor is it the psychology of individuals which holds the secret of human affairs, but, rather, the ensemble of relations of people as social beings. In other words, this assumption marks the difference between the social quality approach and utilitarian ones. This statement demands an elaboration of 'the social', for three reasons: to understand the adjective 'social'; to explain the ontological position in comparison to utilitarianism, and also voluntarism or structuralism; and to explicate the epistemological position necessary to understand the interactions of social beings building structures, practices and convention's. The unanswered challenge for analysis, politics and policies is that 'the social' is not only normatively assumed, but it is also defined indirectly as an external entity that is not part of the process of individual decision making and not needing a clear definition. In fact, this is based on a false premise: individual and society are not in contradistinction. The second assumption is people as social beings interact with each other, and these interactions constitute a diversity of collective identities which provide the contexts for their self-realization and which lead to manifestations of the social. In other words. A person's self-realisation is enabled through interaction within various collective identities.¹⁰⁴

4.2 The social quality architecture and the environmental question

Social quality is proposed as a goal for all policies oriented on societal relationships and aspects, thus also on **economic, socio-political, cultural and environmental politics and policies**. So, instead of maximizing economic growth in the expectation that it will lead to an enhanced "quality of life," one would try to maximize social quality and determine which (and to what extent) economic activities, permissible within the physical boundaries (or: within the "safe operating space;" see section-2), are needed to help achieve this. This points to a radically different approach to achieving sustainability, in that a sizeable, immaterial (qualitative) dimension of human well-being is already incorporated from the very start and that economic activities should be at the service of enhancing social quality – within the safe operating space.

How to analyze processes resulting into "the social" and its quality? Three sets of factors help us in understanding these processes and in determining the nature of its quality, i.e., social quality. They are derived from an ontological interpretation of "the social." This derivation is new compared to approaches of quality of life, social capital, human development, human security, capability, etc. It is the product of an explicit knowledge-based orientation. The first set is made up of the constitutional factors. They are - in first instance - oriented on the specific outcomes of processes of self-realization; how social beings become competent actors in societal wholes. With the help of the application of its profiles we are

¹⁰³ L.J.G. van der Maesen and A.C. Walker (eds), see note-3.

¹⁰⁴ L.J.G. van der Maesen and A.C. Walker (eds), see note-3, pp 45-46.

able to qualify the nature of these constitutional factors. The second set is formed by the conditional factors. They deal with the characteristics of daily circumstances influenced by achievements of the actors. Using appropriate indicators, we will be able to gauge the changes of the conditional factors as aspects of societal wholes. The third set contains the normative factors with which the outcomes of the linking of the constitutional and the conditional factors can be judged. Together they function as the 'social quality architecture' to explore processes and to judge their results (see Figure-7).

Figure 7: *The Social Quality Architecture + the so-called 'eco-factors'*

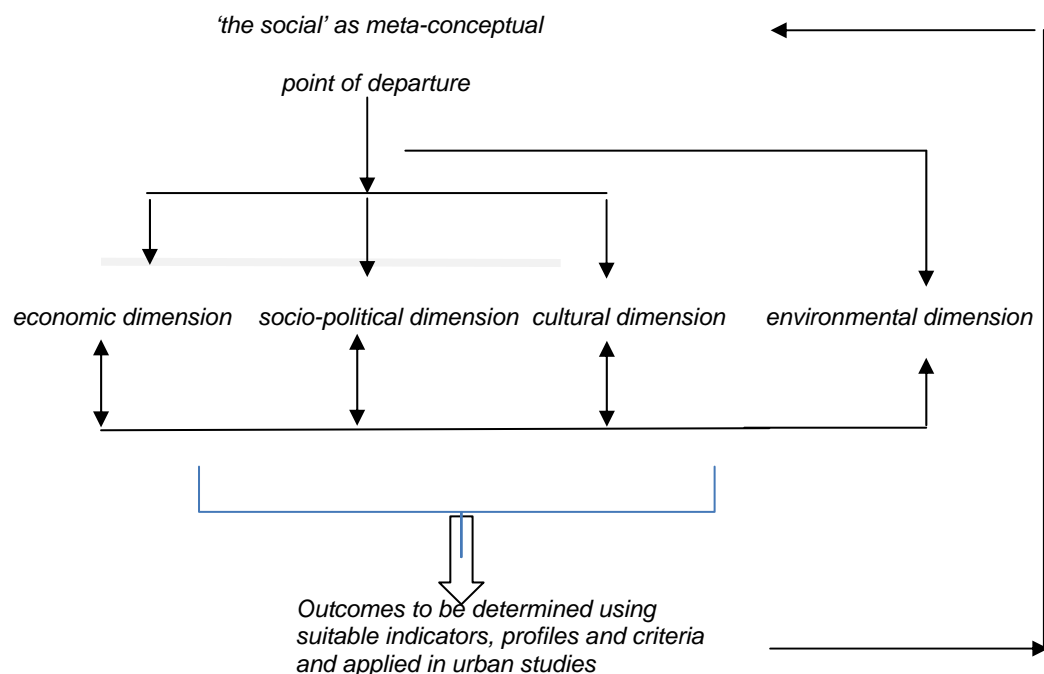
Constitutional factors (processes)	Conditional factors (opportunities + contingencies)	Normative factors (orientation)
[eco-conscience] personal (human) security social recognition social responsiveness personal (human) capacity	[eco-reality] socio-economic security social cohesion social inclusion social empowerment	[eco-equilibrium (systemic)] social justice (equity) Solidarity equal value human dignity
profiles as instruments for the qualification of their nature and changes	indicators as instruments for exploring their changes by trends and policies	criteria as instruments for judging the linking of constitutional and conditional factors

Explorations of the conditional factors tell us whether societal structures may be more or less aware of their positioning in and dependence on the entire natural system (thereby effecting eco-relationships); societal structures may be more or less enabling and supportive (thereby affecting social empowerment); institutions and groups may be more or less accessible (thereby affecting social inclusion); people will have variable access to natural and other resources (thereby affecting socio-economic security); and their society and communities will be characterized by different forms and levels of cohesion (social cohesion.) It is envisaged

that the nature and change of the conditional factors can be explored using indicators and then combined into a composite index of social quality. In this architecture, economic activity is (just) one of the means to attain a high quality of everyday life and daily circumstances. It is an instrument, not (largely) a goal in itself. Also, the environmental dimension is no longer an “external” issue.¹⁰⁵ In contradistinction to indicators’ research, the social quality indicators of the conditional factors are not based on ‘ad random choices’, but derived from the theoretical based connections of the four conditional factors (and their different domains) with the theoretical based interpretation of ‘the social’.

These three set of factors each concern four elements helpful to understand processes which change the complexities of human activities, resulting into the change of societal wholes.¹⁰⁶ For sustainability, the economic, socio-political and cultural dimensions concern the heart of the matter of these complexities. The results will influence the state of affairs of the environmental dimension. The connection between the complexities of human activities and the environmental dimension (see also Figure-8) implies specific ‘environmental elements’, added in the top of the social quality architecture. It illustrates the idea that sustainability refers to a state of dynamic equilibrium of the complexities of the outcomes of human actions which remain within the resilience boundaries. As argued, we may distinguish between three main dimensions of these complexities, namely the economic, socio-political and cultural dimensions. The resilience boundaries concern the environmental or ecological dimension.

Figure 8.: Integrating the four dimensions of sustainability



¹⁰⁵ The factors eco-conscience, eco-reality and eco-equilibrium have been tentatively added to the architecture of social quality. They do not yet appear in the architecture as contained in the recent study about social quality, see note-3.

¹⁰⁶ This architecture concerns the heart of the matter of the new study on social quality, see note-3.

The first challenge is to understand processes in and between the dimensions of the complexities of human actions, the economic, socio-political and cultural with the help of the instruments of the social quality architecture. The second challenge is to understand their consequences for the environmental dimension. With regard to the first challenge we need a framework to analyze processes which determine the nature and changes of the three dimensions and the holistic outcomes of these processes at the same time. For the second challenge we should be able to apply this framework in order to connect the first three dimensions with the fourth dimension, not only deductively but also inductively. The 'societal role' is dependent of the significance and role of the other concepts. The environmental dimension disposes of its own characteristics independent of the complexities of human actions. But these characteristics will be affected or changed by these complexities. From an anthropogenic point of view it is important to know how they change. Therefore we have to design 'environmental specific indicators' which can be confronted and/or connected with the social quality indicators. This connection will be possible, if these specific indicators are referring to respective the cognitive, objective and normative aspects (see architecture):

- Constitute the 'eco-conscience' of people and how this influences the four other constitutional factors,
- Determine the 'eco-reality' of people and how this influences the four other conditional factors,
- Construct the suppositions of the 'eco-equilibrium' of people and how this influences the four other normative factors.

In reference to the European exercises – see section -2.6.4.2 - we recognize a confusion of these related aspects, due to the lack of a theoretical groundwork. The proposed deduction-based procedure enables researchers and policy-makers to connect the outcomes of the complexities of human actions with the environmental dimension in an inductive (empirically oriented) way. It is important to realize that these indicators are not seen as measurement instruments in the mechanical sense, but as instruments for analyzing, initializing and influencing new complex societal trends. In this way the SQA avoids the 'pathological corruption of the reductionist approach'.¹⁰⁷ With this, social quality indicators analyzing the change of the conditional factors differ in an essential way from static oriented mainstream indicators, given their nature and their intrinsic connection with meaningful profiles and criteria. Application of this interrelated set of instruments will allow for a comprehensive understanding of the interrelated dimensions of sustainability and the results of new complex trends on these dimensions.

In order to understand the development toward sustainability we should therefore go beyond the existing gap between the dominant approaches of the economic dimension and the environmental dimension. Current answers on the so-called financial and economic crises are dictated by the mighty players in the global financial markets, pushing economic growth

¹⁰⁷ R. Bradbury (1996), Are Indicators yesterday's News?, in: Institute of Environmental Studies (ed.) *Tracking Progress: linking Environment and Economy through Indicators and Accounting Systems* (Sydney: the University of new South Wales). This refers to the article by: T. Cadman (2012) Evaluating the quality of global governance: A theoretical and analytical approach, in the International Journal of Social quality (forthcoming)..

and consumption of exchange values as a solution of the crises, and, therefore, widening the existing gap.¹⁰⁸

4.3 *Material growth and immaterial growth: the social quality's answer*

The SQA tentatively delivers a proposal concerning an adequate framework by theorizing 'the social'. It does not deliver an alternative of the 'social dimension' in mainstream discourses on sustainability, since in its theory the concept of 'the social' is an overarching concept including the economic dimension as well as the socio-political and the cultural dimension and it paves the way for a connection with the environmental dimension (as illustrated in Figure-8). At the same time it is applicable – as a result form the instruments of the social quality architecture - for explorations of the urban context and the way these dimensions are realized in this context. Hypothesized is, that the SQA is able to understand the integration of these four dimensions. As a consequence of this way of thinking, e.g. capital, production, or distribution are aspects of 'social relations' because 'the social' refers to the productive and reproductive relationships' (see below). In contrast to mainstream approaches, the SQA does not restrict the economic dimension to only enhancing productivity and pooling resources for distribution. It is fundamentally different, namely about being a 'social relationship' by itself.¹⁰⁹ As such it includes an understanding of the social process as productive relationship to nature. If it is really productive it has also to be sustainable; 'the social' itself, for the first time, is now approachable as being crucially a matter of sustainability and vice versa.

However the SQA goes at the same time further than mainstream approaches and e.g. Stiglitz et al. First, it distinguishes, develops and applies different sets of instruments - for analyzing the objectivity-based conditions (namely indicators), the cognition (subjective) based human constitutions (namely profiles) and the ethical or normative aspects (namely criteria) – to explore and understand processes **within and between** the three dimensions of the changing complexities, which will be confronted with the environmental dimension. Mainstream approaches do not bother about (i) instruments to analyse the dimensions respectively from the same conceptual point of departure, (ii) in order to be enabled to analyse their reciprocity (and holistic outcomes) with the help of the same framework. Application of the social quality architecture allows an integrated approach to development towards and achievement of sustainability, in an iterative way. Thus, a certain level of social quality would be aimed for and the economic, socio-political, cultural and environmental requirements needed to get to that level – well within the 'safe operating space' – would be determined. Appropriate indicators for quantitating the four conditional factors in confrontation with the indicators which would be used to determine progress and – if possible or necessary – adjust the level of social quality aimed at. The overall idea is to maximize social quality without transgressing the confinement of the safe operating space.

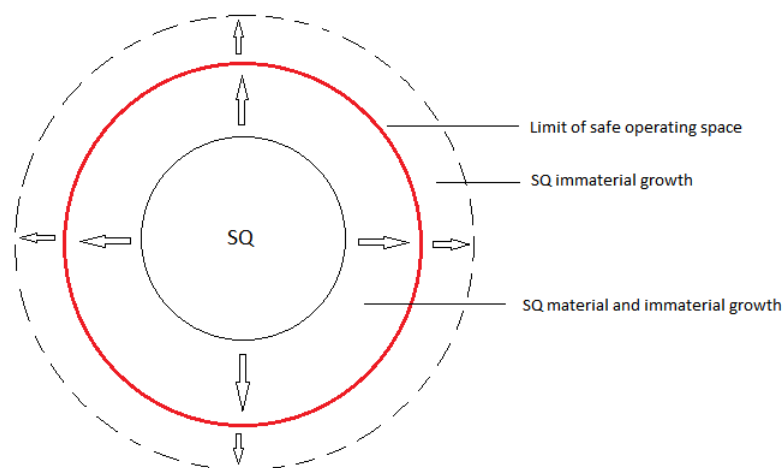
The 'material' (i.e., depending on the net use of natural resources) component of social quality would be allowed to increase until (well within) the limit of the safe operating space. Beyond that limit social quality may further increase but only in an 'immaterial' sense, i.e.,

¹⁰⁸ See the EC's conference, note-2.

¹⁰⁹ A. Callinicos (2010), *Bonfire of illusions. The Twin Crises of the Liberal World* (Cambridge: Polity).

without further net use of natural resources that cannot be regenerated in a relatively short time. This is illustrated in Figure-9.

Figure 9: Increase of social quality



The increase in social quality - material (i.e. net resource-dependent) plus immaterial (i.e. net resource-independent) - up to (and preferably well within) the limit of the safe operating space should be called “development toward sustainability” whereas the qualitative increase (immaterial) beyond the limit should be called ‘sustainable development’. How much immaterial increase in social quality will be possible beyond the limit of the safe operating space, is – of course – unknown and will depend on many factors, such as the rate and direction of evolution of the human species and of other components of the biosphere, on population size and demographic distribution, as well as on the evolution of the normative and constitutional factors of the social quality architecture.

Section 5: Conclusions and recommendations

5.1 Six benefits of the social quality approach

Reaching real sustainability of human existence on Earth requires fundamental changes in the four dimensions and their interrelationships. With regard to the economic dimension, ‘greening’ this dimension is just one of the targets; redefining ‘growth’ and letting go of unsustainable material growth is another. Markets need to be subjected to better conceive, direct and enforce regulation. Unnecessary trade will need to be identified and halted. A runaway production-consumption cycle will need to be curbed. New solutions will have to be found for – inter alia - effectively addressing overall inequity, inequality and extreme poverty. All of this will require new types of national and international institutions and new ways of governing. It will take strong leadership in the public and private sectors, or a change of the socio-political dimension. Much more effort will have to go into increasing people’s awareness about what it takes to pull out of the current, deeply unsustainable, situation and

steer a course toward a sustainable world. This concerns the cultural dimension. But most importantly, our attitude with regard to helping to shape our own future needs to change.

Development toward sustainability requires an integrated approach of its dimensions. Natural (sub) systems are often intricately interconnected and are confronted with the complexities of human activities. This implies the development of a comprehensive understanding of these dynamic processes. As argued, the social quality approach offers a way to analyse and to understand these dynamic processes for underpinning efforts toward sustainable development. Finally, development toward sustainability needs to have a serious point of gravity in cities. Cities will be the 'laboratories' of development toward sustainability. The reason is, these dynamic processes will be 'realized' in the urban context.

A highly important characteristic of current debates on sustainability is that: (i) they are addressing its dimensions as separate from each other, (ii) they do not encourage policy-makers, citizens and scientists to develop new instruments to go beyond these separated approaches – leading to their fundamental fragmentation and (iii) they strengthen implicitly traditional, market-oriented economic approaches for resolving the most urgent human challenge: 'sustainable existence' for future generations. This traditional economic – and individualistic oriented – approach with its logic of the commodification of all aspects of human life invites disaster. It will exhaust natural resources, destroy wildlife, pollute the oceans, stimulate uncontrolled migration waves and cause civil and international wars.

Compared to other approaches, the new social quality approach is especially oriented on changing societal structures and interrelationships and appreciates the economy as a 'means' to support politically and culturally determined 'ends' while also recognising environmental boundaries. Social quality refers to the material/objective, the cognitive/emotional and ethical aspects of human life. Due to recently undertaken work in Europe, Asia and Australia it present instruments for analysing and connecting these aspects with human dignity and justice, while re-orienting political and cultural objectives. This will change the 'handmaiden' role of politics towards economics, into a position whereby the economy is 'steered' by politics towards welfare and well-being instead. The scientific instruments of social quality (indicators, profiles and criteria) are applicable alike in the economic dimension of societies, as they are in the dimensions of welfare, health and care systems, housing, income, etc.

Therefore we may summarize six main benefits on global level:

First: by means of its logically constructed instruments, this theory and its orientation on policy practice is capable of reconceptualising the main dimensions of sustainability, as well as being able to analyse all these dimensions from the same perspective. This transcends the existing fragmentation of the dimensions of sustainability,

Second: its theory and tools are will assist policy-makers and citizens in paving the way for sustainable urban development. As has already is demonstrated it will deliver a new 'urban methodological framework' to build on a globally acceptable understanding of 'sustainable urban development'.

Third: thanks to the first and second points the social quality instrument helps connect existing approaches to sustainable urban development to overall sustainability. The logical basis of the range of the applied concepts presented in this report paves the way for realising connections that previously have been lacking. As a result the social quality approach helps place the question of urban development on the agenda of sustainability overall. In other words, as point of departure for new politics and policies this new theory is able – thanks to its level of abstraction – to connect (i) the different dimensions of sustainability with (ii) the concrete daily circumstances in urban circumstances and its environments. Therefore it presents an overarching tool, which all other approaches applied until now have been missing.

Fourth: most importantly this social quality approach provides a new perspective on understanding ‘economic growth’. In this theory and practice ‘economic growth’ concerns both the material and non-material dimensions. Peoples’ daily lives can be improved by increasing non-material as well material circumstances. Human security, social recognition, social responsiveness and personal capacity are dependent on non-material factors not simply the increase of material wealth. The non-material is highly important to emotional wellbeing.

Fifth: a logically-constructed set of social quality indicators has been in existence in Europe, Asia and Australia since the mid-200s, and has now been further elaborated for measuring the change of the conditional factors of daily circumstances. It provides a means for registering the changes and consequences within the urban context as if were a laboratory for sustainability overall. This globally-orchestrated exercise is a new development and is especially applicable to the first, second, third and fourth points above.

Sixth: thanks to this globally-based preparatory work, scholars will be able to connect social quality indicators (for understanding the change of societal structures) in a systematic way to indicators which measure environmental boundaries, and thereby make progress concerning the first and the second points.

5.2 Four recommendations and the main challenge

Thanks to the arguments, presented in previous sections, we are able to formulate the following recommendations:

- That policy makers support the definition of sustainability as: ‘*a state of dynamic equilibrium between the entire interactive ensemble of non-living and living entities, functioning within the boundaries of a resilient system*’. These living entities include the vast complex of human activities. Analysing these complexities requires a reinterpretation of the dimensions of sustainability and its interrelationships. The aim is to open the path towards changing the relationship between economics and politics, and challenges its normative leading principles

that the allocation of resources (by those in power) is the fundament of all politics and that only economics can determine the principles upon which society is based.

- That policymakers and international institutes support the scientific and political connection of the sustainability issue with sustainable urban development as a means of creating politics and policies which address the enhancement of sustainability overall;
- That policy makers and international institutes support the creation of two international networks of scientists on sustainability/sustainable urban development: for the Western world in The Hague; and the Eastern world in Hong Kong. These will go beyond the existing stagnated state of affairs and in comparison to other existing approaches will apply the new social quality framework. The new International Association on Social Quality and a number of international institutes and global NGOs have been invited to collaborate. The networks will enhance already existing academic collaboration in the European Union, mainland China, Taiwan, Hong Kong, India, Japan, Thailand and Australia and other Asia-Pacific countries to address the stagnation outlined above;
- That policy makers and international institutes will support both networks to regularly articulate the results of their approaches (see above) in such a way that they will contribute to the practical work of policy makers, international institutes and global NGOs. This will pave the way for the development of sustainable outcomes in the many operations that make up the 'complex of human activities'. Such support includes providing assistance in the production and application of indicators and normative guidelines for sustainability and sustainable urban development, based on the collaborative efforts of experts carried out in Europe, Asia and Australia over the last 6 years.

The greatest challenges to realising these recommendations are:

- To elaborate the indicators for analysing the three dimensions of the complex of human activities (economic, socio-political and cultural), as well as indicators for the environmental dimension; and
- To connect both sets of indicators in order to make comprehensive conclusions about the nature of sustainability overall.