Title: The Power of Ideas and the Concept of Sustainability

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Summary

This paper explores the evolution of the underlying ideas behind sustainability, from historic concepts of sustainability in the 17th century to recent ideas in the 20th century and until today. The theoretical framework for an analysis of ideas is taken from Judith Goldstein who emphasizes the importance of the interaction between ideas and institutions and how ideas contribute to shaping existing institutions and the policies they produce. The paper argues that most concepts of sustainability were and still are dominated by the economic value or benefits they provide instead of aiming at a wholly integrated concept of sustainability.

Key words: Sustainability, Judith Goldstein, ideational approach

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Introduction

In a speech in 2012 the UN Secretary General Ban Ki-Moon claimed that sustainability is the biggest challenge for the 21st century¹ and if there has been a widely used "buzz-word" in international politics, in academia and even the general public in the last two or three decades sustainability would certainly be a promising candidate. Despite rising awareness of environmental degradation and increased inequity - recently and famously discussed for example by Thomas Piketty – the world is becoming more unsustainable. The failure to decrease greenhouse gas emissions² is probably the most prominent example of the increasing gap between existing unsustainable activities and the changes science tells us are necessary.³Consequently, the efforts towards increased sustainability and also towards a better understanding of such development should increase in order to avoid future crises. Although it appears that everybody agrees about the need for sustainability, the ideas and principles behind the concept range from purely profit-oriented "green washing"-efforts of multinational companies to eco-centric visions of a complete conserved natural environment. So, what are actually the ideas that shaped and influenced the concept of sustainability and why did they become so successful and omnipresent in today's (development) discourses?

In that background this paper wants to explore the evolution of the underlying ideas behindsustainability, beginning with a discussion of historic concepts of sustainability from the 17th century on and then analyzing the more recent ideas in the 20th century until today. The theoretical framework for the analysis of different sustainability ideas will be provided by the work of Judith Goldstein, which is outlined in the next section of the paper. Goldstein's work on ideas, beliefs and institutions is vast and cannot completely be covered within this paper where a brief summary of her main arguments is offered to discuss the underlying ideas of sustainability and their influence. In her work she emphasis the importance of the interaction of ideas and institutions, in particular how ideas contribute to shape existing institutions and also the policies those produce.⁴ Although this work will focus on the ideational rather than the institutional aspects, it does not imply that institutions are marginal for the explanation of sustainability issues – indeed the contrary seems to be the case. And even though institutions (like the United Nations) undeniably influenced the ideas about sustainability, the main question of this paper is how the ideas about sustainability changed throughout history?

The underlying hypothesis of this paper could be summarized as historic path dependency. In other words, the historic ideas about sustainability (which represented mainly economic interests) were not only the reason for the overwhelming acceptance of the concept in recent times, but also shaped the political outcomes more than generally assumed in the literature. This resulted in a conception of sustainability where the environmental (and often also the social) aspects are incorporated but dominated by the economic costs they might pose to society. Despite of sustainability being often thought as an environmental concept (issues of conservation) and even while the political outcomes (like the Agenda 21) have taken this into account, the application of the concept in all its dimensions is hardly a reality. Projects with and integrated or holistic approach can mainly be found within civil society (like eco-communities or urban community projects) and often only with support of NGOs and donations rather than official institutions. Whereas most "official" or conventionalsustainable

¹See Ban Ki Moon (2011)

² The actual data on the climate change trends are presented and discussed by IPCC (2013)

³ See for example UNEP (2013) or Allen et al (2009)

⁴ See Goldstein/Keohane (1993), in particular Chapter 1 and 3

development projects are often driven by short-termism and value-for-money aspects, thuscreating an environment that is opposed to the ideals of sustainability.⁵

Although there are and always have been several competing concepts of sustainability, the main institutions in defining concepts of sustainability were the United Nations Conferences and Commissions and their corresponding reports. The most cited and commonly used definition of the concept is from one of their reports – the so called Brundtland-Report which was released in 1987 as the final document of the World Commission on Environment and Development.⁶ Therefore, this paper aims to analyze a selection of UN documents on sustainability in order to see if and how the concept of sustainability has evolved compared to the historic and modern ideas. The focus will be on the 1987 Brundtland-Report ("Our Common Future") and the following 1992 "Earth Summit" Conference – which encompass basically the same ideas about sustainability. This selection is based on the assumption – as formulated also by Goldstein⁷ – that the evolution of time. Furthermore, these two outcomes have not only been the most influential ones on sustainability issues in recent times but also has the concept barely changed on the international stage.⁸

Goldstein's framework on ideas and institutions

Judith Goldstein is a political scientist, currently chairing the Political Science Department at Stanford University, who has published several books on the influence and power of ideas and beliefs on institutions and policy. Although the focus of her work is mostly on trade regimes and trade policies⁹, it provides a promising theoretical foundation for the influence of ideas on policy outcomes in general. The next section of this paper offers a broad outline of her thoughts which then serves as framework for the discussion of sustainability concepts.

One of Goldstein's central arguments is that in order to actually explain political behavior and therefore political change – mainly observable or expressed throughofficial declarations or actual policies – it generally is necessary to look beyond purely interest-based arguments and adequately consider the translation of interests into political outcomes. Interests definitely play a central role in policy making, but political action is also influenced by institutions¹⁰, legal structure and the shared beliefs of political actors.In Goldstein's opinion the analysis of political behavior should not stop at preferences over outcomes, but must focus on preferences over actions. In other words, the choice from a variety of possible strategies to realize interests can be as important in explaining behavior as the interests

⁵See Bell/Morse (2007) for detailed reflections on sustainable development projects.

⁶ See WCED (1987)

⁷See Goldstein (1993), p.3 ff.

⁸ This does not imply that there was no lively scientific (and even public) debate on the issues involved. But from an ideational perspective has the recent Rio+20 outcome not produced any crucial new ideas. The main advances in the 20 years between the two events were of technical (knowledge) and methodological nature. See for example Schreurs (2012)

⁹ See for example Goldstein (1989)

¹⁰ Institution is a very vague term which needs further explanation. Institution here is used according to Goldstein's approach in a narrow definition as public or private legal or political organization. However these organizations are also shaped bysocialnorms and values– which depending on the literature are often defined as institutions themselves – that are embedded within them.

themselves. The adoption of a given strategy depends if it is founded ona politically salient theory or analysis, as for example the adaption of Keynesian policies (or rather the choice between Classical Economic policies and them) in the 1930ies was inherently political and not based on objective facts. Goldstein argues that the political power of ideasabout (economic) phenomena plays a crucial role for the choice among possible paths to achieve one's interest. This power of beliefs is at a peak when issues of strategies are in dispute and the shared belief binds a (political) coalition together.¹¹

With this approach Goldstein argues for a "middle ground" between purely interestbased analysis, which could be defined as a materialist or rationalist approach, and analysis based on the importance of institutions, which could be called a structuralist approach. Analysis of political behavior has to take both material interests and institutions – and Goldstein's crucial argument here is that ideas and beliefsalso shape those institutions – into account. While this seems like a rather logical conclusion and Goldstein may not be the first research to have pointed this out, it is her emphasis on the importance and influence of ideas that makes her work significantly interesting for the analysis of political behavior. And Goldstein is not alone as the influence of ideas has experienced a remarkable comeback since the early 1990ies in the social science and particularly in political science. However, ideational approaches – which are often more sensitive for change and agency – should not exclude interest-based (or other institutional) approaches in the analysis of (political) behavior and order.¹²

So, how does Goldstein actually define an idea? In her opinion, ideasare in general shared beliefs. Goldstein and Keohane develop three different categories of ideas: worldviews, principled beliefs and causal beliefs. The most fundamental ideas could be defined as worldviews which are deeply rooted in culture, individual self-perception and modes of social interaction. This category embodies for example beliefs about the human nature or the functioning of the world such as the belief in divine creation versus the big bang. Principled beliefs are beliefs that are embedded in a normative framework such as the question whether human rights are a legitimate aim of policy. And causal beliefs are beliefs about a cause-effect relationship which can be based on objective facts but, as Goldstein points out, can also be based on normative beliefs and usually reflect underlying values. The authors also conclude that these categories overlap and that other typologies can and have been used. After this categorization Goldstein and Keohane summarize three different possibilities how ideas can exercise influence: their function as "road maps" for actors, their role in specifying the choice between possible equilibria and their embedment in institutions.¹³

If an idea is successfully selected as "road map" it limits future strategic choices because it excludes other interpretations of reality and the actor(s) remains on the path that is dictated by the idea's logic. Even if the "road map" does not completely excludes other interpretations it definitely suggests that alternative interpretations are not worth exploring – why would someone think for example about environmental conservation if he or she lives in poverty and desperately needs income. In its function as coordination between alterative choices the ideas can works as a focal point or even glue that ties different actors and interest groups together. That way, ideas affect the strategic interaction between actors by helping to create Pareto-efficient solutions and therefore contribute to outcomes if there is no unique

¹¹ See Goldstein (1993), in particular Chapter One

¹² An argument for a balanced approach similar to Goldstein's is offered for example by Lieberman(2002), p.697 ff.

¹³ See Goldstein/Keohane (1993), in particular Chapter One

equilibrium. Finally, if the idea is very successful it will be institutionalized, meaning that the idea becomes embedded in legal (or even social) rules and norms. In this form the idea constantly constraints policy and is not easy to dismantle, thus it specifies policy (in the absence of new ideas) through affecting the incentive structure of political actors.¹⁴

An important factor about the influence of ideas is their lifespan or longevity. If an idea or set of beliefs is accepted by the (political) agents it eventually becomes embedded in institutions and can influence policy even after the original interests of its creators have changed. No matter what led, for example, to the adoption of Keynesian policies, following policies were heavily constraint by the interests of actors who benefited from them. And this is generally true as soon as an idea becomes encased in a legal institution which then creates a certain path dependency as future decision will be (at least to some extend) constraint by it, thus Goldstein argues that "history matters".¹⁵Famous examples from the recent past would be the 3% debt limit in the Maastricht contracts of the European Union or the cabs on carbon emissions some countries have already adopted – both choices that will clearly affect further political decision. As mentioned, ideas are like road maps for political leaders and entrepreneurs which provide them with strategies to maximize their interests. However, political decisions normally occur in an environment of uncertainty because decision makers rarely know which policy strategy will actually maximize their interest and therefore have to rely on the existing knowledge and the political savvy of the strategy's supporter. In such conditions ideas themselves have at least the same potential to become predictors of political behavior as mere calculations of interests.¹⁶

However, according to Goldstein, not any idea will be successful. To be accepted, an idea must fit sufficiently the dominant social values; otherwise it will not find the political support needed for its implementation. But, how does the idea enter the political process? Goldstein suggests thinking of four stages in the development of public policies. In the first stage, due to either exogenous or endogenous (social, political or economic) change the status quo is not acceptable anymore – thus current policies loss the legitimacy and political actors become willing to reconsider their beliefs. The second stage is characterized by the "search" and selection of an alternative strategy (or policy) which requires availability of new, politically salient ideas that are also supported by elites. Then, in the third stage, the policy (or set of policies) is tested to whether it serves it purpose and benefits (at least some of) its supporters. A crucial factor in this stage is the environment in which a new idea is tested, which for its institutionalization is often even more important than the actual quality of the idea. In a period of economic prosperity the incentive to change policy is little, even if the policy does not achieve its objective. But if confronted with crisis, a policy is often abandoned regardless of its merits. Finally, in the last stage, the new idea now in form of a policy is institutionalized. In this sense, a legal institution like for example a court represents the translation of dominant ideas into a formal government institution. Already existing institutions can both preserve support for old policies and create incentives and support for new policies. It is important to mention that once created or changed an (public or private) organization is slowto change ("inertia") as it is difficult to change the governing legal status.¹⁷

Following Goldstein's suggestions, the questions that will lead the following discussion are why and which kind of ideas about sustainability were successful and made

¹⁴ See Goldstein/Keohane (1993)

¹⁵ See Goldstein (1993), p. 2 ff.

¹⁶ See Goldstein (1993) or for a broader discussion see also Hall (1989)

¹⁷ See Goldstein (1993), p.12-17

their way into the political arena, the public debate and the academic literature? Goldstein argues further to investigate the "demand" (and the selection) of beliefs by political relevant actors and the impact of political institutions on the articulation of interests.¹⁸However, due to the focus of this paper the two latter aspects will hardly be discussed and their analysis remains for future research. Although the ideational approaches like the one Goldstein presents have received much attention in the last two decades, some short-comings have been pointed out as well. Her work "Ideas, Interest and American Trade Policy" for example was criticized to focus too much on causal beliefs which might ignore the role of ideas in evaluating (and also in achieving) political outcomes.¹⁹In general the ideational approaches often received some criticism on the vagueness of their ideational variables (or sometimes the definition of ideas themselves) and the still limited understanding of the processes through which beliefs and ideas become institutionalized.²⁰Although these arguments seem valid and need to be addressed in future work, they play no relevant role for the argument presented here.

Sustainability from an ideational perspective

Ideas of sustainability are inseparably linked to the concept of progress which by itself could be seen as antecede of notions of development. In the most general perspective progress describes the idea that any given society or human civilization as a whole is moving (and will be moving) in a desirable direction. Here we can think of science and technology, but also of moral or material advancements. The idea of progress as defined above starts developing only with the Hebrew and Christian theology and their linear conception of time (as a directed succession of events) which transformed the way of thinking about history and progress. Christian philosophy contributed over the centuries to the idea such that by the 13th century the conception of human progress in Europe included two central pillars: the cumulative advancement of culture (here simply understood as everything created by mankind) and the religious/spiritual belief in a future "golden age" of morality on earth.²¹

Another crucial link exists between the belief in progress and western modernity which are often used interchangeably or even as synonyms – excluding perhaps only some Renaissance ideas about cyclical recurrence. In particular during the Enlightmentand its aftermath (starting around 1750) the idea of progress became the dominant paradigm and it was widely believed that modern, empirical and exact science was the key to human advancement. This resulted also in the belief of human mastery of natureprogressively substituting the former idea of an unfolding, divinely-ordained plan or direction for mankind. For around two centuries (1750-1950) the faith in progress was virtually universal in intellectual circles and for Westerners progress itself was not considered an accident, but a necessity. With the advancing industrial revolution human progress was also linked to economic growth and material advancements. On the other hand, the consequences and implications of industrial capitalism (like uneven distribution of wealth or environmental degradation) also constituted among others the basis for growing concerns about sustainability.²²

¹⁸ See Goldstein (1993), p.18 ff.

¹⁹ See Nau (1995), p.253 ff.

²⁰ A discussion of ideational approaches and their current state is offered by Berman (2013), p.217 ff.

²¹ For a comprehensive discussion on the idea of progress see Bury (1932), p.2 ff.

²²See for exampleNisbet (1980)

In the 20th century the idea of progress was incorporated into concepts of development²³, meaning controlled processes towards a formulated outcome. Development is without doubt a controversial term and what development actually consists of has changed over time and throughout different regions. While it is possible to define development simply as a process from one state to another, it normally is defined as the process towards an improved or better state than before. It is precisely within this idea of "better", where the term incorporates a normative dimension of how a possible future state of society should be and how it is best achieved. Thus, a definition of development can neither be free of values nor universally valid as it always depends on the social context where it is applied.²⁴

All controversies aside, there is also some consensus in the literature about development. Today it is widely accepted that the term development does not only apply to the macro level (nation, society or economy) but also to single actors or individuals. It is, furthermore, a multidimensional concept which despite the dominance of its economic dimension includes a multitude of other dimensions (like political, social, cultural or personal dimensions). Since around the middle of the 20th century there is also a wide-spread consensus that development should ultimately focus on the satisfaction of human needs. However, for a long period development was only thought from the perspective of the 1st World²⁵, hence excluding different views and needs. Historically the concept of development underwent various adaptations throughout the 20th century in a reciprocal relationship with the dominant political paradigms. In the 1960ies, for example, the mainstream development theory argued for a development through economic growth which introduced the idea of a "catching up" process of less developed nations. A decade later the idea of basic human needs became omnipresent in development theory and the 1980ies are often considered a "lost decade" (in particular for Latin America) until concepts of sustainable development²⁶ emerge from the late 80ies on.²⁷

The historic origins of concepts of "sustainability"

In the academic literature the emergence of sustainability as a development concept is generally linked to the environmental social movements starting in the 1960ies which then found their institutional voice first and mainly in the United Nations and some of its various councils and conferences. However, relatively similar notions of the present idea of sustainability can be found before the 20th century like for example in Great Britain in the 17th century or half a century later in Saxony (which today is mostly part of Germany). In fact, one could argue that the demand for raw materials as production inputs and its impact on the natural environment has been a somehow constant issue throughout human history (that is

²³As discussed above there have always been ideas about progress in the human civilization, but the idea of a controlled process towards desirable goals became really influential in the post-war and decolonization period from the 1950ies on.

²⁴ see for example Nohlen (2005), p.196-198

²⁵ The term 1st World is here merely used to avoid the term "developed nations" and simply refers to the economically richest nations (Western Europe, USA/Canada, Japan and Australia). While the term was widely used during the Cold War era, it is more common today in the development literature to speak of developed, developing and less developed nations.

²⁶ For a clearer distinction and the context of this paper sustainable development can simply be defined as a development which not only aims towards sustainability (which by itself is a dynamic state), but also follows principles of sustainability in the development process.

²⁷ For an comprehensive discussion of the development paradigms see Ihne/Wilhelm (2006), especially chapter 1

recorded history). There is historic evidence for problems like deforestation, salinization or loss of fertile ground – all concerns that we would label today as environmental sustainability issues – in the ancient Egypt, Greek and Roman civilizations. Authors like Plato (5th century BC) or Varro (1st century AD) were not only aware of the environmental degradation caused by human activity such as logging or farming, but also argued for the benefits of more "sustainable" practices in order to preserve nature or at least maintain some of its functionality.²⁸

The same issues arise in modern history, for example, in the work of John Evelyn – a founding member of the Royal Society²⁹ and adviser to King Charles II. – who criticized the reckless logging for economic activities in British forests. Evelyn argued for a less resource-intensive timber use and his central argument is the concern for the interest of future generations. Although he most likely was an environmentalist (he produced an abundant amount of work on biology), the initiative for his book published in 1664 on the deforestation issue came from the royal navy and growing political concerns that the British Empire would run out of resources for its strategically essential ship production.³⁰A very similar example can be found in the book "Sylviculturaoeconomica" by Hans Carl von Carlowitz which was published in 1713and discusses the rapid destruction of the European forests. Carlowitz was actually head of the mining department of the Saxon Elector– a central aristocratic post in the Holy Roman Empire – and his main concern was the preservation of timber as crucial input for the booming mining industry in Saxony.³¹

These historic examples clearly show that the concerns for environmental degradation are nothing recent; in fact quite the opposite is true. Especially the two modern examples demonstrate some interesting points about the early concepts of sustainability. First of all, it was mainly if not completely an environmental degradation issue and above all its impact on the economic activity. Although we can find some normative arguments for the needs of future generations, it means that the social dimensions of environmental degradation for the general population were at best secondary. It also shows that these environmental concerns were primarily a reaction to decreasing resources and possible future power or wealth losses. Furthermore, it becomes clear that it were the political elites who worried about "sustainability" and any measures that have been applied (such as reforestation both in Great Britain and Saxony) were strictly "top-down" approaches without inclusion of local populations.

In this historic context Goldstein's framework is perhaps a little less applicable because the political arena was quite different compared to today. It seems difficult to argue for a public debate (or pressure) on the decision making process in feudal systems such as in the examples above. Although the general public might have had some influence (like through the nobility's fear of uprisings), the decision making process was highly centralized to a small number of agents within the nobility and clergy. The crisis which opened a window of opportunity for new ideas in this case was obviously the lack of timber which displayed

²⁸ See du Pisani (2007) for a detailed pre-modern history of sustainability concepts

²⁹ The Royal Society is a London-based British institution which aims at improving (natural) knowledge and served as the scientific counsel for the monarchs. It is probably the oldest, still existing scientific institution and according to its homepage (www. https://royalsociety.org/grants/) it currently distributes around £42 million in research grants for excellence in science.

³⁰ A discussion of Evelyn's work is offered by Grober (2007)

³¹ The original work from 1713 was reprinted recently, mainly because of its importance for the sustainability debate in Germany as Carlowitz was the first person to coin the word "sustainable" ("nachhaltig", literally: long-lasting, enduring) in German. See Carlowitz (2009)

that the previous ideas about logging activities were not salient. It seems very plausible that within this group the idea of wealth and power losses would be highly influential, thus promoting the idea of environmental conservation for future economic activities. In this context the idea of less logging could have functioned as coordination between the relevant political actors, thus reducing their strategic and political costs.³²

In the next section the paper focusses on the development and sustainability ideas throughout the 20^{th} century, but obviously those debates did not occur in a vacuum. In fact, there are several thoughts on sustainability – mostly never using that precise term – or concepts related to sustainability already before the 20^{th} century. Especially the 19^{th} century experienced a significant exchange of ideas on "political economy" which often aimed at improving the human condition and humanity's impact on nature. In Europe thinkers like Marx or Hayek build on the work of earlier generations like Adam Smith. His work is often reduced to its "rational" pursuit of self-interest, but Smith also argued for the rule of justice and strong moral principle which should guide that self-interest. In the Victorian age, the combination of natural conservation and improving the Brundtland-Report. In those ideas and in the manner they were conceptualized in theories there are many links to the present sustainability debate.³³

The growth and environment debate in the 20th century

In the more recent history the emergence of sustainability concepts is very closely related to the growth and environment debate or more generally to a changing view of the relationship between human civilization and its natural environment.One of the most cited studies in this field and one that helped trigger the on-going debate on resource consumption and environmental degradation was the famous "The Limits to Growth" report³⁴ from 1972. Based on computer simulations about the future of our planet – considering variables such as population growth, industrialization, environmental impact and resource consumption – the study concluded that human civilization will have reached its absolute growth limits within the next hundred years. The authors also concluded that reaching this limit would mean an irreversible environmental degradation (including the exhaustion of relevant natural resources) and sharp declines in global productivity.³⁵Although their projections were heavily criticized of being overly dramatic and fear-inducing, the general trends they projected have proven quite accurate. Even if, as estimated in the study, such an economic collapse around the year 2030 seemsunlikely (yet not impossible) mainly due to technological advances, the study has significantly contributed with over 30 million sold copies to the growth debate and the public awareness of environmental issues.³⁶

 $^{^{32}}$ For further work in this area it would interesting and necessary, to explore in more detail the political and social environment of the two present cases. At this point the argument offered here relies purely on plausible explanations rather than empiric evidence – which also might prove diffcult, if not impossible, to obtain.

³³ For a comprehensive discussion of Victorian and 19th century origins of sustainability see Lumley/Armstrong (2004)

³⁴This report was conducted by a team of scientist from the MIT and fundedby the "Club of Rome", a private non-profit think tank which focusses on concerns for the future of humanity and includes many high-ranking UN officials and states-men among its board.

³⁵ See Meadows et al (1972), p.17 ff

³⁶ See for example Turner (2008) for an updated discussion and evaluation of the study's findings.

An idea that is closely linked to the sustainability debate and that gained wide-spread publicity with the report was the belief in the necessity of a zero-growth (or even de-growth) economy, which at that time was considered a radical suggestion with fewpolitical supporters. For economists, the idea of a steady-state economy (meaning the transition from a growing to a stable economy) is nothing new. Pioneers like Adam Smith or John Stuart Mill had already discussed such concepts before the industrial revolution really spread across the globe. Mill, for example, was convinced that the increase in wealth could not be limitless and that the end of growth would eventually lead to a stationary state of capital and population growth. In such a moment the growth of material production and consumption would stop and human progress would principally occur in non-material cultural, moral and social dimensions.³⁷However, in the flourishing and rapidly growing post-war capitalist societies this state seemed extremely far away. Even with the opposing ideology, the communist countries also opted for pro-growth strategies to attend the needs of a growing population and to reduce poverty. Economic growth was (and arguably still is) considered, if not the most effective, but certainly the least socially harmful way (as for example compared to redistribution) to increase wealth and material well-being.

The year 1972 was really a key moment for the development of a global consciousness³⁸ for sustainability issues because it also marked the founding of the United Nations Environmental Program (UNEP) as a result of the UN Conference on the Human Environment (UNCHE) in Stockholm. Although the Conference covered other issues such as human rights as well, it had a strong focus on the relationship of human activity and the natural environment. The Conference and the work stimulated by it led to important insights in the following years which introduced new ideas about the state of human development and the need for a sustainable development. This becomes clear with the so-called "Hammarskjöld report on development and international cooperation" from 1975 or the "Brandt report"³⁹ from 1980. Both documents identify a strong correlation between environmental degradation, poverty and population growth, thus advocating reinforced efforts to eradicate poverty. Furthermore, they diagnosed an unbalanced material consumption in the developed world as the main cause for environmental degradation and social tensions in the developing world. The inevitable conclusions drawn from these reports were that the developed nations are responsible for the state of human development and more importantly that the modernization theory's concept of "catching-up" development should be rejected – thus opening a window for alternative development approaches.⁴⁰

The history of development ideas in the 20^{th} century (and particularly the post-war period) fits very well with the theory, that if a crisis (or, as Goldstein calls it, a exogenous shock) occurs it opens a new window of opportunity, because development theory has been closely linked to the development practice and its trials and errors since the 2^{nd} World War. The ideas which influenced the development paradigms always evolve to some extend when proven ineffective in practice – placing development theory and practice in reciprocal

³⁷ See Mill (1848), in particular Book IV, Chapter VI "On the Stationary State"

³⁸ This does not imply that it was the starting point of environmental or ecological movements. However, before the 1970ies these movements were almost exclusively of a very local dimension and mostly in the developed nations. The argument here is that ecological and social issues reached a global perception and slowly started to be seen as integral parts of the development process.

³⁹ It is common to name the UN commission's final reports after their corresponding chairman or chairwoman, in this case former UN Secretary-General and Swedish economist Dag Hammarskjöld and former German chancellor Willy Brandt

⁴⁰ For the original reports see UN General Assembly (1975) and UNCDI (1980). A discussion of their implications is offered by Gehrlein (2004)

relationship since the 1950ies.⁴¹ Like the idea that economic growth alone could serve as a panacea for poverty reduction and development got discarded over time as other dimensions of development gained more visibility and importance.

Recent ideas on sustainability

One of these alternative development approaches and at the same time one of the most important documents – including not only the mere amount of citations but also the political impact it created⁴² – on sustainability and sustainable development is the so-called Brundtland-Report. It is the final report of the UN World Commission on Environment and Development (WCED) chaired by former Norwegian Prime Minister Gro Harlem Brundtland which was published in 1987 under the title "Our Common Future". In the academic literature the report is considered one of, if not the, most important trigger for the global debate on sustainability in academia, international politics and the civil society.⁴³As mentioned above it also resulted in the most cited definition of sustainable development, which is understood as:

"[...] a development that meets the 'needs' of the present without compromising the ability of future generations to meet their own needs. [...] It contains within it two key concepts: the concepts of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."⁴⁴

The report basically argues for dignity in the every human's living conditions which exceeds purely material needs and includes things such as the possibility of active citizenship (particularly through participation in the decision making process) or political freedom in general. It also argues for a long-term vision, introducing a normative dimensionof both intraand intergenerational justice (with focus on the least favored parts of society) into the development agenda and strategies. This vision of sustainable development also acknowledges that the increasing ecological problems and poverty are systematically linked crisis phenomena which require simultaneous attention to be reduced or even solved.⁴⁵ Stating this involves a political and moral argument by connecting the environmental exploitation mainly caused by the development as a fulfillment of human needs (the same needs that are to some extend responsible for social and environmental crises), thus discarding an eco-centric vision⁴⁶ of sustainabilityand emphasizing the anthropocentric nature

⁴¹See for example Mürle (1997)

⁴² For discussion of the impact in the academic literature see Schubert/Lang (2005) and for the general impact of the report see for example Sneddon et al (2006)

⁴³ See Tremmel (2003), p.89

⁴⁴ WCED (1987), p.54

⁴⁵ The links between poverty and environmental degradation or disasters run in both directions. On one hand, the poorest are also the most vulnerable to ecological disasters. And on the other hand, a lack of other resources often leads to over-consumption of natural resources. These are just two example of a multidimensional issue which for the purpose of this paper will not be discussed comprehensively. For a general discussion on the topic see for example Brand (2002).

⁴⁶Ecocentrism as opposed to Athropocentrism argues that other living beings (basically animals and plants) have intrinsic value regardless of their usefulness to humans and that ecological concerns should be central to (moral) decisions. Whereas an anthropocentric view beliefs that humans are the only significant entities and other living beings are only of value as long as they provide benefits for human needs. Obviously these two opposing

of development. Furthermore, by including immaterial needs into its definition of sustainability, the report also offers a broad, multidimensional definition of poverty – poor is who cannot fulfil his or her needs.⁴⁷

By demanding a development that allows for human dignity the Brundtland-Report locates itself within the tradition of the human rights discourse. While human development should never fall short of complying with human rights in general, it emphasizes the importance of positive rights (like the right to political participation) in order to empower individuals to have a self-determined life and as a requirement for sustainability.⁴⁸ The "right to development" had already been declared and ratified into international law at the 1986 UN General Assembly and the just mentioned idea was later also explicitly stated in the declaration of the UN Development Department. The idea of sustainability here requires a distributive justice and its realization is the objective while the lack of it is a main cause of the global tensions which becomes clear in the following citation:

"sustainable human development aims [...] to promote the realization of all human rights – economic, social, cultural, civil and political. [...] Human rights and sustainable human development are interdependent and mutually reinforcing. Development is unsustainable where the rule of law and equity does not exist [...]."

Inspired by the ideas of the Brundtland-Report, the 1992 "Earth Summit" in Rio de Janeiro produced with the Agenda 21⁵⁰one of the most visible outcomes in terms of sustainability.There were also several sustainability related binding convention signed by the 178 participating nations, including the UNFCCC (United Nations Framework Convention on Climate Change) and the CBD (Convention on Bio-Diversity). These documents display the strength and probably dominance of ecological issues at the Conference.⁵¹Various principles formulated in the declaration demonstrate the ideas invoked by the report five years earlier, like the "principle of social justice". Another important principle is the "precautionary approach" which demands to anticipate potential risks and also to avoid resource depletion. Or the "polluter pays principle" which demands that the social and environmental costs of economic activity are paid by the responsible agent (which is often not clear in the case of environmental degradation).⁵²The similarityto Brundtland is obvious in the third principle of the declaration that states: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."⁵³

The increasingly obvious environmental crises (like the loss of biodiversity around the globe) and social crises especially in the developing world made a paradigm shift in development ideas inevitable and opened the "policy window" for sustainability concepts. The pro-growth

approaches to extend ethics to nature reach very different conclusion about sustainability. A comprehensive discussion of the moral implications is offered by Kortenkamp/Moore (2001), p.261 ff.

⁴⁷See WCED (1987), p.14 ff.

 $^{^{48}}$ A more comprehensive discussion of the human rights issue of sustainability can be found at Kopfmüller et al (2001), p.67 f

⁴⁹ See UNDP (1998), p.7

⁵⁰ This document is a non-binding action plan for the UN, NGOs and national governments which builds on the sustainability principles derived from the Brundtland-Report and suggests strategies to implement them. As the ideas proposed in the Agenda 21 are directly based on the Brundtland-Report a more comprehensive discussion of the Agenda 21 seems unnecessary for the purpose of this paper.

⁵¹ For a complete assessment of the Rio'92 Conference see for example Grubb et al (1993)

⁵² See respectively principle 2, 13 and 15 of UNDP (1992)

⁵³ UNDP (1992), p.2

development policies from the Post-war period therefore got subsequently augmented with human rights aspects (which basically is the social dimension of sustainability) and later – particularly after 1972 – increasingly with environmental issues. These ideas got easily accepted not only because they were obviously needed or because of the pressure of poverty-prone countries, but more so because they did not challenge the existing economic or social order.⁵⁴ This issue is also widely discussed in ecological and environmental economics in the debate about strong versus weak sustainability⁵⁵. The Brundtland-Report and all following international declarations on sustainability hardly bare any trace of strong sustainability making the acceptable even for opponents of environmental protection (as they always can use the substitution argument).⁵⁶While both conceptions have problems, there are various concerns that weak sustainability might result – some even argue it already has resulted – in irreversible ecological damage and ultimately hinder future human well-being.⁵⁷

The ideas of sustainability in the Brundtland-Report and the "Earth Summit" vary a great deal from the historic origins and the preceding theories on development and progress. Although the idea of essential or elementary multidimensional and the idea of intergenerational justice regarding those needs were both not completely new (as discussed in the section on the 20th century), their combination and a strong focus on environmental issues made the Brundtland-Report a milestone for the emergence of sustainability as a development approach.More importantly, the Rio-Declaration was one of the first and biggest steps towards the institutionalization of sustainability ideas on the international level. Even though the declaration has not completely been ratified into national (and thus applicable) law in a wide range of countries, there has been virtually no UN declaration on development since 1992 which has not mentioned the need and importance of sustainability. It could be argued that the institutionalization of those ideas on international level functions like a "road map" and in some cases also as "coordination" (in Goldstein's sense) for actors on the national level where a vast majority of government has at least declared commitment. Critics often claim that the UN declarations produce no binding outcomes for the national states, which in the case of sustainability is not surprising considering the economic interest of the developed nations and many developing countries like Russia or China. From an ideational perspective there is also the problem of inertia when implementing new ideas in the political or public debate. In the replacement of existing ideas and logics there is inertia, a disinclination to enact change, which can result in strengthening the prevailing logics and which has already been widely discussed in the literature.⁵⁸

Concluding remarks

⁵⁴For adiscussion of the North-South dialogue around the Brandt and Brundtland-Reports see for example Graf (1992)

⁵⁵The central issue between weak and strong sustainability is how the resources and particularly the natural capital we leave behind for future generations are structured. Proponents of weak sustainability argue that natural capital can sufficiently be substituted by man-produced capital so that the net wealth of future generations does not decline. Strong sustainability , on the other hand, argues that natural capital is to at least some extend non-substitutable, especially the life-support functions it provides (often summarized in the literature as "ecosystem services"). An overview of the discussion can be found at Dietz/Neumayer (2007)

⁵⁶ This is also the case for the most recent ideas and the distinguishing theme of the Rio+20 Conference about the "green economy" which argues for a "greening" of economic activities without changing the economic system. However, within the capitalist society the green economy might be the only way towards more sustainability. See for example Barbier (2012)

⁵⁷ See Holland (1996) for an argument against weak sustainability

⁵⁸ See Daly (2013) for a societal perspective or Post/Altmann (1994) for an analysis of organizations.

There are several conclusions that can be drawn from the examples and their discussion above. One of the biggest changes in the ideas about sustainability occurred only recently with environmental movements and with the UN decalarations since Stockholm – which is the shift from a top-down to a bottom-up approach. The historic examples demonstrate that sustainability was an idea or solution to an elite problem (without any participation or inclusion whatsoever) and the ideas about development and progress were also largely dominated by ideas like the "big push"⁵⁹ (especially in the case of many African nations) or import substitution (particularly in Latin America and Asia).⁶⁰ These ideas rely on a central actor (normally the state or international organization) who funds, plans and executes the development strategies, whereas the recent ideas about sustainability and sustainable development strongly emphasize a crucial and participating role of local and regional communities and actors.⁶¹To some extend this is probably linked to the transition from feudal systems to democratic states and their promise of citizenship, but it also demonstrates a new understanding of sustainability and development.

Another important change in the ideas behind sustainability which emerged in the second half of the 20th century is the preoccupation with the long-term future – something that definitely was of no concern in the historic concepts and arguably not even in the 19th and 20th century development debate. As often discussed sustainability has a strong ideational link to the survival of humanity in the long-term by preserving not only the ecosystems and their life-supporting services, but also by stabilizing the social and economic systems through more justice and less crisis.⁶² Closely related to the long-term perspective is the idea of intergenerational justice as a fundamental pillar of sustainability. However, taking the wellbeing of future generations into account remains politically difficult with poverty and little access to essential resources being a reality for significant parts of the present generation. Further issues which directly affect the well-being of future generations are for example decisions about indebtedness or investments in technologies – both can create strong path dependencies for future decision and might constrain sustainability like investments in coal plants (compared to investments in renewable energies) or private and public debt-financed consume (compared to investments in infrastructure or education which might be sustainable even if financed through debt).

Drawing a timeline of the examples discussed in this paper we can observe a certain evolution of the ideas behind sustainability. The historic examples demonstrate a purely economic dimension of sustainability concerned only with the political power of the ruling class. In the 19th century and especially in the middle of the 20th century the ecological dimension of human development emerged principally within the environmental movements and provided a crucial input for the further steps towards the present concept of

⁵⁹ The concept behind the "big push" is basically to increase basic investment (principally in infrastructure, administration and human capital) in an underdeveloped economy in a systematic way such that it leads to an economic "takeoff", that is economic growth. This idea of economic development already emerged in the 1950ies and served as the original justification for foreign aid, but also gained new support recently with the efforts to reach the UN Millennium Development Goals. For an summary of the "big push" debate see for example Easterly (2006)

⁶⁰The strategy of import-substitution tries to incentivize investments in national industrialization in technologically underdeveloped economies through heavy reliance on government manipulation of prices, barriers to entry or access to finance. This approach to overcome the asymmetries between the developed and less developed nations and to reduce the dependency of the latter was widely adapted in Latian America (especially in Brazil) and Asia. See for example Felix (1989)

⁶¹See UNDP (1992), principles 10, 20 and 22 or more recently for example the approach proposed by Robinson (2004), p.369 ff.

⁶²See for example Kopfmüller et al (2001)

sustainability. After the incorporation of the ecological dimension concepts of sustainability started with including also social and institutional aspects which eventually led to the multidimensional idea sustainability today. However, there are as briefly mentioned some hints of sustainability ideas from ancient history whichalready discussed ecological aspects. Considering the timespan covered in these examples one could argue that longevity (to use Goldstein's word) of sustainability ideas is enormous, perhaps as old as civilization itself. Obviously, few of these ideas were successful or receive sufficient political support; otherwise the multi-dimensional concept of sustainability probably might have emerged a lot sooner than it did.

In many aspects sustainability remains an ideal which seems hardly reachable for the present human societies, but which serves as utopian idea for further development efforts. An apparently utopian aspect that has been discussed in the literature, but which has not been incorporated in the political declarations is the idea of a "zero growth" or steady-state economy. As mentioned above the current UN vision of sustainability focusses on "green" growth – an approach which theoretically has huge potential, but which probably might not be able to solve the problem of limited non-renewable resources and limited space for renewable resources. Perhaps the colonization of space does become a reality in the future, but before that our physical resources are finite and recycling as much as possible becomes a vital issue for sustainability. The issue of limited space and resources is also a central argument in the debate about capitalism and sustainability. If capitalism really requires continuous accumulation then it seems incompatible with sustainability in the long-run, although there are ideas about a transformed and sustainable capitalism.⁶³

Interestingly, there is an on-going debate in the United States – the nation which is both the biggest environmental polluter or consumer and also the most influential political actor – about the scientific evidence about climate change and the effects of human activity on the planet. Although this is mostly a polemic and scientifically unfounded debate often fueled by industry lobbies and their agents, it also demonstrates how easily the public opinion (which never has all the latest scientific findings available) and generally ideas can be manipulated.Not only in the case of the United States this rhetoric among other factors created an idea of sustainability (supported by a significant portion of society) which is linked to non-consumption and seen as a threat to national interests in terms of economic development.⁶⁴

In this environment further political advances towards CO2 reduction or a more differentiated dialogue about human activities and their effect on the ecosystems seem difficult. On the other hand, ideas (both principled and causal in Goldstein's definition) can reshape our understanding of national interest. As for example our knowledge about the ecosystems and our society evolves sustainability seems less and less like a threat to national (economic) interests, but rather like a necessary and potentially beneficiary step towards a stable economy. Thusthe adoption of sustainability ideas within the development agenda could not be considered a neglect of national interests, but a shift in the perception of long-term national interests.⁶⁵In this context Goldstein's argument on the influence of ideas on political outcomes gains even more importance making the development and evolution of further ideas a central element on the way towards more sustainability.

⁶³ A brief overview on the topic is offered by Rogoff (2012) or more comprehensively by Lawn (2011)

⁶⁴ See Pearce (2006) or Dunlap/Jacques (2013) for discussion and implications of thisclimate change denial.

⁶⁵ A similar argument, although for the adoption of human right policies instead of sustainability, is offered by Goldstein/Keohane (1993), particularly in Chapter 6

The success of sustainability as a development paradigm iscertainly to some extend due to the causal beliefs about the objective necessity of natural capital in the production process – an idea that as discussed already emerged in the 17th century and still holds today. The examples discussed here demonstrate that it was precisely this causal belief in a failure of the ecosystems and hence the loss of natural capital that made the idea of sustainability promising or at least acceptable for virtually everyone. Even though the "official" UN approach argues only for weak sustainability, the on-going international debate helped to establish sustainability also as a principled belief within the various UN declarations. This principled belief is mainly expressed through the links between sustainability and issues of equity and both intra- and intergenerational social justice. Although sustainability seems to be even a worldview for some parts of society like environmental groups, its general acceptance is still far from being a worldview and it remains a challenge to establish a culture of sustainability.⁶⁶

Sustainability has definitely become a "road map" in Goldstein's sense for the international development agendaand also for many national or local initiatives, thus potentially guiding future development efforts towards more sustainability. The fact that sustainability encompasses so many different dimensions and issues makes it hard to argue that the idea has been fully institutionalized, but there are examples - like the "rights for nature" amendments in Ecuador⁶⁷ – were sustainability ideas even reached constitutional rank.⁶⁸Explicit commitment to sustainability still struggles against economic and private interests and might need a severe environmental or social crisis to further advance. More research – particularly on the historic context and also on recent sustainability strategies – is needed to actually validate the hypothesis formulated at the beginning, but the discussion in this paper strongly indicates that sustainability ideas indeed are dominated by economic rather than social or environmental concerns.

⁶⁶ See for example Galpin et al (2015) for a discussion on the difficulties of organizational change towards sustainability.

⁶⁷See for example Arsel/Avila Angel (2012) for an overview on the Ecuadorian constitutional changes and their implications.

⁶⁸ This is just to state a recent and prominent environmental example, obviously many aspects of sustainability such as the rights to basic needs like shelter, food or security have long been institutionalized in legal frameworks in many countries.

References:

- Allen, M.R./Frame, D.J./Huntingford, C./Jones, C.D./Lowe, J.A./Meinshausen, M./Meinshausen, N. (2009): Warming caused by cumulative carbon emissions towards the trillionth tonne, in: Nature, Vol.458 (7242), pp.1163-1166
- Arsel, Murat/Avila Angel, Natalia (2012): "Stating" Nature's Role in Ecuadorian Development - Civil Society and the Yasuní-ITT Initiative, in: Journal of Developing Societies, Vol. 28, Issue 2, pp.203-227
- Ban Ki Moon (2011): Speech of UN Secretary General Ban Ki Moon in Seoul on August, 12th 2011;online available under:http://www.un.org/apps/news/story.asp?NewsID=39288 [last access: 01.07.2015]
- Barbier, Edward B. (2012): The Green Economy Post Rio+20, in: Science, Vol. 338, No. 6109, pp.887-888
- Bell, Simon/Morse, Stephen (2007): Story Telling in Sustainable Development Projects, in: Sustainable Development, Vol. 15, pp.97-110
- Berman, Sheri (2013): Ideational Theorizing in the Social Sciences since "Policy Paradigms, Social Learning, and the State", in: Governance: An International Journal of Policy, Administration, and Institutions, Vol. 26, No. 2, April, pp.217-237
- Brand, Karl-Werner (2002) (Hrsg.): Politik der Nachhaltigkeit: Voraussetzungen, Probleme, Chancen – eine kritische Diskussion. Berlin: editionsigma (Global zukunftsfähige Entwicklung - Perspektiven für Deutschland, Band 3)
- Bury, J.B. (1920): The Idea of Progress: An Inquiry into Ist Origin and Growth. London: Macmillian and Co.
- Carlowitz, Hans Carl von (2009): Sylviculturaoeconomica AnweiβungZurWilden Baum-Zucht, Reprint Auflage. Leipzig: Verlag Kessel
- Daly, Herman (2013): A further critique of growth economics, in: Ecological Economics, Vol. 88 (April 2013), pp.20-24
- Dietz, Simon/Neumayer, Eric (2007): Weak and strong sustainability in the SEEA: Concepts and measurement, in: Ecological Economics, Vol. 61, pp.617-627
- Du Pisani, Jacobus A. (2007): Sustainable development historical roots of the concept, in: Environmental Sciences, Vol, 3 (2), pp.83-96
- Dunlap, Riley E./Jacques, Peter J. (2013): Climate Change Denial Books and Conservative Think Tanks: Exploring the Connection, in: American Behavioral Scientist, Vol. 57(6), pp.699-731
- Easterly, William (2006): Reliving the 1950s: the big push, poverty traps, and takeoffs in economic development, in: Journal of Economic Growth, Vol. 11, pp.289-328

- Felix, David (1989): Import Substitution and Late Industrialization: Latin America and Asia Compared, in: World Development, Vol. 17, No. 9, pp.1455-1469
- Galpin, Timothy/Whittington, J. Lee/Bell, Greg (2015),"Is your sustainability strategy sustainable? Creating a culture of sustainability", in: Corporate Governance, Vol. 15 Issue 1, pp.1-17
- Gehrlein, Ulrich (2004): Nachhaltigkeitsindikatoren zur Steuerung kommunaler Entwicklung. Wiesbaden: VS VerlagfürSozialwissenschaften
- Goldstein, Judith (1989): The impact of ideas on trade policy: the origins of U.S. agricultural and manufacturing policies, in: International Organization, Vol.43, Issue 01, pp.31-71
- Goldstein, Judith (1993): Ideas, Interests and American Trade Policy. Ithaca: Cornell University Press
- Goldstein, Judith/Keohane, Robert O. (1993): Ideas & Foreign Policy: Beliefs, Institutions, and Political Change. Ithaca: Cornell University Press
- Graf, William (1992): From Brandt to Brundtland and beyond: Hegemonic-ideological aspects of the North-South dialogue in the 1990s, in: History of European Ideas, Vol. 15, pp.399-406
- Grober, Ulrich (2007): Deep roots a conceptual history of "sustainable development", research paper, Wissenschaftszentrum Berlin fürSozialforschung (WZB), online available: <u>http://bibliothek.wzb.eu/pdf/2007/p07-002.pdf</u> [last access: 28.06.2015]
- Grubb, Michael/Koch, Matthias/Munnson, Abby/Sullivan, Francis/Koy, Thompson (1993): Earth Summit Agreements: A Guide and Assessment, Royal Institute for International Affairs. London: Earthscan Publications
- Hall, Peter A. (Ed.) (1989): The Political Power of Economic Ideas: Keynesianism across Nations. New Jersey: Princeton University Press
- Holland, A. (1996): Substitutability: or, why strong sustainability is weak and absurdly strong sustainability is not absurd, in: Foster, J. (Ed.), Environmental Economics: A Critique of Orthodox Policy. London: Routledge
- Ihne, Hartmut/Wilhelm, Jürgen (Eds.) (2006): Einführung in die Entwicklungspolitik -Einführungen Politikwissenschaft, Band 4, Hamburg: LIT Verlag
- IPCC (2013): Summary for policymakers. In: Stocker, T.F., Qin, D., Plattner, G.K., Tignor, M., Allen, S.K., Boschung, J., Nauels, A., Xia, Y., Bex, V., Midgley, P.M. (Eds.): Climate Change 2013: the Physical Science Basis. Cambridge: Cambridge University Press
- Kopfmüller, Jürgen/Brandl, Volker/Jörissen, Juliane/Paetau, Michael/Banse, Gerhard/Coenen, Reinhard/Grunwald, Armin (2001): Nachhaltige Entwicklung integrativ betrachtet - Konstitutive Elemente, Regeln, Indikatoren. Berlin: Edition Sigma (Global zukunftsfähige Entwicklung - Perspektiven für Deutschland)
- Kortenkamp, Katherine V./Moore, Colleen F. (2001): EcocentrismandAnthropocentrism: Moral ReasoningaboutEcologicalCommons Dilemmas, in: Journal of Environmental Psychology, Vol. 21, pp.261-272

- Lawn, Philip (2011): Is steady-state capitalism viable? A review of the issues and an answer in the affirmative, in: Annals oft he New York Academy of Science, Issue: Ecological Economics Reviews, Vol. 1219, pp.1-15
- Liberman, Robert C. (2002): Ideas, Institutions, and Political Order: Explaining Political Change, in: American Political Science Review, Vol. 96, No. 4 (December 2002), pp.697-712
- Lumley, Sarah/Armstrong, Patrick (2004): Some oft he Nineteenth Century Origins of the Sustainability Concept, in: Environment, Development and Sustainability, Vol. 6, pp.367-378
- Meadows, Donella H./Meadows, Dennis L./Randers, Jorgen/Behrens III, William W. (1972): Limits to Growth. New York: New American Library Press
- Mill, John Stuart (1848): Principles of Political Economy: With Some of Their Applications to Social Philosophy, London: J.W. Parker, online available under: http://www.econlib.org/library/Mill/mlP61.html#Bk.IV,Ch.VI [last access: 01.07.2015]
- Mürle, Holger (1997): Entwicklungstheorie nach dem Scheitern der "großen Theorie", Institut für Entwicklung und Frieden, INEF Report, Heft 22/1997
- Nau, Henry R. (1995): Book Review of "Ideas, Interest and American Trade Policy, in: The American Political Science Review, Vol. 89, No. 1 (March), pp.252-253
- Nisbet, Robert A. (1980): History oft he Idea of Progress. London: Heinemann Publishing
- Nohlen, Dieter (2005): Entwicklung, in: Nohlen, Dieter/Schultze, Rainer-Olaf (Eds.): Lexikon der Politikwissenschaft, 3.Auflage, München: Verlag C.H. Beck, pp.196-198
- Pearce, Fred (2006): State of Denial A bitter battle is brewing between mainstream American climate scientists and the minority who deny that human activity is causing global climate change, in: New Scientists, Vol. 192, Issue 2576, pp. 18-21
- Post, J.E./Altman, B.W. (1994): Managing the environmental change Process: barriers and opportunities, in: Journal of Organisational Change Managment, Vol. 7 (4), pp.64-81
- Robinson, John (2004): Squaring the circle? Some thoughts on the idea of sustainable development, in: Ecological Economics, Vol.48, pp.369-384
- Rogoff, Keneth (2012): Is modern capitalism sustainable?, in: The International Economy, Vol. 26(1) Winter, pp.60-62
- Schreurs, Miranda A. (2012): Rio +20: Assessing Progress to Date and Future Challenges, in: The Journal of Environment & Development, Vol. 21(1), pp.19-23
- Schubert, András/Láng, István (2005): The Literature Aftermath oft heBrundtland-Report "Our Common Future". A Scientometric Study based on Citations in Science and Social Science Journals, in: Environment, Development and Sustainability, Vol. 7, pp.1-8
- Sneddon, Chris/Howarth, Richard B./Norgaard, Richard B. (2006): Sustainable development in a post-Brundtland world, in: Ecological Economics, Vol. 57, pp.253-268

- Tremmel, Jörg (2003): Nachhaltigkeit als politische und analytische Kategorie Der deutsche Diskurs um nachhaltige Entwicklung im Spiegel der Interessen der Akteure. München: ökomVerlag
- Turner, Graham (2008): A comparison of The Limits to Growth with 30 years of reality, in: Global Environmental Change, Volume 18, Issue 3, pp.397-411
- UN General Assembly (1975): "What now: the 1975 Dag Hammarskjöld report on development and international cooperation", prepared on the occasion of the seventh Special Session of the United Nations General Assembly. Uppsala: Dag Hammarskjöld Foundation
- UNDP (1992): The Rio Declaration on Environment and Development, online available under: <u>http://www.unesco.org/education/nfsunesco/pdf/RIO_E.PDF</u> [last access: 25.07.2015]
- UNDP (1998): Integrating Human Rights and Sustainable Human Development. A UNDP Policy Paper, New York: United Nations Development Program, online available under: http://www.pogar.org/publications/other/undp/hr/hr-pub-policy5-98e.pdf [last access: 01.07.2015]
- UNEP (2013): Emissions Gap Report 2013. United Nations Environment Programme (UNEP), Nairobi.
- UNICDI (1980): United Nations Independent Commission on International Development Issues, final report "North-South: A Program for Survival", online available under: <u>http://files.globalmarshallplan.org/inhalt/psu_2.pdf</u> [last access: 01.07.2015]
- WCED (1987): Our Common Future, Report of the World Commission on Environment and Development, online available under: http://www.un-documents.net/our-common-future.pdf [last access: 25.06.2015]