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EUROSTAT EXPERIENCE AND CAPITAL APPROACH ISSUES IN MEASURING SUSTAINABLE DEVELOPMENT

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INTRODUCTION

1. This paper consists of two parts. The first introduces Eurostat's approach to measuring sustainable development and the second raises issues regarding the capital approach and its use for measuring sustainable development that will need some attention in the task force.

Part I

2. This part retraces the steps in the development of Eurostat's work on sustainable development indicators, describing the evolution of the policy background, and presenting the reviewed SDI set, as well as the approach used for the assessment and analysis of trends ¹.

3. Sustainable development is a fundamental and overarching objective of the European Union (EU), enshrined in the Treaty ². It can be defined simply as the pursuit of a better quality of life for everyone, for present and future generations. It is a vision of progress that links economic development, protection of the environment and social justice, and therefore concerns all citizens of the EU, and indeed of the whole world.

4. The Union's commitment to sustainable development at the first Earth Summit in Rio de Janeiro in 1992 led in due course to an EU-wide sustainable development strategy, which was adopted by the European Council in June 2001 in Gothenburg, and renewed in June 2006. The renewed strategy sets out a single, coherent approach on how the EU will more effectively live up to its long-standing commitment to meet the challenges of sustainable development. It reaffirms the overall aim of achieving continuous improvement of the quality of life and well-being on earth for present and future generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social

¹ This part is mostly taken from the introduction chapter of Eurostat's 2007 monitoring report: *Measuring progress towards a more sustainable Europe – 2007 monitoring report of the EU sustainable development strategy*. Eurostat, European Commission

² Article 2 of the *Treaty on European Union*.

innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion ³.

5. Measuring progress towards sustainable development is an integral part of the renewed strategy, which foresees in particular that Eurostat produces a monitoring report every second year, based on the EU set of sustainable development indicators (SDIs). Monitoring reports were published by Eurostat in 2005, 2007 and 2009 (forthcoming). Following the mandate arising from the strategy, the Commission carried out a review of the 2005 indicator set in cooperation with the working group on SDIs, which is composed of both statistical and policy representatives at national and EU level.

6. The trends derived from the analysis of indicators are assessed against policy objectives and targets to inform the general public and decision-makers about achievements in attaining the commonly agreed objectives of sustainable development. The approach is essentially quantitative, focusing on the analysis on the EU set of sustainable development indicators. It complements the policy analysis provided in the Commission's progress report on the implementation of the sustainable development strategy.

I. THE EARLY STAGES OF EUROSTAT WORK ON SUSTAINABLE DEVELOPMENT INDICATORS

7. In 1996, the United Nations Commission on Sustainable Development (UNCSD) proposed a list of 134 indicators ⁴, linked to the thematic chapters of Agenda 21, to be tested, developed and used by governments. As a contribution to the UN's international testing phase, Eurostat produced a pilot study ⁵ containing 46 indicators based on the UN list. In 1998, Eurostat also hosted a meeting with the European countries which were testing the UN list of indicators, to review progress and present results with the aim to advance understanding of methodologies and the way in which SDIs were being developed and used across the Member States.

8. As a result of the international testing phase, the United Nations Department of Economic and Social Affairs launched a revision of the indicator list. The overall framework and structure of the SDI set were adapted, resulting in a reduced but more policy-oriented set of indicators. Drawing upon and extending the UN revised list of 59 core SDIs, Eurostat issued a second publication ⁶, containing some 63 indicators.

9. Following the adoption of the EU sustainable development strategy in Gothenburg in June 2001, the Statistical Programme Committee ⁷ established a task force in September of the same year to develop a common response from the European statistical system to the need for indicators on sustainable development. The task force, comprising statisticians, researchers,

³ *Review of the EU sustainable development strategy*, Council of the European Union, document 10117/06 of 9 June 2006.

⁴ *Indicators of sustainable development framework and methodologies*, United Nations, New York, 1996.

⁵ *Indicators of sustainable development — A pilot study following the methodology of the United Nations Commission on sustainable development*, European Communities, Luxembourg, 1998.

⁶ *Measuring progress towards a more sustainable Europe — Proposed indicators for sustainable development*, European Commission, Luxembourg, 2001.

⁷ The Statistical Programme Committee (SPC), which is chaired by Eurostat, brings together the heads of Member States' national statistical offices. The SPC discusses the most important joint actions and programmes to be carried out to meet EU information requirements. It agrees a five-year programme, which is implemented by the national authorities and monitored by Eurostat.

members of national administrations, and representatives from other European Commission services, met regularly between April 2002 and April 2005. The Commission endorsed a first set of 155 indicators based on the work of the task force in February 2005⁸. Some 98 indicators from this list formed the basis of the first monitoring report published by Eurostat in December 2005⁹. Upon the expiry of the mandate of the task force at the end of 2005, a working group on sustainable development indicators (SDIs) including representatives from all EU Member States was set up, in order to build on the work of the task force as well as to exchange and expand best practices to all Member States.

II. THE RENEWED EU SUSTAINABLE DEVELOPMENT STRATEGY

10. In June 2006, the European Council adopted a renewed sustainable development strategy. This built on the 2001 strategy and incorporated subsequent commitments such as the external dimension added in 2002 by the European Council in Barcelona, and the plan of implementation of the Johannesburg World Summit on sustainable development⁽¹⁰⁾. It translates the vision of sustainable development into an operational strategy. The document recalls the four key objectives and the ten policy guiding principles agreed by the June 2005 European Council, and organises the core of the operational policy objectives around seven key challenges, with the addition of cross-cutting policies and issues.

A. Policy guiding principles

11. In the declaration on guiding principles for sustainable development, the European Union and its Member States have committed to pursue and respect the following objectives and principles to address the challenges of a sustainable development in Europe and the world:

Key objectives:

- (a) Environmental protection;
- (b) Social equity and cohesion;
- (c) Economic prosperity;
- (d) Meeting our international responsibilities.

Policy guiding principles:

- (e) Promotion and protection of fundamental rights;
- (f) Solidarity within and between generations;
- (g) Open and democratic society;
- (h) Involvement of citizens;

⁸ *Sustainable development indicators to monitor the implementation of the EU sustainable development strategy*, SEC(2005) 161.

⁹ *Measuring progress towards a more sustainable Europe – sustainable indicators for the European Union*, 2005 edition. Eurostat, European Commission.

¹⁰ <http://www.un.org/esa/sustdev/index.html>

- (i) Involvement of business and social partners;
- (j) Policy coherence and governance;
- (k) Policy integration;
- (l) Use best available knowledge;
- (m) Precautionary principle;
- (n) Make polluters pay.

12. These principles correspond to the underlying values of a dynamic European model of society and are intended to serve as a basis for the renewed strategy.

B. Seven key challenges

13. The renewed strategy underlines that the unsustainable trends identified in the 2001 strategy still persist, while new challenges are arising. The seven key challenges identified as priorities in the renewed strategy therefore largely coincide with the 2001 strategy, with the addition of sustainable consumption and production, and global poverty and sustainable development challenges. They comprise:

- (a) Climate change and clean energy;
- (b) Sustainable transport;
- (c) Sustainable consumption and production;
- (d) Conservation and management of natural resources;
- (e) Public health;
- (f) Social inclusion, demography and migration;
- (g) Global poverty and sustainable development challenges.

14. Each of the key challenges is described in terms of an overall objective, specific operational objectives and targets, and a list of actions.

C. Cross-cutting policies and issues

15. The renewed strategy also outlines cross-cutting policies which contribute to the knowledge society, namely education and training, and research and development. It advocates the use of economic instruments in implementing the strategy, while calling for integrated financing mechanisms. It proposes actions towards communication, dissemination and stakeholder involvement.

D. A new governance cycle

16. The renewed strategy introduces a governance cycle whereby the December European Council will review progress and priorities every two years. The Commission will contribute by submitting a progress report on implementation of the SDS in the EU and in the Member States, analysing both the present situation and proposing orientations and actions for the future. In doing so, the progress report will draw on the set of SDIs presented in the Eurostat monitoring report, which should therefore be updated every two years. The strategy states also that the Commission should further develop and review the SDI set with the assistance of the working group on SDIs, which is a continuous activity of varying intensity.

E. A thematic framework

17. In 2005, the indicators were selected and organised using a theme-oriented framework, which was conceived to provide a clear and easily communicable structure and relevance to political decision-making. The framework was based on priority policy issues, while being flexible enough to adjust to possible changes in these priorities and objectives, bearing in mind that new issues could emerge. The framework followed a hierarchical approach where indicators are ranked in three levels.

18. The 2005 framework has been slightly adapted to reflect the wording of the renewed strategy. Each of the seven key challenges was already represented by a theme in the original framework, with the 'social inclusion, demography and migration' challenge split into two themes (social inclusion on the one hand, demographic changes on the other) to reflect the different nature of these two issues. Two other themes have been retained in order to reflect key objectives and guiding principles of the renewed strategy. The theme of socioeconomic development complements the set by focusing on the key objective of economic prosperity, while the theme of good governance is related to the guiding principles of the strategy and other cross-cutting issues.

19. The ten themes of the reviewed framework follow a general gradient from the economic, to the social, and then to the environmental and institutional dimensions:

- (a) Socioeconomic development;
- (b) Sustainable consumption and production;
- (c) Social inclusion;
- (d) Demographic changes;
- (e) Public health;
- (f) Climate change and energy;
- (g) Sustainable transport;
- (h) Natural resources;
- (i) Global partnership;

- (j) Good governance.

20. The themes in the reviewed SDI framework are further divided into subthemes to organise the set in a way that reflects the operational objectives and actions of the sustainable development strategy.

F. Different kinds of indicators

21. The reviewed set of SDIs retains the three-storey pyramid structure of the 2005 set. This distinction between the three levels of indicators reflects the structure of the renewed strategy (overall objectives, operational objectives, actions) and also responds to different kinds of user needs. The three-level pyramid is complemented with contextual indicators, as illustrated in Figure 1.

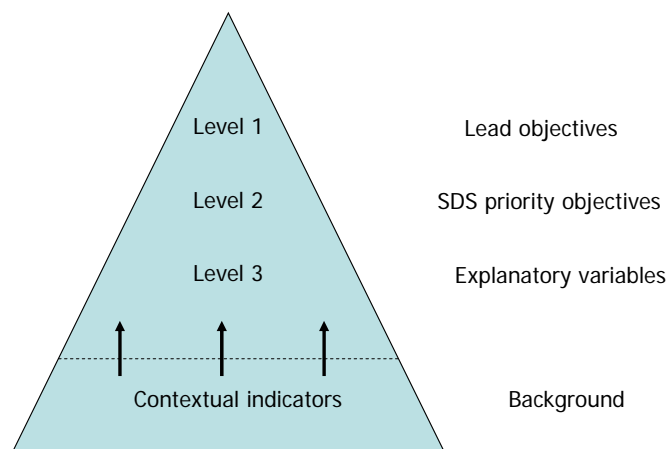
22. Headline (or level-1) indicators are at the top of the pyramid. The objective is to monitor the ‘overall objectives’ of the strategy. They are well-known indicators with a high communication value. They are robust and available for most EU Member States for a period of at least five years.

23. The second level of the pyramid consists of indicators related to the operational objectives of the strategy. They are the lead indicators in their respective subthemes. They are robust and available for most EU Member States for a period of at least three years.

24. The third level consists of indicators related to actions outlined in the strategy or to other issues which are useful to analyse progress towards the SDS objectives. Breakdowns of level-1 or -2 indicators are usually also found at level-3.

25. Contextual indicators are part of the SDI set, but either they do not monitor directly any of the strategy’s objectives or they are not policy responsive. Generally they are difficult to interpret in a normative way. However, they provide valuable background information on issues having direct relevance for sustainable development policies and are useful for the analysis.

Figure 0.1: The SDI pyramid



26. The SDI set also describes indicators which are not yet fully developed but which would be necessary to get a more complete picture of progress. The Commission, with the assistance of the working group on SDIs, constantly reviews the situation regarding the development of new and better indicators.

27. Most of the data used to compile the indicators come from the regular Eurostat collection of statistics from the European statistical system, but some data were extracted from databases outside Eurostat, either from other Commission services or from external sources.

28. The approach is as a contribution to measuring the progress towards sustainable development at EU level, based on commonly agreed indicators derived from official statistics, and thus providing one out of the many perspectives required in the search for a more sustainable development.

Part II

29. This part introduces some of the open questions on the subject of the capital approach and its value for measuring sustainable development.

III. THE CAPITAL APPROACH

30. *Official statistics*: If the capital approach should be promoted within the system of official statistics it will have to comply with the requirements of official statistics, i.e. its ethics and its quality standards¹¹. Along the path from putting theory into practice, conventions or assumptions will have to be made. The questions are whether they are made by institutions recognised to do that, to what extent they are internationally agreed upon and have been tested against reality, but also whether they are transparent and comprehensible for the user. It will be key to carry out the work within the framework of official statistics.

¹¹ European statistics code of practice, for the national and community statistical authorities, Eurostat 2005; Regulation (EC) No 223/2009 of the European Parliament and the Council of 11 March 2009 on European statistics.

31. *Monetisation*: Monetisation is the final goal in order to be compatible with accounting systems, two issues will have to be taken into account. One needs to be solved within statistics: The data – be it environmental, social or human – need to be reasonably robust before the valuation calculations, otherwise the house will be built on sand. The second goes beyond statistics: The valuation of physical measures will have to be based on international agreements and conventions (see e.g. the Kyoto protocol) that involve stakeholders far beyond statisticians and scientists. The task force also has to bear in mind that developing and reporting asset accounts in Europe have not received much support from countries and as a consequence these accounts and work have not been given priority e.g. in Eurostat's 5-year work plan in environmental statistics. The London Group decided not to work on asset accounts in monetary forms either. Regarding social accounting, according to Eurostat sources, there are no activities reported in any EU institution.

32. *Non-monetary asset accounts*: As monetisation might be outside the scope of this task force, its focus will be on accounting in physical measures. If process can be made in this direction, especially in the field of human and social capital this would be a considerable step forward. However, the national accounts are at this stage not willing to incorporate information that is not according to SNA, so the fundamental question will have to be answered in what form and for what purpose it's useful to pursue this approach at a statistical level.

33. *Resources*: The task force will have to be transparent and clear about the time and costs that an implementation of a capital approach or parts of it will entail and how many resources will be needed before the issues of measuring and calculating problems will be solved. It would be most damaging for the credibility of official statistics to promise fast results and then for years not to be able to deliver. For the national statistical offices it will also be key to know about the resources needed in order to take a decision about incorporating the capital approach in their systems. If the time horizon for the implementation of the capital approach is long-term as it looks now, the task force has to discuss ideas of how to proceed in the short and middle term to deal with the demand for information.

A. Measuring sustainable development with the capital approach

34. *Linking the capital approach with SD*: In the WGSSD a widespread uneasiness had been expressed towards combining the two issues of measuring SD and developing the capital approach¹². One referred to the fact that SD has more components than the capital approach is able to cover and the other feared that it could be a too ambitious plan to deal with both issues at the same time and come up with results to implement within a reasonable time frame. That's why it has been several times proposed to rename the task force.

35. *SD components not addressed*: Some of the priorities of sustainable development that so far haven't been addressed in a satisfactory way by the capital approach are 1) The distributional aspects or intra-generational equity (which shall be dealt with in this task force), 2) the global dimension of sustainable development including development aid and 3) the assessment of policy measures. The task force doesn't have to deal in-depth with everything due to its assignment to focus on the long-term aspect of a sustainable development. However, the above mentioned issues will have to be addressed in one way or the other as they all have long-term

¹² *Outcome of the consultation on further work on statistics for sustainable development*, Note prepared by the UNECE Secretariat, 2008.

implications. Also, it will be useful throughout the action to point out what parts of SD can be covered by the capital approach and what not.

36. The global dimension is worth to be mentioned again explicitly, because the sustainability of a country's development cannot be assessed without including externalities its production and consumption patterns and lifestyles cause in other countries. To embark upon this issue the possibilities to change from a production to a consumption perspective within the capital framework should be explored.

37. *Feasibility*: Another challenge is to put the capital theory into practice when the subject goes beyond the economic system. The problems have been mentioned before¹³: the space-time frame of flows and stocks are not well-defined and limited to traditional statistical boundaries, property rights do not exist for many capitals central to SD, many stocks and some flows are not easily measured in physical units (biodiversity, knowledge of a society, subjective well-being) and even less easy attributed a value without strong assumptions. Any work done in the task force will have to be evaluated against its actual realisation.

38. *Net present value methodology*: One of the key issues to address experts see in the use of the net present value methodology. It doesn't give any value to assets beyond 10 to 20 years. The way that the income from future assets is discounted in the calculations (i.e. the calculation methodology for Net Present Value) actually means that any streams of income beyond 7-10 years is considered basically worthless. This seems very problematic from a "sustainable" perspective - if the calculations are used to implement policy the only policy that can be rationally defended on the basis of the calculations is to exploit the resources (for example the forests, fish stocks, mineral resources) within a 10 year period – because after that the income calculations are basically zero. According to information from the London Group so far the NPV is the only alternative in both the SNA2008 and the revision of the SEEA for calculations of future income streams.

39. *Link to politics*: The *raison d'être* of statistics is to inform policy-makers and the society at large about developments in a society and to develop tools for political decision-making. Measuring sustainable development has a particularly strong link to politics as SD is a normative concept that is often translated into an SD policy or strategy. Linking a list of indicators to a strategy is a means of putting statistics to direct use and of participating in the public debates by providing quality-secured knowledge-based evidence. Justifying an SD indicator set from a purely theoretical standpoint will not be enough, it also needs to comply with the conceptual framework defining and operationalising SD. From the existing examples we see that there's no indicator set that has succeeded in constructing an indicator set without indicators from outside the theoretical framework of the capital approach. In general, at least a few additional indicators were needed to cover all relevant SD issues.

40. Eurostat would opt for a pragmatic approach of continuing the development of the capital approach and integrating any useful measures coming from it in existing indicator sets. The work on the capital approach and the developments in environmental and social accounting are certainly valuable to improve the tools for measuring sustainable development, also policy-oriented indicator system can only profit from the availability of improved stock flow measures.

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¹³ Outcome of the consultation on further work on statistics for sustainable development, op. cit.