

Sustainable City Index

SCI-2014

Summary

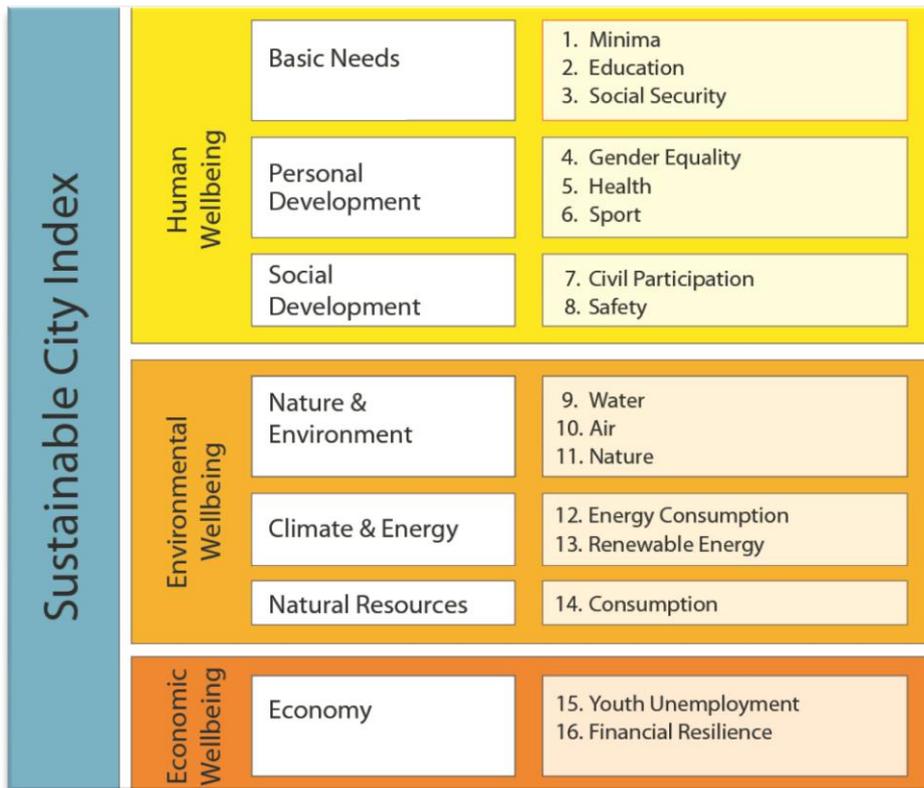
Since its successful launch in 2006, the Sustainable Society Index (SSI) still remains the only index that shows in quantitative terms the level of sustainability – defined in its broad sense – for a large number of countries (151 countries or 99% of the world population) and is updated every 2 years. In the wake of this ongoing activity, the Sustainable Society Foundation has now developed an additional index designed for monitoring the level of sustainability of cities. More and more, it are the cities in our world that take initiatives to improve the level of sustainability in their communities and thus set the trend to be followed at national levels.

In first instance, the newly developed Sustainable City Index (SCI) has been elaborated for the 408 cities in the Netherlands. Based on 16 indicators, the SCI shows the current level of sustainability of each individual city in the Netherlands. In the same manner as for the SSI, for the current index sustainability is defined in its integrated sense as intended by the Brundtland Commission (WCED, 1987):

A sustainable community is a community

- *in which each inhabitant can meet his or her needs,*
- *that takes care that future generations can meet their needs,*
- *and in which each individual has the opportunity to develop itself in freedom, within a well balanced society and in harmony with its surroundings.*

The three dimensions that together define sustainability in this broad sense are for our purpose defined as (i) Human Wellbeing, (ii) Environmental Wellbeing, and (iii) Economic Wellbeing. The first 2 dimensions form the core of sustainability. The third dimension – Economic Wellbeing – is not a goal in itself but is a precondition to safeguard to first two dimensions. The full framework of the SCI consists of 16 indicators which are grouped in 7 categories, 3 dimensions and 1 overall index, the SCI, as shown in the following picture.

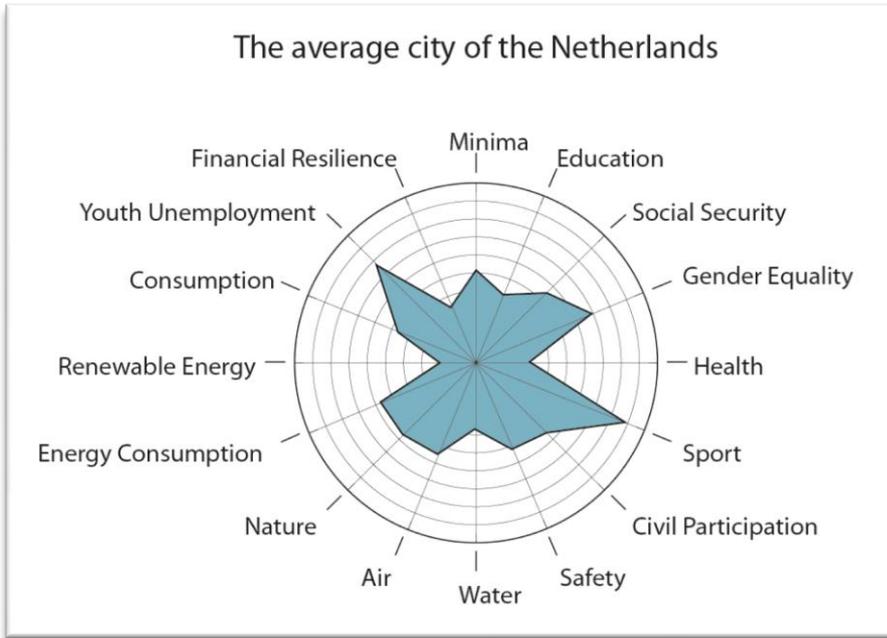


The most important feature of the SCI is that it is a quantitative instrument instead of only a qualitative tool. The index serves to provide cities, their inhabitants and companies with a practical instrument which shows at a glance which aspects of sustainability are going well (but can always be further improved) and in which respects action is required for further development towards sustainability. Thus, it enables taking quick and effective steps towards a sustainable community. It allows city governments to better prioritize aspects of its sustainability policy and to base implementation measures thereupon.

Indicators are expressed as a score on a scale of 0 to 10 and are calculated from data retrieved from public sources. The three higher aggregation levels were calculated from the indicator scores.

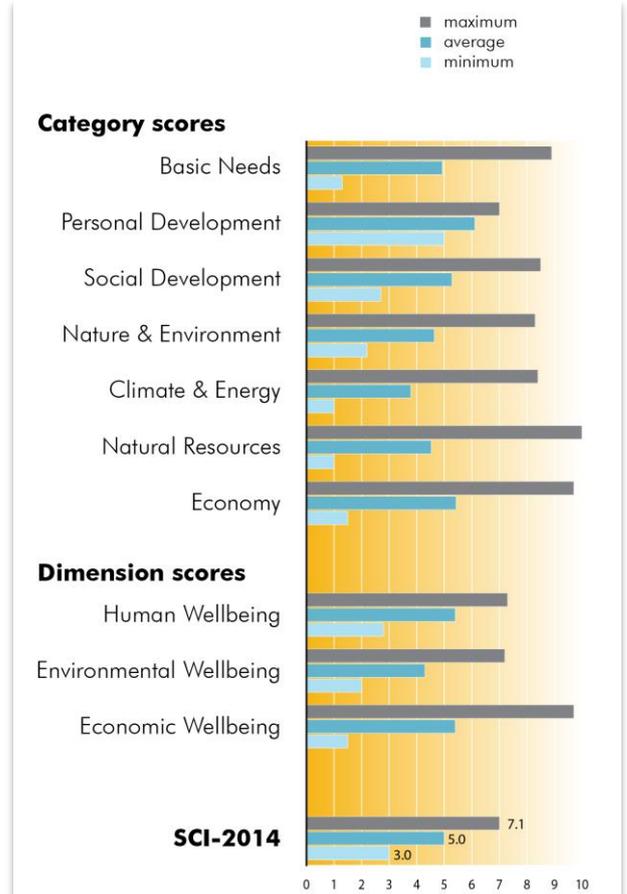
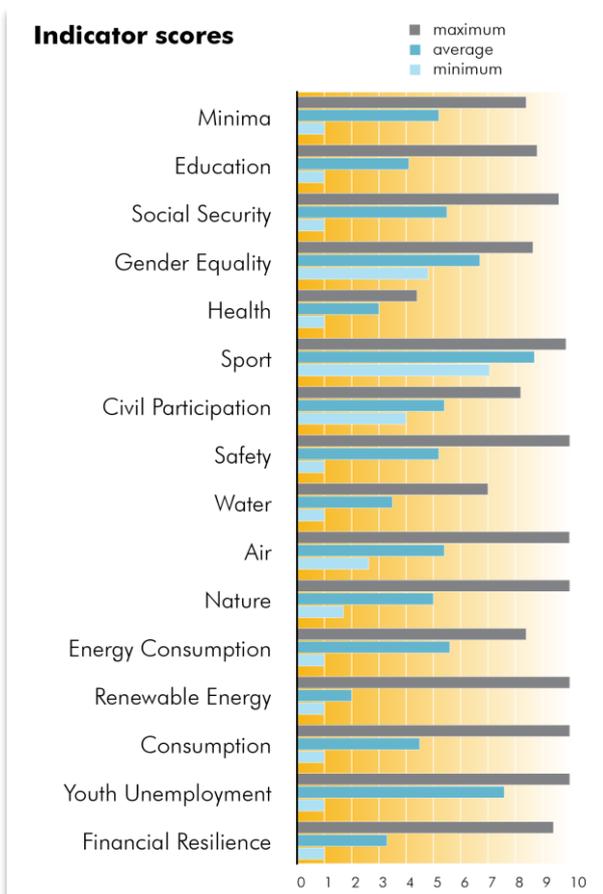
Upon our request, the Joint Research Centre (JRC) of the European Commission in Ispra (Italy) has carried out a statistical analysis of the framework of the SCI and its various calculation methods. This has led to several improvements in the initial setup; the final result now complies with the requirements of the JRC. The resulting data and the calculated scores for each of the 408 Dutch cities can be found on the website www.gdindex.nl (in Dutch).

The indicator scores for the average Dutch city are shown in the following spider web diagram. The centre of the web represents a score of 0 or no sustainability. The outer circle represents a score of 10, or full sustainability.



The diagram shows that there is still a lot of room for improvement before full sustainability is achieved. With the exception of 2 indicators the indicator scores are well below a modest score of 7. Of course, this will come as no surprise for those familiar with the subject.

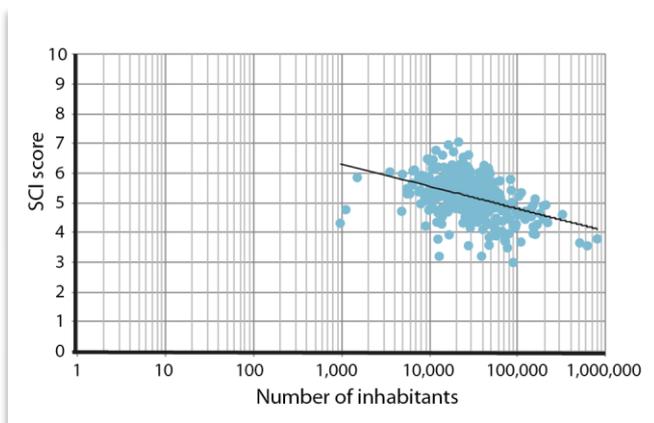
Below we have presented the scores of indicators, categories, dimensions and overall index SCI in barcharts, including the maximum and minimum scores as well as the population weighted average score.



SCI scores of Dutch cities run from 3.0 to 7.1, with a population-weighted average of 5.0.

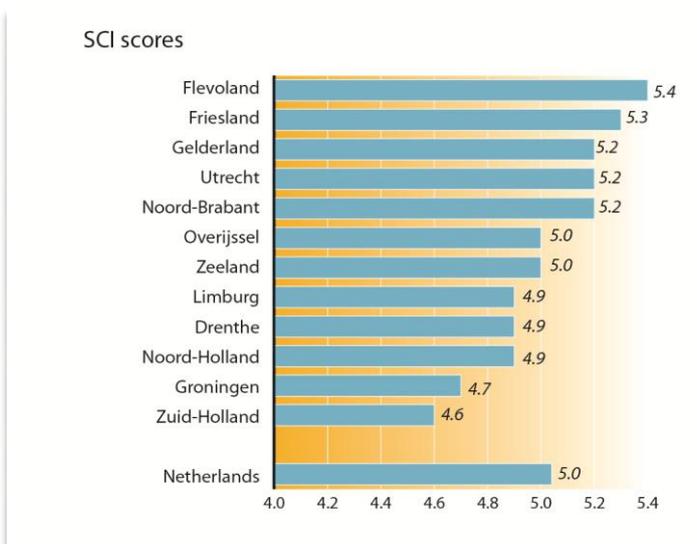
The highest score is found for the city of Zeewolde, which may call itself now the most sustainable community in the Netherlands. At the same time, it faces the challenge of success in the sense that it has to maintain its position and to continue on its way to full sustainability. The city of Heerlen has the lowest score in the Netherlands, and thus the most room for improvement.

The largest cities - Amsterdam, The Hague and Rotterdam – have relatively low scores and end up among 13 cities in the bottom end of the ranking list. This fact has lead us to see whether there is a correlation between population size and the SCI score of a city. The following diagram shows that there is a significant correlation, with lower SCI scores for larger population sizes. This is not to say that a causal relation exists between the number of inhabitants and the SCI score. Many other factors can play a role in this relation.



No significant correlations were found between SCI scores and (i) population density, (ii) land area of the city and (iii) the average income per inhabitant.

Since data are available at city level, the results can also be aggregated to the level of provinces. The indicator scores for the 12 provinces of The Netherlands vary from 4.4 to 5.3 as shown in the next graph.



The SCI is an instrument that can serve a range of different users: city governments and their various community services, inhabitants and companies, schools and NGOs. Each of them can use the instrument to stimulate and accelerate development towards sustainability in the community. The SCI enables up to date monitoring the results of measures implemented and initiatives taken within the community.

The current first issue of the SCI not only aims to stimulate development towards sustainability, but is itself subject to development too. No doubt in the following years the index will be further improved. The first update of the SCI, expected by the end of 2015, will show the extent in which we have succeeded in this effort.