

**International approaches to measure
wealth and well-being in the context
of sustainable development**

ESDN Case Study No. 3

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Introduction

The debate on the Gross Domestic Product (GDP) has been ongoing since some time: academic circles have questioned the appropriateness of GDP in measuring societal progress beyond economic growth already in the 1980s and 1990s. This concern has lately stepped from academic circles into the spot light of policy-making and public debates and seems to gain momentum through various initiatives at the national and international level. Against this background, this ESDN Case Study aims to take stock of the various international activities on the measurement of societal progress which raise awareness on critical issues of the GDP indicator as a measure of well-being and societal progress.

This case study is divided in five chapters. The first and second chapter outline the most important initiatives at the European level, based on the European Commission's Communication "GDP and beyond" and the Commission on the Measurement of Economic Performance and Social Progress (commonly referred to as Stiglitz Commission). The third and fourth chapter focus on the international level, drawing on the activities of the OECD Global Project on measuring societal progress and well-being and three United Nations activities, the UNEP The Economics of Ecosystems and Biodiversity (TEEB), United Nation Development Program initiative on replacing the GDP indicator with a more comprehensive indicator on human development, such as the Human Development Index and UNECE work on measuring sustainable development indicators. The focus will be on the objectives and background of the initiatives as well as on their methodological and measurement approach towards well-being indicators. Similarities and differences will then be summarized in the last chapter.

The ESDN Case Study No.3 is drafted as a preparatory document for the 6th ESDN Workshop on 2-3 December 2010 in Berlin. The case study aims to provide a basis for knowledge and exchange on the initiatives 'beyond GDP' for the ESDN Workshop participants.

European Commission: “GDP and Beyond – Measuring progress, true wealth and the wellbeing of nations”

Background and objective

The European Commission launched its initiative on the measurement of wealth and wellbeing of countries “beyond GDP” in 2007. According to the European Commission, the EU is committed to take the lead in the move to integrate non-economic factors into policy-making by 2010 ([EURActive 2007](#)). In November 2007, the high-level [conference “Beyond GDP”](#) was hosted by the European Commission, the European Parliament, the Club of Rome, OECD and WWF (please click here for a [summary of the conference results](#)).

The general aim of the initiative is to measure “true” progress, taking environmental and social indicators into consideration, which are not reflected in the current measurement of economic growth through the GDP indicators ([EurActive 2007](#)). Moreover, the initiative aimed not only to present possible indicators, but rather to give a signal to both policy-makers and the public “that it is time to go beyond GDP” (EU Parliament Policy Department Economic and Scientific Policy, 2007). The conference results revealed a strong support from policy-makers, economic, social and environmental experts as well as civil society organisations for developing indicators to complement GDP (EurActive, 2007). On 20 August 2009, the European Commission released its communication to the EU Council and EU Parliament, [“GDP and beyond: Measuring progress in a changing world”](#), which is a direct outcome of the [“Beyond GDP” conference](#) in 2007 and outlines a roadmap for the EU with five key actions. Importantly, the change in title of the conference (“beyond GDP”) and the Communication (“GDP and beyond”) also signify a change in approach.

The EU measurement framework of going beyond GDP is linked to the policy developments regarding the renewal of the Lisbon Strategy and the launching of *Europe 2020 strategy*. The reflection on complementing GDP is not new, but the political momentum of considering these issues on the political agenda is growing¹. The economic crisis gave a window of opportunity to rethink the growth concepts and market performance based on GDP growth. The European Council recognized this need and used the crisis as an opportunity to set the economy on a path of low-carbon and resource-efficient economy (European Commission, 2009). The need of inclusive markets, considering environmental and social cost and not only market benefits and costs, requires indicators which are also able to track social and environmental achievements (e.g. social cohesion, accessibility of basic goods and services, education and public health and air quality). These developed indicators should then be integrated for the review of EU SDS and the Europe 2020 strategy (EESC, 2008).

Measuring well-being in the context of sustainable development

¹ The call on measuring wellbeing, stepping from academic circles (developed in the 1970s and 1980s) into the political agendas of the EU Commission and international organizations is a “crucial qualitative step” compared to years ago (Hönerbach & Mayer-Ries, 2009).

The European Commission with its communication “GDP and beyond” does not aim to replace GDP, but to complement it with other top-level indicators in order to provide a more accurate view of progress in social, economic and environmental spheres (EU Commission, 2009). The Commission’s communication developed a roadmap by setting out five key action areas:

- 1) Complementing GDP with environmental and social indicators;
- 2) Near-real time information for decision-making;
- 3) More accurate reporting on distribution and inequalities;
- 4) Developing a European Sustainable Development Scoreboard;
- 5) Extending National Accounts to environmental and social issues.

In its communication, the EU Commission recognizes the weaknesses of GDP in providing information for the overall progress of a society (EU Commission, 2009). This argued has also been brought forward by the Commission President Barroso in the “Beyond GDP” Conference: “GDP is an indicator of economic market activity. It was not intended to be an accurate measure for well-being”. (Speech held at the [International conference on beyond GDP](#)). Moreover, Joaquin Almunia, Commissioner for Economic and Monetary Affairs also stressed the inadequacy of the GDP to take into account sustainable consumption and production patterns (Hinterberger et al 2009, 19).

Relation to environmental aspects

The European Commission’s Roadmap and the communication “GDP and beyond” aim to supplement GDP with environmental and social information. This is recommended to be done on one hand by the integration of environmental satellite account systems to the conventional national accounts and On the other hand by setting the social and environmental information in relation to GDP.

Currently, there is no comprehensive environmental indicator². The EU Commission, together with Eurostat, is increasing efforts to develop communication instruments, such as the *composite indicators (environmental index)*, for raising awareness in the public debate on environmental performance as part of the societal progress. This composite indicator will include topics such as: *climate change and energy use, nature and biodiversity, air pollution and health impacts, water use and pollution, waste generation and use of resources*. The next step will be the development of another indicator on *environmental quality*, describing the number of European citizens living in a healthy environment. These indicators, when published annually with GDP and other social indicators, will inform the public, firstly, on environmental protection and, secondly, if the progress has been achieved. For offering updated information on environmental indicators in decision-making, the European Commission is also planning to establish “satellite accounts” on environmental and social issues for a more real time information. The communication “GDP and beyond” does not only specify the importance of environmental indicators as communication tools to the public or for the policy-making, but also refers to the extension and further improvement on

² The only two indicators: Ecological and Carbon foot print are limited in scope. The first one excludes some impacts (water). The Carbon footprint summarizes only green house gas emissions.

data collection of natural capital stocks (fisheries and stocks)³. The long-term actions are to further work on data collection for the physical flow accounts and material consumption as well as the monetary accounts. The Commission, therefore, aims to monetise in the long-term the costs and benefits of the environmental damage and protection⁴.

Concerning sustainable development, a “*Sustainable Development Scoreboard*” is planned to be established so that scientists across the EU-27 can work on threshold values for key pollutants and renewable resources to inform policy debate and target setting as well as to exchange information in this field with policy-makers. It remains unclear in the communication whether the environment is observed as an indirect/enabling or direct factor to well-being and welfare⁵. It needs to be distinguished how well-being is measured (aggregated or individual indicators) and what the measurement subject is.

Relation to social well-being (quality of life)

GDP should not only be supplemented with environmental information, but also with social information. The measures of supplementing GDP are of short- and long-term importance. The short-term actions comprise the improvement of quality-of-life indicators as well as the development of more timely social indicators, and more accurate reporting on distribution and inequalities (satellite account system). The communication of the European Commission does not clarify any methodological or conceptual implications whether the quality-of-life measurement will be based on subjective indicators or on objective ones, such as the domains of life influencing well-being (e.g. education, health, income). The Commission only mentions that input indicators of income, health, leisure, wealth, mobility and clean environment should be further complemented with outcome indicators. In the long-term, the social information should then be better integrated in the national accounts.

In the medium- and long-term, the integrated environmental, social and economic accounting, which is one of the five key actions areas of the European Commission’s communication, is likely to be “the strongest tool for the promotion the measurement of well-being and progress” ([Joaquin Alumina, Commissioner for Economic and Monetary Affairs](#)).

Implementation and follow-up

The initiative in the EU to go beyond GDP has not only resulted in a technical engagement of Eurostat in implementing its actions, but it has also been debated in various political institutions, such as the EU Parliament and European Economic and Social Committee. This sub-section outlines, firstly, Eurostat’s work and its first set of variables for measuring well-

³ The first EU strategy on greening accounting was presented in 1994. Since then, Eurostat and Member States, together with the UN and OECD, have developed and tested accounting methods to the point where several Member States provide first sets of environmental accounts.

⁴ The most advanced ones are on forests and fisheries.

⁵ Linkages between social exclusion and environmental deprivation are provided in the study of see “Addressing the social dimensions of environmental policy”, study commissioned by DG EMPL, July 2008; see <http://ec.europa.eu/social/main.jsp?catId=88&langId=en&eventId=145>.

being. Secondly, it describes shortly how political institutions engage in the implementation of the initiative.

Eurostat currently not only works on the key actions of the “GDP and beyond” communication but also coordinates all activities within the European Commission and the European Statistical System (EES) for this initiative at the national and international level. It does this mainly through two groups:

- a) Within the ESS, the **Sponsorship Group on “Measuring progress, well-being and sustainable development”**, co-chaired by Eurostat and FR-INSEE (National Statistical Institute of France), with the participation of 16 EU Member States as well as OECD and UNECE.
- b) Within the European Commission, the **Inter-departmental Co-ordination Group**, co-chaired by Eurostat and DG Environment, with the participation of 11 Commission DGs and three agencies. The group co-ordinates actions as well as communication and cooperation activities.

The achievement of Eurostat can be noticed in various actions areas of the European Commission communication. In the first action area, it has already produced a [feasibility study for well-being indicators](#), where it proposes a set of variables to measure well-being in the EU-27. In this study, Eurostat compares its approach with other beyond GDP initiatives, such as the OECD Global Project on Measuring Progress and Well-being and the Stiglitz Commission. Based on the feasibility study, the measurement of well-being at the European level should not be based on composite indicators, but on an indicator set with the following characteristics:

- *Multidimensional and integral*: The model of well-being is multidimensional. Therefore, Eurostat recommends an “integral framework”, covering all aspects of well-being (incl. outcome measures, personal characteristics, external context factors and measures of what people do with these characteristics and societal conditions). Eurostat distinguishes between outcomes and drivers of well-being. For the outcome measure, Eurostat proposes a *composite outcome indicator*, consisting of “health” and “life-satisfaction” indicators weighted equally (*SALY*). For the drivers/components side (dimensions of well-being), the framework requires an [indicator set](#) for sufficient analytical and communicative value.
- *Combining subjective and objective substances*: Both approaches should be merged into a complete set of relevant components and used in the well-being indicators set. This feasibility study has resulted in a first proposition for a set of variables to measure well-being in the EU-27.

Moreover, Eurostat published data on *net domestic products and real adjusted gross disposable income of household* and it plans to provide quarterly updates of the statistics on real disposable income, which were first delivered in April 2010 (for more information, please go to the [Eurostat homepage](#)).

Beside the Eurostat technical work on the measurement of well-being, the communication “GDP and beyond”, together with its roadmap, have found resonance in various EU institutions, such as the EU Parliament and the European Economic Social Committee. It has

been discussed in September/October 2010 in the EU Parliament within five of its committees ([Committees on Regional Development](#); [Employment and Social Affairs](#); [Industry, Research and Energy](#); [Development](#), and [Economic and Financial Affairs](#)). The results of the draft opinions can be summarised as follows:

Generally, all EU Parliament Committees declared that GDP is not a suitable indicator because:

- as it cannot assess regional cohesion and policies (European Parliament (2010a);
- it ignores non-market aspects (work from home, voluntary work) which are important to assess social well-being (European Parliament (2010c); and
- it ignores social and environmental gains and losses (European Parliament (2010b)).

Therefore, they advise on supplementing GDP with other social and environmental indicators at least until 2014, for a better policy planning of regional programmes. Moreover, a proposal from the European Commission to the EU Parliament on "[Regulation on European Environmental Economic Accounts](#)"⁶ should enter into force soon after its publication in the Official Journal of the European Union.

In April 2010, the European Economic and Social Committee (EESC) welcomed the Commission's communication "GDP and beyond" and the initiatives it outlines. The EESC also recognizes "the process of making the changes that are being prepared is neither short nor simple" ([EESC, 2008](#)). Therefore, it suggests that other interested parties, such as the DG economics of the Commission, European Environmental Agency and Eurostat, to be integrated in the early stages of the analytical planning of these instruments. EESC also recommends integrating the measures and linking them with the review process of the current policies and strategies Europe 2020 and EU SDS.

⁶ This regulation establishes a common framework for the collection, compilation, transmission and evaluation of European environmental economic accounts for the purpose of setting up environmental economic accounts as satellite accounts to ESA 95 by providing methodology, common standards, definitions, classifications and accounting rules, intended to be used for compiling environmental economic accounts (European Commission, 2010, Article 1).

Commission on the Measurement of Economic Performance and Social Progress (Stiglitz Commission)

Background and objective

The Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) – also referred to as Stiglitz Commission – has been established at the beginning of 2008 on the initiative of the French government. President Sarkozy himself raised the increasing concern on the mismatch between indicators (GDP) that refer to continuous progress and the increasing difficulties that the French people experience in their daily life⁷. The aim of the Commission was:

- to identify the limits of GDP as an indicator of economic performance and social progress, and to consider additional information required for the production of a more relevant picture;
- to discuss how to present this information in the most appropriate way;
- to check the feasibility of measurement tools proposed by the Commission.

The Commission, headed by the famous economists Joseph Stiglitz (chair), Amartya Sen (chair advisor) and Jean Paul Fitoussi (coordinator), held its first meeting in spring 2008 in Paris and delivered its [final report](#) in autumn 2009. The Commission's final report strives to give recommendations on around three topics:

- limits and potential of GDP as indicator;
- quality of life and
- sustainable development and environment.

The Stiglitz Commission regarded its report as opening a discussion which should be then further taken on at the national and international level. However, the report argues, “as what we measure shapes what we collectively strive to pursue – and what we pursue determines what we measure – the report and its implementation may have a significant impact on the way in which our societies look at themselves and, therefore, on the way in which policies are designed, implemented and assessed” (Stiglitz, et al., 2009, 9).

Measuring well-being in the context of sustainable development

According to the Stiglitz Commission, well-being is related to economic, social and environmental well-being. It plays a role not only in the present but also in future. It regards well-being as multidimensional⁸. In this context, the measurement of current well-being can be aggregated in monetary units (economic well-being) or along dimensions that are less amenable to conversion into monetary units (quality-of-life). Moreover, the measurement of

⁷ *Les Echos*, 17th August 2009. <http://www.lesechos.fr/info/france/020102965322.htm>

⁸ The Commission has identified following dimension that should be taken into account when defining what well-being is: (1) Material living standards; (2) Health; (3) Education; (4) Personal activities including work;(5) political voice and governance;(6) social connections and relationships;(7) environment(present and future generations);(8) Insecurity of an economic as well physical nature (Stiglitz et al., 2009, 14-15).

well-being poses the challenge of determining whether the current level of well-being can be at least maintained for future periods or future generations.

Relation to economic activities (critique of GDP)

The Stiglitz Commission emphasises that GDP should not be dismissed. However, the Commission argues that GDP fails to provide information on well-being. It is an indicator of market activity based on production and does not really show how well-off people are. For instance, production/profit can increase but income can decrease due to various factors (e.g. depreciation, income flows, and differences between the prices).

The Commission's recommendations are based on adjusting GDP for better information on economic well-being. When looking on people's well-being, one should less observe the performance of economies (real GDP per capita) as a whole, but emphasize the household perspective based on citizens material living standards (objective part of well-being captured from other national accounts aggregates, such as the net national income, real household income and consumption). Generally, the report argued that GDP should be adjusted in three aspects:

- Firstly, from the production side, it should better capture structural changes in economic performance (such as the shift from measuring output in quantitative terms, for instance cars or computers, towards more qualitative change (such as medical service, educational services): "Capturing quality change (...) is vital to measuring real income and real consumption, some of the key determinants of people's material well-being". (Stiglitz et al., 2009, 11).
- Secondly, a better measurement of government output (e.g. number of medical treatments) and not only government input (e.g. the number of doctors) is needed to better reflect the productivity change of a sector and its contribution to economic growth.
- Thirdly, inclusion of non-market activities in the production side (e.g. home work and other services).
-

Out of its 12 recommendations, 5 are dedicated to critical GDP issues:

- | |
|---|
| <ul style="list-style-type: none">• Recommendation 1: When evaluating material well-being, look at income and consumption rather than production• Recommendation 2: Emphasize the household perspective• Recommendation 3: Consider income and consumption jointly with wealth• Recommendation 4: Give more prominence to the distribution of income, consumption• wealth• Recommendation 5: Broaden income measures to non-market activities |
|---|

Relation to societal issues (quality-of-life)

The well-being definition is multidimensional and the report calls for the use of multiple measures when trying to cover well-being⁹. The Stiglitz Commission recognizes that well-being can not only be measured on economic terms must go beyond that and include people's *objective conditions and capabilities* (e.g. health, education, personal activities, political voice and governance,) and their *subjective experiences of quality-of-life* (e.g. self reported levels of happiness, pleasure and fulfilment as satisfaction): "Quality-of-life includes the full range of factors that make life worth living, including those that are not traded in markets and not captured by monetary measures". Therefore, according to the Commission's report, GDP should be supplemented with other indicators, measuring subjective experiences and objective conditions which shape quality of life: "These measures, while not replacing conventional economic indicators, provide an opportunity to enrich policy discussions and to inform people's view of the conditions of the communities in which they live" (Stiglitz et al. 2009, 57).

Methodologically, the Commission's report recommends not only objective and subjective data, but also indicators on inequalities based on socio-economic groups, such as gender and generations. Moreover, the data should not only be aggregated across quality-of-life dimensions (e.g. health, environment, etc) allowing the construction of different outcome indexes (e. g Human Development Index, or SALY), but surveys should be designed to also assess the links between various quality-of-life domains for each person.

The recommendations concerning *quality-of-life measurement* are:

Recommendation 6: Quality-of-life depends on people's objective conditions and capabilities. Steps should be taken to improve measures of people's health, education, personal activities and environmental conditions. In particular, substantial effort should be devoted to developing and implementing robust, reliable measures of social connections, political voice, and insecurity that can be shown to predict life satisfaction.

Recommendation 7: Quality-of-life indicators in all the dimensions covered should assess inequalities in a comprehensive way.

Recommendation 8: Surveys should be designed to assess the links between various quality-of-life domains for each person, and this information should be used when designing policies in various fields.

Recommendation 9: Statistical offices should provide the information needed to aggregate across quality-of-life dimensions, allowing the construction of different indexes.

Recommendation 10: Measures of both objective and subjective well-being provide key information about people's quality of life. Statistical offices should incorporate questions to capture people's life evaluations, hedonic experiences and priorities in their own survey.

⁹ The Commission identifies dimension that should be taken into account when defining what well-being is: (1) material living standards; (2) health;(3) education;(4) personal activities including work;(5) political voice and governance;(6) social connections and relationships;(7) environment (present and future generations);(8) insecurity of an economic as well physical nature (Stiglitz et al 2009, 14-15).

Relation to environmental sustainability

According to the Stiglitz Commission, the assessment of environmental sustainability is complementary to the question of current well-being or economic performance and must be examined separately: “Sustainability poses the *challenge of determining whether we can hope to see the current level of well-being at least maintained for future periods or future generations*. It is no longer a question of measuring the present, but of predicting the future, and this prospective dimension multiplies the difficulties” (Stiglitz et al. 2009, 61).

The Commission criticizes the majority of proposals which have been made so far for measuring sustainability in quantitative terms¹⁰. The Stiglitz Commission approach varies distinctively from other approaches as it distinguishes between the “measurement of current well-being, economic activities”, on one hand, and “the assessment of its sustainability”, on the other hand (Stiglitz et al., 2009, 61). Based on such restriction when it comes to measuring sustainability, the Commission’s report focuses on what the literature calls a “wealth or stock based approach” (ibid). This means that different types of capital like economic, social, human and environmental capital should be preserved for future generations. But Stiglitz Commission also points out that the difficulties in measuring various kinds of capital are not solved yet. This holds especially true for *natural capital* and for the *monetary valuation of natural and also social capital*. Considering the substantial constraints in implementing the capital approach, Stiglitz report draws pragmatic conclusions. It recommends measuring sustainable development and environment with two sets of indicators – so-called dashboards, one focused on economic and one on environmental aspects of sustainability. The Stiglitz Commission encompasses the two following recommendations on environmental sustainability:

Recommendation 11: Sustainability assessment requires a well identified dashboard of indicators. The distinctive feature of components of this dashboard should be that they are interpretable as variations of some underlying “stocks”. A monetary index of sustainability has its place in such a dashboard but, under the current state of the art, it should remain essentially focused on economic aspects of sustainability.

Recommendation 12: The environmental aspects of sustainability deserve a separate follow up based on a well-chosen set of physical indicators. In particular there is a need for a clear indicator of our proximity to dangerous levels of environmental damage (such as associated with climate change or the depletion of fishing stocks).

Implementation and follow-up

The Commission regards its report as opening a discussion. The Commission findings and their endorsement by President Sarkozy represent a will to reassess the way progress is measured. Therefore, it represents an ally both, politically and in terms of technical

¹⁰ Green GDP, Dashboard of SD, Olsberg and Sharpe’s Index of Economic Well-being have been subject to many objections. ANS-Adjusted net savings (of the World Bank) and footprint evaluations are the best proxies of what would be genuine indices of changes in extended wealth or its components. (Stiglitz et al., 2009, 62-72)

knowledge, which has found wide usage and has been taken up from various organizations at the international level:

- OECD has integrated the Stiglitz Commission recommendations in its labour programmes and the green growth strategy;
- [Eurostat and FR-INSEE](#) (National Statistical Institute of France) sponsorship group in which the national statistical institutes of 16 EU Member States as well as OECD and UNECE collaborate, is currently establishing 4 taskforces: three on the topics of the Stiglitz Commission report and one on the coordination. Within this sponsorship group, roundtables at the national level are established with other stakeholders;
- Other bodies at the national and international level have discussed the recommendations of the Stiglitz report, identified its limits, and analyzed how best they can contribute to this broad agenda, each from their own perspective ([Eurostat feasibility study on wellbeing indicators](#)).
- The mandate “Sarkozy –Merkel” on the preparation of a German-French cooperation report on “What is economic growth in the 21st century and what is prosperity for industrialised developed nations?”. The preparation of this concept will be based on the Stiglitz Commission’s report and the results will then be introduced in a conference held in Berlin in 2010.
- United Nations Statistical Commission has placed the implementation of the Stiglitz Report recommendation on top its priorities.

OECD - Global Project on Measuring the Progress of Societies and Well-being

Background and objective

The OECD has started to address the concerns on measuring societal progress through the world forums on “Statistics, Knowledge and Policies” held in Palermo (2004) and Istanbul (2007). The conference in 2007 led to the Istanbul Declaration on Measuring and Fostering the Progress of Societies, jointly agreed by the European Commission, the OECD, the UNDP, the World Bank, and the Organisation of the Islamic Conference. To achieve the goals of the declaration, a partnership based Global Project on Measuring the Progress of Societies was launched in 2007 (OECD, 2009). Both, the Istanbul Declaration and the Report of the Stiglitz Commission, proposed to move from the current measurement system, based on the metrics of production, to a system that focuses on societal well-being and progress (OECD, 2007).

The aim of the Global Project is not to impose one definition of progress worldwide, but as the Istanbul Declaration advocates, “to encourage communities to consider for themselves what ‘progress’ means in the 21st century” ([OECD, Global Project Homepage](#)). Therefore, the Global Project objectives are to: (1) stimulate national and international debates on societal progress and its measurement; (2) create a network of networks for advocacy and for sharing information on progress.

The Global Project, initially, has endeavoured to provide a network for the many initiatives and international projects aimed at “going beyond GDP” to measure societal well-being, quality-of-life and progress by organising the world forums conferences and offering trainings (OECD, 2009). Lately, this focus has shifted towards engaging more technically in measurement on how to measure well-being by:

- 1) setting priorities for the statistical agenda¹¹;
- 2) developing measures, methods and tools;
- 3) improving and enhancing policy making (OECD, 2009, 3).

Due to this shift of focus, the OECD Global Project has been recently renamed as “Measuring the Progress of Societies and Well-being”. The OECD seems well-placed to contribute to the implementation of this agenda, based on its long standing experience and its substantive contribution to the work of the Stiglitz Commission (the OECD Chief Statistician was a member of the Stiglitz Commission and senior staff of the OECD acted as rapporteurs).

¹¹ The recent World forum conference on “charting progress, building visions, improving life” emphasized and reoriented the direction by pointing out that there not only is a better need of measurement of progress but also changing the basic global paradigm of progress for people and nations, from production to equitable and sustainable well-being (see: <http://www.oecdworldforum2009.org>).

OECD Framework on measuring well-being

The OECD statistics directorate has compiled a [framework for progress](#) that could provide a useful starting point for anyone engaged in an initiative to develop a set of societal progress indicators (OECD, 2010). The need of such a framework is built on the current critique of the national accounts which are regarded as not a suitable measure of economic well-being due to shortcomings such as incomplete coverage of non market activity; restricted coverage of assets and depreciations; and lack of information on distributional, generation of income, on life-cycle and inter-generational features. The developed framework is broad enough to be adaptable to different cultures and scopes. It is not a “model how the world works”, but a framework which includes all important aspects for “selecting and presenting the key measures of societal progress” (OECD, 2010, 13). The [taxonomy](#) comprises most of the alternative frameworks proposed so far and is coherent with the Stiglitz Commission report.

The aim of this framework is (i) to identify gaps in existing statistical standards and build a research programme to fill these gaps, and (ii) to structure the official website of the Global Project -Wiki-progress¹² (see www.wikiprogress.org). The OECD framework¹³ regards the “progress of society”

- as a multidimensional concept encompassing material and immaterial aspects of well-being; the framework recognizes that various concepts are linked to the progress concept such as well-being, quality-of-life, life-satisfaction and sustainable development¹⁴(para. 16);
- as a dynamic concept requiring both, looking at the past and considering the future, such as sustainability of current level of well-being (par. 16)
- measured in subjective and objective measures (para. 36)
- by taking in consideration inequalities, distributional (para. 34) and sustainability issues (para. 39).

The framework considers that societies are based on two systems: the human system and the ecosystem. They are linked through two different channels, “resource management” and “ecosystem services”) (OECD, 2010). Therefore, it defines well-being of a society “as the sum of the human wellbeing and the ecosystem condition and progress of society as the improvement in human wellbeing” (OECD, 2010, 12). Social progress is defined as the “improvement in the sustainable and equitable wellbeing of a society” (OECD, 2010, 12).

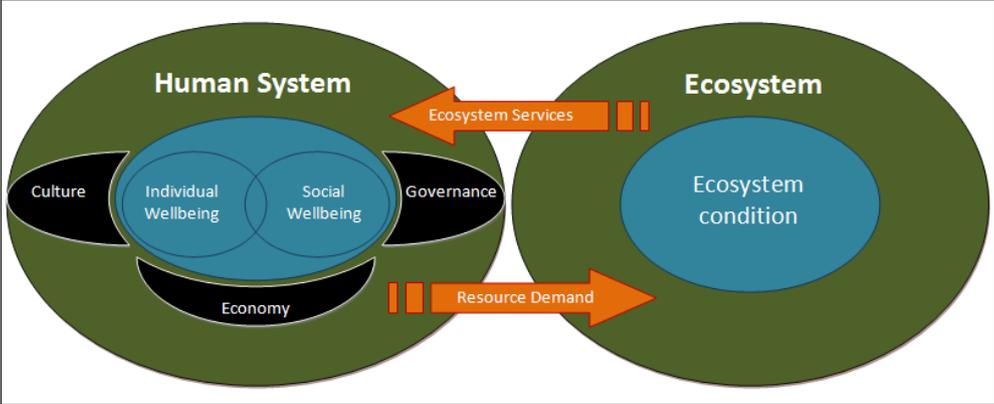
¹² Wikiprogress is a global platform for sharing information in order to evaluate societal [progress](#). It is a place to find information and statistics to facilitate the exchange of ideas, initiatives and knowledge on “[measuring the progress of societies](#)”. It is open to all members and communities for contribution– students and researchers, civil society organizations, governmental and intergovernmental organizations, multilateral institutions, businesses, statistical offices, community organizations and individuals – anyone who has an interest in the concept of “[progress](#)”.

¹³ The OECD framework is based on the work of Robert Prescott-Allen (2001), *The well-being of nations*, Washington DC: Island Press.

¹⁴ “Life satisfaction” focuses on the subjective assessment of different elements that affect individual lives, “wellbeing” has been used to refer to objective living conditions. While both concepts refer to the condition of the current generation, “sustainable development” tries to take into consideration the wellbeing of future generations, introducing an intergenerational dimension in assessing current wellbeing that is often absent in other frameworks (OECD, 2009).

Relation to human well-being

The framework of progress of societies distinguishes between domains and dimensions within these domains. The key domain is human well-being. This dimension should be based on physical and mental health (based on the data of HDI and WHO). Well-being sits within the human system, which includes the economy, culture and governance as “pillars to human well-being” or drivers. Other domains such as economy (national income and wealth), culture (heritage) and governance (human rights, civic and political engagement, security and violence, trust, access to services) offer an enabling environment for human well-being. Therefore, human well-being (outcomes for people) is considered as a final goal and the other three domains are considered as “intermediate goals” (OECD, 2010, 11). Human well-being is again to be subcategorised in individual well-being and social well-being. The OECD framework for progress of society is summarised in Graph 1 below:



Graph 1: The OECD framework of the progress of societies (OECD, 2010, 15)

Relation to environmental well-being

The framework presents not only the human system, but also the ecosystem as decisive for well-being. According to the OECD framework, ecosystem well-being is equally important as the human system if one sees the ecosystem as important in its own right (eco-centric view) or if one takes a more anthropocentric view¹⁵ in which the ecosystem is viewed as important because simply it provides the human system with resources and services which contribute to human well-being (OECD, 2010).The OECD framework does not dictate which is the best approach how to regard ecosystem well-being and mainly serves as a starting point to countries which are interested in measuring well-being.

According to the OECD framework, the ecosystem has only one domain (ecosystem condition), which represents the well-being of the ecosystem. The ecosystem condition

¹⁵ Anthropocentrism is a concept that human beings may regard themselves as the central and most significant entities in the universe, or that they assess reality through an exclusively human perspective. Anthropocentrism is alleged to leave the case for the protection of non-human nature subject to the demands of human utility, and thus never more than contingent on the demands of human welfare. An ecocentric ethic, by contrast, is believed to be necessary in order to develop a non-contingent basis for protecting the natural world.

(outcomes for the environment) (see Graph 1) is defined as a final goal in the OECD taxonomy. The ecosystem conditions are measured along following dimensions:

- Land (geosphere),
- Freshwater, oceans and seas (hydrosphere)
- Biodiversity (biosphere)
- Air (atmosphere).

The relation of the ecosystem to the human system is linked along two channels: (a) ecosystem services and (b) resource management. Resources management represents the effects of the human system on the ecosystem through resource depletion and pollution. Its dimensions where outcomes should be measured are: resource extraction and consumption; pollution and protection and conservation of economic and environmental assets. Ecosystem services link the two systems in both directions. The ecosystem benefits the human system through positives services like food, clean water, etc. But it can also do damage through earthquakes and floods. The human system may also provide positive services to the ecosystem (or its capacity for supporting life) through providing food and water for wild animals in times of hardship, tackling invasive species and so on.

Relation to sustainability

Intra- and inter-generational aspects of measurement are also included in the OECD framework. The first one comprises measurement along the equity/inequality dimensions of human well-being and ecosystem condition across societies, geographical regions and generations. It is argued that distributional aspects of today cannot be assessed without considering its sustainability over time. Inter-generational aspects apply to sustainability, vulnerability and resilience issues. All of them have an inter-temporal dimension and can be important for individuals as social groups. These inter-temporal considerations can be taken throughout the framework.

Implementation and follow-up

The process launched by the OECD in 2004 has opened up an ambitious agenda. Indeed, the OECD Global Project has been influential for a variety of national initiatives ([OECD 3rd World Forum Homepage](#)). As part of the Global Project implementation, countries have established national roundtables to measure progress and developed a variety of research projects. One important output of the Global Project has been the creation of the www.wikiprogress.org web portal which provides a platform for exchanging information and analysis on well-being across the Global Project Network.

The project is now moving to a new phase, shifting its focus from raising awareness and networking towards producing a new generation of concrete measures of well-being. In particular, the research team working for the Global Project is developing a number of indicators on people's quality-of-life with the goal of informing policies for improving well-being and quality-of-life. The statistical work aims at taking stock of the most innovative experiences in individual countries but also at developing new statistical standards in areas

where these are lacking. This work is carried out in cooperation with two other horizontal OECD projects focusing on economic and environmental sustainability: the Green Growth Strategy and the OECD Innovation Strategy.

In terms of the governance of the Global Project Network, OECD is now moving towards a more streamlined operational structure in order to increase the effective participation of partners and strengthen the co-operation between key players. A number of initiatives promoting the statistical and political agenda on well-being are in preparation, such as the 4th World Forum in India and other regional events in Latin America, Asia and Africa in 2011 and 2012.

United Nations' efforts in measuring well-being

The United Nations (UN) have undertaken various initiatives to measure and evaluate the economic value of ecosystems, societal progress based on human development as well as sustainable development. In this subsection three key initiatives will be outlined shortly: the UNEP hosted initiative on The Economics of Ecosystems and Biodiversity (TEEB); the United Nations Development Program initiative on replacing the GDP indicator with a more comprehensive indicator on human development such as the Human Development Index (HDI); and the involvement of UNECE in the Joint working group of OECD and Eurostat in measuring sustainable development.

UNEP's The Economics of Ecosystems and Biodiversity (TEEB): Valuation of environment

The Economics of Ecosystems and Biodiversity (TEEB) is a major international initiative to draw attention to the global economic benefits of biodiversity, to highlight the growing costs of biodiversity loss and eco-system degradation, and to draw together expertise from the fields of science, economics and policy to enable practical actions moving forward. TEEB was launched in 2007 by Germany and the European Commission in response to a proposal by the G8+5 Environment Ministers¹⁶ and is hosted by the United Nations Environment Programme to provide a comprehensive global assessment of economic aspects of these issues¹⁷ ([TEEB Homepage](#)).

The background of such an international initiative is the recognition that human well-being relies critically on ecosystem services provided by nature. Examples include water and air quality regulation, nutrient cycling and decomposition, plant pollination and flood control, all of which are dependent on biodiversity. They are predominantly public goods with limited or no markets and do not command any price in the conventional economic system, so their loss is often not detected and continues unaddressed. This in turn not only impacts human well-being, but also seriously undermines the sustainability of the economic system. As TEEB has generated various reports for various stakeholders (e.g. business, policy makers), in this ESDN Case study we will concentrate only in the TEEB syntheses report. The aim of the TEEB synthesis study is to highlight and illustrate the approach adopted by TEEB: namely to show how economic concepts and tools can help equip society with the means to incorporate the values of nature into decision-making at all levels (TEEB 2010, 3).

The approach of TEEB in measurement:

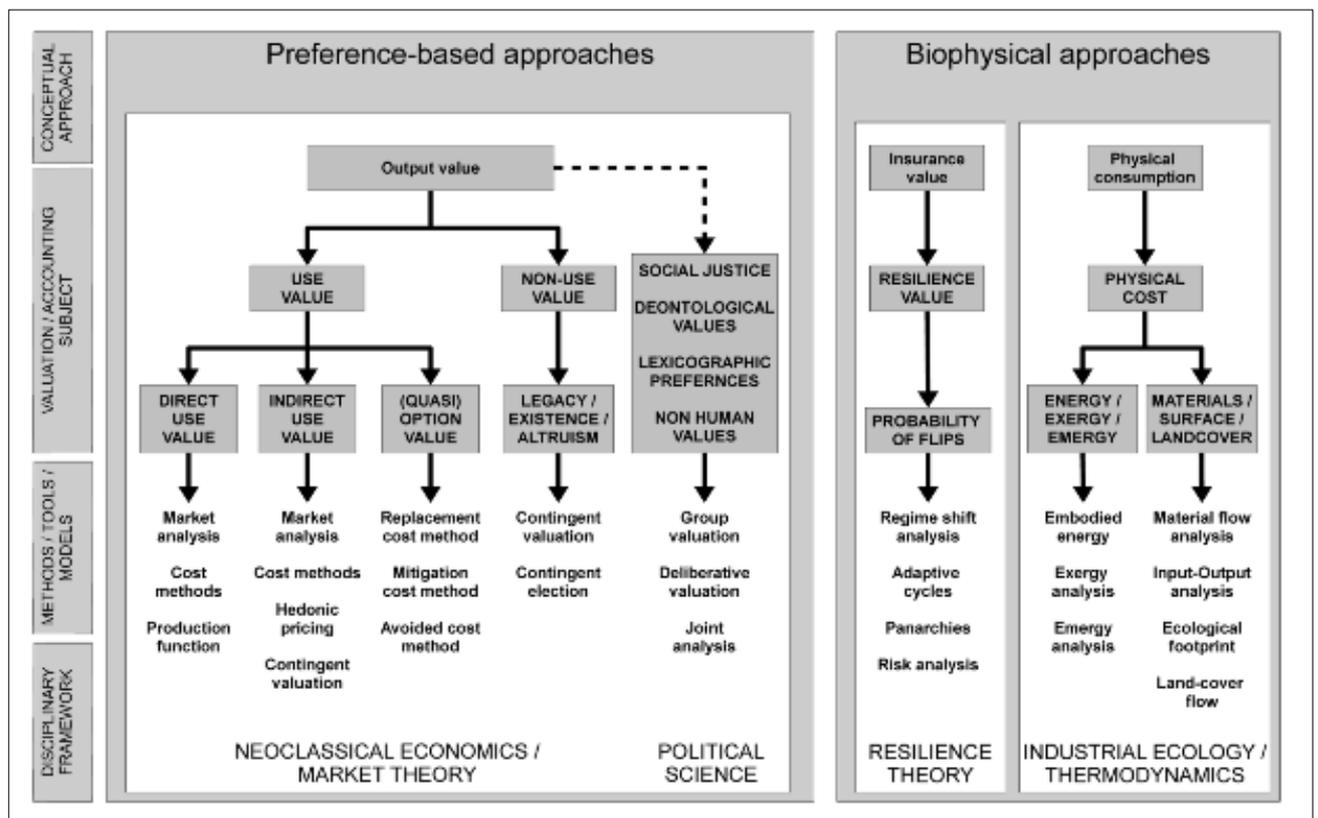
According to the TEEB study, ecosystems and human well-being are strongly correlated, as maintaining the stocks of natural capital allow sustained provision of future flows of ecosystem services and thereby enduring human well-being (TEEB, 2010, 7). The concept

¹⁶ Phase I's Interim Report demonstrates the huge significance of ecosystems and biodiversity and the threats to human welfare if no action is taken to reverse current damage and losses

¹⁷ TEEB Phase II has delivered a series of reports addressing the needs of major user groups: national and local decision makers, business and the wider public. In this report we will only concentrate on the synthesis of the approach, conclusions and recommendations. TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB.

used in the literature of how to link nature with the economy is used by the concept of “eco-system service”¹⁸ or “flows of value” to human societies as a result of the state and quantity of natural capital. The theoretical approach or modelling on how to value nature comprises foundations from *preference base theoretical approaches* (neoclassical economics (market theory) and political sciences) to *biophysical approaches* (resilience theory, industrial ecology and thermodynamics)¹⁹ (see Graph 2 below).

According to the TEEB study, the valuation of biodiversity and ecosystem services for every kind of decision-making follows a tiered-approach in analyzing and structuring valuation; recognizing, demonstrating and capturing the value of nature. In the valuation of the ecosystem services, the report distinguishes between the services that are consumptive or have a *use value* and can be priced in markets - *direct use values* of “provisioning ecosystems services” (e.g crops, livestock, fish, water) and the one that have a *non-consumptive value* and are rarely valued in money, which may include the cultural importance of a landscape or species (see Graph 2, left).



Graph 2: Approaches for the estimation of nature's value (TEEB, 2010)

The three-tiered approach consists of following steps:

¹⁸ There are four various forms of eco-system services: (1) Provisioning services – for example wild foods, crops, fresh water and plant-derived medicines; (2) Regulating services (filtration of pollutants by wetlands, climate regulation through carbon storage and water cycling, pollination and protection from disasters); (3) Cultural services (recreation, spiritual and aesthetic values, education); (4) Supporting services (soil formation, photosynthesis and nutrient cycling).

¹⁹ For more information see TEEB Ecological and Economics foundation, Chapter 5

- (1) *Recognizing value in ecosystems*, landscapes and other areas, might be grounded in spiritual or cultural values. If the recognition of the value of biodiversity is high, protective legislation can be an appropriate response and no need of monetary valuation may be necessary.
- (2) *Demonstrating value in economic terms* implies the calculation of costs and benefits of conserving the ecosystem services. TEEB has reviewed a variety of economic valuation methods, and concluded that most valuation studies do not assess the full range of ecosystem services, but concentrate only in a few. The demonstration of the economic value of ecosystem services has various advantages for the decision maker²⁰.
- (3) *Capturing the value of ecosystem services*, involves the introduction of mechanisms that incorporate the values of ecosystems into decision making through market mechanisms such as incentives and price signals.

TEEB draws various recommendations for policy-makers and stakeholders, including inter-governmental and other international bodies. One of the recommendations is also oriented to measurement issues. The report recognizes the economic assets of natural resources, despite the fact there is still no market place for them. Therefore, it criticizes conventional measures of national economic performance of contributing to the invisibility of nature and calls for *integrating value changes in natural capital stocks and ecosystem services in present national accounts and of drawing up consistent physical accounts for these services and forest stock*. Such shift is recommended in the TEEB report to be supported through amendments to the UN Manual on Integrated Environmental and Economic Accounting (TEEB, 2010, 26).

UNEP's Human Development Index (HDI)

In 1990, UNDP has published its first Human Development Report with its then newly devised Human Development Index (HDI). The idea of HDI was simple: *national development should be measured not simply by national income, but also by life expectancy and literacy*. The goal of the Human Development Reports is to put people at the center of development, going beyond income, and to assess people's long-term well-being. The reports follow a human development approach²¹. The UNDP Human Development Report 2010, published in November 2010, recognizes once more the relevance of this approach: human development matters across years, ideologies, cultures and classes (UNDP, 2010, 36).

The HDI is considered as an indicator replacing GDP (Schepelmann et al., 2010), for demonstrating the real progress of society. The HDI is a composite index measuring the average achievements of country in their basic dimensions: (i) health; (ii) education; and (ii)

²⁰ Firstly, it highlights the costs of achieving environmental targets; Secondly, it helps identify more efficient means of delivering ecosystem services. Consequently, the policy-maker can address the trade offs of the decisions which tend to favor private wealth and physical capital over public wealth and natural capital.

²¹ According to this approach, human development is the expansion of people's freedoms to live long, healthy and creative lives; to advance other goals they have reason to value; and to engage actively in shaping development equitably and sustainably on a shared planet. People are both the beneficiaries and the drivers of human development, as individuals and in groups (UNDP, 2010, 16).

standard of living (measured since 2010 not any longer through the GDP, but through the Gross national income per capita²²).

There have been also some changes in the new report concerning the substitutability across the three dimensions (health, education and standard of living). Changes within one dimension were not reflected before in HDI. Now, the aggregation of the three dimensions reflects also the poor performance in any dimension. This new method captures how well rounded a country's performance is across the three dimensions.

HDI and GDP: Strengths and Limitations

The HDI's strengths—particularly its transparency, simplicity and popular resonance around the world—have kept it at the “forefront of the growing array of alternatives to gross domestic product (GDP) in measuring well-being” (UNDP, 2010, 28). As the *New York Times* recently wrote, “so far only one measure has succeeded in challenging the hegemony of growth-centric thinking. This is known as the HDI, which turns 20 this year” (UNDP 2010, 14). Also its ranking mechanism is a tool which is easily understood by the public. Moreover, the indicator has raised awareness for the concept of “human development” beside economic progress (Schepelmann et al. 2010).

The HDI methodology since 2010 does not include any longer the GDP as an indicator for standard of living, but the Gross National Income per capita. The latter one reflects better in a globalized world the income generated from residents inside and outside the country and not only its domestic output²³. The strength of the HDI methodology is, therefore, the consideration of these economic dimensions, which are not always sufficiently reflected in alternative indices attempting to replace GDP (UNDP, 2010). Moreover, inequalities and disparities within and across countries as well as unsustainable production and consumption patterns have been addressed through the development or improvement of the HDI through the following indicators: the inequality adjusted Human Development Index (IHDI)²⁴, the Gender Inequality Index(GII)²⁵, and the Multidimensional Poverty Index(MPI)²⁶. These state-of-the-art measures incorporate recent advances in theory and measurement and support the centrality of inequality and poverty in the human development framework (UNDP, 2010). Also subjective measures and happiness are recognized in the human development approach as important (UNDP, 2010). Happiness should not be a sole measure, but complementing other measures of well-being. However, HDI does not well cover ecological

²² In a globalized world differences are often large between the income of a country's residents and its domestic production. Some of the income residents earn is sent abroad, some residents receive international remittances and some countries receive sizeable aid flows. For example, because of large remittances from abroad, GNI in the Philippines greatly exceeds GDP, and because of international aid, Timor-Leste's GNI is many times domestic output (UNDP, 2010, 29).

²³ For example, because of large remittances from abroad, GNI in the Philippines greatly exceeds GDP, and because of international aid, Timor-Leste's GNI is many times domestic output

²⁴ IHDI is a measure of the average level of human development of people in a society once inequality is taken into account. It captures the HDI of the average person in society, which is less than the aggregate HDI when there is inequality in the distribution of health, education and income. Under perfect equality, the HDI and IHDI are equal; the greater the difference between the two, the greater the inequality (UNDP, 2010, 40).

²⁵ GII is a measure that captures the loss in achievements due to gender disparities in the dimensions of reproductive health, empowerment and labor force participation. Values range from 0 (perfect equality) to 1 (total inequality) (UNDP, 2010,40).

²⁶ MPI is a measure of serious deprivations in the dimensions of health, education and living standards that combines the number of deprived and the intensity of their deprivation (UNDP, 2010, 40).

aspects of sustainability²⁷ and is being criticized of not considering other aspects of human development (e.g. neglecting political and civil issues) (Schepelmann et al. 2010).

In the future, HDI might be best suited for application in EU cooperation and trade policy. Therefore, the European Parliament study suggests that EU and UNEP could also work together to further develop the indices and address its shortcomings. Due to its lack of complexity (e.g. regarding environmental aspects), the HDI cannot replace sustainable development measurements (European Parliament, Policy Department Economic and scientific Policy, 2007).

Joint UNECE, OECD and EUROSTAT Working Group on Statistics for Sustainable Development (WGSSD)

The Joint **UNECE/Eurostat/OECD Working Group on Statistics for Sustainable Development (WGSSD)** was commissioned by the Bureau of the Conference of European Statisticians in 2005 to develop a broad conceptual framework for *measuring sustainable development with the concept of capital at its centre and to identify a small set of indicators that could serve for international comparisons and which has a policy relevance*. The outcome of this work is presented in the publication on [Measuring Sustainable Development](#), issued in 2009. The work identifies good concepts and practices to assist national governments and international organizations in the design of sustainable development indicator sets. It also provides a set of 10 indicators for sustainable development which are internationally comparable, use the capital approach, and have policy relevance across the EU countries ([UNECE Homepage](#)).

According to the report, sustainable development is understood as “increasing well-being over a very long time” (UNECE, 2009, 12). As already the Stiglitz Commission report has argued, measuring sustainable development should be clearly separated from the issues of measuring current well-being in monetary and non-monetary terms. The WGSSD does not make any difference between well-being and welfare, as it regards the differences among these concepts only crucial for the academic debate. It assumes that the concept of well-being (with its multi-dimensional definition) has much potential for measuring sustainable development if it is broadened beyond the traditional scope in economics (UNECE, 2009, 3).

Capital approach for sustainable development indicators

From a capital perspective in the UNECE report, sustainable development can be defined as non-declining *per capita* wealth over time (United Nations et al., 2003). It refers to the need to maintain wealth as the basis of sustainable development. The capital approach measures wealth of a society, based not only on financial capital, but on the society’s total capital, including five individual stocks:

- *financial capital* like stocks, bonds and currency deposits; produced capital like machinery, buildings, telecommunications and other types of infrastructure;
- *natural capital* in the form of natural resources, land and ecosystems providing services like waste absorption;

²⁷ About a fourth of countries have a high HDI but low sustainability.

- *human capital* in the form of an educated and healthy workforce; and
- *social capital* in the form of functioning social networks and institutions.

The challenge of sustainable development is simplified in the report into a question of whether a country's total capital base – or total national wealth – is managed in a way that secures its maintenance over time. Based on the limitations of the current approach (see Box 1), a practical implementation of the capital framework cannot rest only on monetary indicators alone, but should also separate indicators of *critical capital stocks* measured in *physical units*.

Box 1: Limitations on the theoretical capital approach

Firstly, it is difficult to uniquely determine all of the ways in which capital contributes to well-being. Those that cannot be identified obviously cannot be valued. Secondly, even for those contributions which can be identified, it is sometimes difficult to monetize their value. A third limitation on valuation is the degree of substitutability among capital types. According to the WGSSD report, the various components of national wealth cannot always and without difficulty be replaced with one another. Capital services for which no substitute can be found are said to flow from critical capital stocks. To the extent that some capital stocks are indeed critical, the possibility of using a single monetary aggregate to measure sustainable development disappears. It would be wrong to aggregate values for non-critical capital with those for critical capital into a single measure. In doing so, essential information for sustainable development would be lost (UNECE, 2010).

As mostly all sustainable development indicator (SDI) sets in Europe are a product of policy negotiations, the WGSSD proposed only a small set of SDI (10 indicators) that is consistent with the capital approach, relevant from the policy perspective and suitable for comparing sustainable development performance among countries. When comparing the policy-based approach of SDIs across countries and the theoretical capital approach for SDIs, the study noted that (a) only a few common policy-based SDIs cannot be reconciled with the capital approach (GDP per capita is one of the few indicators used in the policy approach and cannot be selected in the SD set from the capital perspective), and (b) only a few monetary indicators are commonly found in policy-based set²⁸.

The proposed set of indicators should not be understood only as theoretically robust, but it shows also political relevance. This explains why some indicators which are highly relevant to the capital approach are not included in the small set of indicators.²⁹

²⁸ There is no effort in policy-based set to measure sustainable development with highly aggregated indicators as economic wealth.

²⁹ For example economic welfare is not currently measured in the policy based set and through highly relevant from a capital based approach not included in the proposed set.

Conclusion

The various initiatives at the international level described above demonstrate the diverse efforts of international organizations in going beyond the GDP indicator and measuring societal progress not only in terms of economic growth. The engagement of the various international organizations has been political as well as technical.

The majority of the initiatives mentioned in this ESDN Case Study still consider GDP as a useful indicator for measuring economic growth; however, they also see its limitations in measuring general societal well-being and progress. They recommend, therefore, supplementing GDP with environmental, social and sustainability information in order to attain a diversified picture regarding societal progress and well-being. The only indicator which has managed so far to replace GDP and to find also political acceptance has been UNDP's Human Development Index (HDI) that offers a more comprehensive measure for human development by considering the economic dimension in it. A study of the European Parliament has emphasized that supplementing GDP, and not completely replacing it, is the more "realistic and acceptable option for going beyond GDP in the EU" (European Parliament Policy Department Economic and scientific Policy, 2007, 61).

When well-being and societal progress should be measured, the international initiatives attempt to supplement GDP with information at two levels: environmental and societal. The majority of the initiatives recommend at the environmental level two groups of instruments: (1) integration of environmental information on national accounts either through physical flow accounts (air emission, material consumption) or stock of natural capital accounts (fisheries, forests) or through monetary accounts on environmental protection systems (TEEB, 2010), or (2) provision of environmental information in relation to GDP through indicators (such as the Environmental Performance Index which will be developed soon at the EU level). The UNDP human development approach with its comprehensive HDI is the only case covered in this ESDN Case Study where ecological aspects are not included in the measurement of human development. The second level of supplementing GDP is at the societal level with indicators on well-being and quality of life.

The initiatives show following methodological similarities in their approaches and understanding of well-being:

- Well-being is as a multidimensional concept which should include not only the standard of living (based on national income measures), but also other aspects, such as health, education, social relatedness, etc.. The differences are in the framework of these initiatives: some initiatives put the ecosystems at the heart of human well-being (UNEP TEEB), others rely more on the human development approach and less on ecosystems (UNDP HDI). The other initiatives (Stiglitz Commission, OECD Global Project, European Commission "GDP and beyond") lie somewhere in between these two perspectives.
- For measuring well-being, objective conditions and subjective experiences are considered as important approaches in the measurement. Objective conditions are considered as domains of life which influence the subjective experiences of quality-of-life to a certain extent (health, education, security, etc.). Integration of subjective

measures is regarded as crucial when measuring well-being and not only societal progress³⁰.

- As well-being is multi-dimensional, the initiatives have proposed not to offer a composite indicator but an indicator set as there are issues, such as subjective experiences of individuals, which cannot be aggregated in one number. However, for communication reasons, composite indicators (such as HDI and the recently developed quality-of-life indicator SALY – Satisfaction Adjusted Life-Expectancy indicator³¹) are validated as useful for raising political and societal awareness on progress and well-being.
- All initiatives integrate distributional and equality indicators development for measuring disparities among, nations, regions, societal groups or gender.

Sustainable development has been regarded as a concept which needs complementary indicators to well-being indicators as it includes inter-and intra-generational aspects (i.e. temporal questions). The Stiglitz Commission criticized the majority of proposals which have been made so far for measuring sustainability in quantitative terms only, as they did not strictly separate current well-being measurement from future measurement. The temporal aspects of sustainability are not included in well-being measurement. Due to various methodological problems, the Stiglitz Commission focuses its recommendations more on economic and environmental sustainability indicators. Initiatives such as UNECE, Stiglitz Commission, European Commission “GDP and beyond”, and OECD Global Project have explicitly recommended the further development of sustainable development indicators based on the “wealth or stock based approach”. Useful for its communication would be dashboards on SD which should be interpretable of variations of some underlying “stocks”.

³⁰ For more information on distinguishing the objective conditions and subjective measures of well-being, please see the Workshop Discussion & Background Paper of the 6th ESDN Workshop.

³¹ For more Information on this indicator, please see Eurostat feasibility study on well-being indicators.

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