



## Statistics Netherlands

Division of Macro-economic Statistics and Dissemination/Division of Social and Spatial Statistics

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### THE STIGLITZ-SEN-FITTOUSSI REPORT: COMMENTS BY STATISTICS NETHERLANDS

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*Summary: On September 14th 2009 the Commission on the Measurement of Economic Performance and Social Progress presented its final report to President Sarkozy of France. The Commission was led by the Nobel laureates Stiglitz and Sen and the eminent French economist Fitoussi as well as many other renowned social scientists. The report is very much a reflection of the times: climate change, the financial crisis and social unease has lead to a resurgence of criticism of GDP as a yardstick for development. The SSF-report proposes ways to measure the “progress” of societies in a more satisfactory way. It contains an impressive overview of scientific and statistical work in this field and also shows that the concepts of national accounts, wellbeing and sustainability are all interconnected elements of this measurement problem.*

*This paper concludes that Statistics Netherlands concurs with most of the SSF insights. This is not surprising since the institute has a long history in this field which is founded in the same literature. As a result, many of the recommendations have already been implemented or were already part of the working program before the SSF-report came out. In our view the most important aspect of the SSF-report that needs further exploration is the further definition of the concepts of quality of life, wellbeing, welfare, sustainable development as well as their relation to the national accounting system. This paper presents a first attempt at such a conceptual framework.*

*This document discusses all the projects that are currently underway at Statistics Netherlands which are relevant to the statistical agenda that the SSF-committee set forth.*

*Keywords: Progress of societies, GDP debate, Quality of life, Sustainability, Wellbeing, Welfare, Sustainable development, Inequality, Social welfare*

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## **1. Introduction**

On September 14<sup>th</sup> 2009 the “Report by the Commission on the Measurement of Economic Performance and Social Progress” was presented to the French president Sarkozy at the Sorbonne University in Paris (CMEPSP, 2009 - referred to as SSF-report in the text). The commission was led by the Nobel Prize Winners Joseph Stiglitz and Amartya Sen and the eminent French economist Jean-Paul Fitoussi. In addition there were many prominent economists and other social scientists who contributed.

The SSF-report has gained a great deal of attention from economists, social scientists, policy makers and statisticians because of the potential impact on the measurement of (social) welfare, wellbeing and sustainability. The report demonstrates an impressive overview of the literature that has accumulated over the last few decades and even centuries. Its strength is that, under the guidance of a number of very influential scientists, it is convincingly argued that that these different disciplines are all related to the measurement of “progress” in the broadest sense of the word. This is indeed a very welcome and timely report.

The SSF-report contains recommendations which are aimed for the most part at National Statistical Institutes (NSIs). It is therefore important that these institutions articulate their opinion of the report and, most importantly, what they will do with the recommendations. This report reflects the position of Statistics Netherlands with respect to the SSF-report.

This report will show that Statistics Netherlands has a long history of advancing the measurement of the “Progress of societies”. Statistics Netherlands also plays a role in various international Task Forces which are related to this field. The main conclusion is therefore that the SSF-report was more of a confirmation that Statistics Netherlands is on the right track than that it leads to major shifts in the work plan. The institute is already working on distinct aspects of the SSF-report through the working program for sustainability, through the satellite accounts of the National Accounts and more recently through the working program for wellbeing. The main challenge is to further harmonize the work which is done in all these fields.

## **2. Overall comments**

Starting from the 1920s-30s the national accounting practices which were developed over the previous centuries (Bos 1992) were formalized into a coherent statistical system: the System of National Accounts (SNA). The system has been updated several times, most recently in 2008 (United Nations et al., 2008). Prominent economists have called the SNA one of the greatest statistical innovations in history. Apart from the detailed information about the transactions in an economy it also

yields aggregated indicators such as Gross Domestic Product (GDP). This indicator is a measure of the economic activity but from the onset it has increasingly been used as a measure of social welfare, despite warnings from national accountants. The dominance of GDP in public debate has been criticized by many (for an overview of literature and arguments see van den Bergh, 2009). The statistical community has responded in a number of ways:

1. Satellite accounts. Since the 1990's "satellite accounts" have been developed to complement the core national accounts. These satellites deal with matters such as the environment, tourism and labour which are important for a better understanding of society but are insufficiently covered in the core of the SNA. Probably the most important of the satellites are the environmental accounts. The handbook, the System of Environmental and Economic Accounting-SEEA, is currently being revised and is supposed to develop into an international standard comparable to the SNA.
2. Wellbeing. Many researchers have focussed their attention towards wellbeing (also referred to as happiness or satisfaction with life). It is argued by these researchers that this is a better indication of progress than GDP. Bhutan is often cited because it has officially adopted "Gross National Happiness". Nevertheless, not many statistical offices have a tradition in the measurement of wellbeing. This situation is changing since a growing number of statistical offices, including Statistics Netherlands, are working on extending their measurements and indicator sets on this field.
3. Sustainable development. Ever since the Brundtland report popularized this concept (WCED, 1987), it has gained prominence in the scientific and statistical worlds. Recently the Working Group of Statistics of Sustainable Development (WGSSD) proposed that the 'capital approach' be adopted by the statistical community (UNECE/OECD/Eurostat, 2008). The follow-up Task Force for Measuring Sustainable Development (TFSD) will tackle the measurement issues related to human and social capital. Furthermore it is mandated to propose indicator sets for the current quality of life as well as quality of life of future generations and the quality of life in other countries.

The strength of the SSF-report is that it shows that these three issues are basically three dimensions of the same measurement issue. This can also be seen in the structure of the report, which deals with national accounts, quality of life and sustainability respectively.

In the first part of the SSF-report, "*GDP Issues*", an overview is given of the advantages and disadvantages of the SNA and its satellites. The main conclusion is that it is important to shift attention from GDP to indicators on income, consumption and wealth. Attention is also paid to "correcting" the national accounting aggregates by adding or subtracting certain components.

The second section “*Quality of life*” is devoted to the description of theories and knowledge in the field of welfare and wellbeing. This is not restricted to the objective side of quality of life. Attention has also been paid to the measurement of subjective determinants of quality of life.

Finally the section on “*Sustainability*” deals with the issue whether wellbeing can be maintained over the long run. The SSF-commission concludes that a set of indicators based on the “capital approach” is the most fertile way to measure these developments. However, the report also stresses that it is important to analyse sustainability simultaneously with current quality of life.

In summary one might say that the SSF-report does not propose radical new ways to measure societal developments. Rather, it is a good and comprehensive summary of the state of knowledge in the scientific and statistical communities. The report was timely because the limitations of the SNA have become even more apparent in an era of climate change, financial crisis and social unease.<sup>2</sup> A coherent report, with a set of very prominent authors, helps to bring home the idea that there is a lot of urgent work for NSIs to do.

Statistics Netherlands very much supports the following aspects of the report:

- Quality of life vs. sustainability. The SSF-report encourages a very strict separation of these two concepts. This split is consistent with the literature and helps to communicate towards the public that there are two distinct problems at hand: the quality of life of the current generation as well as that of future generations (sustainability).<sup>3</sup>

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<sup>2</sup> The European Commission (“GDP and Beyond”, “Europe 2020 Strategy”) and the OECD (“Progress of Societies”, “Green Growth”) have also initiated large projects to move forward these issues. Most recently Eurostat and INSEE have initiated the “Sponsorship Group for Measuring Progress, Wellbeing and Sustainable Development” which is mandated to take the next steps in the wake of the Stiglitz report. Finally, the Task force for Measuring Sustainable Development (TFSD), which is lead by UNECE, OECD and Eurostat, aims to harmonize and refine the measurement of sustainable development along the lines of Stiglitz report. These initiatives underline the fact that the SSF-report is very much a product of its time.

<sup>3</sup> Note that this is the “future oriented” view of sustainability in which only the future welfare defines sustainability. There is, however, also the “integrated view” which identifies *both* current and future wellbeing are components of sustainable development (UNECE/OECD/Eurostat, 2008). Statistics Netherlands agrees with the SFF-report that current and future wellbeing should be looked at simultaneously because decisions in the here and now have impact on both. The viewpoint on sustainability (future vs. integrated) then becomes rather minor since this only has an impact on the labelling of the dashboards for “quality of life” (alternative is “intra-generational sustainability”) and “sustainability” (or alternatively “inter-generational sustainability”).

- Indicator dashboards vs. composite indicators. The SSF-report is very critical of (monetized) aggregates for sustainability although it does acknowledge the communicative importance of aggregates, particularly in the field of the quality of life. However the report advocates a dashboard of indicators for both dimensions. Statistics Netherlands agrees with this conclusion since the current monetization techniques are not yet sufficiently developed and there are issues such as critical capital and discounting practices which are problematic. Nevertheless, as far as the long term agenda is concerned, Statistics Netherlands does recognize the need to try to further develop aggregation techniques.
- Satellite accounts. The report endorses the further development of satellite accounts, particularly environmental accounts. This is a fruitful strategy in which Statistics Netherlands has invested, and continues to invest, a lot of effort.
- Quality of life. The SSF-report focuses attention on both the objective and the subjective aspects of quality of life, which has traditionally not been part of the products that statistical offices have on offer. Statistics Netherlands has recently (2008) started a working program in this field.
- Inequality. This is indeed an important issue which is often overlooked because statisticians and policy makers often simply look at national averages. This is an aspect which has been picked up and will be further developed in both the national accounts setting as well as social statistics of Statistics Netherlands.
- Time use. The commission reiterates the importance of time use measurements. Statistics Netherlands agrees that this is an important factor in understanding the quality of life of citizens and should be granted a more prominent place in the statistical system. A project has been started to create a time use module of the National Accounts so that time use can be compared to national accounting variables. Furthermore, a project has been proposed to investigate the influence of time use on wellbeing.

There are a number of aspects of the SSF-report which Statistics Netherlands is less enthusiastic about (see Appendix 2 for full comments on the recommendations). Apart from a number of minor points we feel that two main improvements are possible. Firstly, the harmonization of concepts of wellbeing, welfare and sustainability has not been explored fully. The three sections are clearly separate chapters which have not been integrated to their full potential. In appendix 1, a conceptual framework is presented which Statistics Netherlands will use to link these concepts. Secondly, the report says very little about the international aspects of economic growth and sustainability. In our opinion the growth of a society, particularly a small open economy such as the Netherlands, can hardly be viewed without looking at the impact it has on other countries. This was also a view which was argued forcefully in the Brundtland report. Primarily the discussion is on the

impact of natural capital of other countries, but there are also issues such as knowledge transfers and Official Development Assistance. It is therefore also important that the international dimension be explored as an integral part of the sustainable development.

### **3. The CBS working program**

Statistics Netherlands has a long history in the field of measuring societal progress.<sup>4</sup> Our main focus in the 1990's was the development of satellite accounts for the National Accounts which would yield indicators of development (Keuning, 1997; Kazemier et al., 1998; van de Ven et al., 2000; de Haan et al., 2002). A lot of attention has been given to the environmental accounts. Statistics Netherlands has a very elaborate range of accounts for all types of environmental pressures (de Haan et al., 1993; Keuning and de Haan, 1996; Keuning et al. 1999; de Haan, 2004; Schenau and Hoekstra, 2006; Hoekstra et al., 2008, CBS, 2009d).

Regular satellite accounts have also been created for labour (CBS, 2009c), tourism (Hoekstra et al., 2005; Van de Steeg, 2008; CBS, 2009c), a social accounting matrix (SAM) (Timmermans and van de Ven, 1992; CBS, 2009c) and growth accounting (productivity) (de Haan and van Rooijen, 2004; de Haan et al., 2005). In the past one-of studies about time use have also been published (Kazemier and Exel, 1992; Van Rooijen et al., 2004).

One of the prime advantages of a satellite account is they are constructed in a consistent manner to the core accounts. This means that aggregates such as greenhouse gas emissions can be compared to GDP measurement and therefore provides a conceptually sound way of comparing the relationship between the economy and the environment. A second reason is that the satellite accounts can be coupled to the input-output (IO) tables of the National Accounts. These IO-tables are frequently used for macro-economic modelling and can therefore be used for environmental-economic analysis (Hoekstra et al., 2008).

In 2007, Statistics Netherlands embarked upon a working program for sustainability statistics (which also includes the developments of more elaborated environmental accounts). The most visible publication of this working program was the "Sustainability monitor for the Netherlands (Dutch: February 2009 (CBS 2009a), English: September 2009 (CBS, 2009d)). This publication was commissioned by the Dutch government to create a tool with which it can evaluate how the Netherlands

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<sup>4</sup> The discussion in this section starts in the 1990's since this is also the period in which the developments are most relevant to the SSF-report. However, before this time Statistics Netherlands already had a reputation in this field. Notable was Roefie Huetting with his proposal for a "Sustainable National Income" (Huetting, 1974).

has developed in terms of sustainability. The capital approach is adopted to create a dashboard of sustainable development indicators.<sup>5</sup>

In the next sustainability monitor (which is due in February 2011) a dashboard for current wellbeing will be added because we have found that policy makers and the general public want a report which tackles both quality of life of current and future generations as well as the international dimension simultaneously. As such the monitor is more accurately described as the “Progress of the Netherlands”.

Recently (2009) Statistics Netherlands has also embarked upon a working program for the measurement of wellbeing. A first activity has been to bring the selection of social indicators and the dimensions of quality of life in line with international developments, where the SSF-report serves as basis. Furthermore some peculiarities about measuring subjective wellbeing mentioned in the SSF-report will have to be addressed to be able to improve measurements in the future. The ultimate goal of the wellbeing program is to implement a set of statistics to monitor wellbeing over time in the context of measuring societal progress and to provide handles to policy makers for strategic interventions.

From the viewpoint of the wellbeing program, it is also worth mentioning a part of the working program called “experiences”, Statistics Netherlands has recently been given the green light. The intention of this theme is to develop a survey to ask people for their opinions and experiences on topical issues. This offers opportunities to collect more data on perceptions of people about their wellbeing. As a first step, a small block with questions on subjective wellbeing has been incorporated, including the questions of the Personal Wellbeing Index, developed by the International Wellbeing Group. This may be the off set for a new, more extended module for the measurement of wellbeing.

There are obviously many other projects at Statistics Netherlands that are related to the work of the SSF commission. There are also a number of overarching topics notably the issues of inequality and time use measurement. These are topics that Statistics Netherlands will address from all three projects which are described above. Clearly, the three projects are working closely together to ensure that they are carried out in a harmonized fashion.

#### **4. The need for harmonization**

The above three programs (satellite accounting, sustainability and wellbeing) involve 15-20 people that are developing *new* statistics in this field. The people working on existing statistics make up an even larger group. This means that

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<sup>5</sup> Note that we do not adopt the “monetary capital approach” in which all capital stocks are measured in monetary units. Rather we have adopted a “hybrid capital” approach in which each capital stock is measured in its own unit.



Statistics Netherlands is heavily committed to the agenda which was articulated by the SSF-report.

One of the key messages of the SSF-report is that the time is ripe to shift emphasis from measuring economic production to measuring people's quality of life (QoL) and the sustainability of a society. This message makes harmonization the unifying theme of the SSF-report: measures of quality of life should be put in a context of sustainability and should complement measures of market activity in order to bridge the increasing gap between the information contained in aggregate GDP data and what counts for people's wellbeing.

The need for harmonization is probably the greatest challenge. Dutch society stands to benefit most if these projects are not developed in isolation but work along common definitions and concepts. For example, the projects will be most effective if the concepts of wellbeing, welfare and sustainability are defined using a common conceptual framework. However, this means that a plethora of literature has to be moulded into a coherent system. Furthermore, the role which national accounting plays in these issues has to be made explicit. This is by no means a small task but unfortunately the SSF-report falls short of providing such a framework.

Statistics Netherlands believes that it is vitally important to work with such a common framework. Of course, not all literature can be captured but we are nevertheless trying to find a measurement system which includes the most important insights from the fields of economics, sociology, experimental economics and "happiness". Appendix 1 describes a "working model" which will be used (and refined) at Statistics Netherlands to measure the progress of societies.

The need for clarification of concepts is not only an important matter for the Netherlands. This field of research would also benefit greatly if an international agreement were to emerge. Statistics Netherlands will do its part through the work of international Task Forces. In particular the Task Force for Measuring Sustainable Development (TFSD), which is lead by Rutger Hoekstra and Jan Pieter Smits (Statistics Netherlands), is mandated to explore a conceptual approach to sustainable development. The group is expected to present its final reporting in late 2011.

Statistics Netherlands is also committed to the previously mentioned Sponsorship group for Measuring Progress, Wellbeing and Sustainable Development. This group was instigated by Eurostat and INSEE to take the work of the Stiglitz forward in the European setting.

Finally, Statistics Netherlands is very active in the field of environmental accounting (Mark de Haan is chair of the London Group for Environmental-Economic Accounting and Peter van de Ven, Head of National accounts, is active in the UNCEEA (United Nations Committee on Economic Environmental Accounting)).

## **5. Conclusions**

In short we can conclude that the SSF-report is a comprehensive report which has highlighted one of the most important statistical questions of our time: how can we measure societal progress?

Statistics Netherlands agrees with most of the recommendations of the report (see appendix 2 for further details) and the urgency of an improved measurement of the progress of societies. The institute has a long history in this field, and is committed to intensifying its efforts in the coming years. Statistics Netherlands will also strive, both nationally and through international Task Forces, towards a common coherent statistical framework that describes the relationship between wellbeing, welfare, sustainability and national accounts. The SSF-report provides a welcome first step in that direction.

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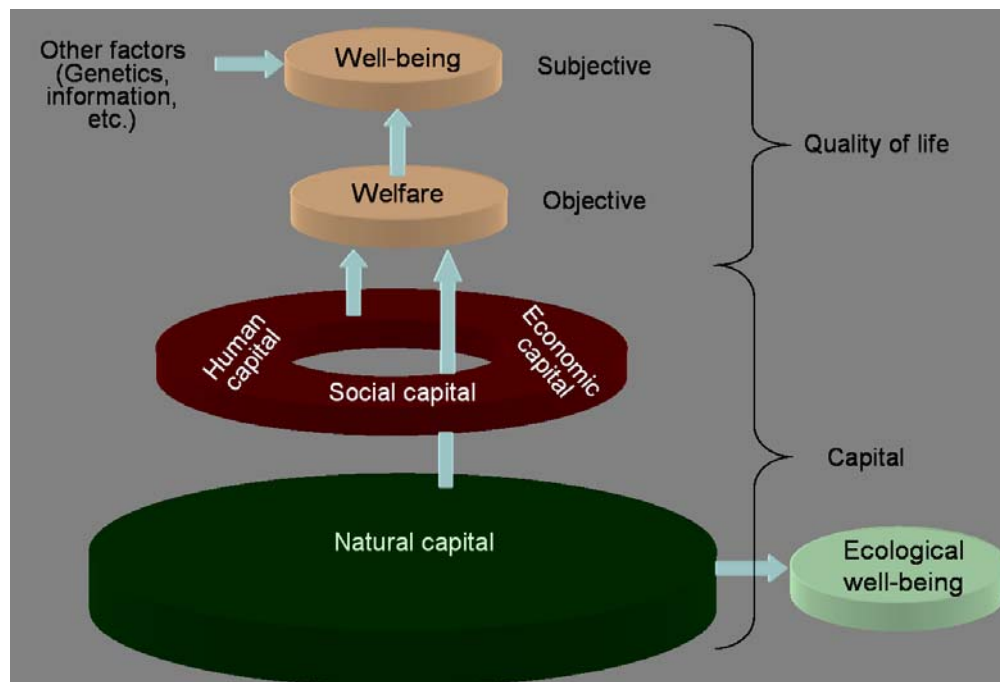
## Appendix 1: A conceptual framework to measure the progress of societies

Statistics Netherlands agrees with the fundamental premise of the SSF-report that improved measurement of the “progress of societies” is required. Naturally, National Statistical Institutes shoulder a significant part of the responsibility for the development and implementation of a new measurement system.

The SSF-report provides a very good starting point for such a system because of its broad and eclectic overview of the literature. It however falls short when it comes to the integration and demarcation of the central concepts and definitions. Going forward, Statistics Netherlands feels that it is very important to produce such an integrated conceptual framework. In this appendix we present the “working model” which Statistics Netherlands is currently developing.

The starting point of our framework is shown in figure 1. Similar figures have been presented in many publications, most recently by the Global-project of the OECD (2009, p. 11) and the National Accounts of Wellbeing of the New Economics Foundation (2009, p. 45).

Figure 1. A conceptual basis for the quality of life



### Quality of life-here and now

The central notion in the figure is “quality of life”. As the SSF-report acknowledges this concept has many different connotations because it is covered in many different scientific fields (economics, psychology, “happiness” etc) under different scientific

names. In general terms it refers to the life satisfaction of humans. It is useful to distinguish a subjective (wellbeing) and an objective component (welfare). Wellbeing can be measured by having people score their life satisfaction and their satisfaction with different domains of life. This type of “happiness” research has a long history and has gained prominence over the last few years. Welfare is a measure of the objective situation in a country and is determined by the use of scarce resources. This distinguishes it from wellbeing, which is partly determined by scarce resources but also by factors such as genetic predisposition and the availability of information. Clearly the focus on scarcity reveals that the concept of welfare is very much related to economic theory. It is derived from the economic notion of “utility” but a broader set of preferences than is common to the System of National Accounts is included. Examples include the utility derived from environmental quality, leisure time and social cohesion.

But how can quality of life be measured? Subjective wellbeing can and has been measured by questionnaires starting as far back as the 1970s. The resulting indicator does not, by itself, provide information on how to improve wellbeing. The driving forces of the quality of life therefore need to be understood. Various strands of literature can help in this endeavour. This point will be pursued later in this appendix.

Essentially the quality of life is based on the resources that are available to a society. These can be economic (e.g. buildings, machinery etc.), social (e.g. social connections and trust) or human capital (e.g. education and health). Natural capital is the fourth type of resources, but it is different because it is not related to humans in the same way as the other capital stocks are. The human system functions *within* the natural system. Humans make use of resources and services of nature but some argue that from an ethical perspective the value of nature is greater than the anthropocentric value. Thus the notion of ecological wellbeing is a separate concept.

### *Quality of life-future*

Apart from the question of the correct measurement of the current quality of life, the SSF-report also correctly points out that the concept of the quality of life of future generations is a separate but equally important aspect of sustainable development.

Figure 2 shows that in the quality of life of future generations will be determined by the capital stocks that are available. There is obviously a clear link with the Brundlandt definition here which states that ‘Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED 1987). In the context of figure 2 this implies that the quality of life of future generations must be safeguarded by making sure that they have sufficient resources, while at the same time securing the quality of life of the current generation. The issue of sustainable development thereby becomes a matter of intergenerational equity which is determined by the distribution of capital over time.

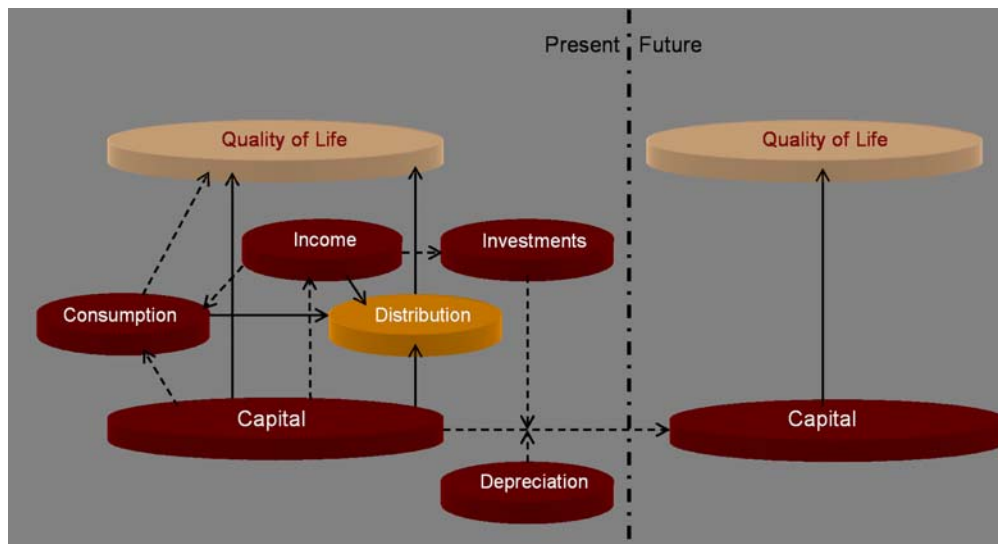


Figure 2. A conceptual basis for the quality of life in the future

Let us now go into a little more detail. Figure 2 shows that, through the production process, the capital stocks lead to goods and services that are consumed and also generates income which is required to buy these commodities. In economic terms, the goods and services that are produced lead to “utility” and thereby enhance the quality of life.

Not all of the income is consumed. A portion is reserved for investments. Together with the depreciation, this leads to new levels of capital in the future. Societies can therefore influence the intergenerational sustainability by the investments and depreciation in capital stocks as well as the efficiency with which these capital stocks are used.

The above is clearly inspired by economic theory and the statistical system which was been created to measure macro-economic developments: the national accounts. These conventional economic relationships are represented by the dotted lines in the figure. However, as the SSF report correctly points out there are a number of areas in which standard economic theory does not provide an adequate picture.

Firstly, economic mainstream literature and the system for national accounts is not used to taking natural and social capital on board. Similarly, the definition of commodities should be broadened far beyond the market based set that is observes in the system of national accounts.

Secondly, the causal relationships that are related to the quality of life are all related to consumption in mainstream macro-economics. It is assumed that “utility” is only achieved through the consumption of goods and services. A wide range of social sciences literature (Sen’s capabilities, happiness literature, Maslov’s pyramid, experimental economics and social production literature) convincingly shows that quality of life of humans are affected by a greater range of factors than consumption (and most certainly when the definition of “consumption” in the national accounts is used). We have indicated two main additional causal links in figure 2 (full lines).



The first line indicates that capital may have a direct effect on the quality of life. For example, it has often been shown that persons with a higher educational level achieve a higher level of wellbeing, even when corrected for other factors. The second line shows that the distribution of income, consumption and capital may influence the wellbeing of individuals.

#### *A set of indicators for sustainable development*

Based on the above theoretical framework two indicator sets are proposed: one for quality of life of the current generations (“here and now”) and the other for the determinant of the quality of life in future (through capital indicators). This is entirely consistent to the SSF-report which states that:

*The assessment of sustainability is complementary to the question of current well-being or economic performance, and must be examined separately. [...] To take an analogy, when driving a car, a meter that added up in one single number the current speed of the vehicle and the remaining level of gasoline would not be of any help to the driver. Both pieces of information are critical and need to be displayed in distinct, clearly visible areas of the dashboard.*

Statistics Netherlands has already published a dashboard of sustainable development indicators (CBS, 2009a and 2009d). The set only measured the intragenerational dimension of sustainable development (i.e. the capital indicators). A new set is currently being finalised in which a dashboard for current quality of life is also included (see Hoekstra and Smits, 2010). There will, of course, be some overlap: some resources have a direct effect on the current quality of life and are also important because they are resources that are usable in future. The results will be published in the Sustainability Monitor for the Netherlands (due February 2011).

#### *Completing the system: The international dimension*

The sustainability monitor will not contain two but rather three dashboards. The third concerns an aspects which is not given much attention in the SSF-report: the impact of a nation on other (particularly developing) countries.

The dashboard for the international dimension is particularly important for a small open economy such as the Netherlands. The actions of Dutch citizens and companies may have serious consequences for other countries’ sustainability or global problems such as climate change or biodiversity loss. This may be particularly important when it comes to trade with the least developed countries. It is therefore important to create an indicator set which shows these relationships.

### *Future work*

*Inequality:* The SSF-report stresses that simply looking at the mean values for the entire population paints an insufficient picture of society. The distribution of assets and income is also important because these can be very different according to age groups, gender and race. It is therefore important to have information that shows the differences per demographic category (ethnic background, income level, age, education level) and also for other important categories than income (education, health). It is also interesting to make distinctions between subjective and objective measures at this level.

*Satellite accounts:* The indicators in the three dashboards come from various statistical sources. The coherence of the indicator set would be greatly enhanced if the indicators were part of a *statistical system* in which the indicators were constructed using the same methodology. This is precisely the idea behind satellite accounts for the National accounts: they are produced in a similar way to the core national accounts. This means that the indicators from the environmental accounts are comparable to economic indicators such as GDP, which provides for a theoretically correct way to measure decoupling.

A satellite accounting approach has other advantages: the indicators can be compared at the industry level and they can also be used for policy modelling because the satellite accounts can be linked to input-output tables (Hoekstra et al, 2008).

The drawback of this approach is that it is not obvious for all themes of quality of life and sustainability what a satellite account would look like. Social capital is an example that is often mentioned. A second problem is that policy makers rarely use these indicators. Rather, indicators such as the greenhouse gas emission based on the Kyoto protocol, have far more relevance in the political setting than the indicator from the environmental accounts.

Statistics Netherlands is constantly looking to expand our satellite accounting system so that measurement of welfare and sustainability are enhanced.

## **Appendix 2: Reactions to individual recommendations**

Table A.2.1 provides a summary of the opinion of Statistics Netherlands with respect to the individual recommendations of the SSF-report. The table shows that Statistics Netherlands agrees with most recommendations and messages of the SSF-committee (“agree” for 9 out of 12). Of course, this is a simplification of these rather complex issues so the rest of the appendix is used to elaborate and articulate our position. The appendix also provides information about which actions Statistics Netherlands is currently embarked upon to implement these recommendations.

Table A2.1 Point of view of Statistics Netherlands with respect to recommendations

	<b>Recommendation or message</b>	<b>Point of view</b>
<i>Classical GDP issues</i>	<i>Recommendation 1: When evaluating material well-being, look at income and consumption rather than production</i>	Agree
	<i>Recommendation 2: Emphasise the household perspective.</i>	Agree
	<i>Recommendation 3: Consider income and consumption jointly with wealth.</i>	Agree
	<i>Recommendation 4: Give more prominence to the distribution of income, consumption and wealth.</i>	Agree
	<i>Recommendation 5: Broaden income measures to non-market activities.</i>	Disagree
<i>Quality of Life</i>	<i>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.</i>	Agree
	<i>Recommendation 7: Quality-of-life indicators in all the dimensions covered should assess inequalities in a comprehensive way</i>	Agree
	<i>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.</i>	Agree
	<i>Recommendation 9: Statistical offices should provide the information needed to aggregate across quality-of-life dimensions, allowing the construction of different indexes.</i>	Partially agree
	<i>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.</i>	Agree
<i>Sustainable development and the environment</i>	<i>Recommendation 11: Sustainability assessment requires a well-identified dashboard of indicators. The distinctive feature of the 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.</i>	Partially agree
	<i>Recommendation 12: The environmental aspects of sustainability deserve a separate followup 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.)</i>	Agree

### **Recommendations for “Classical GDP issues”**

The recommendations in this chapter are nearly all related to the work of the National Accounts department. The National Accounts department has a long history of warning that GDP cannot be used a measure of social welfare: “A figure such as national income cannot be a measure for collective prosperity” (CBS, 2009c, pp. 209). To enhance the measurement of the various dimensions of social welfare, the National Accounts department has been very active in the field of satellite accounting, particularly environmental accounts.

#### *Recommendation 1: When evaluating material well-being, look at income and consumption rather than production*

“GDP is the most widely-used measure of economic activity. There are international standards for its calculation, and much thought has gone into its statistical and conceptual bases. But GDP mainly measures market production, though it has often been treated as if it were a measure of economic well-being. Conflating the two can lead to misleading indications about how well-off people are and entail the wrong policy decisions. Material living standards are more closely associated with measures of real income and consumption – production can expand while income decreases or vice versa when account is taken of depreciation, income flows into and out of a country, and differences between the prices of output and the prices of consumer products.”

*CBS-point of view:* Agree. GDP is a good measure of the economic activity. As such it is a very valuable indicator for society. Statistics Netherlands however agrees that it is not a measure of social welfare and that macro-economic aggregates on income and consumption come much closer to the concept of quality of life.

*Statistics Netherlands Working Program:* Just like many countries, the Dutch NA already publishes all types of macro-economic aggregates related to consumption and income. This recommendation therefore probably refers more to a shift in the focus of our communication strategy. However, because of the importance of GDP in society it is not conceivable that GDP is “dropped” altogether. Nevertheless, the department of National Accounts is thinking about ways in which to raise the visibility of the other macro-economic aggregates .

*Recommendation 2: Emphasise the household perspective.*

*SSF-Explanation:* “While it is informative to track the performance of economies as a whole, trends in citizens’ material living standards are better followed through measures of household income and consumption. Indeed, the available national accounts data shows that in a number of OECD countries real household income has grown quite differently from real GDP, and typically at a lower rate. The household perspective entails taking account of payments between sectors, such as taxes going to government, social benefits coming from government, and interest payments on household loans going to financial corporations. Properly defined, household income and consumption should also reflect the value of in-kind services provided by government, such as subsidized health care and educational services”.

*CBS-point of view:* Agree. The National accounts include macro-economic aggregates for households. Furthermore, in our Social accounting matrix (SAM), some categories, namely income and consumption, have been split into subcategories.

*Statistics Netherlands Working Program:* A project has been undertaken to link the environmental accounts to consumption figures per household category. There is also a new project underway in which the SAM will be expanded to include wealth components.

*Recommendation 3: Consider income and consumption jointly with wealth.*

*SSF-Explanation:* “Income and consumption are crucial for assessing living standards, but in the end they can only be gauged in conjunction with information on wealth. A vital indicator of the financial status of a firm is its balance sheet, and the same holds for the economy as a whole. To construct the balance sheet of an economy, we need comprehensive accounts of its assets (physical capital – and probably even human, natural and social capital) and its liabilities (what is owed to other countries). Balance sheets for countries are not novel in concept, but their availability is still limited and their construction should be promoted. There is also a need to “stress test” balance sheets with alternative valuations when market prices for assets are not available or are subject to bubbles and bursts. Measures of wealth are also central to measuring sustainability. What is carried over into the future necessarily has to be expressed as stocks – of physical, natural, human or social capital. Here too the right valuation of these stocks plays a crucial role.”

*CBS-point of view:* Agree. Over the last few years the National accounts department has developed a national balance sheets which includes physical capital, land, durable goods and inventories. There are also satellite accounts for intangible capital (R&D and others).

*Statistics Netherlands Working Program:* Currently, in the context of the Working program for Sustainability Statistics we are investigating the possibilities for human capital measurement (according to the Jorgenson-Fraumeni Framework) as well as social capital.

*Recommendation 4: Give more prominence to the distribution of income, consumption and wealth.*

*SSF-Explanation:* “Average income, consumption and wealth are meaningful statistics, but they do not tell the whole story about living standards. For example, a rise in average income could be unequally shared across groups, leaving some households relatively worse-off than others. Thus, average measures of income, consumption and wealth should be accompanied by indicators that reflect their distribution. Ideally, such information should not come in isolation but be linked, i.e. one would like information about how well-off households are with regard to all three dimensions of material living standards: income, consumption and wealth. After all, a low-income household with above-average wealth is not necessarily worse-off than a medium-income household with no wealth. The desirability of disposing of information on the “joint distribution” of dimensions will be encountered once again in Recommendation 3 of the Chapter on the quality of life.”

*CBS-point of view:* Agree. Inequality is an important aspect of the quality of life.

*Statistics Netherlands Working Program:* Some parts of the national accounts (income and consumption) are split into household or personal characteristics. Currently the department for National Accounts is looking at possibilities to broaden the scope of aspects in the national accounts which are broken down into household groups (including wealth indicators and information from satellite accounts).

*Recommendation 5: Broaden income measures to non-market activities.*

*SSF-Explanation:* “There have been major changes in how households and society function. For example, many of the services people received from other family members in the past are now purchased on the market. This shift translates into a rise in income as measured in the national accounts and may give a false impression

of a change in living standards, while it merely reflects a shift from non-market to market provision of services. Many services that households produce for themselves are not recognized in official income and production measures, yet they constitute an important aspect of economic activity. While their exclusion from official measures reflects uncertainty about data more than it does conceptual dissent, more and more systematic work in this area should be undertaken. This should start with information on how people spend their time that is comparable both over the years and across countries. Comprehensive and periodic accounts of household activity as satellites to the core national accounts should complement the picture.”

*CBS-point of view:* Disagree. Statistics Netherlands does not see this as a priority in the measurement of progress. We do not envisage adjustments of the national accounts aggregates by valuation of non-market activities in the near future. This is also partially because of methodological problems. We also feel that “time” is an excellent common denominator for many measurements. Converting time use to monetary values then has very little added value.

*Statistics Netherlands Working Program:* Although there are no plans to “adjust” current national accounts, work is being done on the so-called time-use module of the national accounts.



## **Recommendations for “Quality of life”**

*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.*

*SSF-Explanation:* “The information relevant to valuing quality of life goes beyond people’s self-reports and perceptions to include measures of their functionings and freedoms. While the precise list of these features inevitably rests on value judgments, there is a consensus that quality of life depends on people’s health and education, their everyday activities (which include the right to a decent job and housing), their participation in the political process, the social and natural environment in which they live, and the factors shaping their personal and economic security. Measuring all these features requires both objective and subjective data. The challenge in all these fields is to improve upon what has already been achieved, to identify gaps in available information, and to invest in statistical capacity in areas (such as time-use) where available indicators remain deficient.”

*CBS-point of view:* Agree. We think it is necessary to compare the outcomes of objective measures of wellbeing with the perceptions people have. A difference in the outcomes, and even more a growing gap between them should be made visible to support policy makers to put effort in bridging this gap.

*Statistics Netherlands Working Program:* Statistics Netherlands already does collect many objective indicators. The number of objective indicators will be extended in the future and this is done under the umbrella of several themes, such as social cohesion and health, care and wellbeing. Furthermore, we started an international comparison of measurements of quality of life to bring our monitor of social statistics in line with. The work done by the SSF-commission will be leading for this. But we also consider the approaches of the OECD and of other National Statistical Offices that have been working on a program to measure progress for some time already as useful sources of information.

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

*SSF-Explanation:* “Inequalities in human conditions are integral to any assessment of quality of life across countries and the way that it is developing over time. Each dimension of quality-of-life requires appropriate measures of inequality, with each of these measures being significant in itself and none claiming absolute priority over others. Inequalities should be assessed across people, socio-economic groups and generations, with special attention to inequalities that have arisen more recently, such as those linked to immigration.”

*CBS-point of view:* Agree. The average conditions in each country offer little guidance to make policy that helps to reduce inequalities. We believe it is important to measure inequalities for all dimensions of quality of life at a micro-level. This should not be restricted to objective indicators, but also the perception of people, especially at the lower end of the distribution, should be accounted for.

*Statistics Netherlands Working Program:* To start, we proposed to study the subjective wellbeing of people in relation to the dimensions of quality of life, including income and social cohesion.

*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*

*SSF-Explanation:* “It is critical to address questions about how developments in one domain of quality of life affect other domains, and how developments in all the various fields are related to income. This is important because the consequences for quality of life of having multiple disadvantages far exceed the sum of their individual effects. Developing measures of these cumulative effects requires information on the “joint distribution” of the most salient features of quality of life across everyone in a country through dedicated surveys. Steps in this direction could also be taken by including in all surveys some standard questions that allow classifying respondents based on a limited set of characteristics. When designing policies in specific fields, indicators pertaining to different quality-of-life dimensions should be considered jointly, to address the interactions between dimensions and the needs of people who are disadvantaged in several domains.”

*CBS-point of view:* Agree. However, the present design of surveys does not allow to link all quality of life domains. This holds even more when the perceptions of people have to be accounted for. The first Life Situation Survey that Statistics Netherlands developed in 1974 covered the following domains: living, working, social contacts, health, leisure activities, marriage and family and the social and

financial situation. Besides an objective indicator for each domain, respondents were asked for their subjective findings. In the course of time several modules disappeared from the survey of which some have been incorporated in other social surveys that all address a specific aspect of the life situation (De Jonge, 2009). Assessing the links between various quality of life domains to date, requires additional questioning.

*Statistics Netherlands Working Program:* A new theme on experiences offers opportunities with this respect. The previously mentioned international comparison can be of help to design the part of the new questionnaire related to quality of life.

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

*SSF-Explanation:* “While assessing quality-of-life requires a plurality of indicators, there are strong demands to develop a single scalar measure. Several scalar measures of quality of life are possible, depending on the question addressed and the approach taken. Some of these measures are already being used, such as average levels of life-satisfaction for a country as a whole, or composite indices that aggregate averages across domains, such as the Human Development Index. Others could be implemented if national statistical systems made the necessary investment to provide the data required for their computation. These include measures of the proportion of one’s time in which the strongest reported feeling is a negative one, measures based on counting the occurrence and severity of various objective features of people’s lives, and (equivalent-income) measures based on people’s states and preferences.”

*CBS-point of view:* Partially agree. Although it is interesting to follow the developments in the field of aggregation, we are proponents of presenting a set of indicators. On the one hand, as stated in the SSF-report, an aggregate indicator for quality of life may contribute to stop GDP being the main indicator. On the other hand, aggregating means that subjective choices have to be made on for example the weight assigned to each underlying indicator. To interpret the value of the aggregate indicator well, it will always be necessary to know the values of the underlying indicators as well. The same holds for the GDP: adjustment that have been made over the years to make GDP more than just a measure of production, sometimes obscure what is happening in society in reality. That is one of the reasons why the commission was asked to develop complementary indicators and that is why one should be very cautious in aggregating indicators. This holds even more if

aggregation across life domains is considered. However, we are interested in studying the Personal Wellbeing Index (PWI) developed by the International Wellbeing Group. The initiative to set up this group came from the Australian Centre on Quality of Life in 2001. The PWI developed by this group, that involves researchers from a number of countries, covers the subjective part of most key-dimensions identified by the SSF-commission.

*Statistics Netherlands Working Program:* The already mentioned theme on experiences offers opportunities with this respect. The PWI has been incorporated in a small block on subjective wellbeing in a pilot survey for this theme. This may be the off set for a new module on wellbeing in the future and more broadly quality of life.

*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.*

*SSF-explanation:* "Research has shown that it is possible to collect meaningful and reliable data on subjective wellbeing. Subjective wellbeing encompasses different aspects (cognitive evaluations of one's life, positive emotions such as joy and pride, and negative emotions such as pain and worry): each of them should be measured separately to derive a more comprehensive appreciation of people's lives. Quantitative measures of these subjective aspects hold the promise of delivering not just a good measure of quality of life *per se*, but also a better understanding of its determinants, reaching beyond people's income and material conditions. Despite the persistence of many unresolved issues, these subjective measures provide important information about quality of life. Because of this, the types of question that have proved their value within small-scale, unofficial surveys should be included in larger scale surveys undertaken by official statistical offices."

*CBS-point of view:* Agree. Moreover, in the surveys of Statistics Netherlands questions to capture people's life evaluations have been incorporated for long. The first questions on happiness and satisfaction with life date back from 1974.

*Statistics Netherlands Working Program:* The commission mentions some peculiarities in measurements of subjective wellbeing. For some of these Statistics Netherlands will start research activities to gain more insight and to be able to implement improvements. These activities cover the interpretation of scales, causes and correlates and adaptation to changes in the external circumstances of life.

### **Recommendations for “Sustainable development and environment”**

This section is mostly dealt with by the Sustainability Monitor for the Netherlands. This publication was first published in February 2009 (English translation: September 2009) at the request of the Dutch government. It was produced together with the 3 policy institutes of the Dutch government. The next edition will be published in February 2011. This will also be launch date of our website on SDIs (for the latest thinking on the Sustainability Monitor 2011 see Hoekstra and Smits, 2010).

Statistics Netherlands also plays a role in the international field. Rutger Hoekstra and Jan Pieter Smits lead the Task Force for Measuring Sustainable Development (TFSD) which is mandated to create a dashboard for Sustainable Development Indicators (including Quality of Life) and to advance the measurement of human and social capital.

Furthermore Statistics Netherlands plays a part in nearly all Task Forces of the “Sponsorship Group on Measuring Progress, Wellbeing and Sustainable Development” which was initiated by Eurostat and INSEE. Its aim is to make progress in the implementation of the Stiglitz report in the European statistical community.

*Recommendation 11: Sustainability assessment requires a well-identified dashboard of indicators. The distinctive feature of the 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.*

*SSF-Explanation:* “First of all, the complexity of the task strongly advocates in favor of treating it separately from the other issue that has been considered by the commission, i.e. the monetary or non monetary dimensions of *current* well-being. This recommendation to separate the two issues might look trivial. Yet it deserves emphasis, because some existing approaches fail to adopt this principle, leading to potentially confusing messages. The confusion reaches a peak when one tries to combine these two dimensions into a single indicator. This criticism applies not only to composite indices, but also to the notion of green GDP. To take an analogy, when driving a car, a meter that weighed up in one single value the current speed of the vehicle and the remaining level of gasoline would not be of any help to the driver.

Both pieces of information are critical and need to be displayed in distinct, clearly visible areas of the dashboard.”

*CBS-point of view:* Partially agree. We agree that current wellbeing and sustainability are two separate issues which each warrant a separate part of the dashboard. We do not agree that a monetary index for sustainability, with a subset of capital stocks that can be measured in monetary units should be adopted. There is ample evidence that the portions that are to be left out are very significant and the monetary indicator could therefore be detrimental rather than helpful for policy decisions.

*Statistics Netherlands Working Program:* The Sustainability monitor for the Netherlands 2009 contained a dashboard for capital indicators. The next version of the monitor (due February 2011) will have three separate dashboards: one for current quality of life, one for quality of life in the future (capital) and one for the international dimension.

*Recommendation 12: The environmental aspects of sustainability deserve a separate followup 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.)*

*SSF-Explanation:* “For the reasons mentioned above, placing a monetary value on the natural environment is often difficult and separate sets of physical indicators will be needed to monitor the state of the environment. This is in particular the case when it comes to irreversible and/or discontinuous alterations to the environment. For that reason members of the Commission believe in particular that there is a need for a clear indicator of increases in atmospheric concentrations of greenhouse gases associated with proximity to dangerous levels of climate change (or levels of emissions that might reasonably be expected to lead to such concentrations in the future. Climate change (due to increases in atmospheric concentrations of greenhouse gases) is also special in that it constitutes a truly global issue that cannot be measured with regard to national boundaries. Physical indicators of this kind can only be identified with the help of the scientific community. Fortunately, a good deal of work has already been undertaken in this field.”

*CBS-point of view:* Agree. The environmental part of the dashboard of indicators should be in physical units.

*Statistics Netherlands Working Program:* Statistics Netherlands has many statistics on energy, environmental pressures and biodiversity. Also the set of environmental accounts is expanding all the time. The main challenge is producing a goods indicator for the overall level of biodiversity.