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## OBJECTIVES AND INDICATORS OF SUSTAINABLE DEVELOPMENT IN EUROPE: A COMPARATIVE ANALYSIS OF EUROPEAN COHERENCE<sup>1</sup>

Setting objectives and measuring progress in achieving them with indicators are two closely related features that are typical for serious strategic management approaches in general, and for virtually all sustainable development (SD) strategies in the EU-27 in particular. This paper summarizes some key findings of a study that was commissioned by Eurostat and conducted by the Research Institute for Managing Sustainability (RIMAS) together with the Department of Economics and Social Sciences at the University of Natural Resources and Applied Life Sciences (BOKU) in early 2007. One purpose of the study was to compare objectives and indicators of SD across Europe. The points of reference used for the European comparison were (i) the objectives of the renewed EU SDS from 2006, and (ii) the indicators of the EU Sustainable Development Indicators (SDI) framework from 2005. By using these two points of reference, both the study and this report provide a comprehensive picture of how coherent objectives and indicators of SD are across Europe.

### 1 Introduction

#### 1.1 *Objectives and indicators: Two key features of strategic processes*

Setting objectives and measuring progress in achieving them with indicators are two closely related features that are typical for serious strategic management approaches in general, and for virtually all SD strategies in the EU-27 in particular. Taking into account several SD strategy guiding documents that emphasize the importance of SDIs as means of monitoring, learning and continuous improvement in the context of SD policymaking (UN, 1992; OECD, 2001; UNDESA, 2002; IIED, 2002; OECD, 2006), this Section frames objectives and indicators as integral key features of SD strategies.

Strategic management approaches and strategy processes have become increasingly popular in both the private and the public sector in the last two decades, in particular since it became apparent that rigid planning schemes have failed to deliver (Steurer & Martinuzzi, 2005; Mintzberg *et al.*, 1998). If one understands strategic management as “the central integrative process that gives the organization a sense of direction and ensures a concerted effort to achieve strategic goals and objectives” (Poister & Streib, 1999:323), it is obvious that neither private nor public organisations can thrive without some sort of deliberate, and to a certain degree formalized, strategy. As Schick (1999:2) puts it, “Strategy without opportunity

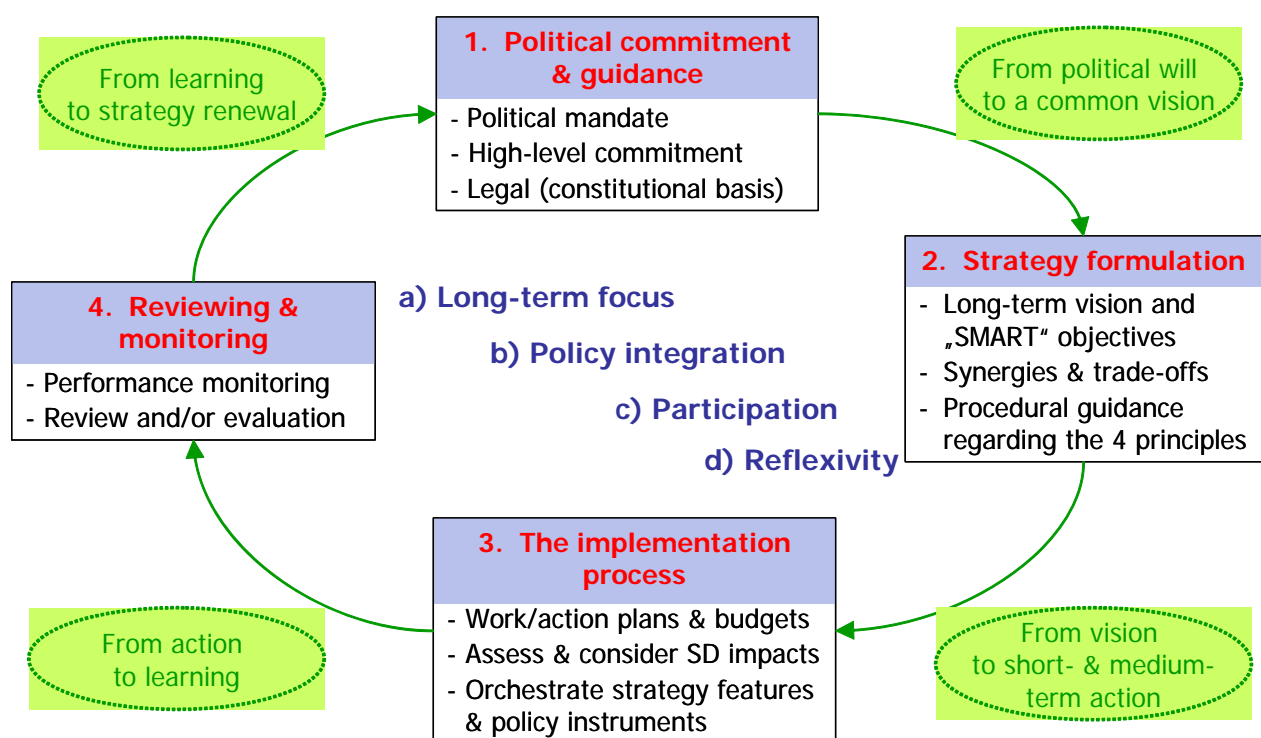
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<sup>1</sup> This paper is mainly based on the ESDN Quarterly Report December 2007 “Objectives and Indicators of Sustainable Development in Europe: A Comparative Analysis of European Coherence” (see [http://www.sd-network.eu/?k=quarterly%20reports&report\\_id=7](http://www.sd-network.eu/?k=quarterly%20reports&report_id=7)). We thank Pascal Wolff from Eurostat for the opportunity to disseminate the findings of the study, and Helga Pülzl, Anja Bauer and Ewald Rametsteiner from BOKU University for conducting the study together with RIMAS.

cannot advance the cause of reform very far. [...] On the other hand, opportunity without strategy is likely to exhaust itself in faddism, drifting from one fashionable innovation to the next, without leaving a lasting imprint.”

According to the Resource Book on SD strategies, “Being strategic is about developing an underlying vision through a consensual, effective and iterative process; and going on to set objectives, identify the means of achieving them, and then monitor that achievement as a guide to the next round of this learning process.” (IIED, 2002:29). As this quote emphasises and Figure 1 illustrates, developing a long-term vision and setting concrete objectives are two initial key steps of a strategic process. Ideally, these steps are based on an assessment of the status quo and current trends, and they are accompanied by high-level political commitment. Monitoring efforts using SD indicators (SDIs), on the other hand, should track SD performances and trends that are relevant for the objectives formulated in the SD strategy. SDI monitoring most often accompanies implementation efforts, and its findings are summarised annually or bi-annually in indicator or progress reports (Steurer & Martinuzzi, 2005). Eventually, the periodic progress reports should lead to the renewal of an SD strategy or some of its objectives.

**Figure 1:** The SD strategy cycle - principles (a-d) and steps (1-4) (© Steurer, loosely based on Volkery *et al.*, 2006)



Put simply, while SD objectives ought to guide sectoral policies towards SD, monitoring with SDIs ought to reveal how governments are doing in this respect. In the context of SD strategies, the linkage between the two features should be close because

- Objectives without a clear link to SDIs cannot be monitored, which makes it difficult to assess and advance respective policies;
- An SDI without reference to a policy objective may be politically insignificant because it is monitoring something that seems to have little political salience.

However, because SDIs chart SD performances mostly in quantitative terms, they can neither reveal causalities, nor can they identify success factors and challenges of

policymaking. Therefore, SDI monitoring should be complemented by qualitative reviews or evaluations of SD strategy processes (see Berger, 2007).

The next two Sections address the role of objectives and SDIs in SD strategies in more detail. Afterwards, the empirical findings of the European comparison will be summarised.

## **1.2 Objectives in Sustainable Development strategies: Vague or SMART**

Regarding objectives, several guiding documents emphasise that SD strategies should be based on sound analyses of economic and environmental data, provide a long-term vision and clear, achievable objectives (UNDESA, 2002; OECD, 2001). Clear objectives are a prerequisite to assess the degree to which policies have achieved their own objectives. However, what are “clear, achievable objectives”?

From the strategic management and project management literature, one can learn that objectives should be **SMART**, i.e. that they should be **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**imed (Doran, 1981; Favell, 2004):

- **Specific:** Objectives should describe what a strategy, a policy or a project wants to achieve in a focused and precise way; objectives should be well-defined;
- **Measurable:** Objectives should be measurable so that their achievement can be assessed; this requires that they are quantified and timed (see below);
- **Achievable:** Objectives should be attainable with a reasonable amount of effort (in terms of work time, budget, actors involved etc.), and achieving them should be neither too easy nor too hard (or even impossible);
- **Relevant/realistic:** Objectives should be relevant to those who have the power and resources to realise them, and the resources necessary to achieve them should be available;
- **Timed/Time-bound:** It must be clear in what timeframe an objective should be achieved; objectives that do not state a “deadline” or “target year” are not measurable.

When objectives are formulated or revised, it may make sense to first think about their relevance and achievability, then about making them as specific as possible, and finally about formulating them timed and measurable. In other words, the memory aid “SMART” can in reality play out as RASTM.

Regarding the monitoring of SD objectives with indicators, the characteristics S, M and T are obviously very important. It is difficult to monitor objectives if one of the three characteristics is not given, and it is impossible when objectives are unspecific, not measurable and not timed. Like most policy documents (even highly salient economic ones), SD strategies contain both vague and SMART objectives (for examples, see the empirical Section on objectives).

## **1.3 Sustainable Development Indicators (SDIs)**

Since the early days of the SD discourse, there has been a controversy on how to best measure, monitor and assess progress towards SD. A major recurring issue of this controversy is the critique of the Gross Domestic Product (GDP) concept. Since decades, critics have highlighted several social and environmental problems that emerge when GDP is misunderstood as an indicator for economic wealth.<sup>2</sup> Consequently, SD scholars have

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<sup>2</sup> For a recent event entitled “Beyond GDP: Measuring progress, true wealth and the well-being of nations”, see <http://www.beyond-gdp.eu>.

developed several alternative or complementary indices to GDP, such as the Index of Sustainable Economic Welfare (ISEW) or the Ecological Footprint (Steurer, 2002:307-322). However, also due to methodological problems, none of these aggregated indicators came out on top of the SD or SDI discourse. Instead, countries began to develop and adopt sets of SDIs that depict selected economic, social and environmental aspects of SD. As the study summarised here and other studies show, SDI sets are the standard way to monitor progress towards SD in Europe and in other parts of the world (Eurostat, 2007a; Dalal-Clayton & Krikhaar, 2007).

An indicator can be defined as “a parameter, or a value derived from parameters, which points to, provides information about, describes the state of a phenomenon/environment/area, with a significance extending beyond that directly associated with a parameter value.” (OECD, 2003)

Generally speaking, indicators have three main functions. Firstly, they reduce the number of measurements necessary to give an exact description of a situation (OECD, 2003). As such, they are indispensable for **measuring progress** towards achieving set goals (Dalal-Clayton & Krikhaar, 2007) and thus constitute a key tool for evaluating the effectiveness of policies (European Commission, 2005). Secondly, indicators simplify the **communication** of positive and negative developments to politicians, administrators, the public and others (OECD, 2003). Both functions rely on the main feature of indicators, i.e. to summarize complexity into a manageable amount of meaningful information that can be understood and interpreted easily. In doing so, indicators can, thirdly, provide crucial **guidance for policymaking processes** (Bossel, 1999; UNCSD, 2001), in particular regarding the better integration of policies horizontally across sectors, and vertically between different levels of government. SDIs can facilitate vertical integration when they are compared and benchmarked across Europe.

In how far SDIs fulfil the measuring function is foremost a question of methodological reliability and validity. Because they ought to reveal where we stand on the way to SD, in which areas progress has been made and where further political actions are needed (Dalal-Clayton & Krikhaar, 2007), methodological challenges in developing and applying SDIs are anything but trivial. In how far they can fulfil the communication and guidance functions is primarily a question of political willingness to learn and improve policies based on evidence. As we all know, learning is a difficult process, in particular in political arenas in which opposition parties are eager to benefit from a government's negative performances and weaknesses.<sup>3</sup>

### 1.3.1 From Rio to the current EU SDI set

SDIs proliferated following the 1992 Earth Summit in Rio de Janeiro. In particular, chapter 40 of the Agenda 21 called for the “development of indicators of sustainable development” both on the national and international level (UN, 1992). Following this call, the OECD in 1994 presented a set of environmental indicators in the so-called ‘Pressure-State-Response’ (PSR) framework. The indicators reflected major environmental preoccupations and challenges in the OECD countries and were classified into (i) indicators of environmental pressures (‘Pressure’), (ii) indicators of environmental conditions (‘State’) and (iii) indicators of societal responses (‘Response’) (OECD, 2003).

Although the PSR-framework, originating from environmental statistics, shows clear limitations when being tied to SD, it was further adopted by various organisations. The UN Commission on Sustainable Development (UNCSD), for instance, used a modified ‘Driving

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<sup>3</sup> The communication and guiding purposes of SDIs were also the subjects of the first ESDN Workshop on SDIs, hosted by the Portuguese Presidency in November 2007 in Cascais, Portugal (see <http://www.sd-network.eu/?k=ESDN%20workshops>).

force-State-Response' (DSR) framework, and the European Environmental Agency (EEA) adopted a 'Driving force-Pressure-State-Impact-Response' (DPSIR) version. However, despite these efforts, the weaknesses of the PSR framework are (i) uncertainties regarding the underlying causal linkages the framework implies, and (ii) oversimplification of complex inter-linkages between issues (Pintér *et al.*, 2005; UNDESA, 2006).

In 1996, the UNCSO proposed a set of 134 SDIs in the Driving force-State-Response framework, linked to the thematic chapters of the Agenda 21. In connection to this SDI set, the UNCSO launched an international testing programme aimed at advancing the understanding, development and use of SDIs by governments. 22 countries covering all regions of the world participated in the testing programme, including seven EU Member States (Austria, Belgium, Czech Republic, Finland, France, Germany and the UK). In addition, Eurostat and a number of countries not officially participating in the testing were affiliated with the programme. The testing phase ultimately led to a revision of the UNCSO SDI set, resulting in a smaller but more policy-relevant set of SDIs (UNCSO, 2001; Eurostat, 2007b).

Another result of the testing programme was the replacement of the DSR framework by one focusing on themes and sub-themes of SD (Pintér *et al.*, 2005; UNCSO, 2001). This new approach was taken up by the European Commission when designing a "framework for indicators based on themes and sub-themes, which are directly linked to EU policy priorities" (European Commission, 2005). As a result, the Commission endorsed a set of 155 indicators (in the form of a hierarchical three-level pyramid), with 98 indicators forming the basis of Eurostat's first SD monitoring report published in December 2005 (Eurostat, 2007b, 2005).

Following the mandate of the renewed EU SDS, Eurostat has undertaken a review of the 2005 EU SDI set in 2006-2007. This review followed three objectives (European Commission, 2007):

- Adjust the SDI set adopted in 2005 to the renewed EU SD strategy;
- Streamline the set of indicators in order to improve communication whilst maintaining the maximum stability of the set over time;
- Improve the overall quality of the set, taking into account recent statistical developments.

The review of the EU SDI set was carried out by Eurostat in close cooperation with the working group on SDIs, composed of both statistical and policy representatives from EU and Member State levels. This working group was established in 2005 in order to further the work of the previous SDI task force and to "exchange and expand best practices to all Member States" (Eurostat, 2007b). The revised EU SDI set was published in October 2007 in the annex to the Commission Staff Working Document accompanying the first EU SDS progress report. It represents the state of the art of SDIs at the EU level.

## 2 Methodological issues of the empirical analysis

### 2.1 Background

The following empirical parts of this paper are based on a study that was carried out between January and June 2007 by RIMAS (the Research Institute for Managing Sustainability that operates the ESDN Office) at the Vienna University of Economics and Business Administration, together with the Department of Economics and Social Sciences at the University of Natural Resources and Applied Life Sciences (BOKU). The study was commissioned by Eurostat, the Statistical Office of the European Communities.<sup>4</sup>

### 2.2 Objectives, scope and methodology of the study

The objectives of the study were to

- (i) List and compare objectives and indicators used in
  - a. The EU Lisbon strategy and NRPs
  - b. The EU SDS and NSDSs
- (ii) Describe similarities and differences regarding objectives and indicators in both Lisbon and SD strategies at the EU and national levels.

The analysis of objectives and indicators in Lisbon and SD strategies at the EU and national levels was implemented through three tasks:

- An analysis of national priorities and sets of indicators used in National Reform Programmes (NRPs are the Lisbon Strategy equivalent at the Member State level) of the EU-25 in comparison with priorities and indicators of the EU Lisbon Strategy
- An analysis of national priorities and sets of indicators used in national SD Strategies (NSDSs) in comparison with priorities and indicators of the renewed EU SDS (this task covered the EU-25 as well as acceding, candidate and EEA countries and Switzerland)
- A comparative analysis of structural and sustainable development indicators on Member State and national levels

The empirical findings summarised here focus on the results of the analysis of NSDS objectives and indicators only (task 2).<sup>5</sup>

At the beginning of the study, a so-called SISDI (Structural Indicators and Sustainable Development Indicators) database was set up. This database enabled us to conduct

- A systematic analysis of the coverage of NSDS objectives through indicators;
- A systematic comparison of SD indicators across Europe;
- A systematic comparison of national and EU level objectives and indicators;
- The identification of trends in the use of indicators at the national level.

A European comparison of SD objectives and indicators requires a common point of reference that helps to highlight similarities and differences across Member States. Here, the key challenges of the renewed EU SDS and the EU SDI set defined in the Communication "Sustainable Development Indicators to monitor the implementation of the EU Sustainable Development Strategy" from February 2005 were used as the common point of reference.

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<sup>4</sup> Lot 2 of Eurostat's tender No 2006/S 148-159080 on the "Improvement of the quality of the quality of the Structural and Sustainable development indicators". The complete study can be downloaded at [www.sustainability.eu/sdi](http://www.sustainability.eu/sdi).

<sup>5</sup> The comparative analysis of the objectives and indicators of the Lisbon Strategy and respective NRPs will be summarised in the upcoming ESDN Quarterly Report March 2008.

The new EU SDI set was not available as a common point of reference because it was under development at the time when the study was conducted.

In a first step, SDS Coordinators were contacted in order to verify or identify policy documents containing SD objectives and indicators. Based on the identified documents, SD objectives were entered into the database and categorized by using an hierarchical scheme.<sup>6</sup> Simultaneously, SDIs used in NSDSs as well as in accompanying documents (monitoring, indicator and progress reports) were entered into the database and, if possible, linked to the already listed objectives and actions. In an additional step, SD objectives and indicators were also linked to the key challenges of the EU SDS and the EU SDI set adopted in 2005. In a last step, we also collected information regarding strategy revisions, monitoring methods and trends in the use of indicators. Overall, the results of the study give a comprehensive picture of SD objectives and indicators used across Europe.

### **2.3 Key challenges and limitations**

When interpreting the findings of the study, challenges and limitations, mainly regarding the country coverage and the reference documents used for the analysis, have to be kept in mind. First, we have covered fewer countries as foreseen, mainly because of three reasons:

- Six countries (Bulgaria, Croatia, Cyprus, Liechtenstein, Macedonia and Turkey) didn't have an NSDS at the time of the study.
- Two countries (Hungary and Spain) were still in the process of elaborating their first NSDS.
- Five countries (France, Greece, Luxembourg, Poland and Portugal) didn't have an English version of their NSDS available.

As a result, 24 instead of the planned 34 countries were covered by the analysis. Among the 24 countries are the EU Member States that had an NSDS in place (does not apply to Bulgaria, Cyprus, Hungary and Spain) and that was also available in English (does not apply to France, Greece, Luxembourg, Poland and Portugal). However, thanks to the support of the national SDS Coordinators as well as experts from Eurostat, we were able to partly include SD objectives and indicators from France and Greece as well as SD indicators from Luxembourg in the analysis. The study also covered the non-EU countries Iceland, Norway and Switzerland.

For countries that have adopted an English NSDS, the strategy document and related SD objectives were easy to identify and categorise. The situation for indicators was sometimes less clear because not all countries list their SDIs in their strategy documents, or they have updated them later on. In virtually all countries, the SDI set originally adopted with the NSDS differed from the set used later on in progress and indicator reports. As a consequence, we have used the most recently published SDI set in the analysis.

Another challenge emerged regarding the actual size of SDI sets. Almost all countries, especially those that used graphs and figures for illustrating their indicators, used indicators that aggregate several independent component indicators. The UK SDI for 'road freight', for instance, is composed of data that corresponds to two separate EU SDIs ('greenhouse gas emissions by transport' and 'volume of freight transport and GDP'). To make the study results comparable, the SDIs entered into the database were broken down into their basic component indicators. This implies that the number of indicators in the project's database is sometimes different to the 'official' number of indicators of a country (for the UK, for instance, we have entered 147 indicators into the database instead of the 68 'official' indicators).

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<sup>6</sup> For a detailed description of the hierarchical scheme used for classifying NSDS objectives see Eurostat (2007a) and the ESDN Quarterly Report December 2007 (Hametner & Steurer, 2007).

### **3 SD objectives in SD Strategies across Europe**

This section gives an overview of the development of NSDSs in Europe, and it characterises them in terms of basic characteristics (types), focus, structure and objectives

#### **3.1 Development and spread of NSDSs**

Key drivers behind the development of SD Strategies in Europe were the 1992 Rio World Summit, the 2001 Gothenburg European Council, the 2002 Johannesburg World Summit, and finally the 2006 EU SD Strategy (for details see Steurer & Martinuzzi, 2007). As Table 1 shows, only a few countries (namely Iceland, Ireland, Switzerland and the UK) have developed their first NSDS already in the mid-1990s in response to the 1992 Rio Earth Summit, with many more following in the early 2000s around the 2002 Johannesburg World Summit. The renewed EU SDS from 2006 seems to drive some latecomers to elaborate their first SD Strategy, and others to review their existing approaches. Currently, a majority of EU Member States plan to review their NSDS within the next two years.

#### **3.2 Type, focus and structure of NSDSs**

As the European Commission's (2004:11-14) Staff Working Document on NSDSs lines out, strategy documents differ widely in various respects. Regarding the approach taken (or type), some documents communicate a bold vision with a few priorities on some dozen pages, while others come up with a bulk of (often vague) intentions and objectives on more than 200 pages. In order to increase policy coherence, countries structure their strategy documents in broad categories (such as "quality of life" or "living space" in Austria), around key sectors (such as transport, industry, energy, agriculture or employment, *inter alia*, in Lithuania), or alongside the three dimensions of SD. Although most SD Strategies cover all three dimensions of SD, emphases differ. Two strategies (Iceland, Italy) show a clear focus on the environmental dimension. Besides commitments regarding to the global aspect of SD, which are stated in virtually all NSDSs, some countries emphasize additional dimensions such as *culture* (Estonia, Lithuania, Slovakia and Slovenia) or *governance* (Czech Republic, the Netherlands). As Table 1 shows in detail, several countries put a special emphasis on *research and education* (Czech Republic, Finland, Latvia, Lithuania, the Netherlands, Slovakia, Slovenia, Switzerland), *sustainable communities, including spatial development and housing* (Denmark, Finland, Ireland, Latvia, Lithuania, Slovenia, Switzerland and the UK) or *tourism* (Latvia, Lithuania, Malta).

However, the most significant difference between NSDSs is related to the document structure. While a number of strategies show a clear link and hierarchy of objectives and actions/measures, others do not specify how (in particular cross-sectoral) objectives are supported by implementation measures. Instead, actions and measures are specified in independent chapters referring to various policy sectors (such as air, water, forestry, agriculture, industry, transport, energy, etc.).

**Table 1:** Development, Structure and scope of European NSDSs (years stated in **bold** indicate the strategy documents that were included in the empirical analysis; countries not included in the analysis are displayed in *italics*).

Country	First NSDS (year)	Revision(s) of NSDS (years)	NSDS structure	Number of objectives and actions/measures <sup>i</sup>	Coverage of the 3 SD dimensions	Additional dimensions / priority areas
<b>Austria</b>	<b>2002</b>	-	clearly hierarchical; 4 'fields of action', each consisting of 5 key objectives; plus an additional main objective (finance)	159 (5/23/131)	equally covered	international
<b>Belgium</b>	1999 (federal level only)	<b>2004 (federal level only)</b>	matrix; 6 themes with 31 'actions for SD'	230 (6/31/193)	emphasis of social dimension	
<i>Bulgaria</i>	<i>2007 (draft)</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>Croatia</i>	<i>no NSDS</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>Cyprus</i>	<i>2007 (draft)</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Czech Republic</b>	<b>2004</b>	-	hierarchical; 6 priority areas (3 SD pillars + 3 cross-cutting areas)	167 (6/17/144)	equally covered	international; governance; R&D/education
<b>Denmark</b>	<b>2002</b>	-	mixed; 8 key objectives, plus 13 priority areas with actions/measures	200 (21/87/92)	equally covered	international; housing
<b>Estonia</b>	<b>2005</b>	-	clearly hierarchical; 4 'goals' (3 SD pillars + culture), each comprising 3 'sub-goals' and a number of actions	32 (4/12/16)	equally covered	culture
<b>Finland</b>	1998	<b>2006</b>	hierarchical; 6 main priority areas	186 (6/26/154)	equally covered	international; R&D/education; sust. communities
<b>France</b>	2002	<b>2006</b>	mixed; objectives structured according EU SDS; actions described in a separate part of the NSDS	75 (9/50/16) <sup>ii</sup>	equally covered	international; R&D/education
<b>Germany</b>	<b>2002</b>	(2005) <sup>iii</sup>	mixed; 21 objectives embedded in the 3 SD pillars + international dimension; 8 additional priority areas	25 (4/21/0) <sup>iv</sup>	equally covered	international
<b>Greece</b>	<b>2002</b>	-	hierarchical; 5 priority areas	56 (5/25/26) <sup>v</sup>	emphasis of environmental and social dimension	international
<i>Hungary</i>	<i>2007 (draft)</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

<b>Iceland</b>	(1996) <sup>vi</sup>	<b>2002</b>	clearly hierarchical; 4 priority areas, each with 3-6 objectives, on average 3 'sub-goals' per objective	72 (4/17/51)	only environmental dimension covered	international
<b>Ireland</b>	<b>1997</b>	(2002) <sup>vii</sup>	hierarchical; 7 priority areas, 2 comprising a comprehensive number of objectives and key issues	193 (7/16/170)	emphasis of environmental and economic dimension	international
<b>Italy</b>	<b>2002</b>	-	hierarchical; 4 priority areas, very detailed key issues, often supported by indicators	142 (4/28/110)	only environmental dimension covered	
<b>Latvia</b>	<b>2002</b>	-	mixed; 16 priority areas with objectives and key issues; 10 additional main objectives ('goals')	319 (26/79/214)	equally covered	R&D/education; housing; tourism
<i>Liechtenstein</i>	<i>no NSDS</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Lithuania</b>	<b>2003</b>	-	mixed; 16 priority areas with objectives and actions; 11 additional main objectives	610 (27/48/535)	equally covered	culture; R&D/education; housing; tourism
<b>Luxembourg</b>	1999 <sup>viii</sup>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>Macedonia</i>	<i>no NSDS</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Malta</b>	<b>2006</b>	-	hierarchical; 4 priority areas (3 SD pillars + cross-cutting issues)	246 (4/28/214)	equally covered	tourism
<b>The Netherlands</b>	2001	<b>2003 (SD Action Plan)</b>	mixed; actually two parts: 'national strategy' with 12 priority areas, and 'international strategy' with 6 priority areas	89 (13/22/54) <sup>ix</sup>	equally covered	governance; R&D/education
<b>Norway</b>	2002	<b>2004 (SD Action Plan)</b>	hierarchical; 7 priority areas	167 (7/17/143)	equally covered	international; one priority area dedicated to the Sami people
<i>Poland</i>	<i>2000</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>Portugal</i>	<i>2006</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Romania</b>	<b>1999</b>	-	mixed; NSDS was mainly aimed to introduce SD concept in Romania	NSDS does not clearly specify objectives and actions	emphasis of social and economic dimension	
<b>Slovakia</b>	<b>2001</b>	2004 (SD Action Plan) <sup>x</sup>	mixed; 10 'long-term priorities'; additionally 28 'strategic objectives' with actions	277 (11/28/238)	emphasis of social and economic dimension	culture

<b>Slovenia</b>	<b>(2005)<sup>xi</sup></b>	-	hierarchical; 5 priority areas (only one dedicated to SD)	169 (5/19/145)	emphasis of economic dimension	culture; R&D/education
<i>Spain</i>	<i>2007 (draft)</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Sweden</b>	2002	2004, <b>2006</b>	hierarchical; 4 thematic 'strategic challenges' plus further 4 priority areas (relating to implementation)	119 (8/19/92)	emphasis of social dimension	
<b>Switzerland</b>	1997	<b>2002</b>	clearly hierarchical; 10 priority areas with (on average) 2 objectives each	32 (10/22/0)	emphasis of social and economic dimension	international; R&D/education; sust. communities
<i>Turkey</i>	<i>no NSDS</i>	-	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>UK</b>	1994	1999, <b>2005</b>	hierarchical; 6 priority areas (including the 4 'shared priorities' from the UK SD framework)	160 (6/33/121)	equally covered	international; sust. communities

### Notes

- <sup>i</sup> total number of objectives and actions; in brackets: top-level goals/high-level priorities/key issues & measures (for details on this classification, see Hametner & Steurer, 2007)
- <sup>ii</sup> numbers relate to the first part of the NSDS only ("strategic objectives and instruments"); second part ("programmes of action") not available in English
- <sup>iii</sup> NSDS Update/Revision, did not replace the original NSDS
- <sup>iv</sup> as some priority areas (in particular the 'key focal points') are not clearly supported by operational objectives, actions or indicators, only a part of the strategy, namely the 21 objectives that clearly refer to indicators, have been entered in the database
- <sup>v</sup> numbers refer to an English summary of the NSDS only; complete NSDS not available in English
- <sup>vi</sup> Implementation plan 'Sustainable Development in Icelandic Society', no "real" NSDS
- <sup>vii</sup> NSDS Update/Revision, did not replace the original NSDS
- <sup>viii</sup> as the Luxembourgian NSDS was not available in English, only the 2002 SDI set was included in the analysis
- <sup>ix</sup> numbers refer to an English summary of the NSDS only; complete NSDS not available in English
- <sup>x</sup> NSDS Update/Revision, did not replace the original NSDS
- <sup>xi</sup> 'Slovenia's Development Strategy' accounts for both the NSDS and the NRP; thus clearly focusing on economics issues related to the EU Lisbon strategy

### 3.3 Number and character of SD objectives

Table 1 also provides an overview of the total number and hierarchy of objectives stated in SD strategies. The number of objectives ranges from 32 (Estonia) to 610 (Lithuania). As mentioned in the introduction above, some of these objectives are vague, some SMART (i.e. Specific, Measurable, Achievable, Relevant and Timed).

Good examples for vague objectives in SD strategies are the following:

- "Play a part in efforts to halt the degradation of global common goods";
- "Criteria must be developed for a viable future lifestyle, along the lines of which every person can orient him- or herself";
- "Welfare must be protected, strengthened and extended";
- "Boosting employment, enterprises and activities oriented to sustainability";
- "Strengthen EU environmental regulation".

Good examples for SMART objectives that are at least specific, measurable and timed (the relevance and achievability of an objective is not self-evident), are the following:

- "Increase the volume of development assistance to 1 per cent of GNI by 2005";
- "To halve the number of people without a completed education by the year 2015";
- "In 2005, the aim is to cut CO2 emissions from energy consumption by 20 per cent compared to the 1988 level";
- "Achieve the target that 10 per cent of the agricultural area is to be converted to ecological farming by 2010";
- "Raise public expenditure on R&D to 1% of GDP by 2010".

### 3.4 Cross-country comparison and European coherence

This Section presents a cross-country comparison of SD objectives in Europe. It shows to what extent the analysed NSDSs address priority areas (i.e. key challenges and crosscutting policies) of the renewed EU SDS from 2006.<sup>7</sup>

When interpreting the results of this comparison, it is important to keep in mind that a low score shows how an SD Strategy refers to a priority or challenge of SD the way it was framed in the EU SDS. Despite a low score it could well be that an issue may be reflected strongly in the NSDS, but differently than in the EU SDS.

**Figure 2:** European coherence regarding SD objectives (for key challenges and cross-cutting policies)

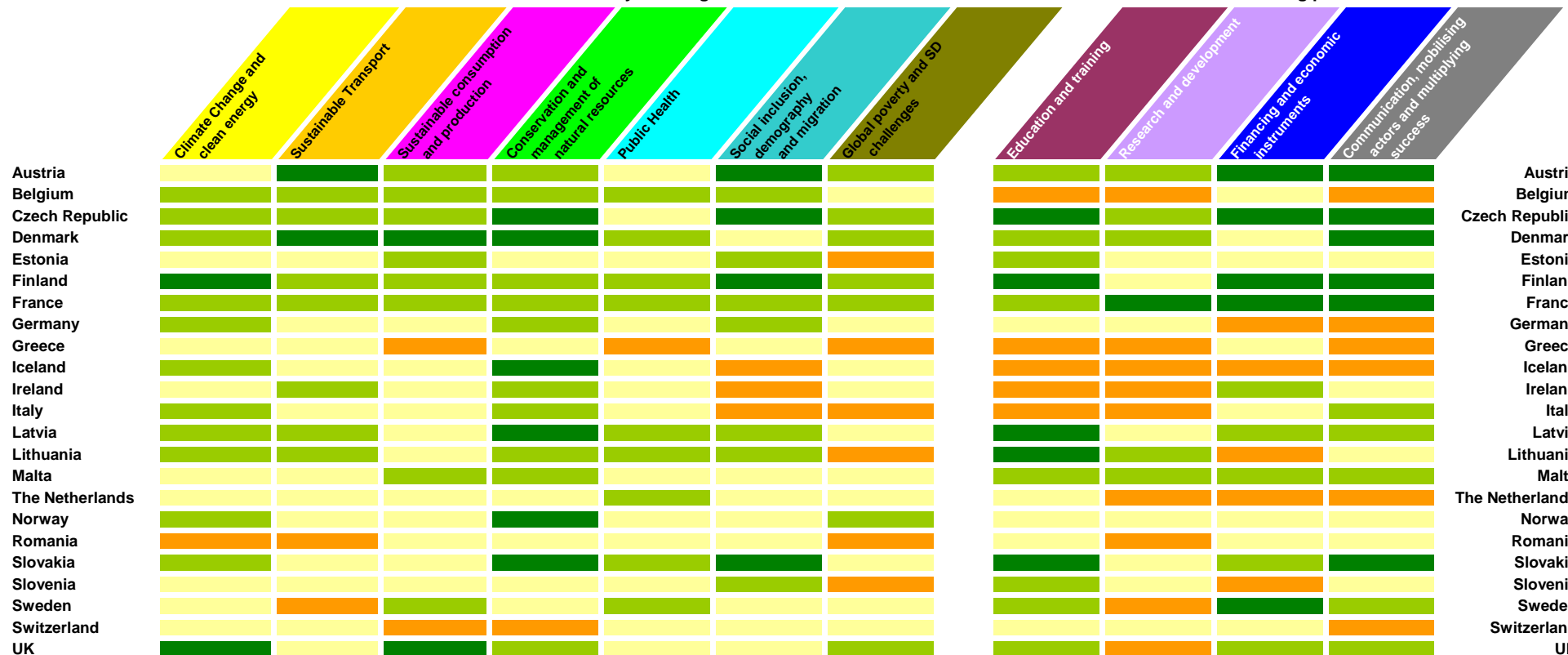
*Note:* The colour code used in Figure 2 indicates the degree to which a country's SD objectives and actions refer to the objectives of the seven key challenges and four cross-cutting policy fields identified in the EU SDS from 2006. The UK's NSDS, for example, addresses more than two-thirds of the objectives related to the EU SDS key challenge 'climate change' (dark-green), between one-third and two-thirds of the EU SDS objectives referring to 'conservation and management of natural resources' (light-green), and less than one-third of the objectives and actions specified under the key challenge 'sustainable transport' (beige). Key challenges and cross-cutting policies that are not addressed by an NSDS are highlighted in orange.

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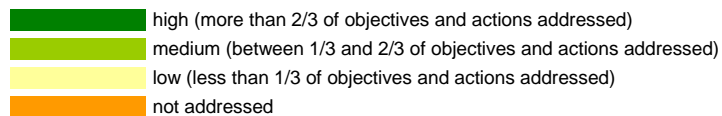
<sup>7</sup> The full lists of SD objectives for 16 countries can be downloaded from the respective country profiles (category 'basic information') at the ESDN homepage <http://www.sd-network.eu>.

### EU SDS key challenges

### Cross-cutting policies



*Legend*



Before drawing conclusions from this cross-country comparison, we want to give a brief explanation of how national peculiarities influence the results. First, the results for Greece and the Netherlands are based on an English summary of the NSDSs because the complete strategy documents were not available in English. Second, the Romanian NSDS is no “conventional” strategy as it was mainly aimed to introduce the concept of SD rather than specifying detailed objectives and actions. Third, the relatively weak coherence in the case of Slovenia may be due to the fact that the Slovenian NSDS is also its Lisbon NRP at the same time. Fourth, as some priority areas of the German NSDS (in particular the ‘key focal points’) are not clearly supported by operational objectives, actions or indicators, only parts of the strategy (that may, however, not comprehensively reflect all German SD priority areas) have been entered in the database.

Figure 2 shows that a majority of countries address the key challenge ‘Conservation and management of natural resources’ both comprehensively and coherently. To a lesser degree, the same applies to ‘Climate Change and clean energy’. This indicates that environmental issues are still the major ingredients of SD strategies (see also Figure 3). As regards social issues (in particular concerning the key challenges ‘Public health’, ‘Social inclusion [...]’ and ‘Global poverty’), the picture becomes more ambiguous. Especially strategies emphasizing the environmental dimension (such as the ones of Iceland and Italy) tend to neglect the social dimension of SD, and they consider economic issues only as far as they affect environmental issues (i.e. when it comes to integrating environmental concerns into economic policies). Countries that comprehensively address the key challenge ‘Social inclusion [...]’ have one point in common, namely that their NSDSs have been developed by involving various stakeholders from civil society (Austria: stakeholder dialogue; Czech Republic: CSD, Finland: FNCSD; Slovakia: REC). The cross-cutting policy field addressed most comprehensively and coherently across Europe is ‘education and training’ for SD. The one addressed least coherently is ‘research and development’ for SD (see also Figure 4). Overall, it is obvious that several of the countries that address the four cross-cutting policy areas of the EU SDS most coherently (in particular Austria, the Czech Republic, Finland and France) show a similar picture of coherence for the seven SD key challenges.

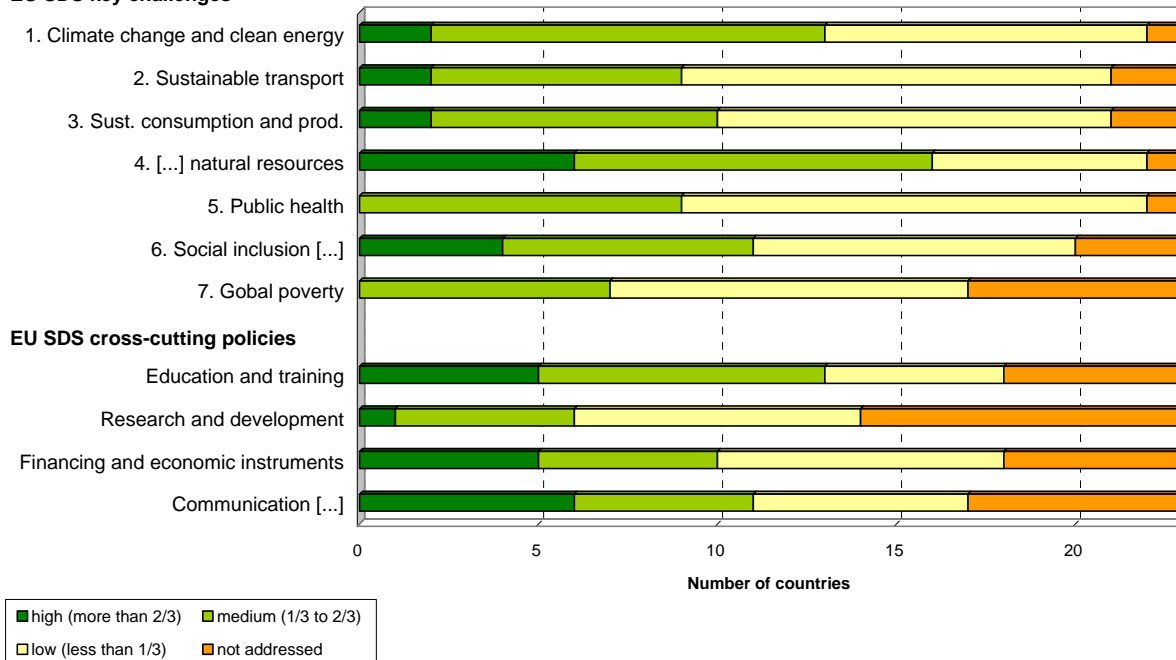
Figure 2 furthermore shows that 13 of the 23 NSDSs address all seven key challenges of the renewed EU SDS. Denmark, Finland, the Czech Republic, France and Belgium stand out because they address six out of seven SD key challenges to a high or medium degree. As regards Finland and France, their strong coherence with the EU SDS is also because they have renewed their SD Strategies after the EU SDS has been adopted by the European Council in 2006. Figure 3 also shows that several NSDSs (in particular those from Romania, Greece and Switzerland) address SD obviously in different ways than the EU SDS does.

Figure 3 summarises the findings presented in Figure 2 for the horizontal axis (depicting key challenges and cross-cutting policy fields) by using the same colour code. In addition to the interpretation given above, one can note here that the key challenge of ‘global poverty’ is the one that is addressed the least coherent across Europe. This finding is remarkable not only because the ‘international dimension’ of SD (in particular North-South relations) is at the core of the SD concept going back to the Brundtland Report (WCED 1987), but also because many countries cover it in extra chapters of their SD Strategies (see Table 1).

**Figure 3:** Overview of how the seven SD key challenges are addressed by NSDSs

*Note:* The colour code used in Figure 3 indicates the degree to which the key challenges and cross-cutting policy areas of the renewed EU SDS are addressed by objectives and actions in NSDSs. The key challenge ‘conservation and management of natural resources’, for instance, is addressed by six SD Strategies to a high degree (dark-green), by ten to a medium degree (light-green), by six to a low degree (beige), and by one NSDS not at all.

### EU SDS key challenges



## 4 SD indicators in NSDSs across Europe

### 4.1 Usage of SDIs in European SD Strategy processes

As mentioned in the introduction, setting objectives of SD and measuring progress in achieving them with indicators are two closely related features that are typical for all SD Strategies in Europe. Table 2 provides an overview of how SD indicators (SDIs) are employed in SD strategy processes across Europe.

As Table 2 shows, a majority of the countries covered here not only monitor their SD performance, but also report about it regularly in monitoring, progress or indicator reports in the course of their SD Strategy cycle.

**Table 2:** Overview of SDIs in European SD Strategy processes

Country	SDIs in SD strategy processes	Updates / revisions of SDIs	Number of SDIs	Headline SDIs	Other indicator processes related to SD	Reporting based on SDIs
<b>Austria</b>	SDIs included in 2002 NSDS	SDIs reviewed in 2006; 2007 indicator report based on new SDI set	95	33	-	Indicator reports published in 2004, 2006 and 2007
<b>Belgium</b>	No SDIs in federal SDS, but included in federal reports on SD	SDI set modified with each federal report	45	-	-	Federal reports on SD published in 1999, 2003 and 2005
<b>Czech Republic</b>	SDIs included in 2004 NSDS	Progress reports based on a smaller set of SDIs than presented in NSDS	100	-	-	Progress reports based on SDIs published in 2006 and 2007
<b>Denmark</b>	SDIs included in 2002 NSDS	-	119	14	-	Indicator report (headline indicators only) published in 2005
<b>Estonia</b>	Preliminary set of SDIs included in 2005 NSDS	-	95	-	Separate SDI set published by Statistical Office	Indicator reports published in 2004 and 2006 (based on Stat. Office's SDIs)
<b>Finland</b>	SDIs included in 2006 NSDS	SDIs reviewed in 2006 in conjunction with revision of NSDS	35	-	-	<i>no progress or indicator reports published yet</i>
<b>France</b>	SDIs included in 2006 NSDS	new SDI set in 2006 NSDS; based on 2005 EU SDIs	12	12	-	<i>no progress or indicator reports published yet</i>
<b>Germany</b>	SDIs included in 2002 NSDS	Small modifications of SDIs with each progress/indicator report	28	28	-	Progress reports (including SDIs) published in 2004 and 2005, indicator report in 2006
<b>Greece</b>	No SDIs included in 2002 NSDS	Elaboration of new SDI set planned	70	-	SDIs published in a separate report (2003)	<i>No monitoring of NSDS with SDIs undertaken</i>
<b>Iceland</b>	SDIs included in 2002 NSDS	Updated SDI set in 2006 indicator report	56	-	-	Indicator report published in 2006
<b>Ireland</b>	No SDIs included in 1997 NSDS and 2002 NSDS review	Elaboration of SDI set planned	93	-	Indicators, <i>inter alia</i> including SDIs, published by National Economic and Social Committee (NESC) and Central Statistics Office (CSO)	NESC indicators published in 2002; annual CSO indicator reports since 2003

<b>Italy</b>	SDIs included in 2002 NSDS	-	190	-	-	<i>no progress or indicator reports published yet</i>
<b>Latvia</b>	SDIs included in 2002 NSDS	-	187	-	Separate SDI set published by Latvian Environment Agency (LEA)	Indicator report published in 2003 (based on LEA indicators)
<b>Lithuania</b>	SDIs included in 2003 NSDS	-	75	-	-	SDIs published in 2004 'Statistical Yearbook'
<b>Luxembourg</b>	SDIs included in 1999 NSDS	Indicator reports (2002 and 2006) based on an updated SDI set	27	-	-	Indicator reports published in 2002 and 2006
<b>Malta</b>	SDIs included in 2006 NSDS	-	24	-	-	<i>no progress or indicator reports published yet</i>
<b>The Netherlands</b>	SDIs included in 2001 NSDS; no SDIs included in 2003 SD action programme	-	32	-	SDI set published by the Dutch Environmental Assessment Agency (MNP)	'Sustainability Outlook' published in 2004, includes the list of MNP indicators
<b>Norway</b>	Preliminary SDI set included in 2004 SD action plan; revised SDI set published in 2005	-	16	-	-	Indicator report published in 2005
<b>Romania</b>	Preliminary SDIs included in NSDS	-	13	-	-	-
<b>Slovakia</b>	SDIs included in NSDS	-	71	-	-	<i>no progress or indicator reports published yet</i>
<b>Slovenia</b>	No SDIs included in NSDS; SDIs included in annual 'development reports'	-	71	-	-	Annual 'development reports' largely based on indicators
<b>Sweden</b>	SDIs included in 2006 NSDS	-	91	12	-	<i>no progress or indicator reports published yet</i>
<b>Switzerland</b>	No SDIs included in 2002 NSDS; SDIs published in 2004	SDIs updated in 2007	163	-	-	Indicator reports published in 2004 and 2005
<b>UK</b>	SDIs included in 1999 and 2005 NSDSs	2006 indicator report based on updated SDI set	147	27	-	Indicator reports published in 2006 and 2007

Regarding the linkage between SD objectives and indicators, two basic approaches in developing SDIs can be distinguished. When the so-called '**model-based approach**' is used, SDIs are developed on the basis of an underlying model of SD. The risk of this approach is that the SDI set does not reflect political priorities and may lack political salience. When the so-called '**policy-based approach**' is applied, SD objectives are defined by political documents, and respective SDIs are derived. Because policies change over time, the corresponding SDI set also has to be revised continuously, making it sometimes difficult to track long-term trends (Hass, 2006; see also Rey-Valette *et al.*, 2007). Only four countries (Austria, Belgium, Norway and Switzerland) explain their approach taken for developing their SDI set, all four using the model-based approach.<sup>8</sup> Most other countries seem to follow the policy-based approach, linking their SDIs to SD Strategy objectives. Consequently, some countries (such as Denmark, Germany, Iceland, Italy and Slovenia) feature a strong and direct link between SD objectives and indicators, making it easy to monitor the SD Strategy. Other countries (such as Belgium, Lithuania, Sweden and Switzerland) feature a weaker linkage between objectives and indicators. In countries that have different SDI sets published by different institutions (for example in Estonia and Latvia), integrating SDI monitoring into the SD Strategy cycle could be improved altogether.

## **4.2 Characteristics of SDI sets**

As already described above, the main feature of indicators is to summarize and communicate complexity with a manageable amount of meaningful information. As a result, the size of an indicator set needs to be limited in order to avoid information overload for data users. As a long list of indicators can be counterproductive regarding its functions of communicating SD trends and guiding policies, only a limited number of indicators is usually selected for describing a broader subject (OECD, 2003; Pintér *et al.*, 2005). Thus, "the strength and weakness of indicators lie in their selection, which facilitates decision making but also opens the door to data manipulation" (Bartelmus, 2007).

Table 2 shows that SDI sets across Europe differ strongly with respect to their size. While some countries have a small set with about 20 (headline) indicators (such as France, Germany and Norway), others use rather comprehensive sets with more than 100 indicators (such as Italy, Latvia, Switzerland and the UK). Some of these countries also use a smaller number of headline indicators for communication purposes. A few countries (Finland, Italy, Slovakia and Slovenia) also use aggregate indices such as the Human Development Index (HDI) or the Ecological Footprint. Austria and UK also state explicitly so-called 'best-needed' indicators, i.e. indicators that still need to be developed (due to methodological issues or lack of data). For some countries, more than one SDI set can be derived from different documents, often one from the NSDS and another one from indicator or progress reports (Czech Republic, Denmark, Estonia and Latvia). In these cases, the SDI sets have been aggregated in the course of the analysis (indicators that were identical in both sets were only counted once) in order to allow cross-country comparisons going beyond the document (NSDS, indicator report) level.

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<sup>8</sup> Austria and Belgium developed their SDIs based on the DPSIR framework, Norway used a capital-approach, and Switzerland developed its own model based on the Brundtland definition.

### **4.3 Cross-country comparison and European coherence**

This Section compares the SDI sets used in 24 European countries with the EU SDI set from 2005.<sup>9</sup> When interpreting the results of this comparison, it is important to keep in mind that a low score refers to the way the theme was framed in the EU SDI set, and that the issue may be reflected in national SDI sets strongly, but differently than in the EU SDI set.

Before drawing conclusions from this cross-country comparison, we want to briefly highlight some methodological challenges standing behind the data. First, the results for Ireland are based on the 2006 indicator set published by the Central Statistics Office (CSO), which is no “official” SDI set. Second, for the Netherlands, we have included a preliminary SDI set published by the Dutch Environmental Assessment Agency (MNP). Third, the Romanian NSDS is no “conventional” strategy as it was mainly aimed to introduce the concept of SD rather than specifying detailed objectives and indicators. Nevertheless, we have derived a set of 13 SDIs from the strategy document and included them in the analysis.

Figure 4 shows the degree to which the SDI sets of 24 European countries address the indicators of the 10 EU SDI framework themes. Since SDI sets differ strongly across countries in terms of both size and themes, and the EU SDI set from 2005 consisted of 166 indicators, it is no surprise that, so far, SDIs are less coherent than SD objectives across Europe (see Figure 2).

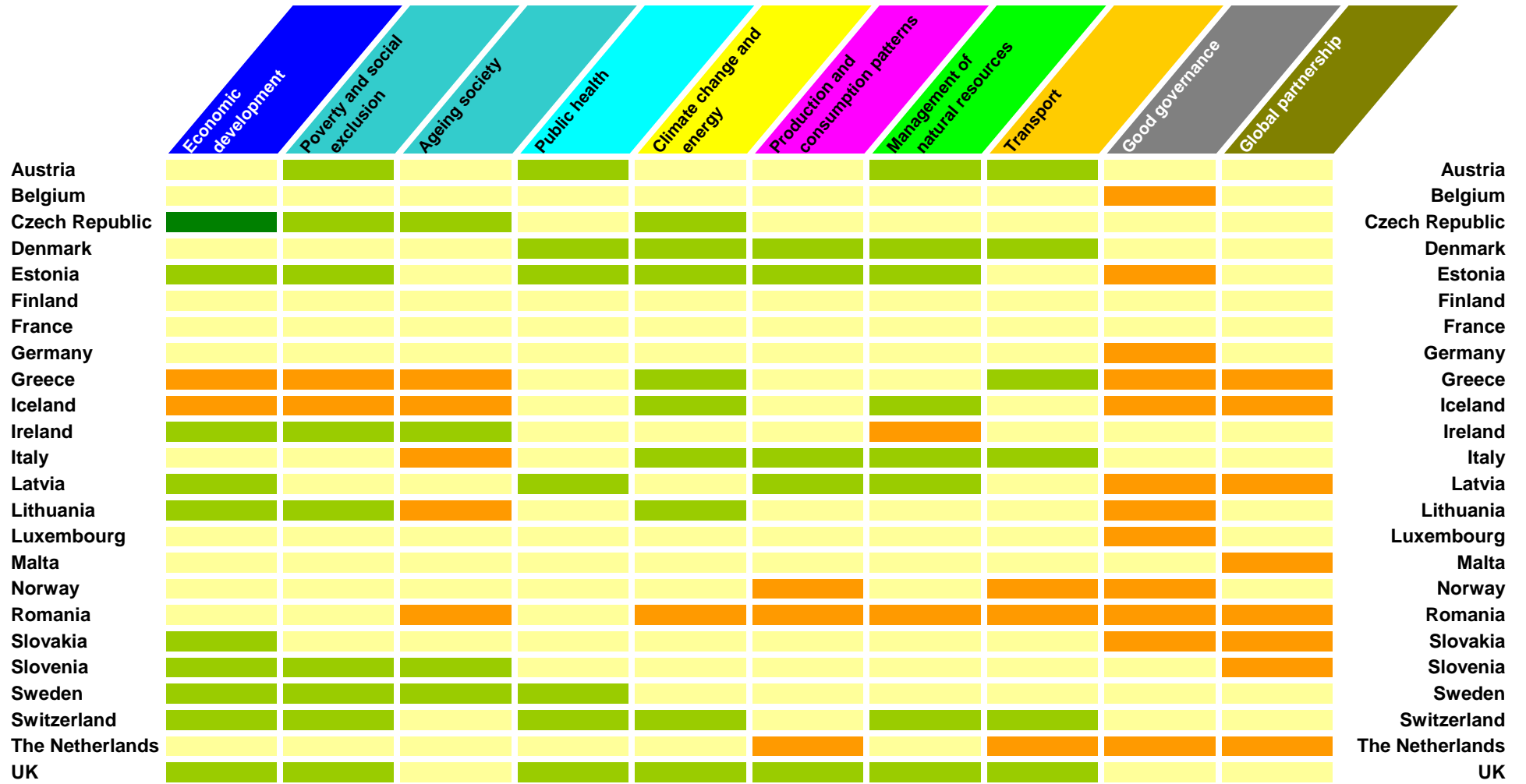
**Figure 4:** European coherence regarding SD indicators (compared to the 2005 EU SDI framework)

*Note:* The colour code used in Figure 4 indicates the degree to which a country’s SDI set addresses the themes of the 2005 EU SDI framework. For instance, the SDI set of the Czech Republic addresses more than two-thirds of the indicators of the EU SDI theme ‘economic development’ (dark-green), but it addresses less than one-third of the indicators specified in the theme ‘public health’ (beige). Themes that are not addressed by national SDI sets are highlighted in orange.

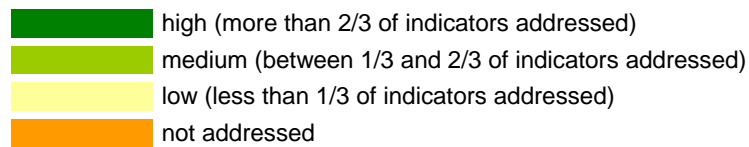
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<sup>9</sup> The full lists of SDIs can be downloaded for 18 countries in the respective country profiles (category ‘SDI and monitoring’) at the ESDN homepage <http://www.sd-network.eu>.

### EU SDI framework themes



*Legend*



Obviously, the EU SDI framework themes 'economic development' and 'climate change and energy' are the ones that are addressed most coherently. 'Public health' is another prominent issue in all national SDI sets analysed. In contrast, countries obviously use few or different indicators for the themes 'good governance' and 'global partnership'. This goes conform with the revised EU SDI set from 2007 that does not contain a headline indicator for 'good governance' anymore. As Eurostat's 2007 monitoring report points out, "good governance is a new area for official statistics, which is reflected in the lack of robust and meaningful indicators on this topic" (Eurostat, 2007b:268).

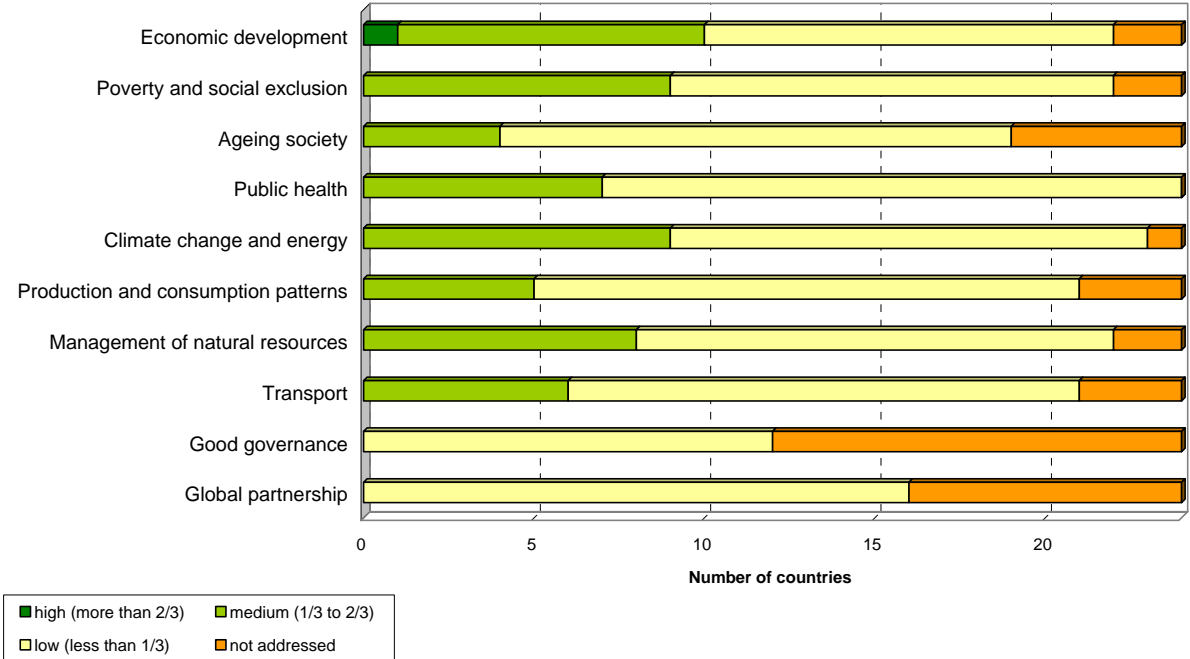
For Iceland and, to a lesser extent, Italy, Figure 4 shows again a clear emphasis on environmental issues (as for SD objectives). Thus, the linkage between objectives and indicators of the NSDSs in these two countries is strong. Other countries (for instance Sweden and Switzerland) show quite different emphases regarding SDIs and SD objectives (see Figure 2). This comparison will be discussed in more detail in the 'Conclusions' Section.

Notably, countries showing relatively high scores in addressing the EU SDI framework themes (Austria, Czech Republic, Denmark, Switzerland and the UK; see Figure 2) all use a comprehensive SDI set. As the EU SDI set from 2005 consists of 166, it is no surprise that countries with rather small sets of indicators (in particular Germany, France and Norway) cannot address the EU SDI framework themes comprehensively.

Figure 5 summarises the findings presented in Figure 2 for the horizontal axis (depicting the ten themes of the EU SDI framework) by using the same colour code.

**Figure 5:** EU SDI themes addressed by national SDI sets

*Note:* The colour code used in Figure 5 indicates the degree to which the EU SDI framework themes from 2005 are addressed by 24 national SDI sets. The theme 'economic development', for instance, is addressed by one SDI set to a high degree (dark-green), by nine to a medium degree (light-green), by twelve to a low degree (beige), and by two SDI sets not at all.



## 5 Conclusions

This report shows that SD objectives and indicators are two related key features of SD Strategies across Europe. It confirms that, “when developed and deployed together, they can play a mutually supportive and strengthening role” (Pintér et al., 2005:10). While SDIs increase the rigour and credibility of the SD governance cycle (from strategy formulation via implementation to strategy renewal), objectives in SD Strategies ought to provide a sense of direction for both actual policies and governance processes (including the monitoring of SD with indicators).

Overall, this report shows that SD objectives are more coherent than SDIs, and that the degree of coherence varies not only between countries, but also regarding topics and themes. Interestingly, the coherence of SD objectives and indicators is strongest for environmental issues, in particular for ‘climate change and clean energy’ and ‘natural resources’. On the other hand, the global dimension of SD is the issue with the lowest degree of coherence in terms of both SD objectives and indicators. For social issues, the picture is ambiguous. While some social themes of the EU SDS (like ‘social inclusion’ and ‘ageing society’) are addressed strongly by some countries, others neglect them in terms of objectives and/or indicators.<sup>10</sup> Overall, it seems that, in the context of SD strategies, vertical policy integration (i.e. the integration of policies across different tiers of government) is stronger for environmental than for social policies. It highlights that environmental issues still play a dominant role in SD Strategies.

Regarding the link between SD objectives and indicators, most countries (in particular Austria, Czech Republic, Denmark and the UK) show a similar pattern of coherence with the EU reference points. This applies also to Finland and France where NSDSs and SDIs were renewed together after the adoption of the EU SDS in 2006 (with the limitation that both countries use a quite small SDI set that, as described above, is not able to address the themes of the EU SDI framework as comprehensively as other countries with large indicator sets). Although we did not look at the direct link between national SD objectives and indicators for methodological reasons, this finding suggests that these countries feature strong thematic linkages between the two SD Strategy features. Other countries, such as Estonia, Sweden and Switzerland, show different degrees of coherence for SD objectives and indicators. While for Estonia and Switzerland this variation may be due to the fact that their NSDS and SDI documents have been elaborated in separate processes, it is surprising for the Swedish NSDS that contains the SDI set.

When we try to understand the degree of coherence regarding SD objectives and indicators across Europe, a key question is to what degree similarities (and differences) are due to top-down and/or bottom-up processes of vertical policy integration. Regarding objectives, it is important to note that, with the exceptions of France, Finland and Malta, all NSDSs were already in force when the renewed EU SDS was adopted by the European Council in June 2006 (for details see Table 1). Thus, the vertical integration of SD objectives from top-down must have played a limited role so far. However, since the EU SDS was developed with a strong involvement of Member States (for details, see Kopp, 2006), vertical integration certainly took place bottom-up. In other words, so far, it seems that the objectives of the EU SDS reflect priority areas of the Member States more than the other way round.

Since most countries plan to revise their NSDSs in line with the renewed EU SDS, we can expect that the coherence of SD objectives will increase considerably mainly top-down driven across Europe in the near future. Obviously, bottom-up and top-down processes of vertical policy integration complement each other, sometimes not necessarily in parallel but at

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<sup>10</sup> The coherence of economic objectives and indicators will be at the focal point of the ESDN Quarterly Report March 2008 that will focus on the Lisbon Strategy and respective National Reform Programmes.

different times due to differently timed policy or strategy cycles. Regarding SDIs we have a similar situation. Most countries have developed their national SDI set before the EU SDI set was adopted in 2005, and renewed in 2007. Thus, we can expect that many of them will be revised in the next few years together with their overall SD strategy objectives. Most likely, this renewal will also result in an increased degree of European coherence regarding SDIs.

Overall, improving the coherence between SD objectives and indicators at the EU and national levels is an important step towards a European answer to unsustainable trends. However, what should not be overlooked is the linkage between SD objectives and SDIs within an SD strategy process. Fostering this linkage, adapting implementation efforts and renewing objectives accordingly is one key purpose of SD strategies in particular, and of what Steurer (2007) calls Strategic Public Management in general.

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