

## Summary

In this report the Index of Sustainable Economic Welfare (ISEW) is compiled for Flanders for the period 1990-2011. The index is a measure of economic welfare in that it measures the contribution of a country's or region's economy to the overall level of well-being of its citizens. In this regard, the ISEW can be regarded as an indicator for the economic dimension of well-being.

When analyzing the level of sustainable economic welfare in a country or region, the ISEW considers both the benefits and the costs of economic activities. As such, the ISEW is clearly distinct from the Gross Domestic Product (GDP) that counts the market value of all final goods and services produced in an economy without distinguishing between activities that contribute to the overall level of well-being and activities that have a negative impact on well-being. In the broader 'Beyond GDP' debate, the ISEW is regarded as one of the most important alternatives to GDP when measuring economic welfare. The main advantage of the ISEW over other alternative measures is that it is calculated in monetary terms, so that it can directly be compared to the GDP. All items in the methodology of the ISEW are expressed in monetary terms using valuation methods from different types of literature (e.g. environmental economics for the valuation of environmental degradation, social economic for the valuation of household labour and the welfare losses from income inequalities and so on).

The methodology of the ISEW takes the private consumption expenditures of a country or region as its starting point, as it is argued that these consumption expenditures are the main benefits from economic activities. Next, a number of corrections is made to incorporate both positive and negative welfare effects: part of the public consumption expenditures and the value of household labour are added to the private consumption base of the ISEW, while the defensive part of private consumption expenditures and the welfare losses from income inequalities are deducted. Finally, a number of capital adjustments is made to include the impact of foreign debt and investments on the current level of well-being enjoyed in a country or region. Within the ISEW, the costs of economic activities are mainly due the loss of ecosystem services that occur either through environmental degradation (water and air pollution, climate change, ozone layer depletion) or through the depletion of natural capital. The ISEW is calculated as the difference between the benefits and the costs of economic activities.

The ISEW for Flanders that is calculated in this report shows that the level of sustainable economic welfare per capita in the region has not increased between 1990-2011. ISEW per capita decreased from €5 637,4 in 1990 to €5 244,0 in 2011<sup>2</sup>. When the study period is divided into smaller time frames, one can clearly identify the period between 2000 and 2005 to be responsible for the overall decline in economic welfare. The drop of the ISEW in this period is caused by a deterioration of the net international investment position of Belgium (which is divided over the different regions in the country on a per capita basis) and by an increase in the income inequalities in Flanders. To a lesser extent, the increase of the environmental costs (climate change and the use of non-renewable energy resources) also contributed to the drop of the ISEW per capita. Over the period 2005-2010 the level of sustainable economic welfare in the Flemish region started to rise again, even in 2008 and 2009 during the economic recession. In 2011, the ISEW/capita decreased once again.

The trend over time of the ISEW in Flanders is quite different from the trend over time of the Gross Regional Product (GRP). The ISEW looks beyond the value of market transactions and takes into account non-market activities such as household labour, the distribution of incomes and the environmental impact of production and consumption. As a result, the ISEW can be stimulated using a wide range of policy measures: reducing pollution levels, striving for a more equal distribution of incomes and so on. The system approach of the ISEW is one of the main benefits of the index over the GDP.

This report includes an extensive review of the methodology used in the compilation of the ISEW for Flanders. The valuation methods of a number of items in the index have been contested in the past. For instance, a researcher has to choose between a number of options when estimating the costs of climate change: should he or she look at the impact of past emissions on the current level of well-being, should he or she look at the impact of the current emissions on future generations or should he or she include both? Next, the valuation method used to estimate the depletion of natural capital in the

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<sup>2</sup> numbers expressed in constant prices 2000 euro

ISEW has also attracted criticism. Currently the annual consumption of non-renewable energy resources is valued at a replacement cost that increases at a rate of 3% a year. This fixed escalation factor causes the estimated costs of natural capital depletion to increase exponentially and does not allow for technological improvement nor for the actual changes in non-renewable energy use. It is clear that the ISEW could benefit from a clear and theoretically supported set of valuation methods that draw from recent research efforts. In this report, a number of very recent studies on cost estimates for water and air pollution were used that were specifically set up for the Flemish region. These estimates contribute to the overall value of the index.

A second problem with using the ISEW is that it is difficult to compare the results of ISEW compilations in different countries due to problems with data availability and personal choices from the researchers in the compilations. This lack of comparability underlines the need for a widely accepted and internationally agreed upon methodology for the ISEW. In this methodology, a number of updated valuation methods should be included, so that the monetary estimates in the index are made according to the latest available data and techniques. The process to arrive at such an updated methodology has been started. This study makes a contribution to this process by exploring new valuation methods for both the costs of water pollution and air pollution. When a standardized methodology is agreed upon, the ISEW can be compiled for a series of countries or regions, allowing for a meaningful comparison of the results.