

## Smiley faces

Smiley faces, at least the smiling ones, make you happy when you look at them. I used to draw them on the cover of my books in highschool, and I have noticed that my children do the same. Smileys seem to have an intuitive and lasting power. I still like them most in their most elementary form, the smileys that you can draw when you are listening to a boring speech, for instance. ☺ ☺ ☺

The European Environment Agency has used the smiley icon in various ways to enhance the communicative power of its products. This paper discusses the experiences in using smiley faces in reports and on the web in the past five years. It includes user reactions and some do's and don'ts.

### Smiley faces in graphs

The use of smiley faces has everything to do with thinking about readers. For the European Environment Agency it is not important to have put all our information on the environment in Europe on paper. The only thing that matters is that the majority of our readers have understood what we have to say. And that means that we need to think about the way our readers use our reports and briefings. Our readers are professionals and policy makers that do not have the time to read through long documents. A lot of them scan diagonally through our reports and pick up information if (and only if) it is placed where they expect to find it. Proper structuring of the information, being it a piece of text, a graph or a chapter is thus of crucial importance.

This can be easily illustrated with an ordinary example of EEA's work. Our mission statement talks about the provision of timely, targeted, relevant and reliable information to policy making agents and the public to support sustainable development, etcetera. To do that we are working closely with our member countries to bring together harmonised information using a lot of electronic data exchange procedures to achieve timeliness. At the end of that process we come to a conclusion, for instance on the progress made in reducing greenhouse gas emissions.

#### Greenhouse gas emissions in the EU, 1990-2002

Austria +0.3%, Belgium +0.5%, Denmark<sup>1</sup> -0.8%, Finland +6.8%, France -1.9%, Germany -18.9%, Greece +26.5%, Ireland +28.9%, Italy +9.0%, Luxembourg -15.1%, The Netherlands +0.6%, Portugal 41.0%, Spain +39.4%, Sweden -3.7%, United Kingdom -14.9%, EU15 -2.9%.

Too many numbers in a text are difficult to grasp though, and therefore the familiar structure of a table is better to communicate the outcomes.

## Table as presented in EEA report

MEMBER STATE	Base year <sup>1)</sup> (million tonnes)	2002 (million tonnes)	Change 2001–2002 (%)	Change base year–2002 (%)	Targets 2008–12 under Kyoto Protocol and "EU burden sharing" (%)
Austria	78,0	84,6	0,3%	8,5%	-13,0%
Belgium	146,8	150,0	0,5%	2,1%	-7,5%
Denmark <sup>2)</sup>	69,0	68,5	-1,2%	-0,8% (-9,1%)	-21,0%
Finland	76,8	82,0	1,7%	6,8%	0,0%
France	564,7	553,9	-1,4%	-1,9%	0,0%
Germany	1253,3	1016,0	-1,1%	-18,9%	-21,0%
Greece	107,0	135,4	0,3%	26,5%	25,0%
Ireland	53,4	68,9	-1,6%	28,9%	13,0%
Italy	508,0	553,8	-0,1%	9,0%	-6,5%
Luxembourg	12,7	10,8	10,4%	-15,1%	-28,0%
Netherlands	212,5	213,8	-1,1%	0,6%	-6,0%
Portugal	57,9	81,6	4,1%	41,0%	27,0%
Spain	286,8	399,7	4,2%	39,4%	15,0%
Sweden	72,3	69,6	2,0%	-3,7%	4,0%
United Kingdom	746,0	634,8	-3,3%	-14,9%	-12,5%
<b>EU-15</b>	<b>4245,2</b>	<b>4123,3</b>	<b>-0,5%</b>	<b>-2,9%</b>	<b>-8,0%</b>

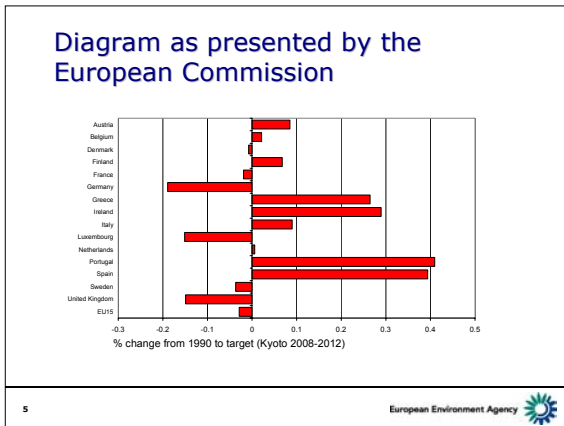
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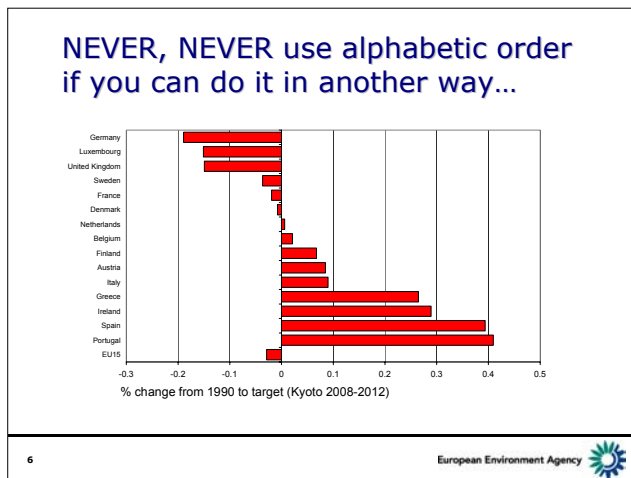


Note that a table also needs to conform to the readers expectations. As we read from left to right, the reader expects to have the context information (here familiar country names) to the left and the new information (here the distance to the target in the two last columns) to the right. Many of our readers quickly jump from the first column to the columns at the right hand side expecting there the piece of information they are looking for. If the columns had been ordered in a different way, with background information such as absolute emission figures in the columns to the right, many readers would be confused and have stopped spending time trying to understand the table.

But to get the message across a picture says more than a thousand words, and our computers come with software to quickly create a graph.

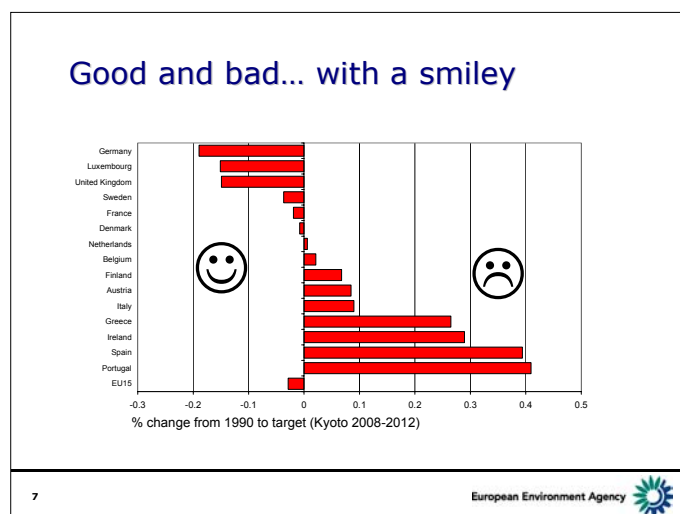


This is how the graph looks like when produced by an old fashioned statistical service or in this example by the European Commission in a report for the Spring Council: with a political correct alphabetic order of countries, but not communicating a message. The presentation above violates one of the golden rules in the presentation of statistics: Never, Never, Never use alphabetic order when you can do it in another way. The rule applies for graphs and for tables. If ordered on the size of emission reduction the a clear picture appears:



The use of the horizontal bar chart works well here. If we would have used vertical bars the country names would have made it very crowded along the X-axis. A recurring problem in presentations of environmental statistics (regardless if you use vertical or horizontal bar graphs) is an intuitive confusion about what is positive and what is negative. Like in the above graph, the negative, left side represents the desired direction. Emission reduction is what it is all about. The right hand, positive, side represents the bad development, and shows the countries doing badly.

Adding a simple smiley face makes that immediately clear:



The same message can also be given by changing the colour of the left hand bars into green, but the smiley has two advantages:

- it stays when you copy and print on a black and white printer, while colours disappear (not unimportant with the growing dissemination of our material as pdf files), and
- it catches the eye in a way that has made environment ministers from particularly countries on the right-hand side react on this graph: “You are hanging us out as the bad guys”

By giving (either by colour or by a smiley face) a positive or negative connotation to the efforts of a country we are not any longer giving a neutral presentation of results. For issues with clear policy targets such a presentation can be used as it stresses the accountability of environmental managers for what they have promised or planned to do. By providing the graphs in such a way the European Environment Agency supports a culture of “naming and faming, and naming and shaming”, which was especially promoted by the former Environment Commissioner Margot Walström. Benchmarking against others and peer pressure are elements to bring about change. That is why policy makers like and do not like this presentation.

To prevent saturation with smiley faces one should use them selectively. As already suggested the preferred use is for major issues with a policy target. Apart from the use in printed material, smiley faces in graphs work well in slide presentations.

## Smiley faces in texts

The receivers of our reports get a large volume of information every day and have a difficult time reading it all. Whether in print or electronically, people usually do not read reports, but skim for the most relevant information for the issues they currently are involved in. In a US investigation of 292 health policy makers, the respondents said that they read 27 percent of what

they receive for detail, skim 53 percent for general content, and “never get to” 35 percent of the material<sup>1</sup>.

As report producers we do not like to end up in the 35% that is never touched, and hence need to go a long way in making our products attractive and readable. Most important are efforts to write concise publications, such as briefings with only a minimum of methodological detail, and to write understandable texts. But smiley faces can do a lot to help to get the message to the reader in the more than half of the material (at least according to the investigation mentioned above) that is skimmed only.

When readers browse through a report they are using lay-out elements (titles, illustrations, side margin text) to decide if they need to read more detail, turn the page or throw the report in the bin. Smileys can help to attract the attention to the key messages and key contents of a report. At the European Environment Agency various uses and variants of smileys have been tried out in the past years.

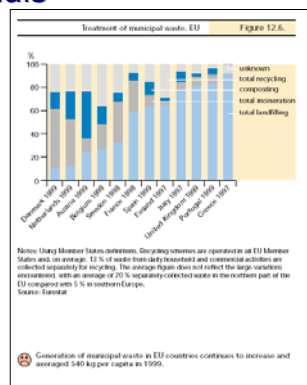
The principle is to provide a constant point of reference throughout a report to guide the eye to key messages. The most common place for smileys is below indicator graphs to help the reader quickly grasp the main conclusion of the indicator. This use assumes that the graphs are showing the main indicators, and that the indicators are reflecting the main policy questions within the issue. If this is not the case, and the graphs are only illustrative specific cases, then the use of smileys will be confusing.

## Environmental signals

Smileys, or other layout features help the reader finding his/her way through a report.

linked to graphs (Signals) or as boxes in text (Europe's env.: the 3d assessment)

Smileys attract the attention to key messages



In a straight text smileys can also be used in boxes, or in a side column to indicate the main findings. The advantage of using a smiley is firstly the constant lay-out feature that catches the eye, but secondly that the reader gets instantly a signal (happy/unhappy; positive/negative) even before having read the text. It was therefore that the smileys were introduced in a publication series with the title Environmental signals.

<sup>1</sup> Richard Sorian and Terry Baugh, 2002. Power Of Information: Closing The Gap Between Research And Policy, in Health Affairs, Volume 21 , Number 2. ([cshcnleaders.ichp.edu/PDFFiles/PowerInformation.pdf](http://cshcnleaders.ichp.edu/PDFFiles/PowerInformation.pdf))

The choice between three faces (happy, neutral and unhappy) has forced us to develop a unified language. A smiley is a pictogram, with precisely the right amount of information to pass a message. Intuitively the reader associates with positive, neutral and negative developments. But we have spent many hours discussing where to draw the line in specific cases.

Smiley faces suggest a dichotomy of absolute truths, where for example upward developments are good and downwards movements are bad. When indicators are defined in the precise way, with a clear linkage of the variable with a sustainability or political target, then usually the good/bad distinction does not give a problem. Problems arise with indicators of which there is no implicit or an unclear assumption of what we want them to indicate. Growth in the number of geese in Western Europe, for instance, is seen as positive in many countries reflecting various developments in agriculture. However growing geese numbers are causing overgrazing in the tundra areas where they stay in summer. In cases with high complexity, where smileys could give an impression of false certainty they should not be used.

Hence, highly aggregated indicators hiding both positive and negative trends are probably less suited for being accompanied with a smiley face, unless such an indicator has a clear and unambiguous implicit meaning behind it.

Sometimes also problems around the allocation and interpretation of a smiley arise when people want to put more meaning in the indicator than there is: the indicator of designated area for nature protection has the implicit assumption that more protection is good for one or another reason. A rise in the indicator will be rewarded with a smiley face. More protected area, however, does not imply anything about the actual efforts on the ground that are needed for really protecting and managing nature and certainly does not tell us anything about the current and expected state of nature.

Smiley faces allocation also needs clear rules for looking at the current state versus looking at development over time to avoid dilemma's in comparing situations with 'poor quality and stable', versus 'bad quality and improving'. Usually the smiley allocation is made for the development over time, unless there is data for a short period only.

The English language that resulted from these discussions varies slightly around this theme:

- ☹ : no progress/decreasing quality of the environment,
- ☺ : progress, but not enough to reach goal,
- ☺ : satisfactory progress towards (policy) targets.

To support discussions on the actual allocation of a smiley and for accountability to the critical reader more detailed classifications have been developed too. For the Environmental signals series we have used a more elaborated scheme that takes into account the type of indicator:

Positive ☺:

- development of *driving forces* or *responses* in a direction that reasonably should lead to lower environmental pressures;
- decreasing *pressures* on the environment in such an extent that targets are coming within reach;
- decreasing *pressures* on the environment showing an absolute decoupling from the development of the causing activities;
- improvement in the *state* of the environment, targets/guidance values exceeded in a small (<15%) part of the area/for a small (<15%) part of the population only.

Neutral ☺:

- developments in the *driving force* or in *pressures* on the environment are levelling of;
- reductions in *pressures* on the environment, but insufficient to bring targets within reach;

- reductions of *pressures on the environment*, but showing only a relative decoupling from the development of the causing activities;
- reductions in the concentration levels/improvement in the *state* of the environment, but targets/guideline values are still exceeded in >15% of the area/ for >15% of the population;
- no changes in *pressure* on and *state* of the environment;
- mixed developments within the indicator.

Negative ☹:

- driving force* or *response* development that reasonably should lead to higher environmental pressures;
- increasing *pressures* on the environment;
- decreasing *quality* of the environment.

The explanation of the smileys should be given in a box at the very beginning (inside cover, introduction) of the publication.

Colouring smileys means that the colours should follow the meaning: red as a warning colour follows the unhappy face, green the happy face. Although intuitively one would choose yellow for the neutral face, this colour is very strong and too dominating for a middle category. Often orange is a better choice, as is demonstrated in the colouring scheme below.



In the context of environmental indicators, smileys were for the first time used in the report: Indicators of the State of the Environment of the Nordic Countries by the Nordic Council in 1997. Since the European Environment Agency has introduced smileys in its Environmental Signals indicator report series in 2000, many others have used them, in often very creative ways. For instance the Swedish Environmental Protection Agency has used a smiley overview table in its De Facto series on the Swedish environmental objectives, the Environment Agency for England and Wales used smileys throughout their State of the Environment reports for London and for the Thames region in 2001.

At the European Environment Agency we have experimented in using smiley faces to highlight key messages of our reports.

**Greenhouse gas emission trends and projections in Europe, environmental issue report nr 36**

**3.3.3 Transport**

☹ Between 1990 and 2001, carbon dioxide emissions from transport increased 20 % in the EU. Road transport is by far the largest emission source in the transport sector (92 %). Emissions increased due to continuous increases in road transport volume (passenger and freight).

☹ Carbon dioxide emissions from international aviation and navigation amounted to 6 % of total emissions in 2001, growing by 44 % from 1990

Smileys can be used to attract attention to the summary of a chapter

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**Transport and environment report**

**TERM 2002 content and key messages**

Summary ..... 7

**Introduction** ..... 9

- ☹ Why change the transport and environment reporting structures? ..... 9
- ☹ Scope of the report ..... 10
- ☹ Assessing indicator trends against policy objectives and targets ..... 11
- ☹ TERM: a user-oriented information system ..... 12
- ☹ Data and information sources ..... 12

**Is the environmental performance of the transport sector improving?** ..... 16

- ☹ Energy consumption by transport is increasing rapidly mainly as a result of growth in road transport ..... 17
- ☹ AC transport CO<sub>2</sub> emissions dropped in the early 1990s, but are now growing with traffic volumes ..... 18
- ☹ AC transport emissions of air pollutants dropped at the beginning of the 1990s, and have since stabilised ..... 20
- ☹ Urban air quality is improving but urban populations are still exposed to pollution levels that pose health risks ..... 23
- ☹ Land take by transport infrastructure is increasing ..... 27

Smileys make people read a list of contents!

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Policy makers seem to have a preference for bulleted lists to quickly take note of main conclusions of a report or a chapter. Replacing bullets for smileys enhances the quick impression

of the direction of change. Conclusion sections at the start of a chapter marked with smileys provide a quick guide through a report.

Again a warning here: as assessors we should not move too far away from the statistics and the indicators underlying the conclusions. To allocate smiley faces to qualitative developments might in some cases move us away from an objective communication of outcomes.

An efficient way of combining a list of contents with the main messages was tried out in the 2002 Transport and Environment Reporting Mechanism report. It gives a quick guide to what is in the report (avoiding the usual dull titles) and an overview table of main outcomes.

We have never done any research on the effectiveness of such a list of contents, but the presentation of main outcomes of state of the environment reports in a smiley summary table such as the one below is appreciated, at least if you consider that the table has been copied in several newspapers. We developed this table to communicate that there is a time lag of many years between the development of environmental policies and the actual changes in the environment. In addition it effectively communicates a sense of priority regarding the main environmental issues in Europe.

**Report summary tables**

Key environmental problems	Progress POLICIES	Progress STATE OF THE ENVIRONMENT
climate change	☹	☹
stratospheric ozone depletion	☺	☹
acidification	☺	☹
tropospheric ozone	☹	☹
chemicals	☹	☹
waste	☹	☹
biodiversity	☹	☹
inland waters	☹	☹

From Europe's Environment, the second assessment, 1998

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**Or more detailed overviews....**

**6th Environmental Action Programme - Are we on track?**

Priority area	Target	Outlook	Region	Current Trend	Future
Action on reducing CO <sub>2</sub> emissions	Kyoto Protocol commitment of an 8% reduction in GHG emissions by 2008-12 compared to 1990 levels for EU as a whole. (Art 5.1) <sup>1</sup>	On the basis of existing domestic policies and measures the EU is expected to fall about 7% short of the Kyoto target (achieving a 2.5% reduction). <sup>2</sup>	EU-15	↑	☹
	Long-term objective of a maximum global temperature increase of 2°C over pre-industrial levels. (Art 2)	Global temperature to increase by more than 2°C by 2100. Potential to reach target by a long-term slow reduction of the EU GHG emissions.	EU-25	↑	☹
Use of renewable energy sources	Meeting the indicative target of 12% of total energy use by 2010. (Art 5.2)(a)(i) <sup>3</sup>	Renewable energy sources in total energy use are expected to be about 7.5% by 2010.	EU-15 / EU-25	↑	☹

From SOER 2005 sub-report 'European Environment Outlook'

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Over many years of using smiley faces we have discovered that somewhere there must be a “smiley saturation point”. There is a category of readers that gets bored with seeing smileys in every report. Currently we are restricting its use to key purposes. Remember: Smileys are nothing more than supports to making a report reaching its audience. The most important jobs are still to write clear comprehensive texts and to design simple understandable graphs.

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The following part is especially for the Neuchatel presentation

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## Country scorecards

The country scorecard project started with using smiley faces but rather quickly moved to use coloured squares.

Building on the idea of summarising the main outcomes per chapter in a smiley face, the idea was to summarise also country performance in a table with smiley faces. To arrive there we had to make a number of choices centred on three issues:

- i. the variables to be used;
- ii. the way in which progress will be measured; and

iii. the way in which relative progress will be scored.

In 2001 and 2002 each of these issues was discussed by e-mail and in meetings with country representatives in EEA's expert group on guidelines and reporting. The following sections deal with the results of this consultation process.

### ***Which variables?***

There was a rather unanimous opinion that country comparisons in such scorecards should be done for the variables for which agreed international targets exist (either in EU legislation and action plans, or in international conventions). These can be 'pressure' indicators but also include 'state' or 'response' indicators. Generally pressure indicators were seen as a priority, but changes in state indicators might indicate the relevance of policy measures taken so far. In a first approximation of the scoreboard a selection of ten headline indicators for the EU were taken as a starting point.

### ***How will progress be gauged?***

There are three broad approaches to gauging progress on environmental performance:

- i. distance-to-target
- ii. performance in relation to an average
- iii. performance in relation to the best and least well performing countries

Each of these approaches has variants associated with them.

**Scoring according to distance-to-target** requires a quantitative target to have been previously set (e.g. targets under the Kyoto Protocol for controlling emissions of greenhouse gases). For each country and each year the distance to achieving the target can be expressed as a score. There are two variants associated with the distance-to-target approach. The first calculates the distance-to-target at a particular point in time (e.g. 2002 – the latest year for which data are available), while the second calculates the difference between the actual and linear ('ideal') paths towards the target at a particular point in time. The second approach has been criticised because the linear scale of emissions reduction fails to take account of the 'law of diminishing returns' (i.e. the fact that realising the last 10% of a target is more difficult than achieving the first 90%).

There are two potential drawbacks associated with the distance-to-target approach. Firstly, it can only be applied to those variables for which a quantitative target has been agreed and, secondly, it tends to present those countries that have adopted ambitious targets in a negative light. Denmark, for example, has a challenging target to reduce greenhouse gas emissions by 21% on 1990 levels and its performance is cast in a relatively unsuccessful light when compared to the performances of those countries that have negotiated less ambitious targets.

**Scoring in comparison to an average.** In this method, performance is gauged in relation to an average value rather than a quantitative target, and the distance above or below the average provides the basis for subsequent scoring. There are two variants on this approach: the static and dynamic approaches. In the static approach, the data are first harmonised or 'normalised' in order to make them comparable. This is achieved by expressing them in terms of value per

unit population, GDP or area. The average is taken to be the EU average for a given year and is assigned the value of 100 and each country's performance in relation to EU performance is then calculated. The variables used to normalise the data can have a considerable influence on the pattern of performance. In addition, certain normalising agents may be better suited to different variables. Waste generation and water consumption, for example, may be best expressed on a per capita basis while emissions to air may be better stated in relation to GDP.

In contrast to the static variant, the dynamic approach does not involve normalising the data. The dynamic approach involves calculating the rate of change between a base year and a later year in a time series of data. The average rate of change (i.e. that of the EU as a whole) can then be calculated and the score of an individual country expressed as a percentage of the average. A distinct advantage of the comparing against an average method is that it can be applied to all available indicators and does not involve targets the setting of which is essentially a political process.

**Scoring in comparison to best and worst performance.** A third method involves ranking country performance in relation to the best and least well performing nations and once again there are *static* and *dynamic* variants. This method has the advantage of being applicable to all indicators.

For the purposes of the static variant, the data must first be normalised to render it comparable (i.e. it should be expressed in terms of population, GDP or area) (the issues associated with harmonising data in this way were highlighted in the previous section and also apply here). Once the data have been normalised, a time period (e.g. 1990-2002) should be established from which the 'best' and 'worst' instances of progress are selected. The average of the inferior and superior limits can then be calculated and assigned the value of 100. Country performance can then be indexed in relation to this.

In contrast, the dynamic variant involves identifying the best and worst percentage changes over a given period of time (e.g. 1990-2002) and there is no need to normalise the data. These can then be assigned a value (e.g. 200 for highest change and 0 for the lowest change) and country performance expressed in relation to these. In order that the index is usable over a number of years, the time period from which the best and worst performances are selected should remain unchanged.

### ***How will progress be scored?***

Once the degree of progress for each nation has been calculated using one or more of the methods outlined above, it is necessary to assign it a score for the purposes of constructing the scorecard. In the absence of what might be described as agreed sustainability reference values (i.e. thresholds at which a pressure or activity may be deemed 'sustainable' or 'unsustainable'), awarding scores will be an essentially subjective process. Several systems were tested for scoring the results and these differed according to the thresholds and bandwidths they employed.

The 2000 version of the scoreboard used different thresholds and bandwidths for each variable, which made the scoring system not very transparent. But it resulted in a colourful table with an overkill in smileys.

2000 scorecard (with 1998 data)

	Germany	United Kingdom	Denmark	Luxembourg	Sweden	Finland	France	Netherlands	Italy	Austria	Ireland	Belgium	Greece	Portugal	Spain
Area under organic farming	😊	😊	😊	😊	😊	😄	😊	😊	😄	😊	😊	😊	😄	😄	😄
Share of renewables in electricity generation	😄	😄	😄	😄	😊	😊	😊	😄	😄	😊	😊	😄	😄	😞	😞
Emissions of greenhouse gases	😄	😄	😊	😄	😊	😊	😊	😞	😊	😊	😞	😞	😞	😞	😞
Emissions of acidifying substances	😄	😄	😊	😊	😊	😊	😞	😊	😞	😞	😞	😞	😞	😞	😞
Emissions of ozone precursors	😄	😄	😊	😊	😊	😊	😊	😊	😊	😊	😞	😞	😞	😞	😞
Total water abstraction	😊	😊	😄	😊	😊	😞	😄	😄	😊	😊	😊	😊	😞	😞	😞
Generation of municipal waste	😄	😊	😊	😊	😊	😄	😄	😊	😞	😞	😊	😞	😊	😞	😞

Based on comments received, a new version was produced in 2002. A major change was the use of a *constant* scoring system across the variables. The example used below uses a four band system with 10 % bandwidth (that is bigger or smaller than a plus or a minus 10% deviation from target or average). Further the countries indicated that they would like to see the starting position of each country reflected, as it makes a big difference if progress is made from a very polluted situation compared to progress at the end of many years of environmental policy. This consideration resulted in a combined scorecard which illustrated:

- (a) *absolute* environmental performance at an instant in time (in the form of environmental pressure/driving force per unit GDP in 1999, upper left hand triangle); and
- (b) *evolving* environmental performance over time (in the form of linear distance-to-target for those variables for which a quantified target had been established and comparison to the EU average over the period 1990-1999 for those variables without an agreed target -- in the lower right hand triangle).

2002 scorecard (with 1999 data)

	Sweden	Austria	Denmark	Finland	Luxembourg	Germany	France	Italy	United Kingdom	Netherlands	Ireland	Belgium	Spain	Greece	Portugal
Area under organic farming	Green	Green	Green	Green	Red	Orange	Orange	Green	Orange	Red	Orange	Red	Green	Orange	Orange
Share of renewables in electricity generation	Green	Green	Orange	Green	Orange	Green	Green	Green	Red	Red	Orange	Red	Green	Green	Red
Emissions of greenhouse gases	Green	Green	Orange	Green	Red	Orange	Green	Orange	Orange	Orange	Orange	Orange	Red	Red	Green
Emissions of acidifying substances	Green	Green	Green	Green	Green	Green	Orange	Green	Green	Green	Red	Orange	Red	Red	Red
Emissions of ozone precursors	Orange	Green	Green	Orange	Green	Green	Green	Orange	Green	Green	Red	Orange	Red	Red	Red
Total water abstraction	Green	Orange	Green	Green	Orange	Orange	Green	Orange	Orange	Green	Green	Orange	Red	Red	Red
Generation of municipal waste	Green	Red	Green	Green	Orange	Green	Green	Red	Orange	Orange	Orange	Red	Red	Red	Red

Both the 2000 and the 2002 version of the scorecard were never officially published. They have been used in slide presentations, but we never felt fully happy with them.

We are now experimenting with the 2005 variant. The degree of complexity has grown as in the meantime the number of member countries of the EEA has grown to 31. In addition we would like to include more variables. That has lead us to develop three separate scorecards, the one given below is the example for the theme climate change.

Draft 2005 scorecard

	Emissions of greenhouse gases			Share renewable energy (excl. HEP)		Share rail & bus in passenger transport	
	Performance per pop. (2002)	Performance per GDP (2002)	Progress (distance to Kyoto-target)	Performance (2002)	Progress (1992/95-2002)	Performance (2001)	Progress (1992 - 2001)
Sweden	Green	Green	Green	Green	Orange	Orange	Green
Germany	Orange	Green	Green	Green	Green	Orange	Green
Spain	Green	Green	Red	Green	Green	Green	Green
Denmark	Orange	Green	Red	Green	Green	Green	Green
Iceland	Green	Green	Green	Green	Orange	Red	Green
France	Green	Green	Green	Green	Orange	Red	Green
Hungary	Green	Orange	Green	Red	Red	Green	Green
Austria	Orange	Green	Red	Green	Orange	Green	Green
Italy	Green	Green	Red	Green	Orange	Green	Green
Latvia	Green	Orange	Green	Red	Green		
Croatia	Green	Orange	Green				
Turkey				Green		Green	Red
Norway	Orange	Green	Green	Green	Orange	Red	Green
Romania	Green	Red	Green	Orange			
Slovakia	Green	Red	Green	Red	Green	Green	Red
United Kingdom	Orange	Green	Green	Orange	Green	Red	Green
Finland	Red	Green	Orange	Green	Orange	Orange	Green
Luxembourg	Red	Green	Orange	Green	Orange	Green	Orange
Poland	Green	Red	Green	Orange	Orange	Green	Red
Lithuania	Green	Red	Green	Red	Orange		
Greece	Orange	Orange	Red	Orange	Green	Green	Orange
Belgium	Red	Green	Orange	Orange	Green	Orange	Green
Portugal	Green	Orange	Red	Green	Green	Orange	Red
Bulgaria	Green	Red	Green	Red	Red		
Malta	Green	Orange		Red	Orange		
Netherlands	Red	Green	Orange	Green	Green	Red	Orange
Cyprus				Red	Orange		
Slovenia	Orange	Orange	Orange	Green	Orange	Green	Red
Czech Republic	Red	Red	Green	Orange	Orange	Green	Red
Estonia	Red	Red	Green	Red			
Ireland	Red	Green	Red	Orange	Orange	Orange	Orange

Whereas the 2000 and 2002 versions of the score card still were able to communicate a message with regard to which countries need to speed up and which countries we can learn from, the complexity of the 2005 version does not give an obvious message at first sight. In the final version of the 2005 scorecard we might want to admit our defeat and even use an alphabetic order of countries to produce simply a lookup table.

However, this is probably not the end of the road for country scorecards. We have reached a point where the wish to include variables is at odds with communicating a clear message. The next step will be to go for further simplification. The transition from a country scorecard to an aggregate index is then a small step. Both build on the same choices with regard to inclusion of variables and the way progress is measured. The choice of the scores on a scorecard is comparable to the choice of an aggregation method to come to an overarching index for comparing the performance of EU Member States. In pursuing this aim we will probably keep the principle of showing both the absolute position and the change over time.

Peter Bosch<sup>2</sup>  
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<sup>2</sup> Opinions expressed in this paper are those of the author and do not necessarily reflect the opinion of the European Environment Agency