

Environmental Accounts

Environmental Goods and Services Sector, NAMEA Air and Environmental Related Taxes

2009 Final Activity Report to Eurostat

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1. Background

The *NORwegian Economic and Environmental Accounts Project* (NOREEA) was first established in 1997 as a co-operative project between the Division for National Accounts and the Division for Environment Statistics at Statistics Norway. The funding for this long-term project has come from Eurostat and the Norwegian Ministry of the Environment.

This final activity report describes the objectives, main activities and main results from the NOREEA project that ran from 1 of January 2009 until 31 of December 2009. Partial funding for this work was through Eurostat Grant Agreement N° 50304.2008.001-2008.337

The project of 2009 has three work areas: Environmental goods and service sector, NAMEA-air and environmental related taxes.

The project objectives include:

Part I: Environmental goods and service sector

The objective was to identify the population of producers of EGSS within CEPA 1 (air/climate) and CEPA 4 (soil/groundwater/surface water), and to compile turnover and employment figures.

Part II: NAMEA-air

The objective was to improve the timeliness of NAMEA air statistics by setting up a system for compiling such statistics 4.5 months after the reference year

Part III: Environmental related taxes

The objective was to develop time-series and to improve the timeliness of the environmental related tax statistics

A detailed description of the work is given in the Final technical Implementation Report to Eurostat for Grant Agreement No. 50304.2008.001-2008.337. The following provides a brief summary of the various activities performed as a part of this the 2009 NOREEA-project.

2. Part I: Environmental goods and service sector

2.1 Objective:

The main objectives of this project were to establish the populations and compile turnover and employment for the environmental domains air/climate and soil, groundwater and surface water. Our plan was to use the same methodology as in earlier case studies, i.e. “The Swedish methodology” (SCB, 2006). They make use of already existing data sources and registers within SCB to compile their statistics. Our objective was to develop this methodology further by identifying the environmental shares of each environmental company.

2.2 Activities:

The first part of the project consisted of setting up a draft population list for companies in the environmental domains we wanted to concentrate on. We made use of a range of relevant sources to draft a first list of companies that might possibly be part of the population. Then second step was to “wash” the draft list. This is a much more demanding process, including closer studies of each

company to find out whether they should be included or not. The final list was dramatically cut compared to the draft list.

For our project we had been in contact with the OECD about using information from their patent database to identify producers of environmental goods. We then tested whether this source of information could be an easier way or give additional information in establishing the population. This data base served to identify a few companies, but was not as important a source as we had first thought.

We tested several options to estimate environmental shares in companies: information from web-sites, annual reports and even calling companies.

After compiling preliminary estimates, we carried out some comparisons with other statistics (foreign trade statistics and environmental protection expenditure).

2.3 Results:

For the environmental domain air/climate the methodology did not work as expected. This was due to problems with identifying environmental shares in companies which have environmental products only as a minor share of their production. For the companies within the group soil, groundwater and surface water, this was easier, and estimates for turnover and employment have now been calculated.

3. Part II: NAMEA-air

3.1 Objective:

The objective of this project was to develop a method for improving the timeliness in publication of the NAMEA-air data, to enable Statistics Norway to publish statistics for emissions intensities and emissions by standard industry groups (NACE) one year earlier than what is currently the case (t+1 instead of t+2).

3.2 Activities:

The first part of the project consisted trying to get an overview of how the current preliminary emission figures are compiled. This work included several start-up meeting with the Emission inventory group and later bilateral meetings with the experts in charge of the different sub-sectors within the emissions inventory.

As no overview documentation existed we started to draft one. This turned out to be a very time consuming job. It was therefore decided to approach the task in a simpler manner, and let the emission inventory group themselves do the documentation work. It was further decided that given the low level of details (breakdown) in the preliminary emissions inventory statistics, we should also aim for an aggregate level industry breakdown.

Compilation was carried out based on the underlying data used as input to the emissions inventory statistics. This seemed to work fine. Two specific problems were identified and had to be dealt with specifically. One was the fluorine gases and the other was international shipping and international air transport. A system was set up to estimate preliminary fluorine gas emissions by industry.

For international air and shipping we needed to have meetings with and discuss with the division for energy statistics and the division for national accounts. It was decided that international air can be calculated in the same way as domestic air transport. For international shipping it was decided to use t-1 data.

3.3 Results:

The objectives were reached. We set up a system to compile preliminary NAMEA-air data, broken down by 1-digit NACE. The compilation is mostly based on the same input data as for the preliminary emission inventory statistics, but for some sectors estimations methods were developed. The methodology is ready for use in publication of preliminary air emissions in May 2010.

4. Part III: Environmental related taxes

4.1 Sub-project a) Possibilities for developing time-series

4.1.1 Objective:

The objective of this sub-project is to prepare input-data for detailed taxes on products and other taxes on production in order to develop environmental tax accounts for NAMEA for the period 1995–2004. Crucial for the project was the development of a side model to the existing SAS system in order to develop a program that can “run” the national account system for the years 1995 – 2004 with new input files for taxes (and subsidies) without disturbing the other information in the national accounts.

4.1.2 Activities:

The first part of this sub-project consisted of discussions with representatives from the division for National Accounts and the IT-development division in order to figure out how to realise the theoretical plans made for the development of time-series for environmental related taxes.

The second part of this sub-project consisted of preparing input files for all taxes and subsidies in a more detailed version, not only the information regarding environmental related taxes. Also scripts transforming the national industry codes to the NACE rev 2 industries in the Eurostat reporting tables were developed. This was done by the division for environmental statistics.

But, at the latest stages of sub-project a), it became clear that the possibilities of successfully completing the side-model necessary to develop time-series for the period 1994-2004 for environmentally related taxes on products divided by industries, was not possible within the time frame of this project.

4.1.3 Results:

Environmental related other taxes on production by industries are produced for the years 1995-2004. In addition, as a result of this project, Statistics Norway has developed all necessary input data in order to establish a technical solution for estimating environmental related taxes on products by industries for the time period 1995–2004. The concept of the side model needed for this work has been developed according to the requested needs, however the actual programming needed was more extensive than first assumed, therefore requested more resources from the IT-division. Based on the solid work undertaken as part of this project, the further programming of the side-model will be undertaken by the costs of Statistics Norway, and total environmental related taxes by industries are expected to be available by mid April 2010.

4.2 Sub-project on improving the timeliness

4.2.1 Objective:

The objective of this sub-project was to examine the possibilities of improving timeliness of the environmental tax accounts for NAMEA. Compiling environmental related taxes by industries based on quarterly national accounts will enable Statistics Norway to publish this statistics by standard industry groups (NACE) two years earlier than what is currently the case.

4.2.2 Activities:

The first part of this sub-projects consisted of discussions with representatives from the division for National Accounts in order to get a clear picture of how taxes are integrated into the preliminary national accounts, what sources in use and what possibilities of cooperation that existed.

Since there did not exist any documented method for improving timelines of environmental related taxes by industries, it was decided not to develop a program that was integrated into the preliminary national account system as is the case for the final national account system.

In the second part of this sub-project, different methods in order to distribute taxes on products by industries were discussed. Trial calculations based on the industry-distribution method for the year 2006 was done. These results were compared to final figures from 2006.

4.2.3 Results:

For the estimating of preliminary environmental related taxes by industries based on the provisional annual national accounts, the industry-distribution methodology did not work as expected.

Ideally, a mix of different methods should be used according to the nature of the tax and available information. For some taxes, the industry-breakdown method and the production-growth method would probably be fine for estimating provisional environmental tax figures by industries, while for other taxes it would be more correct to use energy consumption figures for those areas where this is possible. This is though a resource demanding activity, and discussions have to be taken valuing the benefits of improving the timeliness to include t-1 data against the costs of achieving it.

However, we found that improving timeliness from t-3 to t-2 can be done only by hasten the planned time of publication for environmental related taxes by industries. Figures for t-2 will still be based on the already existing method based on the final national accounts, i.e. environmental related taxes can be presented by detailed NACE industries. Hasten the publication to November instead of May the following year, means that links between the environmental related taxes and the NAMEA-air data have to be done based on aggregated industry levels. This is due to the NAMEA-air data not being published by detailed NACE-levels in November t+2 (see part 2 of this Eurostat-project).