



# **Indicators for sustainable development within the Euroregion Baltic**



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## **PREFACE**

The main purpose of the ongoing Seagull-project is to develop and suggest a common long term strategy and a more concrete development plan (JTDP) for sustainable development in the entire Euroregion Baltic.

To be able to do this it is, of course, most important to elaborate a common ground within ERB concerning the expression “sustainable development” – what do we mean when we are using this expression and how can we follow and evaluate if the development is going in the wanted direction or not?

Defining and anchoring “sustainable development” is a process which needs broad and common discussions. Indicators for a sustainable development can be an important part of the process. This paper is meant as a base for such a discussion and as an input to regional workshops within ERB.

A draft of this report was thoroughly discussed at a seminar in Elblag, October 21<sup>st</sup>, 2004 with representatives for the Polish, Russian and Swedish project partners. At the seminar, a common agreement was made among the participants to recommend the indicator criteria and headlines respectively presented in this report for implementation in the Seagull project. Based on this criteria and headlines, a list of possible indicators for the ERB-region is presented.



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## WHAT IS SUSTAINABLE DEVELOPMENT?

### *What does a Sustainable Society look like?*

Today, there is no clear picture of what a future sustainable society will look like. According to the most common definition<sup>1</sup> it is a society which meets the needs of the present without compromising the ability of future generations to meet their own needs. The word “need” is central. We have to address the needs of the today’s society, but also the needs of our children and grandchildren. We have to secure that the earth, now as well as in the future, can offer what we need for survival. And we have to realise that the “needs” and thereby also the definition of sustainable development may vary between generations.

#### **Sustainable development**

The Brundtland Commission defines sustainable development as

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Sustainable development according to this definition involves three dimensions: ecological, economical and social, the latter including also cultural aspects.

There are, however, some basic demands that always need to be accomplished. It is for instance necessary to create an agriculture sector which is able to produce big amounts of food of high quality. It is also necessary to secure that the earth can provide clean water and healthy air, now as well as in the future. We have to use our resources, especially not renewable resources, in an intelligent way. And we have to work for an equitable society where people are politically empowered and where we divide goods, service and money in a way that leads to benefit for all.

This means that different questions may be of different importance in the different parts of ERB, depending on the local and regional situation. The importance of a question may also differ over time and generations as mentioned above. This is to a large extent a consequence of the fact that when knowledge and values change, so will also the needs.

In spite of these differences and uncertainties, we know for sure that there is only one earth and a limited amount of raw materials and resources. That is why we have to admit that a sustainable society may require limits for personal consumption and using of resources.

Basically, sustainable development is a question about ethics and common values. The practice of sustainability is about creating new ways to live and prosper while ensuring an equitable, healthy future for all people and the planet.

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<sup>1</sup> World Commission on Environment and Development (“Brundtland Commission”) (1987) Our common future. ISBN 0-19-282080-X

## **Benefits of Sustainable Development**

Incorporating sustainable development (SD) into both the strategies and day-to-day running of an organisation gives positive economic, social and environmental benefits. The SCEnE project (Sustainability: Community, Environment and Economy) in Wales summarises some advantages which SD has for business.<sup>2</sup> These advantages are also, to a great extent, applicable on the ERB organisation.

### *a/ Improved financial performance*

*Resource use and energy efficiency cost savings*

*Creating and conserving value*

### *b/ Long-term planning*

*Anticipation of legislation*

*Clear vision of organisation's future position*

### *c/ Enhanced reputation*

*Company image*

*Customer satisfaction and loyalty*

### *d/ Meeting stakeholder expectations*

*Investor pressure to recognise environmental and social concerns*

*Consumer pressure to recognise environmental and social concerns*

*Regulatory pressure*

*Employee pressure*

*Local community pressure.*

## **Elements of Sustainable Development Best Practice**

The above mentioned Wales SCEnE project has developed an Appraisal Tool, making it possible for different kind of organisations to measure their progress towards sustainable development (SD) internally and their contribution to the wider societal goals of SD. The study has identified a number of practices in common for the highest scoring organisations, interesting to keep in mind when implementing SD in the ERB organisation.

### Elements of SD Best Practice

- ✓ *Acceptance of responsibility for SD*
- ✓ *Commitment to SD at a high level in the organisation*
- ✓ *Sharing ideas and open to innovation and continuous improvement*
- ✓ *Demonstrating a commitment to economic regeneration of the region*
- ✓ *Planning for the longer term*
- ✓ *Recognition of regional identity*
- ✓ *Commitment to staff well-being and development*
- ✓ *Regular community involvement*
- ✓ *Formal management of most components of SD*
- ✓ *Seeking to reduce use of natural resources – eco-efficiency*
- ✓ *Reducing the impact of transport and waste management.*

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<sup>2</sup> Jones, J.M., Pomeroy, I.R., Store, T., Butt, T.E., Farrar, J.F., Cooper, R. and Jones-Evans, D. (2004) Sustainability for Organisation. A Guide to Best Practice in Wales. Institute of Environmental Science, University of Wales, Bangor.

## ***The shortages of GDP as an indicator for economic development***

Economic growth is traditionally measured as gross domestic product (GDP) or gross regional product (GRP), which is the total value of all produced goods and services within the area. GDP/GRP has several weaknesses and there is an ongoing discussion whether it actually is a way to measure development or not.

GDP fails to address the three pillars of sustainable development; economic growth, social progress and environmental protection, inherent in the sustainability concept. To be able to reach sustainable development, we need a better measure of progress. The GDP weaknesses are, among else:

- ✓ Damage on people, goods or nature are not visible as fall in value or decreasing GDP.
- ✓ Work performed within the home/family gives no influence on GDP. Neither do differences in distribution of income.
- ✓ Education is mainly handled as a cost, not as a long-term investment.

The shortages of GDP are well illustrated in this example (based on Swedish prices)<sup>3</sup>:



*Contribution to GDP: 0 EURO*  
*Green house discharge: 0 ton CO<sub>2</sub>*

The owner of a small farm goes out in her own forest for cutting wood. She cuts enough wood for heating her own house the whole winter.

This value – heating of the house the whole winter – neither gives any influence on GDP, nor on the green house effect.



*Contribution to GDP: 6100 EURO*  
*Green house discharge: 10 ton CO<sub>2</sub>*

If the farmer cuts her leg by mistake, forcing her to stay at hospital for one week, the GDP will raise with about 3 500 €

Due to the accident the family is forced to buy oil for the heating of their house. This means that GDP will rise with another 2 600 € or more. At the same time as the discharge of environmental damaging green house gases increases with 10 ton.

Are there any doubts about which one of the two examples is the most sustainable one? This is only one of a lot of possible examples where GDP and sustainability goes in complete different directions.

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<sup>3</sup> Based on: One day on hospital 4200-5000 SEK,  
[http://cf.vgregion.se/cfm/webforms/press/dok/2862\\_Rapport%20Ortopedi%20Bakgrund%20och%20utg%C3%A5ngspunkter.pdf](http://cf.vgregion.se/cfm/webforms/press/dok/2862_Rapport%20Ortopedi%20Bakgrund%20och%20utg%C3%A5ngspunkter.pdf) 2004-06-14;  
Oil 6000 SEK/m<sup>3</sup>, exclusive of VAT. Consumption of oil 4 m<sup>3</sup>/yr. Carbon-dioxide 2,66 kg CO<sub>2</sub>/l.  
<http://www.spi.se/omraknfakt.asp?omr=2>. 2004-06-14.  
1 € = 9 SEK.

## ***De-coupling of economical growth and environmental pressure***

The term decoupling refers to breaking the up-to-now existing connection between economical growth and pollution, i.e. what is good for economy has usually been bad for the environment. Decoupling environmental pressures from economic growth is one of the main objectives of the OECD Environmental Strategy for the First Decade of the 21st Century, adopted by OECD Environment Ministers in 2001.

Decoupling occurs when the growth rate of an environmental pressure is less than that of its economic driving force (e.g. GDP) over a given period. Decoupling can be either absolute or relative. Absolute decoupling is said to occur when the environmentally relevant variable is stable or decreasing while the economic driving force is growing. Decoupling is said to be relative when the growth rate of the environmentally relevant variable is positive, but less than the growth rate of the economic variable. Decoupling can be measured by decoupling indicators that have an environmental pressure variable for numerator and an economic variable as denominator. Sometimes, the denominator or driving force may be population growth or some other variable. OECD has developed a set of 31 decoupling indicators covering a broad spectrum of environmental issues <sup>4</sup>.

Until now, rich industrial countries have used resources and caused environmental damage that is much bigger than their proportional part of the world population. The economic growth has mainly been based on use of coal, oil and other nature resources. If the new economies in countries with a strong present growth follow the same pattern of development, new and worse environmental problems surely will occur.

Today, we can notice that many industrial or post-industrial countries have started to move towards more sustainable principles. Dematerialisation of economic activities means that economic growth is no longer connected to a proportional growth in use of raw material. Less amount of raw material are used for production of the same outcome. In other way – we get more from less. This means a higher level of eco-efficiency but doesn't necessary lead to decreased use of nature resources. A high economic growth may neutralize the effect of increased material efficiency.

Twenty years ago we could see an increasing correlation in the EU 15 countries between economic growth and use of resources. Since 1990 the trend is broken, and there is a strong trend of de-coupling, i.e. increased economic growth without the same growth in use of resources or environmental damage<sup>5</sup>. But this trend has to be much stronger, if we in the long run want to combine social, economic and ecological aspects in a sustainable development.

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<sup>4</sup> OECD (2002). Sustainable Development: Indicators to measure Decoupling of Environmental Pressure from Economic Growth. [www.oalis.oecd.org/oalis/2002doc.nsf/LinkTo/sg-sd\(2002\)1-final](http://www.oalis.oecd.org/oalis/2002doc.nsf/LinkTo/sg-sd(2002)1-final). 2004-04-22

<sup>5</sup> Martin Rhisiart. Sustainable Regions. Making Sustainable Development Work in Regional Economies. ISBN 1-899750-31-2

## EUROPEAN UNION STRATEGY FOR SUSTAINABLE DEVELOPMENT

In March 2000 in Lisbon, the European Union set a strategic goal for the next decade, focusing on sustainable economic growth and knowledge-based economy with more and better jobs and greater social cohesion. The transition towards a sustainable development of such a society is a strategic goal for the European Union. This is a long-term process requiring structural changes in our economy and society, but also in the way policies are developed and implemented.

In Gothenburg in June 2001, the European Council agreed on a strategy for sustainable development and added an environmental dimension to the Lisbon process for employment, economic reforms and social cohesion<sup>6</sup>.

### The Lisbon & Gothenburg Strategies

*By 2010*

*Become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*  
(Lisbon 2000)

*Decoupling environmental degradation and resource consumption from economic and social development*  
(Gothenburg 2001)

To make the concept operational and catalyst for change, it is necessary to focus on the biggest challenges to sustainability in the Union. Based on the criteria of severity, their long term nature, and their European dimension, the Union has pointed out the following main threats to sustainable development:

- **Global warming**

Emissions of greenhouse gases from human activity are causing global warming. Climate change is likely to cause more extreme weather events (hurricanes, floods) with severe implications for infrastructure, property, health and nature.

- **Potential threats to public health**

Severe threats to public health are posed by new antibiotic-resistant strains of some diseases and, potentially, the longer-term effects of the many hazardous chemicals currently in everyday use; threats to food safety are of increasing concern.

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<sup>6</sup> The Commission. 2001. A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development. COM (2001)264 final. [http://europa.eu.int/eur-lex/en/com/cnc/2001/com2001\\_0264en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2001/com2001_0264en01.pdf).

▪ **Poverty and social exclusion**

One of every six Europeans lives in poverty. Poverty and social exclusion have enormous direct effects on individuals such as ill health, suicide, and persistent unemployment. The burden of poverty is borne disproportionately by single mothers and older women living alone. Poverty often remains within families for generations.

▪ **Ageing population**

While increases in life expectancy are obviously welcome, combined with low birth rates the resultant ageing of the population threatens a slowdown in the rate of economic growth, as well as the quality and financial sustainability of pension schemes and public health care. Spending on age-related matters could increase by up to 8% of gross domestic product in many Member States between 2000 and 2040.

▪ **Increasing pressure on some vital natural resources**

The loss of bio-diversity in Europe has accelerated dramatically in recent decades. Fish stocks in European waters are near collapse. Waste volumes have persistently grown faster than GDP. Soil loss and declining fertility are eroding the viability of agricultural land.

▪ **Congestion and pollution from current patterns of mobility**

Transport congestion has been rising rapidly and is approaching gridlock. This mainly affects urban areas, which are also challenged by problems such as inner city decay, sprawling suburbs, and concentrations of acute poverty and social exclusion. Regional imbalances in the EU remain a serious concern.

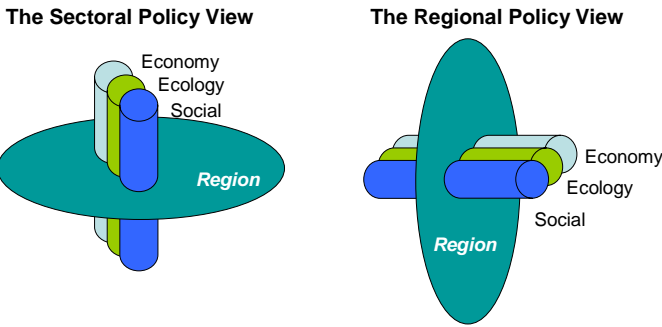
The huge cost of doing nothing about these challenges will show up in the longer term. This must not lead to the impression, however, that there is plenty of time to act. Many of today's unsustainable trends are rooted in past choices regarding production, technology, infrastructure and land use. Some of these problems may be very costly or impossible to put right if action is left to a very late stage. Decisive actions are urgently needed.

Recent European Councils have agreed on headline objectives and measures to tackle the issues that pose the biggest challenges to sustainable development in Europe. These issues, which are gathered in the EU strategy for sustainable development, are:

- ✓ *Combat poverty and social exclusion*
- ✓ *Deal with the economic and social implications of an ageing society*
- ✓ *Limit climate change and increase the use of clean energy*
- ✓ *Address threats to public health*
- ✓ *Manage natural resources more responsibly*
- ✓ *Improve the transport system and land-use management.*

**Integration of SD into Regional Policy:  
the Horizontal Approach**

All structural and cohesion fund interventions must be in accordance with the principles of sustainable development (EC 1260/1999)



Picture: Integration SD into the EU regional policy as a horizontal approach

When integrating sustainable development (SD) into Regional Policy, EU uses a horizontal approach, which means that all structural and cohesion fund interventions must be in accordance with the principles of sustainable development. The Lisbon and Gothenburg Strategies, as well as the European Spatial Development Perspective (ESDP), are strategic elements towards a more sustainable regional development. Programme measures and priorities of regional policy instruments will focus on aims and objectives in this strategy, and the EU structural policy after 2006 will be based on the above mentioned strategies from Lisbon and Gothenburg.<sup>7</sup>

**INDICATORS FOR SUSTAINABLE DEVELOPMENT**

***Why work with parameters for sustainable development?***

Parameters for monitoring progress towards sustainable development are needed in order to assist decision-makers and policy-makers at all levels and to increase focus on sustainable development. Beyond the commonly used economic measures, parameters of well-being, social, environmental and perhaps even institutional matters have to be taken into account as well, in order to have a broader and more complete picture of sustainable development.

Well chosen parameters can be a base for discussion and help decision makers to

- ✓ *Follow the development*
- ✓ *Analyse and explain what happens*
- ✓ *Compare the today situation in relation to decided objectives*
- ✓ *Compare different regions and over years*
- ✓ *Plan for future measures.*

<sup>7</sup> Marie-Colette FitzGerald, DG Regional Policy (2004) EU regional policy and sustainable development. Framework, instruments and outlook. [http://sustainableregions.net/uploads/documentbank/115\\_document.ppt](http://sustainableregions.net/uploads/documentbank/115_document.ppt). 2004-06-15

## ***Some examples of existing models and methods***

### Index

An *index* is a special kind of indicator, showing condensed information from aggregated data. The Gross Domestic Product (GDP) is an example of such an aggregated index. From a regional point of view, one important disadvantage is that the results are regularly presented only at national level.

UNDPs Human Development Index (HDI)<sup>8</sup> concentrates on the human being and aggregating standard of living, expected length of life and education level. UNDP also presents other indexes, for example a gender related development index and a poverty index.

The International Index of Social Progress (ISP) and the Weighted Index of Social Progress (WISP) are examples of index measuring the possibility to create welfare for the citizens. They cover economic development and social and political circumstances, but nothing about environment. In 2003, 163 countries were compared.

In 2001, at the World Economic Forum in Davos, the Environmental Sustainability Index (ESI)<sup>9</sup> was presented for the first time. This index makes it possible to make a national comparison of the environmental development.

Ecological Footprint<sup>10</sup> is a tool for measuring and analyzing human consumption of natural resources and waste output within capacity (or biocapacity). It represents a quantitative assessment of the biologically productive area (the amount of nature) required to produce the resources (food, energy, and materials) and to absorb the wastes of an individual, city, region, or country. The ecological footprint does not measure all aspects of sustainability; for example it does not allow the consideration of the social and economic impacts on biodiversity.

The report "*Wellbeing of nations*" was published 2001 as a result of co-operation between World Conservation Union, International Institute of Environment and Development, FAO and UNEP among others. This Wellbeing Index covers 180 countries and tries to measure human development and environmental protection. It uses 36 indicators about health, population, welfare, education, freedom, peace, crime and equality for a Human Wellbeing Index (HWI), and 51 indicators about terrestrial eco-systems, protected areas, water quality, the atmosphere, air quality, biodiversity, use of energy and other resources are aggregated to a Ecosystem Wellbeing Index (EWI). The HWI and the EWI are then combined in a Barometer of Sustainability, which finally gives a Wellbeing/Stress Index (WI). This index shows the wellbeing in a nation, in relation to the environmental load/stress.

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<sup>8</sup> <http://www.undp.org/hdr2001/indicator/index.html>; 2004-06-08

<sup>9</sup> <http://www.ciesin.columbia.edu/indicators/ESI/>; 2004-06-08

<sup>10</sup> <http://www.ecouncil.ac.cr/rio/focus/report/english/footprint/>,  
<http://www.redefiningprogress.org/publications/footprintnations2004.pdf>,  
[http://www.panda.org/news\\_facts/publications/general/livingplanet/index.cfm#EF](http://www.panda.org/news_facts/publications/general/livingplanet/index.cfm#EF); 2004-06-08

		<b>WI</b>	HWI	EWI
<b>1</b>	<b>SWEDEN</b>	<b>64.0</b>	79	49
<b>2</b>	Finland	<b>62.5</b>	81	44
<b>3</b>	Norway	<b>62.5</b>	82	43
<b>12</b>	Germany	<b>56.5</b>	77	36
<b>13</b>	<b>DENMARK</b>	<b>56.0</b>	81	31
<b>14</b>	New Zealand	<b>55.5</b>	73	38
<b>15</b>	Suriname	<b>55.5</b>	52	58
<b>16</b>	<b>LATVIA</b>	<b>54.0</b>	62	46
<b>17</b>	Ireland	<b>54.0</b>	76	32
<b>21</b>	St Kitts & Nevis	<b>52.5</b>	52	53
<b>22</b>	<b>LITHUANIA</b>	<b>52.5</b>	61	44
<b>23</b>	Cyprus	<b>52.5</b>	67	38
<b>27</b>	United States	<b>52.0</b>	73	31
<b>29</b>	France	<b>52.0</b>	75	29
<b>33</b>	United Kingdom	<b>51.5</b>	73	30
<b>53</b>	Belarus	<b>48.0</b>	46	50
<b>54</b>	<b>POLAND</b>	<b>48.0</b>	46	50
<b>55</b>	Argentina	<b>47.5</b>	55	40
<b>64</b>	Croatia	<b>45.0</b>	57	33
<b>65</b>	<b>RUSSIAN FED.</b>	<b>45.0</b>	48	42
<b>66</b>	Gabon	<b>45.0</b>	28	62
<b>77</b>	Congo, R.	<b>43.5</b>	15	<b>72</b>
<b>84</b>	Malta	<b>42.0</b>	70	<b>14</b>
<b>158</b>	Somalia	<b>32.5</b>	3	62
<b>178</b>	Afghanistan	<b>27.0</b>	6	48
<b>179</b>	Syrian Arab R	<b>26.5</b>	28	25
<b>180</b>	Iraq	<b>25.0</b>	19	31

Table: Wellbeing Index (WI), as the average of the Human Wellbeing Index (HWI) and the Ecosystem Wellbeing Index (EWI). Published 2001.<sup>11</sup>

<sup>11</sup> Countries ranked by Wellbeing Index. [http://www.iucn.org/info\\_and\\_news/press/wonrank.doc](http://www.iucn.org/info_and_news/press/wonrank.doc). 2004-06-15

Some conclusions from the report “*Wellbeing of nations*” are <sup>12</sup>:

- ✓ More than 4 billion people are living in countries with weak or low wellbeing development.
- ✓ Less than 1 billion people are living in countries with acceptable or good standard of living.
- ✓ No country is sustainable or close to sustainability. The countries on the top of the list, and also 32 other countries (mainly in Europe and North America), have an eco system deficit – the countries have high standard of living but also causes very high environmental load.
- ✓ 27 countries with low human standard – mainly in Africa – cause relative low environmental load but are alarming poor.
- ✓ 116 countries have double deficits, a combination of low environmental performance and low development.
- ✓ In 141 countries, the load on the ecosystems is higher than the human wellbeing.
- ✓ The northern part of Europe is the strongest region, with 12 countries among the 40 in the top of the list. Western Asia is the weakest region with high or extreme double deficits.

## Indicators

*Indicators* are designed to show changes over time and are used to give simplified information about complex processes. It is common to use a set of indicators, as a way to give a broader and more balanced picture. Below, some examples of different sets of indicators for sustainable development are presented.

## UN

The UN Commission on Sustainable Development (CSD) has put forward a set of indicators for sustainable development as a part of its task to supervise the implementation of Agenda 21. The original working list contained 134 indicators. Based on the voluntary national testing and expert group consultation, a core set of 57 indicators and methodology sheets are now available for all countries to use. These indicators are presented in Appendix II. They are arranged according to 15 different themes, e.g. health, atmosphere and consumption and production patterns.

Related guidelines for developing national programmes of indicators of sustainable development have been developed, improved and tested as part of the implementation of the Work Programme on Indicators of Sustainable Development (ISDs). The intention is that each country should have the opportunity to choose from the core list those indicators that best reflects its specific nature. The indicators as well as the guidelines and methodologies are available at the CSD website<sup>13</sup>.

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<sup>12</sup> The Wellbeing of Nations at a Glance. [http://www.iucn.org/info\\_and\\_news/press/wonback.doc](http://www.iucn.org/info_and_news/press/wonback.doc). 2004-06-15

<sup>13</sup> UN Department of Economical and Social Affairs. Division for Sustainable Development. <http://www.un.org/esa/sustdev/csd/csd12/csd12.htm>. 2004-05-27.

## **OECD**

OECD has during the last ten years been one of the main actors in the development of indicators measuring different aspects of sustainability. However, the work in OECD has primarily focused on combining the ecological and economical aspects, e.g. a core set of environmental indicators and sets of sectoral environmental indicators for energy and transport and agriculture respectively<sup>14</sup>.

In May 2001 the OECD Secretariat presented a preliminary set of 18 indicators regarding sustainable development distributed on different themes (Appendix III). The set of indicators is of two different types: Resource indicators and Outcome indicators.

The former reflects the extent to which the asset base is being maintained. This includes indicators reflecting changes in quantity and quality of assets. Also important are the stocks of different assets at a particular point in time in either physical or monetary terms. Comparing these stocks to threshold levels provides an indication of major pressure points.

Outcome indicators are aimed at measuring the satisfaction of human needs, in both quantitative and qualitative terms. Needs are defined broadly to cover social, economic and environmental factors. Because of the lack of agreement on a single definition of well-being, measurement will need to be based on a collection of partial and indirect indicators.

The sustainable development indicators are still pending for a more official attitude by the OECD.

## **EU**

The Gothenburg summit in June 2001 confirmed the necessity that a follow-up of the implementation of the strategy for sustainable development should be made each year and presented to the European Council. This is until further notice fulfilled by an annual synthesis report based on a set of 14 structural indicators, originally launched as an instrument for assessment of the progress made towards the Lisbon objectives (Appendix IV). These structural indicators cover the five domains of Employment, Innovation and Research, Economic Reform, Social Cohesion, Environment as well as the General Economic Background.

A more detailed and profound set of indicators is for the moment being prepared by a special task force in Eurostat. One of the main tasks of the Eurostat Task Force on Sustainable Development Indicators is to assist Eurostat in identifying a suitable framework which could serve as a basis for the development of a list of indicators to be used in evaluating the implementation and effectiveness of the EU Sustainable Development Strategy. The basic idea is to find possibilities to combine the existing pressure indicators used by the Eurostat with the environmental indicators presented yearly by the European Environmental Agency (EEA). The preliminary list of indicators includes at the time of writing a great number of possible indicators distributed among the following 10 priority themes:

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<sup>14</sup> OECD. Indicators to Measure Decoupling of Environmental Pressure from Economic Growth. [http://www.oilis.oecd.org/oilis/2002doc.nsf/LinkTo/sg-sd\(2002\)1-final](http://www.oilis.oecd.org/oilis/2002doc.nsf/LinkTo/sg-sd(2002)1-final). 2004-05-26.

ECONOMIC DEVELOPMENT
POVERTY and SOCIAL EXCLUSION
AGEING SOCIETY
PUBLIC HEALTH
CLIMATE CHANGE and ENERGY
PRODUCTION and CONSUMPTION PATTERNS
MANAGEMENT of NATURAL RESOURCES
TRANSPORT
GOOD GOVERNANCE
GLOBAL PARTNERSHIP

The set of indicators will most probably be built as a three-level pyramid. At the top of the pyramid, there should be between 10 and 20 **headline indicators** focusing on the lead objectives of the Sustainable Development Strategy, and containing the essence of the message on sustainable development and covering the most important issues for sustainable development in the EU. The **second level** of the pyramid should consist of between 30 and 40 indicators related to some general policy performance and indicators related to the “areas to be addressed”. Finally, the **third level** should contain most of the indicators linked to and allowing for the monitoring of the effectiveness of concrete and specific policy measures.

A first interim report was made in autumn 2003 and a final report is expected on current planning at the end of 2004. This report will describe the achievements of the Task Force, in particular in terms of setting-up and disseminating indicators but will also point out the main difficulties and the main data or conceptual gaps that remain if the European Statistical System is to cover the EU sustainable development policy correctly

### **Baltic 21**

Baltic 21 was initiated in 1996 by the Prime Ministers of the Baltic Sea Region during their summit, and in the same year by the Ministers of Foreign Affairs during their Ministerial session. Baltic 21 addresses the three dimensions of sustainable development – the environmental, the social and the economic aspects – and includes goals and indicators as well as an Action Programme. The focus is on eight sectors of crucial importance to this region – Agriculture, Energy, Fisheries, Forests, Industry, Tourism, Transport and Education as well as Spatial Planning. In total, 111 indicators are being used to follow the progress towards a more sustainable Baltic region. The indicator set is presented in Appendix V.

The Baltic 21 Report 2000-2002 *”Towards Sustainable Development in the Baltic Sea Region”* is now available for downloading in many languages used in the ERB, i.e. English, Latvian, Lithuanian, Polish, Russian and Swedish. In this report, a selected group of indicator data and their assessments are presented to illustrate the Baltic Sea Region’s progress towards sustainable development. Also, brief information is given about the efforts to implement the Baltic 21 Action Programme in individual sectors as well as in spatial planning and cross-sectoral areas.

## National level

In 2003, the first update of the indicators for sustainable development in *Denmark* was published (Appendix VI)<sup>15</sup>. The original version was presented to the World Summit on Sustainable Development in Johannesburg in 2002. The indicators have been selected in order to reflect objectives and activities in Denmark's National Strategy for Sustainable Development, "*A shared future – balanced development*". The indicators fall into two parts:

- ✓ An overall set of key indicators which describes developments and results in relation to the Strategy's 8 overall objectives and principles. This set comprises 14 indicators.
- ✓ A detailed, specific set of indicators which address individual action areas, describing developments and results in relation to some of the Strategy's targets and activities. This set comprises 90 indicators.

In *Latvia*, the report "*Latvian Sustainable Development Indicators in Latvia 2003*", for the first time, considers all three sustainable development blocks in Latvia: the environment, the economy and social issues. This time environmental issues are partly integrated into the block focusing on the economy, through analysis of state macroeconomic indicators and the main sectors of the economy in relation to the pressure they place on the environment. The social section of the report covers issues such as demographics, employment, healthcare and education. The environmental section of the report also considers the impact of global problems such as climate change and the degradation to the ozone layer on Latvia, as well as transboundary pollution, reductions in biological diversity and the increase of the volume of waste in developed countries.

In *Sweden*, Statistics Sweden and the Swedish Environmental Protection Agency have presented a set of indicators that consists of 30 existing measures mainly in the form of time series (Appendix VII)<sup>16</sup>. They have been structured under four themes (Efficiency, Contribution and Equality, Adaptability and Values and Values and resources for coming generations). Within these themes, the indicators encompass economic, environmental and social dimensions. The more traditional presentation of economic, environmental and social indicators have been avoided, mainly because there is a danger in categorising a set of indicators strictly by these dimensions since the same phenomena can often be viewed from several perspectives.

## Regional level

The Regional Council in Kalmar County uses a set of 21 indicators, chosen as a way to mirror the objectives in the Regional Development Plan (Appendix VIII). Other Swedish regions are working in the same manner with different kind of indicator sets measuring a sustainable regional development, e.g. in the regions of Västra Götaland and Sörmland.

During the work with this report, the ERB secretariats in each region were requested to give examples from their own regions, but there was no response.

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<sup>15</sup> Key Indicators 2003. Denmark's National Strategy for Sustainable Development A shared future – Balanced development. [http://www.mst.dk/udgiv/publications/2003/87-7614-094-6/html/default\\_eng.htm](http://www.mst.dk/udgiv/publications/2003/87-7614-094-6/html/default_eng.htm). 2004-06-08.

<sup>16</sup> Statistics Sweden & Swedish Environmental Protection Agency. (2001) Sustainable Development Indicators for Sweden – a first set 2001. <http://www.scb.se/statistik/MI/MII103/2003M00/Preface1to52.pdf>. 2004-06-08

### **Examples of selection criteria<sup>17</sup>**

At the seventh meeting of the ESS Task Force on Methodological Issues for Sustainable Development Indicators (SDI) in Stockholm in February 2004, the Task Force recommended that each indicator should respect as far as possible the following criteria, which can be seen, in particular for environmental indicators, as a kind of quality **target**:

1. An indicator should capture **the essence of the problem** and have a **clear and accepted normative interpretation**.
2. An indicator should be **robust** and **statistically validated**. The data used should be regarded as statistically reliable and should avoid arbitrary adjustments. Indicators should also be reliable over time in the sense that its values are comparable over time and fluctuations can be generally explained.
3. An indicator should be **responsive to policy interventions** but not subject to manipulation. Indicators should reflect the impact of policies, but not be conceived in a way that they can be manipulated in order to show a better score. In general, indicators should reflect outcomes rather than the various alternative ways in which they might be achieved.
4. An indicator should be measurable in a sufficiently **comparable** way **across Member regions**, and **comparable** as far as practicable with the **standards applied internationally by the UN and the OECD**.
5. An indicator should be **timely** and **susceptible to revision**. Indicators should be as timely as possible, and should be susceptible to revisions both for data and underlying concepts when necessary.
6. The measurement of an indicator should **not impose** on members, on enterprises, nor on citizens a **burden disproportionate to its benefits**. Wherever possible, the construction of SD indicators should be based on existing data collections made by Eurostat, the European Environment Agency (EEA) or other recognised international sources.

And the portfolio of indicators should follow the following principles:

7. The portfolio of indicators should be as far as possible **balanced across different dimensions**. The selection of indicators should respect a certain equilibrium across the various SD themes.
8. The indicators should be **mutually consistent** within a theme. Indicators should not deliver contradictory messages, or to the extent that they do so then explanations should be readily available.
9. The portfolio of indicators should be as **transparent** and **accessible** as possible to the citizens. Indicators should be easy to read and understand.

The Task Force recommends building the set of SDI as a three-level pyramid with the method described in the previous chapter of this memo.

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<sup>17</sup> Pascal Wolff/EUROSTAT (2004). The EU Sustainable Development Strategy: A framework for indicators. SDI/TF/30/4 rev. 5, <http://forum.europa.eu.int/irc/Download/kgeuAMJAmjGFFkOOJU9CEZCz5t2HtryFfd6ZNscm6GwEU1-XEt-Z-10H8WVHgZtFcfKe1CB/SDI-TF-030%20Rev5%20Framework.doc>; 2004-06-21.

## **INDICATORS FOR SUSTAINABILITY - PROPOSALS FOR IMPLEMENTATION AND FURTHER STUDIES IN THE SEAGULL PROJECT AND ERB**

As stated in the beginning of this paper, the task for ERB as an organisation is to develop and clarify the content of “sustainable growth and development” as a common value. The following criteria and headline indicators are presented as an input to these talks and especially the part concerning how to follow-up decided aims and objectives.

### ***Criteria for a common set of indicators for sustainable development***

It is necessary to have an ecological healthy basis as well as good economic and social conditions and development if we want to reach a sustainable society. We have to contribute as much as we can to the goal of meeting human needs in our society and worldwide, going over and above all the substitution and dematerialization measures taken in when discussing ecological sustainability.

In this introductory phase of work with indicators in the ERB, the indicators used should be seen upon as gathered from a first draft of set and thereby most preliminary. Therefore, it is especially important to have the availability to check and continuously evaluate each indicator used. The use of some form of index will however totally eliminate this opportunity. Because of this, we suggest a set of indicators instead of some kind of index for follow-up of the regional development in the ERB.

The ESS Task Force on Methodological Issues for Sustainable Development Indicators has suggested selection criteria for sustainable indicators (see above). Most of these are relevant also for the comparable work in ERB. Referring to the earlier discussion in this paper, the following parameters are of special interest for an ERB set of SD indicators:

- ✓ Reflecting three dimensions
  - Illustrate the different aspects of SD - environmental, economic and social development – in an equivalent and balanced way.
- ✓ Connections between the three dimensions
  - It is of special interest to illustrate the connections between the different parts of sustainability and how they are influencing each other.
- ✓ Possible to influence from regional level
- ✓ Easy to find
  - Since ERB has limited resources, the indicator set must be as far as possible built on already existing official data. Normally existing official statistics should be preferred compared to data from authorities or experts. However, the loss of relevant data today should not be allowed to prevent the development of an outstanding indicator.
- ✓ Easy to understand
- ✓ Few or at least a limited number
  - A large number of indicators are needed to properly assess the multidimensional nature of SD. Although, to be able to “communicate the message”, it is necessary to concentrate on quite few indicators – if possible

between 10 and 20 headline indicators focusing on the lead objectives of the ERB Strategy and Joint Transnational Development Programme. These indicators should contain the essence of the message on SD and cover the most important issues for SD in the ERB. This means that the indicator set can't cover all aspects of SD. They are meant just as *indicators*, nothing else.

- ✓ Correlated to the ERB objectives.
  - When elaborating sustainable indicators for ERB, it is important to adapt the indicators to decided objectives and measures. These means that the chosen indicators should connect to the coming strategy and development programme for ERB.
- ✓ Possible to present for the whole ERB area, but also for at least each one of the regions participating in ERB.
  - As already stated, the aim of the whole exercise is to give a statistical basis for evaluating implementation of SD within ERB. That's why it is suggested to limit the calculation of indicators - as far as possible - to the ERB area as a whole. There is also a need to be able to present the same kind of data for each and every ERB region.
- ✓ Relevant and representative.
- ✓ Showing trends and variations
  - Indicators - at least the headline indicators - should be measured and presented annually, covering as many time periods as possible in order to show the importance of political measures on the impact. They could also include projections in the future (e.g. demography, pensions) and distances to target (e.g. employment, greenhouse gases) where appropriate.
- ✓ If possible be correlated to SD indicators on UN, EU and Russian national level.

### ***A proposal for ERB indicator headlines***

As stated in the beginning of this paper, the task for ERB as an organisation is to develop and clarify the content of "sustainable development" as a common value. For the forthcoming work regarding delimitation of the expression "sustainable development" in ERB, the following "cornerstones" or headlines are proposed.

#### **Environment**

When it comes to environmental or ecological sustainability, the nature itself sets the limits. The limits are therefore less negotiable than the other aspects of sustainability, especially the economic perspective. This means that we can and should build our actions on a scientific ground. The organisation "The Natural Step" summarizes this scientific knowledge in the following sustainability principles<sup>18</sup>:

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<sup>18</sup> The Natural Step. [http://www.naturalstep.org.uk/uk\\_homepage.htm](http://www.naturalstep.org.uk/uk_homepage.htm) >Framework, 2004-06-21

In a sustainable society, nature is not subject to systematically increasing:

- ✓ concentrations of substances extracted from the earth's crust;
- ✓ concentrations of substances produced by society;
- ✓ degradation by physical means

and, in that society:

- ✓ human needs are met worldwide.

To reach this we have to focus on

A. Use of scarce materials

We need to eliminate our contribution to systematic increases in concentrations of substances from the Earth's crust. This means substituting certain minerals that are scarce in nature with others that are more abundant, using all mined materials efficiently, and systematically reducing dependence on fossil fuels.

B. Substances produced by society.

We need to eliminate our contribution to systematic increases in concentrations of substances produced by society. This means systematically substituting certain persistent and unnatural compounds with ones that are normally abundant or break down more easily in nature, and using all substances produced by society efficiently. This also means to avoid unnatural levels of natural compounds.

C. Natural and man-made systems in balance

We need to eliminate our contribution to systematic physical degradation of nature through over-harvesting, depletion, foreign introductions and other forms of modification. This means drawing resources only from well-managed eco-systems, systematically pursuing the most productive and efficient use both of those resources and land, and exercising caution in all kinds of modification of nature. We also have to keep the cultural heritages and identities living in the different areas comprising the ERB region if the development should be sustainable.

## Economy

The economic section reflects the objective of SD to maintain or enhance people's living standards over time. This means that overall macroeconomic performance should also take into account sustainability concerns. The application of sustainable production and consumption models plays a crucial role in this context. This means using all of our resources efficiently, fairly and responsibly so that the needs of all people on whom we have an impact, and the future needs of people who are not yet born, stand the best chance of being met. A sustainable economy must, for example, use efficiently energy and material resources, manage its wastes effectively and have a sustainable pattern of transports.

D. Economic growth

This means high gross regional product and good economic growth, as a way to provide economic opportunities and conditions for obtaining SD. Strong economies make broad social contribution possible and this in turn is conducive to SD.

E. Stability

This means a high degree of solvency in enterprises in the region, together with an economical growth with small oscillations in the regional business cycle.

- F. Effective production and consumption patterns.  
This means efficient use of material and other resources and decoupling economic growth from increased use of resources. One aspect is that our technical systems for different kinds of infrastructure should be as efficient as possible.
- G. Employment  
This means a high employment level, and a low level of long-term unemployment, among all groups irrespective of sex, age or origin.

## Society

The social dimension of SD reflects the need to address the welfare of citizens allowing sustainable economic growth and protection of the environment. Social welfare, in terms of SD, relates to both the economic and physical well being of the population by improving access to education, health, housing etc.

- H. Inclusion  
This means that social exclusion should be reduced to a minimum with all groups of people participating in the society in which they live.
- I. Possibility to earn ones living  
This means to secure all people a reasonable disposable income and standard of living.
- J. Gender equality  
This means to secure women's and men's equal rights, responsibilities and possibilities in society. This concerns such areas as; political power and influence; economical independence; the labour market; education; shared responsibility for the home and the children, as well as; freedom from gender-related violence.
- K. Good physical and mental health  
This means people feeling healthy and content, also covering our need of cultural stimulus. Since productivity and participation in the labour market requires healthy people, a healthy population is also vital to economic growth. Inversely, unhealthy people cause high expenditures for the society and personal suffering.
- L. Participation  
This means that democratic, knowledge based decisions is an important condition for sustainability. To reach this, good governance, openness, transparency and citizen's participation are necessary.
- M. Education  
This means a high level of education among the population, as a base for better adaptation of new techniques, logistics, planning and management as well as better economic development; but also essential to our individual well-being.
- N. Safety

This means the right to be safe, and feel safe, in my home as well as in the society, and the possibility to fully participate in different activities, for example cultural and political events.

O. Institutional capacity

This means a society with enough capacity for taking care of the needs of the citizens in a proper way. Access to infrastructure, health care and other services are important parts.

***Possible indicators according to available data***

In the following pages, a first preliminary list of possible indicators for the Seagull project and the ERB is presented, based on the definitions, limitations and proposed criteria discussed above. The basic thought is that the indicators and thereby also the necessary statistics should be presented at two levels: Entire ERB region and each one of the regions participating in the ERB respectively. The draft strategy for ERB and the list of statistical indicators presented in a draft report about GIS and statistic indicators<sup>19</sup> within the Seagull project have formed the main starting-point for the work. This draft report contains a study about Geographic Information Systems and possibilities to create a common data base for ERB, and among else maps the current and reported status of statistics of the different ERB countries. It also suggests statistical indicators to be included in the data base (Appendix I).

Unfortunately, it is in many cases difficult to get comparable data covering the specific ERB geographical area. The draft report just mentioned presents a list of statistical indicators, comparable and available in all ERB regions. Some of these are suitable as SD indicators while, on the other hand, some kinds of indicators (especially environmental indicators) are missing. Hopefully it will be possible to find other relevant data during the coming discussion and process. As stated earlier, a final decision about a definite indicator set has to be based on coming and deeper discussions and decisions about delimitation, objectives and goals for sustainable development in the

The most traditional way to build a set of indicators is trying to cover the whole scope of sustainable development by presenting some environmental, some economic and some social indicators. In Sweden, another model is tested, where the indicators instead are presented under four themes (Efficiency, Contribution and Equality, Adaptability and Values and resources for coming generations). Within these themes, the indicators encompass economic, environmental and social dimensions. This model is used to avoid the danger in categorising a set of indicators strictly by the three dimensions, since the same phenomena can often be viewed from several perspectives.

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<sup>19</sup> Bruno Nilsson and Roland Nilsson. Statistics and Geographical Information Systems (GIS). Draft report March 2004. [http://www.eurobalt.org/admin/doc/wp1/reports/report\\_gis\\_and\\_statistics.pdf](http://www.eurobalt.org/admin/doc/wp1/reports/report_gis_and_statistics.pdf), 2004-06-22.

## Environment

Proposed definitions of SD in the ERB	Suggested indicators	Available data, according to the draft Seagull GIS report <sup>20</sup>	Comments
A. Use of scarce materials	<b>Emissions of greenhouse gases</b>	Not presented	Also relevant for <b>F</b> UN indicator
	<b>Consumption of fossil fuels</b>	Not presented	Also relevant for <b>F</b>
	<b>Total water borne discharge of phosphorous per capita to the Baltic</b>	Not presented	Also relevant for <b>F</b>
B. Substances produced by society	<b>Use of priority hazardous substances, according to the EU Water Framework Directive</b>	Not presented	
	<b>Total water borne discharge of nitrogen per capita to the Baltic</b>	Not presented	
C. Natural and man-made systems in balance	<b>Exploitation of Baltic cod and salmon</b>	Not presented	Spawning stock and fishing. Available for the Baltic Sea as a whole, from ICES.
	<b>Land-use: present situation and recent change</b>	Not presented	
	<b>Abundance of selected key species</b>	Not presented	UN indicator
	<b>Protected areas as a % of total area</b>	Not presented	UN indicator
A, B and C	<b>Number of enterprises/organisations certified according to ISO 14 000 and/or registered to EMAS.</b>	Not presented	Also relevant for <b>M</b>

<sup>20</sup> Bruno and Roland Nilsson. Statistics and Geographical Information Systems (GIS). Draft report March 2004. [http://www.eurobalt.org/admin/doc/wp1/reports/report\\_gis\\_and\\_statistics.pdf](http://www.eurobalt.org/admin/doc/wp1/reports/report_gis_and_statistics.pdf), 2004-06-22.

## Economy

Proposed definitions of SD in the ERB	Suggested indicators	Available data, according to the draft Seagull GIS report <sup>21</sup>	Comments
D. Economic growth	<b>Increase in GDP</b>	Increase in GDP/capita and year, €	UN indicator
	<b>SME &amp; Micro-enterprises*</b>	Number of micro-enterprises and SME's/1,000 inhabitants	
	<b>New enterprises*</b>	Newly established enterprises/1,000 inhabitants	
E. Stability	<b>Oscillations in economic growth, % compared with previous year</b>	Not presented	
F. Effective production and consumption patterns.	<b>Generation of industrial and municipal solid waste/GDP or capita</b>	Not presented	UN indicator
	<b>GDP per hour worked</b>	Not presented	
	<b>Annual energy consumption per capita</b>	Not presented	UN indicator
G. Employment	<b>Employment*</b>	Employment rate by sex and age, %.	Also relevant for <b>H</b>
H. Inclusion	<b>Persistent unemployment*</b>	Not presented	Also relevant for <b>G</b>
I. Possibility to earn ones living	<b>Percent of population living below poverty line*</b>	Not presented	UN indicator
	<b>Income*</b>	Average income, by sex, age and price level, €	

\* Disaggregated by gender

<sup>21</sup> Bruno and Roland Nilsson. Statistics and Geographical Information Systems (GIS). Draft report March 2004. [http://www.eurobalt.org/admin/doc/wp1/reports/report\\_gis\\_and\\_statistics.pdf](http://www.eurobalt.org/admin/doc/wp1/reports/report_gis_and_statistics.pdf), 2004-06-22.

## Society

Proposed definitions of SD in the ERB	Suggested indicators	Available data, according to the draft Seagull GIS report <sup>22</sup>	Comments
J. Gender equality			All relevant indicators should be presented divided on sex and the differences between women and men should be reduced to a minimum.
K. Good physical and mental health.	<b>Declared state of health according to people themselves*</b>	Not presented	
	<b>Life expectancy at birth*</b>	Not presented	UN indicator
L. Participation.	<b>Electoral participation*</b>	Not presented	
	<b>Internet access</b>	Cost of 1 minute of Internet access, € In relation to price level.	
	<b>Participation in political bodies*</b>	Directly elected individuals, by sex and age, %	
	<b>Non Governmental Organisations</b>	Number of NGOs/ 1000 inhabitants	
M. Education	<b>Adult secondary education achievement level*</b>	or Number of people with higher education/1,000 inhabitants*.	UN indicator
N. Safety	<b>Experienced safety*</b>	Not presented	
	<b>Number of recorded crimes per 100 000 population*</b>	Not presented	UN indicator
O. Institutional capacity	<b>Health care</b>	Number of doctors and nurses/1 000 inhabitants	
	<b>Number of Internet subscribers/1000 inhabitants</b>		UN indicator

\* Disaggregated by gender

<sup>22</sup> Bruno and Roland Nilsson. Statistics and Geographical Information Systems (GIS). Draft report March 2004. [http://www.eurobalt.org/admin/doc/wp1/reports/report\\_gis\\_and\\_statistics.pdf](http://www.eurobalt.org/admin/doc/wp1/reports/report_gis_and_statistics.pdf), 2004-06-22.

## APPENDIX I

### ***Indicators for the ERB-region proposed in the Seagull report “Statistics and Geographical Information Systems (GIS)”.***

#### *Indicators*

The deliberations in Ronneby resulted in the following agreement and suggestions concerning the statistical indicators to be included in the database. The indicators are to be presented for each region and sub-region.

- Average age, by sex
- Births/1,000 inhabitants
- Deaths/1,000 inhabitants
- People age 60+, by sex, %
- Net migration/total population, %
- People living in urban areas, %.

The definition agreed upon for the term “urban area” is that there should be a minimum of 1,000 inhabitants living in a village, small town or settlement.

- Population density, total population/km<sup>2</sup>
- Unemployment rate, by sex and age, %
- Employment rate by branch and sex, %.

The branches agreed upon are public service, industry, agriculture and “the rest.”

- GDP/capita, Euro
- Average number of persons/dwelling
- Average income, by sex, EUR
- Land use, by categories in the GIS map, %
- Cars/1,000 inhabitants
- Directly elected individuals, by sex and age, %
- Number of people with higher education by sex/1,000 inhabitants.

The agreed definition of “people with higher education” is people with a college and/or university education.

- Number of micro-enterprises and SME’s/1,000 inhabitants.

The agreed definition of micro-enterprises is enterprises with a maximum of 10 employees and the range for SME’s is between 11 and 250 employees.

- Newly established enterprises/1,000 inhabitants, if possible divided by sex
- Number of hospital beds/1,000 inhabitants
- Number of doctors and nurses/1,000 inhabitants
- Number of guest nights by nationality/total population
- Price of a Big Mac, EUR
- Cost of 1 minute of Internet access, Euro

#### *Basic facts*

It became clear during the workshop in Ronneby that the indicators need to be supplemented by a number of basic facts for each region and each sub-region. The reason for this is that the indicators are mainly designed to facilitate comparison. Thus important information of a general and more descriptive nature needs to be presented in another way. The basic facts agreed upon are:

- Population, total and divided by sex and 10 years intervals

- Population of the largest city of the region/sub-region, total
- Area, km<sup>2</sup>
- Number of people employed in the three largest branches
- Main road network
- Main railway network
- Number of commercial airports incl. passenger turnover
- Number of commercial ports incl. passenger and cargo turnover
- Number of hospitals
- Number of colleges and universities
- Important web-sites

*Others*

One important aspect that has to be considered is the possibility of making comparisons over time. Accordingly, the aim should be to produce indicators and basic facts for the years of 1990, 1995 and 2000. The possibility of doing this and the possible costs involved have not yet been thoroughly investigated.

Ref: Bruno and Roland Nilsson. Statistics and Geographical Information Systems (GIS). Draft report March 2004.

[http://www.eurobalt.org/admin/doc/wp1/reports/report\\_gis\\_and\\_statistics.pdf](http://www.eurobalt.org/admin/doc/wp1/reports/report_gis_and_statistics.pdf), 2004-06-22

## APPENDIX II

### **UN-CSD Theme Indicator Framework**

<b>SOCIAL</b>		
Theme	Sub-theme	Indicator
Equity	Poverty (3)	Percent of Population Living below Poverty Line
		Gini Index of Income Inequality
		Unemployment Rate
	Gender Equality (24)	Ratio of Average Female Wage to Male Wage
Health (6)	Nutritional Status	Nutritional Status of Children
	Mortality	Mortality Rate Under 5 Years Old
		Life Expectancy at Birth
	Sanitation	Percent of Population with Adequate Sewage Disposal Facilities
	Drinking Water	Population with Access to Safe Drinking Water
	Healthcare Delivery	Percent of Population with Access to Primary Health Care Facilities
Immunization Against Infectious Childhood Diseases		
Contraceptive Prevalence Rate		
Education (36)	Education Level	Children Reaching Grade 5 of Primary Education
		Adult Secondary Education Achievement Level
	Literacy	Adult Literacy Rate
Housing (7)	Living Conditions	Floor Area per Person
Security	Crime (36, 24)	Number of Recorded Crimes per 100,000 Population
Population (5)	Population Change	Population Growth Rate
		Population of Urban Formal and Informal Settlements
<b>ENVIRONMENTAL</b>		
Theme	Sub-theme	Indicator
Atmosphere (9)	Climate Change	Emissions of Greenhouse Gases
	Ozone Layer Depletion	Consumption of Ozone Depleting Substances
	Air Quality	Ambient Concentration of Air Pollutants in Urban Areas
Land (10)	Agriculture (14)	Arable and Permanent Crop Land Area
		Use of Fertilizers
		Use of Agricultural Pesticides
	Forests (11)	Forest Area as a Percent of Land Area
		Wood Harvesting Intensity
	Desertification (12)	Land Affected by Desertification
Urbanization (7)	Area of Urban Formal and Informal Settlements	
Oceans, Seas	Coastal Zone	Algae Concentration in Coastal Waters

(17)	Fisheries	Annual Catch by Major Species
Fresh Water (18)	Water Quantity	Annual Withdrawal of Ground and Surface Water as a Percent of Total Available Water
	Water Quality	BOD in Water Bodies
		Concentration of Faecal Coliform in Freshwater
Biodiversity (15)	Ecosystem	Area of Selected Key Ecosystems
		Protected Area as a % of Total Area
	Species	Abundance of Selected Key Species

## ECONOMIC

Theme	Sub-theme	Indicator
Economic Structure (2)	Economic Performance	GDP per Capita
		Investment Share in GDP
	Trade	Balance of Trade in Goods and Services
	Financial Status (33)	Debt to GNP Ratio
Total ODA Given or Received as a Percent of GNP		
Consumption and Production Patterns (4)	Material Consumption	Intensity of Material Use
	Energy Use	Annual Energy Consumption per Capita
		Share of Consumption of Renewable Energy Resources
		Intensity of Energy Use
	Waste Generation and Management (19-22)	Generation of Industrial and Municipal Solid Waste
		Generation of Hazardous Waste
		Management of Radioactive Waste
		Waste Recycling and Reuse
Transportation	Distance Traveled per Capita by Mode of Transport	

## INSTITUTIONAL

Theme	Sub-theme	Indicator
Institutional Framework (38, 39)	Strategic Implementation of SD (8)	National Sustainable Development Strategy
	International Cooperation	Implementation of Ratified Global Agreements
Institutional Capacity (37)	Information Access (40)	Number of Internet Subscribers per 1000 Inhabitants
	Communication Infrastructure (40)	Main Telephone Lines per 1000 Inhabitants
	Science and Technology (35)	Expenditure on Research and Development as a Percent of GDP
	Disaster Preparedness and Response	Economic and Human Loss Due to Natural Disasters

Ref.: [http://www.un.org/esa/sustdev/natlinfo/indicators/isdms2001/table\\_4.htm](http://www.un.org/esa/sustdev/natlinfo/indicators/isdms2001/table_4.htm); 2004-05-27

## APPENDIX III

### *A preliminary set of sustainable development indicators (OECD 2001)*

<i>Theme</i>	<i>Current indicator</i>
<b>Resource indicators: Are we maintaining our asset base?</b>	
Environmental assets	Greenhouse gas emission index and CO <sub>2</sub> emissions
Air quality	NO <sub>x</sub> and SO <sub>x</sub> emissions
Water resources	Intensity of water use
Energy resources	Consumption of energy resources
Biodiversity	Size of protected areas as a share of total areas
Economic assets	Volume of net capital stock
Produced assets	Multi-factor productivity growth rate
Technological assets	Net foreign assets & Current account balance
Human capital	Proportion of population with upper secondary/ tertiary qualifications
Stock of human capital	Education expenditure
Investment in human capital	Rate of unemployment
Depreciation of human capital	
<b>Outcome indicators: Are we satisfying current needs?</b>	
Consumption	Household final consumption expenditure
	Municipal waste generation intensities
Income distribution	Gini coefficients
Health	Life expectancy at birth
	Urban air quality
Work status/Employment	Employment to population ratio
Education	Participation rates

Ref: OECD. 2001. Sustainable Development. Critical Issues.

## APPENDIX IV

### ***The 14 structural indicators approved by the European Commission***

List of indicators:

1. GDP per capita in PPS
2. Labour productivity
3. Employment rate\*
4. Employment rate of older workers\*
5. Educational attainment (20-24)\*
6. Research and Development expenditure
7. Comparative price levels
8. Business investment
9. At risk-of-poverty rate\*
10. Long-term unemployment rate\*
11. Dispersion of regional employment rates\*
12. Greenhouse gas emissions
13. Energy intensity of the economy
14. Volume of freight transport

\* Indicators disaggregated by gender

Ref: <http://europa.eu.int/comm/eurostat/Public/datashop/print-product/EN?catalogue=Eurostat&product=struct-EN&mode=download>; 2004-06-07

## APPENDIX V

### *The Baltic 21 indicator set*

Name of indicator	
<b>Overall indicators</b>	
1	GDP/capita by selected regions (2001)
2	CO2 emissions/capita (1988)
3	Infant mortality rate (1996-2000)
4	Life expectancy at birth
5	Infant mortality rate
6	Unemployment
7	Regional GDP per capita, market prices
8	Income distribution
9	Inflation
10	Participation in latest elections
11	Participation in local/regional elections (%)
12	Emission of Carbon dioxide
13	Emission of Carbon dioxide per capita
14	Renewable energy per Total Energy Supply (TPES)
15	Energy intensity (TPES/GDP)
16	Emission of Nitrogen oxides
17	Population ozone exposure
18	Land area where depositions of nitrogen are above critical load for acidification and eutrophication
19	Land area where depositions of sulphur are above critical loads for acidification
20	Emission of Sulphur dioxide
21	Load of nutrients to the Baltic Sea
22	Load of heavy metals to the Baltic Sea
23	Consumption of ozone depleting substances
24	Protected land area
<b>Agriculture sector indicators</b>	
25	Consumption of nitrogenous fertilisers
26	Consumption of phosphate fertilisers
27	Livestock density
28	Share of permanent pasture
29	Yield of cereals
30	Milk production
<b>Education sector indicator</b>	
31	Proportion of people in the Baltic Sea Region enrolled in formal and higher education
<b>Energy sector indicators</b>	
32	Total Primary Energy Supply (TPES)
33	Domestic energy production
34	Self sufficiency
35	Total final consumption
36	Total final consumption per capita
37	Final electricity consumption
38	Combined Heat Production - share of Total Heat Production
39	Combined Heat Production efficiency
40	Share of renewable energy per total primary energy supply
41	Share of renewable electricity per total electricity production
42	Share of natural gas per total primary energy supply
43	Emission of Carbon dioxide
44	Emissions of Carbon dioxide per energy unit

45	Emission of Nitrogen oxides
46	Emissions of Nitrogen oxides per energy unit
47	Emission of Sulphur dioxide
48	Emissions of Sulphur dioxides per energy unit
<b>Fisheries sector indicators</b>	
49	Total landings of Cod, Herring, Sprat and Salmon
50	Number of fishing vessels per country operating in the Baltic Sea
51	Average engine power per country: total kilowatt of fleet, divided by the number of vessels
52	Number of fulltime fishermen engaged in the Baltic Sea Region, per country
53	Fish consumption per capita
54	Sprat, Recruitment and spawning stock biomass in the Baltic Sea (subdivisions 22-32)
55	Sprat, Landings and fishing mortality in the Baltic Sea (subdivisions 22-32)
56	Sprat, total landings per country
57	Herring, Recruitment and spawning stock biomass in the Baltic Sea (subdivisions 25-29, excluding Gulf of Riga)
58	Herring, Landings and fishing mortality in the Baltic Sea (subdivisions 25-29 excluding Gulf of Riga)
59	Herring, Recruitment and spawning stock biomass in the Gulf of Riga
60	Herring, Landings and Fish mortality in the Gulf of Riga
61	Herring - total landings per country
62	Cod, Recruitment and spawning stock biomass in subdivisions 22-24
63	Cod, Landings and fish mortality in subdivisions 22-24
64	Cod, Recruitment and spawning stock biomass in subdivisions 25-32
65	Cod, Landings and fish mortality in subdivisions 25-32
66	Landings per country
67	Salmon smolt production in Baltic rivers with natural reproduction
68	Salmon, landings per country
<b>Forests sector indicators</b>	
69	Area of fore stand other wooded land
70	Area of forest and other wooded land per inhabitant
71	Changes in area of forest and other wooded land
72	Ownership structure
73	Protection status of forest land
74	Public access to forest and other wooded land
75	Annual average change in forest growing stock
76	Age-class distribution of forest available for wood supply
77	Balance between fellings and net annual increment
78	Causes of damage to forest and other wooded land
79	Trees showing serious defoliation
80	Threatened forest species
81	Forests according to "naturalness"
82	Natural regeneration
83	Proportion of mixed forest stands
84	Percentage of forest area managed according to a management plan or management guidelines
<b>Industry sector indicators</b>	
85	Industrial production index for manufacturing, electricity and mining
86	Change of industrial production index for manufacturing, electricity and mining
87	Industry energy consumption
88	Renewable energy in the industry sector
89	Trends in emissions of greenhouse gases
90	Trends in emissions of acidifying pollutants - NO <sub>x</sub>
91	Trends in emissions of acidifying pollutants - SO <sub>2</sub>
92	Certificates for Environmental Management Systems according to ISO 14001
93	Certificates for Quality Management Systems according to ISO 9000
<b>Tourism sector indicators</b>	
94	Overnight stays - all accommodation facilities
95	Overnight stays - Hotels and Motels
96	Overnight stays - camping
97	All other registered overnight stays, including cottages and guest-houses
98	Tourism sector share of GDP (1999-2001)
99	Number of Tourism Sector employed personnel, (1999-2001)

<b>Transport sector indicators</b>	
100	Emission of Carbon dioxide
101	Emission of Nitrogen oxides
102	Emission of Sulphur dioxide
103	Emission of Volatile organic carbon
104	Transport accident fatalities
105	Transport accident injuries
106	Motor vehicle density
107	Passenger car density
108	Goods transported on road related to population
109	Transport network density, roads
110	Transport network density, rail
<b>Local level indicator</b>	
111	Accumulated number of Local Agenda 21 processes in UBC member cities

Ref: <http://baltic21.e-lider.pl/reports/report/>; 2004-05-27

## APPENDIX VI

### *Set of sustainable development indicators for Denmark 2003*

#### Key Indicators

<p>1. The welfare society must be developed and economic growth must be decoupled from environmental impacts</p>	<p>N1. GDP per capita            N2. Decoupling illustrated by environmental impacts for 4 factors (greenhouse gases, runoffs of nutrients into the sea, emissions of acidifying compounds and emissions to air) in relation to GDP            N3. Genuine Savings            N4. Employment analysed by age groups</p>
<p>2. There must be a safe and healthy environment for everyone, and we must maintain a high level of protection</p>	<p>N5. Average life expectancy (men and women compared)            N6. Gross emissions in million tonnes CO<sub>2</sub> equivalents analysed between industry, transport, households, agriculture, and waste            N7. Number of chemicals which have been classified</p>
<p>3. We must secure a high degree of biodiversity and protect the ecosystems</p>	<p>N8. Area of natural habitats (deciduous forest, original forest, meadow, dry grassland, moor, and marshland)</p>
<p>4. Resources must be used more efficiently</p>	<p>N9. Resource flows for 3 factors (energy consumption, drinking water consumption, and total waste volume in relation to GDP)</p>
<p>5. We must take action at an international level</p>	<p>N10. Assistance funds as a percentage of GNI, in total and analysed between development and environmental assistance, and assistance to neighbouring countries</p>
<p>6. Environmental considerations must be taken into account in all sectors</p>	<p>N11. Environmental profile of the energy sector, illustrated by energy consumption and emissions of NO<sub>x</sub>, CO<sub>2</sub> and SO<sub>2</sub> in relation to GDP            N12. Environmental profile of the transport sector, as illustrated by energy consumption, emissions of NO<sub>x</sub>, CO<sub>2</sub> and NMVOC in relation to freight and passenger transport performance</p>
<p>7. The market must support sustainable development</p>	<p>N13. Number of eco-labelled products, analysed as the number of trade names</p>

8. Sustainable development is a shared responsibility, and we must measure progress	N14. Number of EMAS and ISO registered enterprises
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Ref: [http://www.mst.dk/udgiv/publications/2003/87-7614-094-6/html/helepubl\\_eng.htm](http://www.mst.dk/udgiv/publications/2003/87-7614-094-6/html/helepubl_eng.htm);  
2004-06-08

## APPENDIX VII

### ***Sustainable Development Indicators for Sweden– a first set 2001***

#### ***Toward sustainability: Efficiency***

1. Total energy supply by GDP
2. GDP per hour worked
3. Waste
4. State of health; Expenditures on health
5. Proportion of pupils not qualifying for upper secondary schools

#### ***Toward sustainability: Contribution and Equality***

6. Population by age group
7. Gross regional product
8. Passenger and freight transport
9. Disposable income per consumption unit
10. Women's salaries as percentage of men's salaries
11. Electoral participation
12. Ratio of the population exposed to violent crime or threat of violence
13. Enterprises with EMAS or ISO 14000 certification, certified eco-schools; area with certified forestry
14. Purchases of ecolabelled products and services

#### ***Toward sustainability: Adaptability***

15. Primary energy supply mix
16. Investments in share of GDP
17. Newly started enterprises and bankruptcies
18. Level of education
19. Research and development expenditures in relation to GDP
20. Employment: Women and men by activity status
21. Organic farming, grazed pastures and hay meadows

#### ***Toward sustainability: Values and resources for coming generations***

22. General Government and Central Government Net Debt in per cent of GDP
23. Share of GDP spent on health, education, welfare and social security
24. Direct Material Consumption
25. Quantities of chemicals hazardous to health and/or the environment
26. Prevalence of allergic asthma among school children
27. Protected area
28. Exploitation of Baltic herring
29. Extinct and endangered species
30. Emissions of carbon dioxide

Ref: <http://www.scb.se/statistik/MI/MI1103/2003M00/Preface1to52.pdf>; 2004-06-08)

## APPENDIX VIII

### ***Indicators for sustainable regional development: an example from the region of Kalmar***

The Regional Council in Kalmar County has decided about a indicator set for sustainable regional development. These indicators are connected to the regional development programme for Kalmar County and the regional growth programme. This indicator set is presented, as an example.

# Indicators for Sustainable Regional Development for Kalmar County

The current version of the regional development programme (RUPEN 3) includes 21 different indicators of which each one reflects various aspects of sustainable development in the County of Kalmar. The conceptions „indicator” and “ratio” are sometimes defined in different ways however in this case they are used as synonyms. The so-called RUPEN-indicators will also be used in the follow-up of the regional growth program for the county.

All the indicators should evolve in the right direction for the development in the region to be considered as sustainable. In the case of the social indicators the data are presented, where possible, separately for men and women. This is because the social differences that depend on the sex should be minimised if the development is to be characterised as sustainable.

The account of RUPEN indicators on regional level is presented for the first time in this memo. Most of the indicators' existing basic data are of such quality that they can be decomposed on the local level. That is why there is a reference to data sources with a wide account of each indicator where corresponding information on the municipal level can be found.

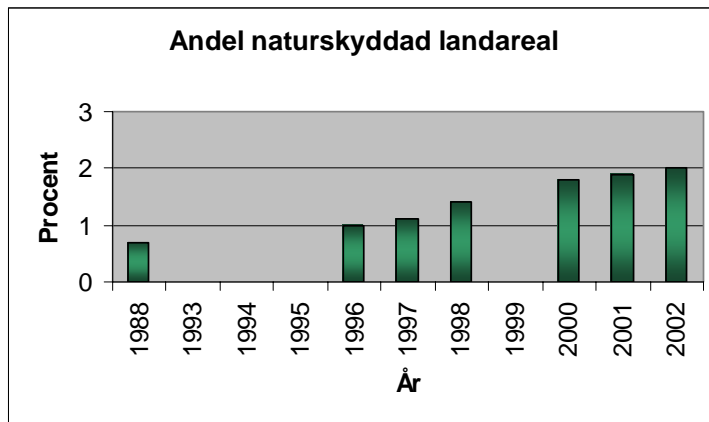
Some of the indicators however are considered so essential that they have been included even though the basic data do not allow for the local resolution, for example the nutrient load in the Baltic Sea and the residents living in or outside the population centres respectively. It should be pointed out here that some of the indicators shown here are blunt but at the same time they are the best data available in the existing statistics. As the statistic basic data are reviewed and improved the indicators are also revised. A result of these running overhauls is that the indicator of *Air quality in population centres* given in RUPEN 3 is substituted in this account by *Emission of carbon dioxide*.

We have used symbols in various colours to mark our evaluation of how the situation that has been reflected in the different figures corresponds with the development towards obtaining a higher degree of ecological, economic and social sustainability. The symbol 😊 is used for indicators where the development is evaluated as heading in the right direction towards increased sustainability while 😞 stands for the opposite tendency. Finally the symbol 😐 has been used in those cases where it was difficult to evaluate the development direction.

Since it is the first report of this kind we will be grateful for all forms of constructive criticism. Our ambition is to present the results of at least one representative selection of the 21 RUPEN indicators every year.

## Ecological indicators

### 😊 *Protected nature*



*Diagram: Share of the protected areas, percentage.*

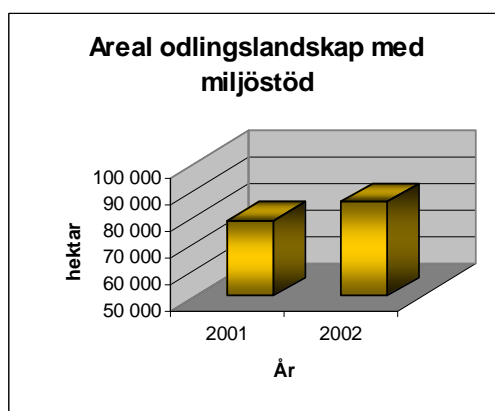
*Source: The Kalmar County Administrative Board*

Comment: The County of Kalmar is considered to accommodate a relatively large biological inheritance to be managed for the future generations. At the moment there are no sufficient data available that could directly illustrate for example the occurrence of endangered and rare species or environments.

The share of the protected area may be temporarily used as an indirect measure of the biological diversity. It has, as appears from the report, increased in the last fifteen years, which is a positive development. The parameter has also connections to the economic development in so far as the conditions to achieve protection are better when the economy is good. Besides the protected area is a valuable capital to be used and preserved not least for the tourist trade in the region.

Natura 2000 is another protection instrument that has come up to the fore with relation to our membership in the EU. At the moment 9,4 % of the County of Kalmar's area belong to some part of the Natura 2000 zone. Information on protected area is at present only available on the regional level and for the time being may only be calculated manually for a municipality.

### 😊 *Maintained Agricultural Landscape*



*Diagram: Agricultural landscape area with environmental subsidy, hectares.*

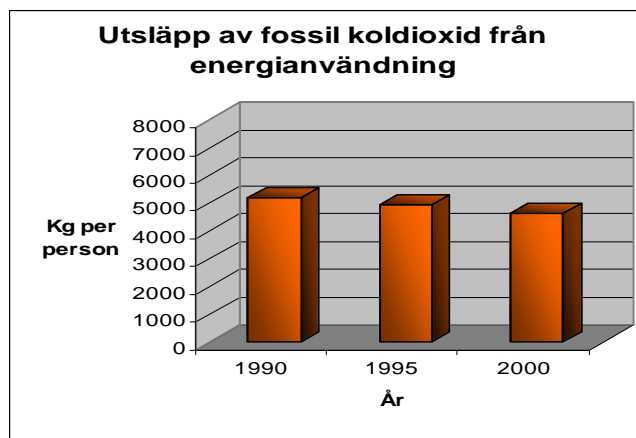
*Source: The Kalmar County Administrative Board & Swedish Board of Agriculture*

*Comment:* The county comprises a considerable part of the most valuable agricultural landscape in Sweden, for example Tjust archipelago, Astrid Lindgren's landscape, Bråbygden, Emådalen, Vilhelm Moberg's emigrants' country and the world heritage on the island of Öland with the limestone grassland and the coastal lands. The Eastern Småland and Öland constitute a region that has still the largest area of cultivated meadows and pastureland in Sweden.

The attractiveness of the existing remains of the older agricultural landscape in the county is the region's important resource first of all for the tourist trade. But the County of Kalmar is also one of the biggest agricultural regions in the country and in this context the agricultural landscape area that is worth protecting becomes relatively large.

Since the factual information is only available from two adjacent years it is not yet possible to determine if the development is going in the positive direction or not. The available statistics are possible to be transferred into local conditions.

### *Impact on Climate*



*Diagram: Emission of fossil carbon dioxide from energy consumption, kg/person and year*  
*Source: Proposals for the regional environmental targets in the County of Kalmar. Revised in August 2003. The Kalmar County Administrative Board.*

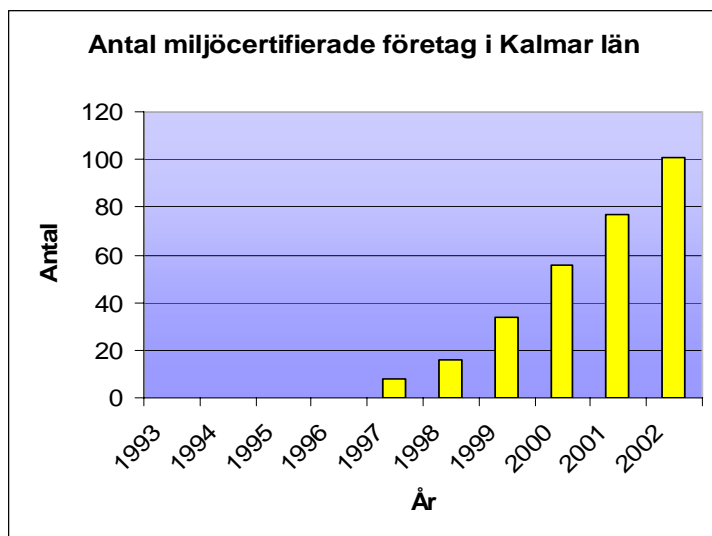
*Comment:* The UN climate commission has laid it down that the concentration of greenhouse gases in the atmosphere as a result of human impact must be stabilised at a level that is not dangerous to the global climate system. In order to get there we must reduce the emissions particularly in the rich western countries. The consumption of the fossil fuels that affect the climate is, for example in Sweden and in the County of Kalmar, a few times above the world's average.

According to the Kalmar County Administrative Board's proposals for the regional environmental targets the emission of the greenhouse gases from Eastern Småland and Öland should be reduced by 15 % between 1995 and 2010. The reduction between the years 1995 and 2000 amounts to 8 %, which is positive but at the same time less than the uncertainty present in the statistics.

The situation is far from being under control, which becomes visible when we distribute the limits of greenhouse gases emission amongst all the population on the Earth. It would turn out that each one of us would be allowed to produce ca 1500 kg gas a year. If we compare the result with the present emissions in our region we will see that in our region the emissions are three times as big.

There is information available on the municipal level however the material's reliability is highly uncertain.

## ☺ *Environmentally Classified Companies*

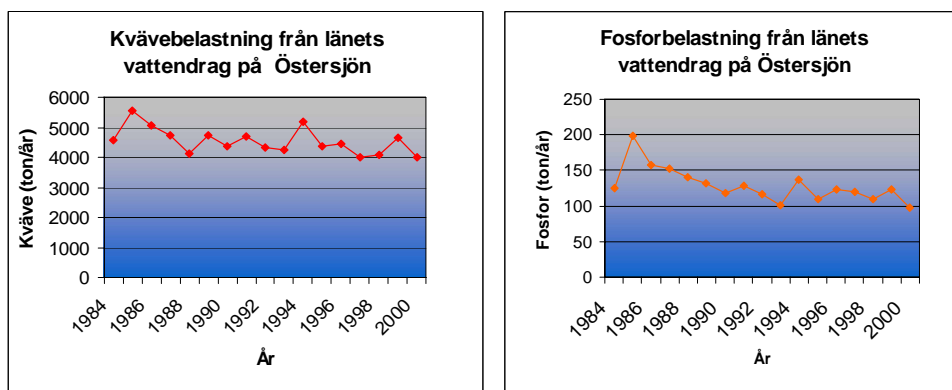


*Diagram: Number of environmentally classified companies in the County of Kalmar*  
 Source: Eco Media AB; <http://www.environ-cert.com/sweden/sweden.htm>

*Comment:* In a sustainable society the trade and industry have their own well-developed environmental responsibility and are often ahead of the authorities in this field. Various types of environmental management systems may constitute good work tools for a company. The figure above shows how many companies have either been granted environmental certificates according to the EU's regulation EMAS and/or have been approved according to the international environmental management system ISO 14 000. The number of these companies has increased exponentially from eight in 1997 to 101 in 2002. It is a very good thing that so many of the County's companies have adopted one of the systems or both of them.

The data from other types of systems, for example FR2000, that concern small and medium enterprises will be gradually included in the indicator as the data become available. The material may be decomposed into the municipal level.

## ☹ *Nutrient Load in the Baltic Sea*



*Diagram: Nitrogen load from the County's watercourses in the Baltic Sea, tons N/year*  
*Phosphorus load from the County's watercourses in the Baltic Sea, tons P/year*  
 Source: The Kalmar County Administrative Board

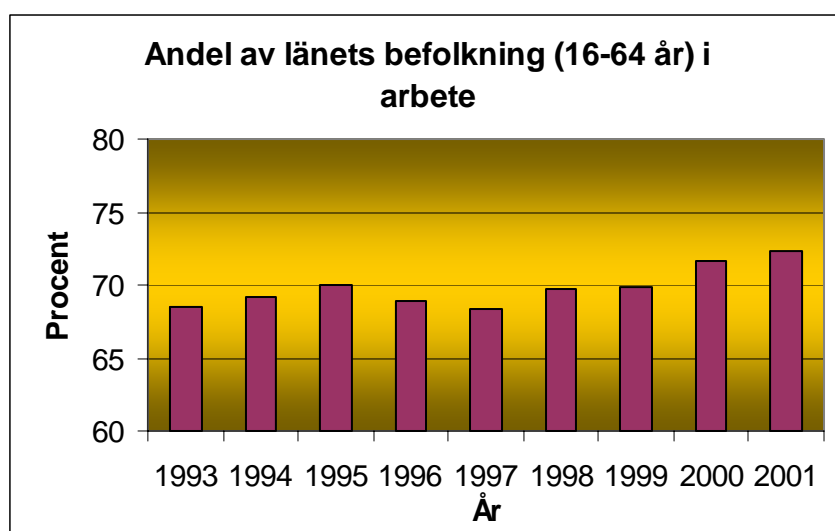
*Comment:* The environmental situation in the coastal, western part of the Baltic Sea is essential for southeastern Sweden. We must not expose our surrounding sea to more nutrient than it can actually take without negative effects and that is one of the prerequisites for a sustainable society.

The supply of nutrient carried by our watercourses gives in this context a picture of the strain that we ourselves impose on our part of the Baltic Sea. It also reflects the results of the discharges and cleaning measures within the different catchment areas along the county's coast.

The load of phosphorus supplied by the bigger watercourses shows symptoms of slow reduction since the middle of the 1980's, while the trends for the nitrogen are a lot more difficult to assess. Even though the situation regarding the nutrient supply from the land shows a certain positive development there is still a long way to the point when the nutrient load in the sea has been reduced to the level that could be described as "long-term sustainable levels".

## Economic indicators

### Employment



*Diagram: Share of the county's inhabitants (age 16-64) that are employed, percentage.*

*Source: SCB/Arbetsmarknad>Registerbaserad arbetsmarknadsstatistik (RAMS)>Förvärvsarbetande 16+ år med arbetsplats i regionen (dagbef) (RAMS) efter län, arbetsställets sektortillhörighet, ålder och kön. År 1993-2000,*

*SCB/Arbetsmarknad>Registerbaserad arbetsmarknadsstatistik (RAMS)>Befolkningen 16+ år (RAMS) efter region, sysselsättning, ålder och kön. År 1993-2001*

*Statistics Sweden /Labour Market>Register based labour market's statistics (RAMS)>Gainfully employed age 16+ with place of work within the region (day-time population) (RAMS) by county, the workplace's sector, age and sex. Year 1993-2000,*

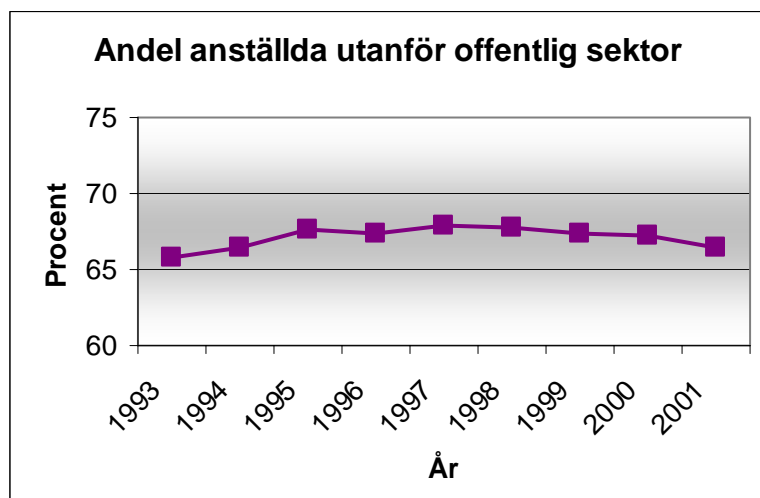
*Statistics Sweden /Labour Market>Register based labour market's statistics (RAMS)>Population age 16+ (RAMS) by region, employment, , age and sex. Year 1993-2001*

**Comment:** To give each person the possibility to participate in the working life and to feel needed by others are vital questions in the process of acquiring a sustainable development. An economic development that leads to elimination and social maladjustment is therefore not sustainable.

During the last decade the share of the working population (people aged between 16 and 64) that has got a job has been increasing. In other words the trend is going in the right direction even though the aim must still be to obtain a higher level of employment than we have today.

Equivalent data are available for each municipality from the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.aspx>; search path according to the source reference).

## ☹️ *Market Financed Activities*



*Diagram: Share of employees outside the public sector, percentage.*

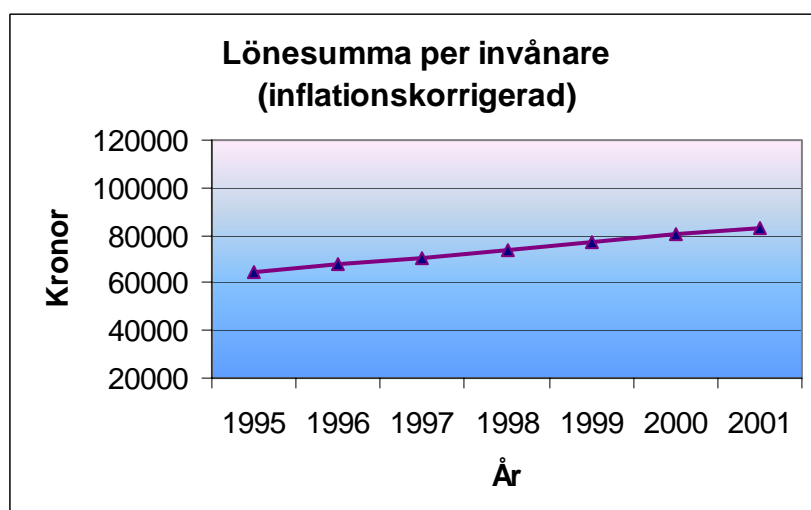
*Source: SCB/Förvärvsarbetande 16+ år med arbetsplats i regionen (dagbefolkning) (RAMS) efter län, näringsgren SNI92 och kön. År 1990-2001*

*Statistics Sweden / Gainfully employed age 16+ with place of work within the region (day-time population) by county, branch of business SNI92 and sex. Year 1990-2001*

*Comment:* One of the objectives of the actions to obtain the sustainable growth is to increase the share of the county's population employed outside the public sector. The share of the market financed employees increased during the first half of the latest decade but has since shown a slightly decreasing trend.

Equivalent data are available for each municipality from the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.asp>; search path according to the source reference). The public sector in this case includes the following SNI codes L, M, N, Q and K73.

## 😊 *Regional growth*



*Diagram: Salary per inhabitant, inflation admitted, SEK.*

*Source: SCB/rAps/Regional ekonomi>Lönesummor efter län och bransch (12 grupper). År 1995-2000, SCB/Befolkning>Befolkningsstatistik>Befolkningen efter region, civilstånd, ålder och kön. År 1968-2002>Befolkningen efter län, civilstånd, ålder och kön. År 1968-2002*

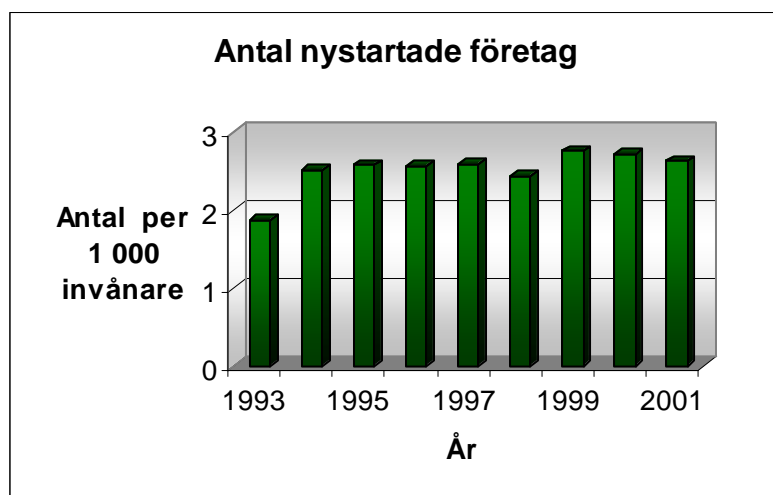
Swedish Statistics/Regional Analysis and Prognosis System/Regional economy>Salaries by county and branch (12 groups). Year 1995-2000; Swedish Statistics/Population>Population Statistics>Population by region, civil status, age and sex. Year 1968-2002> Population by county, civil status, age and sex. Year 1968-2002

Comment: There is a tendency to use the salary sum as a measuring instrument of the regional growth more often now instead of the gross regional product. While the latter is a measure of the integrated economic activity in the region the salary shows the regional nett income instead as well as how well the growing production is reflected in the growing incomes in the region. Corrections have been made in the statistic material regarding the inflation during the period in question.

On the regional level the income per inhabitant has been permanently increasing since the middle of the 1990's as can be seen in the figure. There has been a similar development on the local level. The salary sum is however not equally divided among the different parts of the county and shows the highest levels in the southern parts and the lowest in the northern parts of the region.

The gross regional product is available at the municipal level and can be ordered from the Swedish Statistics (SCB). There is also information on the salary sums shown for each of the four local labour market regions in the county and they can be obtained at <http://www.h.scb.se/raps/>.

### 😊 *New Enterprises*



*Diagram: Number of new enterprises established in the county, per 1000 inhabitants and year*

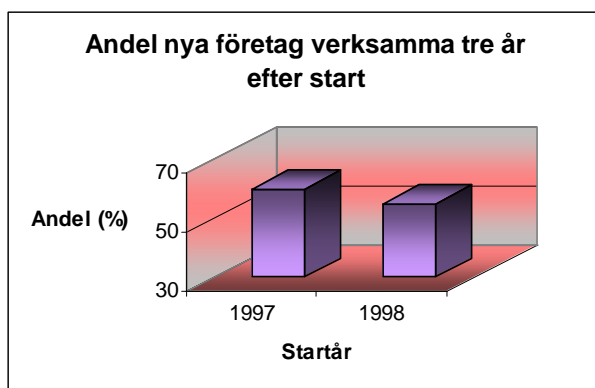
*Source: Nyföretagandet i Sverige 2000 och 2001. ITPS rapport S2002:008,*

*SCB/Befolkning>Befolkningsstatistik>Befolkningen efter region, civilstånd, ålder och kön. År 1968-*

*2002>Befolkningen efter län, civilstånd, ålder och kön. År 1968-2002*

*New enterprises in Sweden 2000 and 2001. ITPS report S2002:008, Statistics Sweden/Population>Population statistics>Population by region, civil status, age and sex. Year 1968-2002> Population by county, civil status, age and sex. Year 1968-2002*

Comment: The efforts to encourage the establishment of new enterprises in the region constitute a comprehensive development area in obtaining the regional sustainable growth. An increased private enterprise is considered to be able to contribute to the decrease of the dependence of the regional economy on the traditional industries and on the public sector. The development during the last ten years has been billowy however with a steadily rising tendency.



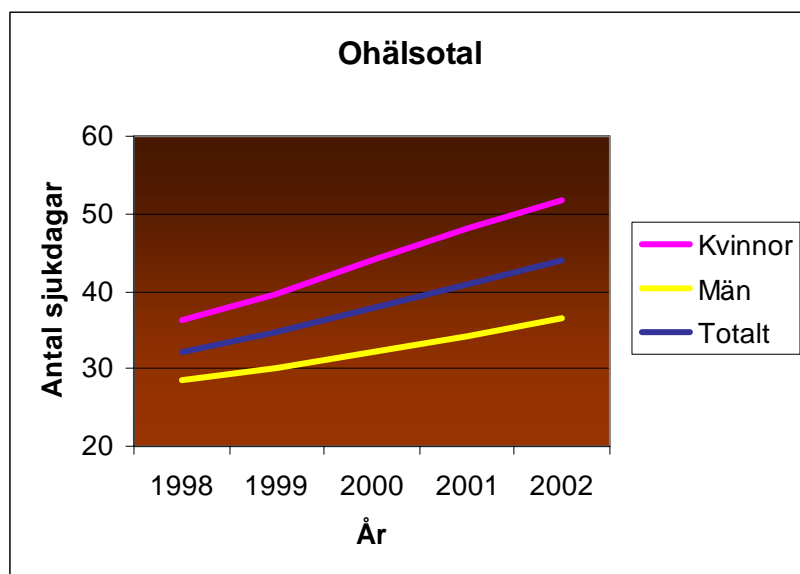
*Diagram: Share of new enterprises still in business three years after start-up, percentage.*  
*Source: Follow up of new companies started up in 1998 - three years after the start-up. ITPS report S2003:005;*  
*Follow up of new companies started up in 1997 - three years after the start-up. ITPS report S2002:003*

Sustainability in new enterprises can be measured by observing the number of the new enterprises still in business after a few years' time. The figure above shows the share of the new companies that were started in 1997 and 1998 and were still working in 2000 and 2001 respectively.

Where factual data are only available from the two adjacent years it is not possible to decide whether or not the development is heading towards the positive direction. Equivalent data for the local level should be available at the municipal economy office.

## Social Indicators

### 🧑‍🤝‍🧑 Health



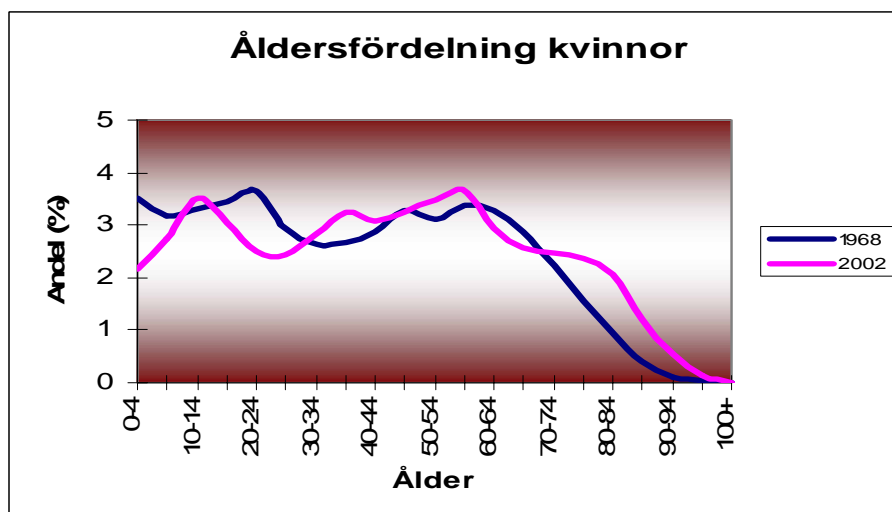
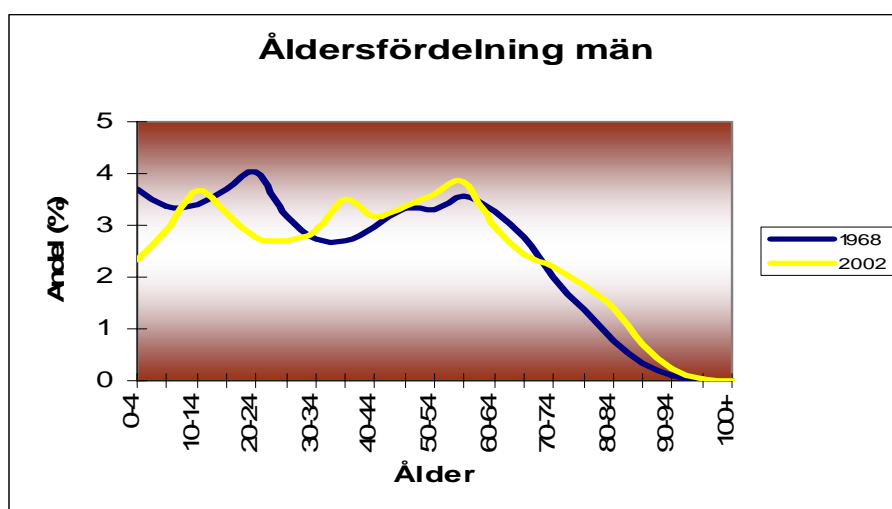
*Diagram: Ill-health number. Number of sick days per year. Women, men, total.*  
*Source: The National Social Insurance Office in the County of Kalmar*

Comment: A healthy and prosperous population is a fundamental condition for obtaining a socially sustainable development. The unit of measurement used here to describe the health situation - the ill-health number - gives a total value of the number of days with sickness and rehabilitation benefits as well as the early retirement and sickness allowance.

The latest development in the region is unfortunately indicating a negative direction, and the situation is the same in the rest of Sweden. Women are particularly exposed with a higher level as well as a faster growing ratio of ill-health.

Equivalent data are available for the municipal level.

### 🙄 *Age Distribution in the Population*



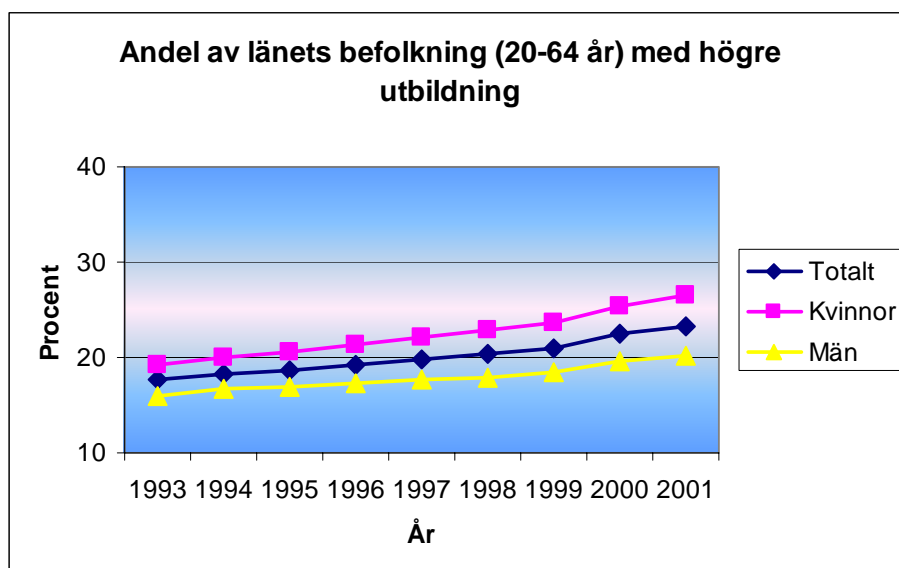
*Diagram: Age distribution men and women respectively, 1968 and 2002.*

*Source: SCB/Befolkning/Befolkningsstatistik/Befolkning efter region, civilstånd, ålder och kön. År 1968-2002  
Swedish Statistics/Population/Population statistics/Population by region, civil status, age and sex. Year 1968-2002*

*Comment:* A distinctive trait of a "sustainable" age distribution in a population is that the age graph runs at a relatively constant level and gently subsides at older age. The population development in the County of Kalmar during the last thirty years diverges from this pattern. The most important reason for this is that the share of children and young people age 15 to 30 is substantially lower today. The positive side of the fact that the average age of the population has been going up does not counterbalance the drainage of the of the young generation.

Equivalent data for each municipality are available at the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.aspx>; search path according to the source reference).

## 😊 Education Level



*Diagram: Share of the county's population (age 20-64) with higher education. Men, women, total.*

*Source: SCB/Utbildning och forskning>Befolkningens utbildning>Befolkning 16-74 år efter län, utbildningsnivå, ålder och kön,*

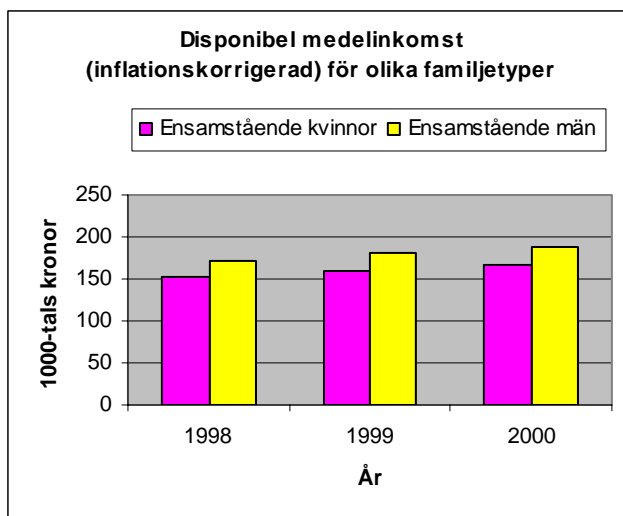
*SCB/Arbetsmarknad>Registerbaserad arbetsmarknadsstatistik (RAMS)>Befolkningen 16+ år (RAMS) efter region, sysselsättning, ålder och kön. År 1993-2001*

*Swedish Statistics/Education and research>Population education>Population age 16-74 by county, education level, age and sex; Swedish Statistics/Labour market> Register based labour market's statistics (RAMS)>Population age 16+ (RAMS) by region, employment, age and sex. Year 1993-2001*

Comment: Knowledge is an important basis for all development and especially when it comes to efforts to obtain an increased sustainability. Therefore it is gratifying to see that the number of inhabitants that are able to work and have higher education (above the secondary school level) shows clear signs of increasing. The higher level of education among the county's women is largely connected with the tight sex distribution within the care and nursing sector.

Equivalent data for each municipality are available at the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.aspx>; search path according to the source reference).

## ☺ *Disposable personal income*



*Diagram: Average disposable personal income (inflation admitted) for single women and single men respectively. 1000 Swedish kronor.*

*Source: SCB/Hushållens ekonomi>Inkomst och förmögenhetsstatistik (IoF)>Disponibel medelinkomst för familjer (20+ år) efter län, familjetyp och sysselsättning. År 1998-2000*

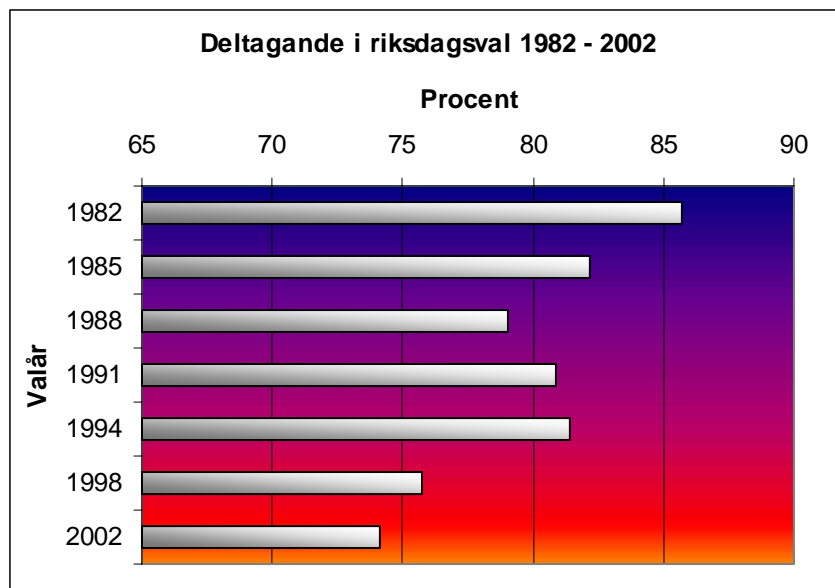
*Swedish Statistics/Households economy>Statistics of income and means>Average disposable income in families (age 20+) by county, family type and occupation. Year 1998-2000*

*Comment:* All possible measures against poverty and economic segregation are important parts in the work for a sustainable growth in the region. Above there is an example of income situation in families with single women or men. Corrections have been made in the statistic material regarding the inflation during the period in question.

The income in the families where women provide for the family constitutes nearly 90% of the income of single men. The rate of growth of the income is around four per cent for both groups in the period. Statistic data are at the moment only available for three years, which limits the possibility to make more detailed analysis.

Equivalent data for each municipality are available at the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.aspx>; search path according to the source reference).

## ☹️ *Participation in elections*



*Diagram: Turnout at the parliamentary elections, percentage.*

*SCB/Medborgarinflytande>Allmänna val, valresultat>Riksdagsval - valresultat efter valkrets och parti mm. Valår 1973-2002*

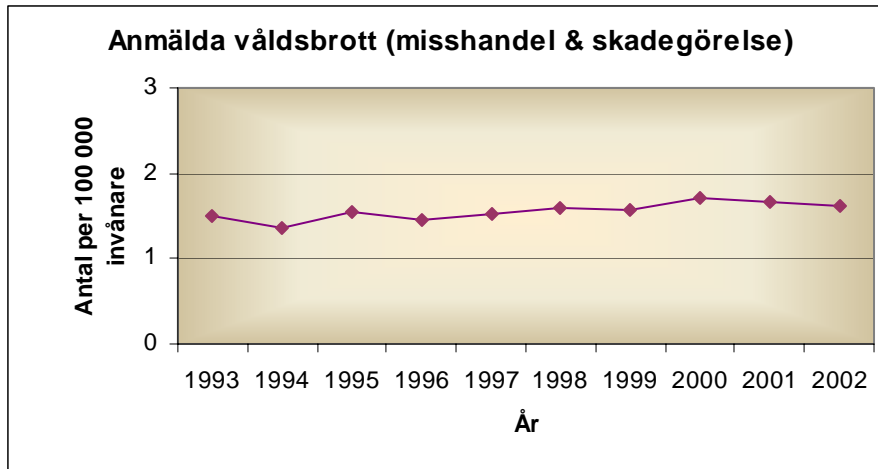
*Swedish Statistics/Citizen influence>General election, election's results>Parliamentary elections - election's results by constituency and party and so on. Election year 1973-2002*

*Comment:* The development of our society in the direction towards an increased sustainability demands that all the inhabitants feel that they participate in the process. The participation in the elections is a measure that in the best way reflects people's confidence and sense of participation in our democratic system.

The trend that could be observed during our last parliamentary election is therefore alarming. Together with the growing ill-health and insecurity it is the most serious negative development direction among the indicators shown here.

Equivalent data for each municipality are available at the Statistics Sweden's website (<http://www.scb.se/databaser/makro/Start.aspx>; search path according to the source reference). The statistics are not shown separately for each sex.

## ☹️ Crime



*Diagram: Reported violence crime (assault and damage) per 1000 inhabitants and year.*

*Source: Brottsförebyggande rådet/www.bra.se>Statistik>Välj tabell>Brottsstatistik – Sök, Befolkning>Befolkningsstatistik>Befolkningen efter region, civilstånd, ålder och kön. År 1968-2002>Befolkningen efter län, civilstånd, ålder och kön. År 1968-2002*

*National Council for Crime Prevention/ www.bra.se>Statistics>Choose table>Crime statistics - Search, Population>Population statistics>Population by region, civil status, age and sex. Year 1968-2002>Population by county, civil status, age and sex. Year 1968-2002*

Comment: A sustainable society must be tantamount to a society where all the people irrespective of age, sex, native language or the colour of the skin feel secure. The tendency that can be noticed today of decreasing respect for people and their possessions is therefore also a threat against a sustainable regional development.

At the moment there are no statistics available for the municipal level and it is not possible to acquire data regarding respective sexes from the given source.