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Adapting the Norwegian Environmental Accounts to the legal base (phase I)

Part 2: Expand the NAMEA Environmental related tax accounts

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Summary

This report documents the work done to be able to produce Norwegian statistics for environmentally related taxes according to the Eurostat definition, broken down by economic activity, and consumers (households). These statistics becomes required reporting under EU-regulation 691/2011 in 2013. It also documents some of the challenges Statistics Norway is still facing in fulfilling this obligatory reporting to Eurostat.

Work needed to be done in order to coordinate the Norwegian reporting of the totals of the different environmentally related taxes. When comparisons between the different totals being reported to Eurostat, OECD and DG TAXUD from various institutions in Norway it was obvious that better national coordination was needed. One main result of this project has been the establishment of an agreed national process for evaluating which taxes are to be included on the National Tax List (NTL) taking the Eurostat definition for granted, which will then also be used for reporting total figures and be used to distribute the taxes by industries (NACE rev 2, A64) plus households. This national coordination – with Statistics Norway and with the Ministry of Finance – will help eliminate the discrepancies that have previously been present. We remark that Statistics Norway work on a separate project establishing statistics for environmental taxes following a Pigouvian definition of the term. Using 2007 as an example, about 20 per cent of the tax revenue in Norway following the Eurostat definition is defined as environmental taxes (Bruvoll, 2009).

In 2010 the data on environmentally related taxes broken down by industries was developed for the first time in a coordinated fashion. The industry classification then used was NACE rev. 1 A*17, and not the classification of economic activity for producers as stated in EU- regulation, NACE Rev.2 (A*64 aggregation level as set out in ESA 95). To report the environmentally related taxes in this required form, a revision of the 2010 system was undertaken. The conclusion is that the figures for environmentally related taxes for 2007 onwards to t-3 years are of good enough quality to be reported on an annual basis. For the years from 2007 – 2009, the statistics are considered final figures.

Due to the transition to the new revised industry classification in the national accounts system (NACE rev 2), it is only possibly to produce figures back to 2003 for taxes on products and for other taxes on production, we only have detailed information back to 2007 using NACE rev 2. This means that a consistent time series using NACE rev 2 at the industry breakdown of A64* only will be available starting from 2007. Since the regulation states that the first transmission should include annual data starting from 2008, this will not be problematic.

To achieve the goal of transmitting the statistics within 21 months of the end of the reference year, as stated in the EU-regulation, it is not possible to use the final national accounts since these are not currently available until 23 months after the reference year. This means that a system using other data sources will be needed for reporting the most current year's data. Various data sources and methods for estimating the t-2 year data were a major focus of this project. An estimation methodology was determined for most of the different types of taxes – including the use of averages for relatively stable data and the use of a bottom-up approach based on the use of different energy products available in the energy statistics and accounts. Some additional work still needs to be made for 3-4 different taxes since an appropriate methodology was not yet identified.

This project has led to the development of a new system and new processes connected to the national accounts databases which will allow the distribution of tax revenues to the various industries and households. Coordination of evaluating new taxes and reviewing the national tax list (NTL) has also been established – since this was identified as key to consistent reporting both nationally and internationally. Future work will focus on evaluating the quality of the reported data – beyond consistency over the time series – and establishing methods for estimating t-2 years data for the remaining taxes for which adequate methods have yet to be identified.

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1 Introduction

Statistics Norway is according to the EU regulation 691/2011 (Eurostat, 2011) on environmental economic accounting[1] obliged to report environmentally related taxes by industries/economic activities defined by the EU regulation to Eurostat on an annually basis from 2013 on with the time series beginning in 2008.

Statistics Norway has for several years reported total environmentally related taxes to Eurostat on a voluntarily basis, but the totals have neither been divided by industries nor have they been published at Statistics Norway as official statistics. This is due both to methodological challenges related to the allocation of taxes by industries and to discussions of which taxes to include, how to present the statistics, and the different treatments of taxes that address environmental harmful actions by industries.

Definitions and classifications of environmentally related taxes are not straight forward. The definition of environmentally related taxes that according to the EU regulation are to be reported to Eurostat aims to include all taxes *related* to environmental aspects. This opens for inclusion of a broader set of taxes than the pure environmental taxes derived from economic literature. See Næss and Smith 2009, Bye and Bruvoll 2008, and Bruvoll 2009 for further discussions related to these two ways of defining environmental taxes. Statistics Norway aims to publish statistics that will serve both ways of defining environmental (related) taxes.

This report summarises the work processes that have been established in order to meet the reporting requirements stipulated in the annex to EU-regulation 691/2011 on environmentally related taxes by industries. The figures presented in this report for environmentally related taxes will therefore follow the definitions given in the EU-regulation 691/2011 and statistical guidelines provided by Eurostat (see chapter 4).

The work undertaken as part of this project have to be seen in connection to the previous projects on environmental relevant taxes undertaken by Statistics Norway and partly funded by Eurostat. Particularly the following two publications will, together with this report, give a good overview of the compilation of environmentally related taxes by industries in Statistics Norway:
- Environmentally related taxes in Norway. Totals and divided by industries (Næss and Smith, 2009)
- Environmentally related tax account for NAMEA – Possibilities for developing time-series and improve timeliness (Smith et. al, 2010).

The analysis in this report is not undertaken with a purpose to present and explain the development of revenues from environmentally related taxes in Norway. This is a technical report, describing the remaining actions that have been necessary to undertake in order to try to meet the 2013 reporting requirements to Eurostat (see chapter 2).

There is at present several reporting arrangements of environmentally related taxes from different divisions within Statistics Norway as well as from the Norwegian Ministry of Finance to Eurostat, DG TAXUD and OECD. These various reporting arrangements will in this report be referred to as the following:
- Reporting of environmentally related taxes by industries according to EU-regulation 691/2011 is referred to as: “Questionnaire” or “Eurostat-reporting”
- Reporting of the National Tax List (NTL) to Eurostat and DG TAXUD is referred to as “NTL-reporting”
- The revised NTL from DG TAXUD is referred to as “revised NTL” or “NTL from DG TAXUD”
- The reporting of environmentally related taxes from the Ministry of Finance to OECD is referred to as “OECD-reporting”.

[1] See Annex 2 in: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:192:0001:0016:EN:PDF

2 The objectives of the project and approaches used

2.1 The overall objective

The overall objective of this project is to finalise the development of the environmentally related tax statistics in Statistics Norway in order to meet the requirements for these data specified in the EU regulation 691/2011 on environmental economic accounts.

In practice this means that we by the end of the project will be able to fill inn figures for environmentally related taxes by industries (NACE rev 2, A64 plus households and non-residents) as required[2] in the *Questionnaire* that are obligatory reporting to Eurostat from 2013.

Although the focus of this project is to provide data for the reporting of environmentally related taxes, the reporting of the *Questionnaire* to Eurostat also includes 9 questions on the metadata and coverage of the data. The majority of these questions are dealt with in detail in different chapters in this report. A summary, similar to what will be reported to Eurostat as part of the Questionnaire, is attached in Annex D.

2.2 Actions undertaken in order to meet the overall objective

In order to achieve this objective, 3 main actions have been identified and carried out, see chapter 2.2.1 - 2.2.3.

2.2.1 Coordinating and streamlining the reporting of total environmentally related taxes to Eurostat, OECD and DG TAXUD

Eurostat and OECD have stressed the importance of coherence between the environmentally related tax data reported to Eurostat, OECD and DG TAXUD from various institutions in Norway as well as from various divisions within Statistics Norway.

Statistics Norway is reporting a National Tax List (NTL) as part of the ESA-reporting to Eurostat and DG TAXUD. This list contains information about which taxes are regarded as environmentally related taxes. The totals of environmentally related taxes in NTL have differed from the total figures in the environmentally related taxes by industries which are now being developed as part of the EU regulation on environmental economic accounting. Coherence between the information on taxes reported to Eurostat is important, as well as coherence with the tax information reported to OECD by the Ministry of Finance and included in the OECD/EEA database on instruments used for environmental policy and natural resources management[3].

At the beginning of this project, all of these three sources of information on environmentally related taxes diverge from each other, mainly due to the inclusion of different taxes in the different reporting systems, although they all are supposed to use the same definition.

Objective:
This action will aim at harmonising the reporting arrangements to OECD, DG TAXUD and Eurostat. The objective of this action is to decide upon a common population of taxes defined as Norwegian

[2] In the original Grant Application sent Eurostat in June 2010 it was stated that work would consist of evaluating the quality of the already established detailed figures for 1995 - 2006 on environmentally related taxes by industries according to NACE rev 1 A60 in order to meet future reporting obligations. Due to the conversion of the National Account data from NACE rev 1 to NACE rev 2, it was in this project necessary to convert from NACE rev 1 to NACE rev 2 industry breakdown as a basis for the work.

[3] http://www2.oecd.org/ecoinst/queries/

environmentally related taxes to be used by the various actors in Statistics Norway reporting to Eurostat (Questionnaire and NTL), as well as in the reporting to OECD.

A comparison of the Norwegian environmentally related taxes reported to Eurostat and the information present in the NTL as well as the OECD/EEA-database about Norwegian environmentally related taxes was undertaken. Procedures for filling possible gaps will also be developed.

Method:
In order to close the gaps between the various reporting systems of the environmentally related taxes, it soon became clear that the processes of preparing figures for environmentally related taxes had to be changed. The various actors, particular from the various divisions within Statistics Norway involved in this process, had to be in touch with each other at a much earlier stage than before in order to include in the various statistical systems, what taxes to define as environmentally related ones (see chapter 4). The Statistics Norway's business process model[4] has been used as a starting point for organising work and to set up a process flow chart of data collection, validation and reporting of environmentally related taxes by industry (see chapter 5).

2.2.2 Development of the environmentally related taxes by detailed industries

In 2010 an IT program was developed as an integrated part of the national account system in order to estimate environmentally related taxes on products broken down by industries. These figures and the environmentally related other taxes on production broken down by industries were then reported for the first time to Eurostat. The reported industry-breakdown was NACE rev. 1 A17, not the now required NACE rev. 2 A64.

In 2011, the NACE rev. 2 industry classification was implementing in the national accounts, as well as the corresponding revised product classification (the Norwegian version of CPA). The revision of the National Accounts and the conversion to NACE rev 2 unfortunately had some negative impacts on our previous IT system for extracting data. First and foremost it is no longer possible to use the existing IT program in order to extract environmentally related taxes on products divided by industries from the national accounts before 2003.

Objective:
The objective of this action is to systematise the extraction of environmentally related taxes by detailed industries data from the national accounts according to NACE rev. 2 A64 (and households) in order to fill the reporting tables to Eurostat. Development of some rough consistency checks by review the time-series for the various tax categories on a detailed industry level is also desirable.

Method:
In order to start this part of the project, new revised lists of environmentally related taxes by the NACE rev 2. A64 breakdown of industries had to be developed. The revision of the National Accounts and the conversion to NACE rev 2 meant that revised input files and conversion code lists for the IT program were needed in order to systematise the data according to the reporting tables to Eurostat. Revisions to the IT programming were also needed.

2.2.3 Methods to improve timeliness of reported figures

In 2009 attempts were made in order to improve the timeliness of environmentally related taxes basing the calculations on the provisional annual national accounts. The method turned out not to be suitable as a general method to use for all taxes and industries. No calculation of environmentally related taxes are therefore done by using the provisional annual national accounts. This means that the current system for the compilation of environmentally related taxes only covers figures for t-3 and earlier. Improving the timeliness is now of particular importance, since the text in the legal base states that

[4] See: http://www.ssb.no/emner/00/90/doc_200817/doc_200817.pdf

“Statistics shall be transmitted within 21 months after the end of the reference year (annex II, section 4, point 2)”. By using the annual final national accounts, we will not be able to meet this requirement (final national accounts figures are published 23 months after the end of the reference year).

Objective:
Examine what method and source(s) to use in order to propose how to improve the timeliness of the statistics in order to meet the t-21 month reporting requirement.

Method:
Each environmentally related tax has been examined to find out if

- the basic data later used in the final National Account to allocate taxes by industries already is available and/or
- the allocation of the tax by the industries used for the final t-3 figures can also can be used for t-2 figures (or a moving average of last years) and/or
- there are other sources than those used in the final national accounts that can be used

3 Norwegian environmentally related taxes – what to include?

Although *environmentally related taxes* is defined in the EU-regulation and further explained as part of explanatory notes as part of the Questionnaire, it is not straight forward to define which taxes to include and exclude when setting up a list of Norwegian environmentally related taxes. A common understanding of what to include as environmentally related taxes according to the EU-regulation is essential in order to develop a common *national* list of taxes defined as environmentally related ones.

In this chapter, the official requirement that the EU-regulation sets for reporting environmentally related taxes by industry is presented, as well as a presentation of which Norwegian taxes that Statistics Norway according to this regulation defines as environmentally related taxes.

The list of Norwegian environmentally related taxes presented in this report is to be regarded as preliminary until the first obligatory reporting of environmentally related taxes in September 2013.

As discussed and explained in chapter 4, this list still differs from the current overviews of environmentally related taxes presented for Norway by the National Tax List (NTL) from DG TAXUD. The current review of the Norwegian taxes and the processes that have now been developed will minimise – and hopefully eliminate – these gaps in the future.

3.1 What to define as an environmentally related tax?

The EU regulation 691/2011 establishes a common framework for the collection, compilation, transmission and evaluation of European environmental economic accounts, including environmentally related taxes by industries, for the purpose of setting up environmental economic accounts as satellite accounts to ESA 95. This regulation provides common standards, definitions, classifications and accounting rules intended to be used for compiling environmental economic accounts.

Definition of environmentally related tax:
From the EU regulation (Eurostat, 2011)[5] an environmentally related tax is as *a tax whose tax base is a physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment, and which is identified in ESA 95 as a tax.*

Definition of environmentally related tax-categories:
The regulation specifies that the statistics on environmentally related taxes shall be produced according to characteristics as either an energy tax, a transport tax or as a pollution or resource tax (see box 3.1).

[5] EU regulation (Eurostat, 2011); Article 2, definition (2).

Box 3.1: Definition of the 4 tax-categories of environmentally related taxes

Energy taxes (including fuel for transport) include taxes on energy products used for both transport and stationary purposes. The most important energy products for transport purposes are petrol and diesel. Energy products for stationary use include fuel oils, natural gas, coal and electricity.
The CO_2 taxes are included under energy taxes rather than under pollution taxes. There are several reasons for this. First of all, it is often not possible to identify CO_2 taxes separately in tax statistics, because they are integrated with energy taxes, e.g. via differentiation of mineral oil tax rates. In addition, they are partly introduced as a substitute for other energy taxes and the revenue from these taxes is often large compared to the revenue from the pollution taxes. This means that including CO_2 taxes with pollution taxes rather than energy taxes would distort international comparisons. If they are identifiable, CO_2 taxes should be reported as a separate category next to energy taxes.

Transport taxes (excluding fuel for transport) mainly include taxes related to the ownership and use of motor vehicles. Taxes on other transport equipment (e.g. planes), and related transport services (e.g. duty on charter or scheduled flights) are also included here, when they conform to the general definition of environmental taxes. Taxes on petrol, diesel and other transport fuels are included under energy taxes.

Pollution taxes include taxes on measured or estimated emission to air or water, management of solid waste and noise. An exception is the CO_2 taxes, which are included under energy taxes.

Resource taxes are related to water consumption, forestry and mining. All taxes related to oil and gas extraction should be excluded from the data for international comparison reasons, this for international comparison purposes.

The tax base list defining what to include as an environmentally related tax:
Whether a tax is to be regarded as an environmentally related tax or not according to the EU-regulation definition is determined by the tax base of the tax. More exactly, if the tax base of a tax is included in the *tax base list* given in the EU regulation, the tax is to be defined as an environmentally related one – regardless of if the tax base actually is a *physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment* or not. In addition, all taxes on energy and transport are to be included. The name, or the expressed purpose, of a given tax is not a criterion in this definition. The focus is instead on the potential environmental effects of the given tax.

The tax base list is presented in box 3.2 and gives an outline over tax categories included in the environmental tax statistics framework. The list was composed by Eurostat in order to ensure international comparability of data and was agreed upon in 1997. This list has been slightly updated in 2011. All taxes levied on items in the tax bases listed below are defined as environmental taxes by Eurostat (Eurostat, 2012).

Box 3.2: The tax base list

Energy products (including fuel for transport)

- Energy products for transport purposes
- Unleaded petrol
- Leaded petrol
- Diesel
- Other energy products for transport purposes (e.g. LPG or natural gas)
- Energy products for stationary purposes
- Light fuel oil
- Heavy fuel oil
- Natural gas
- Coal
- Coke
- Biofuels
- Electricity consumption and production
- District heat consumption and production
- Other energy products for stationary use

Transport (excluding fuel for transport)

- Motor vehicles import or sale (one off taxes)
- Registration or use of motor vehicles, recurrent (e.g. yearly taxes)
- Road use (e.g. motorway taxes)
- Congestion charges and city tolls (if taxes in national accounts)
- Other means of transport (ships, airplanes etc.)
- Flights and flight tickets

Pollution

- Measured or estimated emissions to air
- Measured or estimated NOx emissions
- SO_2 content of fossil fuels
- Measured or estimated Sulphur emissions
- Other measured or estimated emissions to air
- Ozone depleting substances (e.g. CFCs or halons)
- Measured or estimated effluents to water
- Measured or estimated effluents of oxydisable matter (BOD, COD)
- Other measured or estimated effluents to water
- Effluent collection and treatment, fixed annual taxes
- Non-point sources of water pollution
- Pesticides (based on e.g. chemical content, price or volume)
- Artificial fertilisers (based on e.g. phosphorus or nitrogen content or price)
- Manure
- Waste management
- Collection, treatment or disposal
- Individual products (e.g. packaging, beverage containers, batteries, tyres)
- Noise (e.g. aircraft take-off and landings)

Resources

- Water abstraction
- Harvesting of biological resources (e.g. timber, hunted and fished species)
- Extraction of raw materials (e.g. minerals, but excluding oil and gas)
- Landscape changes and cutting of trees

An important factor in the definition of the tax base in relation to the Norwegian situation is the definition of the tax base regarding resource taxes, more precisely the exclusions from the tax base. As stated above in box 3.1, all taxes related to the extraction of oil and gas as a tax base for resource taxes should be excluded for international comparison reasons, i.e. comparison between countries and over time.

The argument given in the guidelines from Eurostat (2001, 2012) is that the revenue from these taxes is important in only a few EU/OECD countries. The tax systems also differ between countries, with different combinations of royalties, exploitation fees, special corporate tax rates and direct government ownership of extraction companies. This means that including these taxes in the definition would make comparisons of environmental and resource tax revenue very difficult. Another argument to exclude revenue from oil and gas extraction is that taxes on the extraction of oil and gas often are designed to capture the resource rent, and do not influence prices in the way that other environmental taxes, e.g. product taxes, do. The resource rent can be defined as the value of output less all extraction costs, including a normal return to fixed capital, and represents a kind of “pure profit” from extraction. In many countries taxes on the resource rent are not considered taxes in the national accounts. A tax on the resource rent does not introduce a difference between the price received by the extractor and the price paid by the users in the way that a product tax does, and the market price will be affected only if the supply of the product changes because of the tax on the resource rent.

However, there are taxes levied on the petroleum industries that are to be defined as environmentally related ones, but these are not defined as resource taxes. The taxes on CO_2- and NO_X-emission from petroleum extraction are included as environmentally related taxes because the tax base is "measured or estimated emission to air". We regard the taxes on CO_2 emissions from petroleum extraction as an energy tax (i.e. box 3.1 defining that all taxes on CO_2-emission are to be regarded as an energy tax) and the tax on NO_X emissions in the petroleum sector as a pollution tax.

There are not yet any guidelines from Eurostat in relation to the treatment of tradable GHG-emission quotas when it comes to the reporting of environmentally related taxes. According to the latest guidelines in relation to the National Accounts, only those tradable GHG-emission quotas bought directly from the Government is regarded as "taxes" in the National Account, meaning that by definition not all tradable GHG-emissions quotas are to be included in the reporting of the environmentally related taxes. This is problematic in the sense that a shift from a CO_2-tax to tradable GHG-emission quotas will change total energy taxes, even though there have not been any major changes in the taxation of CO_2-emissions (given that CO_2-taxes and tradable GHG-quotas are regarded as equivalents).

Also value added type taxes (VAT) are in general excluded from the definition of environmental taxes. This is mainly because of the special characteristics of this type of tax. VAT is a tax levied on all products (with few exceptions), and it is deductible for many producers, but not for households. Because of this, it does not influence relative prices in the same way that other taxes on environmental tax bases do.

Using this definition on what is regarded as an environmentally related tax, we can embark on defining the taxes to be included in the Norwegian reporting to Eurostat of environmentally related taxes.

3.2 The National tax list (NTL) – the new starting point

Prior to this project, the starting point for the work with the Questionnaire was the final National Accounts. However, it is in the National Tax List, prepared by the Division for Public Finances in collaboration with the Division for National Accounts, that the most current figures for taxes for the first time is defined as environmentally related taxes or not. In May/June in year t, tax figures for the year t-1 are included. Within September in year t, the NTL is reported to Eurostat and DG TAXUD.

From the basis of the NTL the different national taxes are classified according to the tax categories given by Eurostat (2001, 2012) i.e. as an energy tax, a pollution tax, a transport tax or as a resource tax.

In order to better coordinate the internal processes of the definition of which taxes to include as environmentally related ones, the Environmental Accounts team is now involved in the preparation of the NTL and responsible for the decision of which taxes to be defined as environmentally related ones according to the Eurostat/OECD/EEA definition.

The data in NTL contains data on revenue by main individual taxes which are supplied to the EU statistical office Eurostat annually by the National Statistical Offices in EU Member States (plus Iceland and Norway). The NTL follows the ESA95 classification of national accounting. According to Annex II in the EU regulation the taxes defined as environmentally related falls within ESA95 categories D.2 (Taxes on production and imports), D.5 (Current taxes on income, wealth etc.) and D.91 (Capital taxes). The NTL therefore represents a good overview over all the relevant taxes to be considered as environmentally related or not.

In the next sections an overview of the Norwegian environmentally related taxes are presented,

together with information on what tax bases that the tax is levied on. It also includes references to the revised NTL and how the NTL was utilized to meet the requirements set by Eurostat discussed in chapter 4.2 when classifying the national taxes accordingly.[6] In chapter 4.1 and 4.2, comparisons between the current NTL, OECD/EEA-database and the list of Norwegian environmentally related taxes in the Eurostat-reporting are given.

3.3 Classification of environmentally related taxes by category

Table 3.1 below includes the set of national environmentally related taxes distinguished by environmentally related tax categories (see box 3.1 for definitions of the tax categories) in the most recent evaluation undertaken. Some taxes that were considered environmental taxes by DG TAXUD are not included here. See chapter 4.4 for further elaboration on this issue. The table also includes listings over chapter and post in the Norwegian Fiscal Accounts (chapter/post), the codes used for taxes in the national accounts (ytart), the code the taxes were assigned in the National Tax List, the year for which the tax was introduced, the tax category i.e. the classification according to definition from Eurostat, and a more detailed specification over the classification of tax base. If the tax is a tax on a product, a product code is stated in brackets after the tax name. The chapter and post is not listed if the tax no longer exists, i.e. if the tax was lifted during the reporting period. When referring to the tax base list, both the general classification and the more detailed listing are referred to.

Table 3.1: Overview of Norwegian environmentally related taxes by tax category and tax base

Name of tax	Chapter/ post	Code in NTL	Date intro.	Tax category	Specific tax base
Tax on CO_2 emissions from petroleum extraction	5508/ 70	D214LB	1991 -	Energy tax	CO_2 tax is specified in the tax base as an energy tax.
Tax on NO_X emissions in the petroleum sector	5507/ 70	D29FB	2007 -	Pollution tax	Taxes on measured or estimated NO_X emissions are specified in the tax base as a pollution tax.
Petrol Tax (41361)	5536/ 76	D314AA	1933 -	Energy tax	Tax on unleaded petrol and leaded petrol are specified in the tax base as an energy tax.
Diesel Tax (41345)	5536/ 77	D214AB	1993 -	Energy tax	Tax on diesel is specified in the tax base as an energy tax.
Tax on lubricating oil (41347)	5542/ 71	D214AE	1988 -	Energy tax	Tax on lubricating oil (light and heavy fuel oil) is specified in the tax base as an energy tax.
CO_2 tax (41364)	5543/ 70	D214AF	1991 -	Energy tax	CO_2 tax is specified in the tax base as an energy tax.
Sulphur tax (41365)	5543/ 71	D214AO	1970 -	Pollution tax	Taxes on measured or estimated sulphur emissions are specified in tax base as a pollution tax.
Tax on mineral oil (41343)		D214AE	1991 – 1999	Energy tax	Tax on mineral oil (light and heavy fuel oil) is specified in the tax base as an energy tax.
Base tax on mineral oil (41346)	5542/ 70	D214AE	2000 -	Energy tax	Base tax on mineral oil (former base tax on fuel oil) is specified in the tax base as an energy tax.
Tax on fertilizers		D214AG	1988 – 1999	Pollution tax	Tax on fertilizers is specified as a pollution tax in the tax base.
Tax on the final treatment of waste	5546/ 70	D29FA	1999 -	Pollution tax	Tax on waste management is specified in the tax base as a pollution tax.
Tax on trichloroethane and tetrachloreten (41391)	5547/ 70/71	D29HC	2000 -	Pollution tax	Tax on trichloroethane and tetrachloreten are categorized as tax on ozone depleting substances and included under pollution taxes

[6] The distinction between the NTL and the revised NTL is discussed in chapter 5.2.

Name of tax	Chapter/ post	Code in NTL	Date intro.	Tax category	Specific tax base
Tax on greenhouse gases HFC and PFC (41341)	5548/70	D214AH	2003 -	Pollution tax	Tax on greenhouse gases HFC and PFC is categorized as other measured or estimated emissions to air i.e. pollution tax.
Base tax on disposable beverage packaging (41366)[7]	5559/ 70	D214AP	1994 – 1999	Pollution tax	Individual products (e.g. packaging, beverage containers, batteries, tires) are specified in the tax base as pollution
Environmental tax on disposable beverage packaging (41367/41368/41369)	5559/ 71/72/73/74	D214AQ	1973 -	Pollution tax	Taxes in individual products (e.g. packaging, beverage containers, batteries, tires) are specified in the tax base as a pollution tax.
Tax on electricity consumption (41349)	5541/ 70	D214AD	1951 -	Energy tax	Tax on electricity consumption and production are specified in the tax base as an energy tax.
Tax on NO_X emissions, petroleum sector excluded (41348)	5549/ 70	D214AX	2007 -	Pollution tax	Taxes on measured or estimated NO_X emissions are specified in the tax base as a pollution tax.
Motor vehicle registration tax (41351/41352)	5536/ 71	D214DA	1955 -	Transport tax	Motor vehicle registration tax is specified in the tax base as a transport tax.
Annual weight based tax on motor vehicles	5536/ 73	D29BA	1993 -	Transport tax	Annual weight based tax on motor vehicles is specified in the tax base as a transport tax.
Annual motor vehicle tax	5536/ 72	D29EB	1917 -	Transport tax	Annual motor vehicle tax is specified in the tax base as a transport tax.
Re-registration tax on motor vehicles	5536/ 75	D214DB	1959 -	Transport tax	Re-registration tax on motor vehicles is specified in the tax base as a transport tax.
Tax on coal (41344)		D214AS	1991 – 1999	Energy tax	Tax on coal is specified in the tax base as an energy tax.
Tax on air traffic passengers (41379)		D214HA	1994 – 2002	Transport tax	Tax on air traffic passengers is specified in the tax base as a transport tax.
Tax on pesticides	5550/ 70	D214AG	1998 -	Pollution tax	Tax on pesticides is specified in the tax base as a pollution tax.
Marine engine tax (41363)	5537/ 71	D214AC	1978 -	Pollution tax	Marine engine tax is levied to as a fiscal tax and to reduce noise and high speed and therefore considered a pollution tax in accordance with the tax base.
Annual tax, fisher boat registry	5575/ 73	D29EJ	2009 -	Transport tax	Annual tax, fisher boat registry – similar to annual motor vehicle tax – specified in the tax base as a transport tax.
Anti traffic accident premium		D29BB, D59FA	- 2004	Transport tax	Anti traffic accident premium paid by enterprises and household is categorized under transport taxes.

The following table 3.2, further stipulates the tax revenues from the national environmentally related taxes for the period 1995-2010. The taxes are sorted by tax categories and given in national currency, million NOK, in current prices. The table will be referred to in the analysis undertaken later in this report when it represents an overview of the development in the respective tax categories.

[7] After 1999, the base tax on disposable beverage packaging became a part of the environmental tax on beverage packaging.

Table 3.2. National environmentally related taxes by tax categories. Million NOK (current prices). 1995-2010*.

Million NOK (current prices)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
Environmentally related taxes, totals	**34837**	**38608**	**39995**	**41130**	**42685**	**46024**	**47628**	**47645**	**49005**	**54244**	**56147**	**61318**	**64716**	**63069**	**60063**	**64634**
Energy taxes	**21470**	**22260**	**23804**	**23370**	**24614**	**26882**	**27180**	**25317**	**25834**	**26380**	**27193**	**28175**	**29532**	**30818**	**30334**	**31593**
Tax on CO2- emissions from petroleum extraction	2559	2787	3034	3229	3261	3047	2861	3012	3056	3309	3306	3405	3385	3392	2215	2166
Petrol tax	9935	10042	10883	11367	9623	9755	8821	8548	8651	8754	8623	8412	8132	7872	7694	7373
Tax on mineral products, total	1330	1798	1514	1631												
Tax on production of electricity	1519	1533	1471	2	2											
Electricity consumption tax	3254	3100	3344	3393	3482	4993	7015	5631	5173	5492	5884	5962	6344	6399	6821	7322
Diesel tax	2804	2928	3489	3679	4533	4813	4067	3977	4305	4731	5217	5746	6425	7312	7798	8653
Tax on coal and coke	9	10	6	2												
CO2 tax on mineral products					3643	3814	3576	3587	3848	3462	3643	4100	4469	4491	4442	4603
Tax on mineral oils					1	372	754	482	720	548	435	456	685	1257	1276	1378
Tax on lubricating oil	60	62	63	67	69	88	86	80	81	84	85	94	92	95	88	98
Transport taxes	**12969**	**15919**	**15706**	**17298**	**16739**	**17946**	**19265**	**21064**	**21595**	**26202**	**27247**	**30848**	**31359**	**28993**	**27346**	**30843**
Motor vehicle registration tax	7484	9900	9345	9976	8892	9556	9821	12319	12888	17125	17737	20721	20724	18541	16375	19517
Re-registration tax on motor vehicles	1100	1229	1307	1348	1402	1410	1595	1598	1796	1820	1882	2049	2172	2119	2295,7	2318
Annual motor vehicle tax	3225	3403	3688	4247	4442	4626	5348	5583	5780	6964	7281	7722	8110	7977,6	8320	8665
Mileage tax for diesel vehicles	2	14	4	2	8	1										
Tax on air traffic passengers	441	631	651	1056	1272	1320	1389	434								
Annual weight based tax on motor vehicles	293	315	271	214	226	273	342	314	299	293	347	356	353	355	346	334
Annual tax, fisher boat registry															10	9
Anti traffic accident premium	424	427	440	455	497	760	770	816	832							
Pollution taxes	**398**	**429**	**485**	**462**	**1332**	**1196**	**1183**	**1264**	**1576**	**1662**	**1707**	**2295**	**3825**	**3258**	**2383**	**2198**
Tax on beer packaging	14	13	13	11	31	3										
Tax on wine and liquor packaging	55	51	66	59	63	8										
Tax on packaging on carbonated beverages	15	10	11	9	22	1										
Tax on still soft beverages	28	32	37	32	29	1										
Tax on fertilizers	167	172	171	165	108	2										
Tax on final treatment of waste					442	483	473	498	501	554	488	596	684	697	491	279
Tax on pesticides	19	22	21	24	35	53	35	56	65	85	49	63	70	72	56	53
Base tax on disposable beverage packaging	100	129	166	162	259	325	363	433	694	639	674	1075	1150	1226	1232	1262
Tax on plastic beverage containers						15	22	39								
Tax on metal beverage containers						100	102	86								
Tax on glass beverage containers						48	45	45								
Tax on paper beverage containers						13	15	17								
Tax on trichloroethane						4	7	4	4	4	3	3	2	2	2	1
Tax on tetrachloroethane						1	2	2	2	2	2	3	2	2	1	1
Tax on greenhouse gases HFC and PFC									61	123	167	176	222	249	236	255
Tax on NO_X emissions in the petroleum sector													491	292	47	20
Tax on NO_X emissions													716	340	78	67
Sulphur tax on mineral products					343	139	119	84	95	40	32	56	129	91	65	55
Tax on marine engines									154	215	292	323	359	287	175	205

3.4 Discontinuity in the time series in 2003 and 2007

The current method used to allocating environmentally related taxes by industry groups started in 2009. The taxes were then also allocated to the different tax categories. Based on earlier pilot studies a distribution among industries according to NACE rev. 1 was made for the years 1995 – 2007. Later also an IT-tool in order to withdraw tax-information from the National Accounts on environmentally related taxes by industries was developed. Unfortunately, the revision undertaken of the National Accounts as part of the conversion from NACE rev. 1 to NACE rev. 2 caused some changes in the structure of how basic data on taxes are incorporated in the National Accounts, causing problems for the possibilities of using the IT-tool in order to withdraw harmonised time-series back to 1995 for the environmentally related taxes by industries.

2003: Discontinuity in the content of some of the tax-categories

The tax-base list has in relation to the new EU-regulation been updated/revised, and a new evaluation of the tax-categories has been undertaken as part of this project. The new evaluation settled on a somewhat different classification than the previous one. The differences were related to which taxes to include in the definition of environmentally related taxes and in which of the four tax categories the taxes were placed. This led to some discrepancies between the new and the old total figures in the tax categories compounded.

For example, in the old figures the tax on marine engines was not considered an environmentally related tax, but is now included. Another example is regarding the classification of the sulphur tax and tax on lubricating oil. In the previous classification sulphur tax on mineral products was categorized as an energy tax, but is presently considered a pollution tax according to the Eurostat tax base. It was previously an energy tax due to a Nordic “tradition” dating back to a common energy tax project in 2003 (Næss and Smith, 2009). The opposite is the case regarding the tax on lubricating oil, which went from being a pollution tax to an energy tax in the latest evaluation. In this case, it has been the various tax bases in the tax base list that has been the main reason for systematising the taxes in the different tax -categories (see box 3.2). Following the explanatory text of each tax category given by Eurostat in box 3.1, one could argue that all taxes on energy products (is lubricating oil an energy product? And what about the mineral product levied with a tax on Sulphur?) should be regarded as part of energy taxes. The categorisation of taxes is not straight forward.

These discrepancies are present in the current reporting of environmentally related taxes broken down by industries i.e. in the Questionnaire. Table 3.2 presents the corrected tax revenues within each tax category and the total tax revenue for the whole economy from 2003 (Næss and Smith, 2009). For the years before 2003 the previous categorisation of taxes is still present.

The discontinuities in the time series before and after 2003 in the present reporting of the Questionnaire will not be addressed due to time-limitations.

2003: Discontinuity for taxes on products allocated by industries

The industry breakdown of the environmentally related taxes on products prior to 2003 is only available in NACE rev. 1 and based on the National Accounts figures prior to the last revision.

A new withdrawal of environmentally related taxes by industries using the IT-tool has for the years prior to 2003 not been possible due to the changes made with the basic tax input data as part for the conversion to NACE rev. 2 in the National Accounts.

The total values of the different taxes are not affected, only the allocation by industries. In order to provide longer time-series for the analyses of the environmentally related taxes by industries, a conversion from NACE rev. 1 to NACE rev. 2 was made for the environmentally related taxes. This

means that the allocated figures for taxes on products prior to 2003 are based on the National Account prior to the last revision. The changes in the National Account due to the revision for the years prior to 2003 were minimal, however, the detailed results in the Questionnaire for these years should be analysed with this in mind.

Converting these figures to harmonise with the revised National Account figures is not a prioritised work task at the moment.

2007: Discontinuity for other taxes on production allocated by industries
The industry breakdown of the other environmentally related taxes on production prior to 2007 is only available in NACE rev. 1 and based on the National Accounts figures prior to the last revision.

From 2007 on, the basic data for other environmentally related taxes on production is available in NACE rev 2. For the years prior to 2007 this is not the case. In order to provide longer time-series for the analyses of the environmentally related taxes by industries, a conversion from NACE rev. 1 to NACE rev. 2 was made for these years. This means that the allocated figures for other taxes on production prior to 2007 are based on the National Account prior to the last revision. **The total values of the different taxes are not affected**, as well as for those NACE-groups where there is a 1:1 relationship between NACE rev 1 and NACE rev 2 are not affected. However, the detailed results in the Questionnaire for the years prior to 2007 should be analysed with this change in mind.

3.4.1 Conclusion
A fully consistent time series only begins at 2007. Longer time series have certain adjustments that do not result in full consistency. Also the change from CO2-taxes to tradable GHG-emission quotas might cause discontinuity in the time-series after 2005.

4 Need of streamlining reported figures to Eurostat, DG TAXUD and OECD

At present, the reporting of environmentally related taxes to Eurostat, DG TAXUD and OECD is not streamlined, each organisation is showing different totals for what is regarded as environmentally related taxes in Norway. In line with the reporting of the Questionnaire, the importance of coherence between the taxes reported in the NTL to Eurostat/DG TAXUD and the information reported to OECD by the Norwegian Ministry of Finance has been stressed.

Particularly the differences between the reporting of environmentally related taxes broken down by industries and the tax information in the revised NTL has been more evident, since the Eurostat-report now includes a comparison to the DG TAXUD revenue totals on each tax category.

As a starting point, Eurostat has in the Questionnaire included the revenue totals already reported in the NTL for Norway, revised by DG TAXUD, and these totals are to be compared to the revenue totals in each tax category in the reporting to Eurostat of environmentally related taxes broken down by industries. Any differences between the totals from the revised NTL and the totals from the Eurostat-reporting have to be explained.

4.1 Comparison of reporting to DG TAXUD and OECD

The situation prior to the work undertaken in 2012 in relation to the Eurostat-reporting showed some differences between the reported taxes in the revised NTL and the OECD/EEA-database for the Norwegian environmentally related taxes. The main difference is related to which national taxes are regarded as environmentally related, and if the tax revenue for a given year is reported as a book value or as an accrued value.

The classification and definition of national environmentally related taxes was not thoroughly coordinated between Statistics Norway and the Ministry of Finance prior to the current reporting which led to some differences in total tax revenue from environmentally related taxes. When it comes to the timing of the tax revenue, this is mainly with regards to the individual national taxes, which in turn will influence the total revenue. The differences are mainly present in the years after 2007 when the figures reported to OECD are recorded as book value, while most of the figures in the NTL are accrued values, time-lagged by one month. In the time period prior to 2007, the figures in the NTL were mainly book values, such that the revenue from each national tax matched the figures in the OECD-reporting. The time-lagging after 2007 is structured so that the tax revenue in January in year t is subtracted from the total tax revenue in year t, and the tax revenue from January in year t+1 is added. This time-lagging performed by the divisions in Statistics Norway is executed to adjust for when the tax is actually applicable/accrued, rather than when the tax revenue is received.

4.2 Comparison of the data from the revised NTL and the Questionnaire

A part of the evaluation of the present reporting consists of comparing the total figures in the Questionnaire with the revised NTL. Explaining the differences between these two totals (if present) is also included in the Questionnaire as part of the table with questions on methodology and coverage of the reported data.

As previously stated, the NTL contains data on revenue by all individual taxes following the ESA95 classification. The taxes defined as environmentally related according to the Eurostat-definitions are to be identified with the corresponding tax category, i.e as an energy-, pollution-, transport- or resource tax.

When comparing the figures, we found some differences in the total figures. The comparison comprised of comparing total figures and reported revenue for the individual taxes. The differences in total figures were mainly due to differing classifications of environmentally related taxes; whether it was the inclusion or exclusion of certain taxes or the placement of the taxes in the different tax categories. A discussion over these differences in total revenue follows.

In the NTL, the initial definition of environmentally related taxes was first executed by the Division of Public Finances at Statistics Norway before being revised by the DG TAXUD. This revision is present in the current NTL included as a starting point for the comparison of figures that are to be divided by industries and reported to Eurostat. Some of the taxes that were included in the revision are under discussion in chapter 5.4 when their inclusion is questioned with respect to the present definition of environmentally related taxes and may be the cause of the differences in total revenues in the tax categories.

Certain taxes in the revised NTL may have been included by DG TAXUD merely on the basis of the name of the tax, even though the tax itself may not fulfil the requirements to be defined as an environmentally related tax.

4.3 Explaining the differences between the revised NTL and the Questionnaire

As the situation is at the moment, some of the differences between the revenue totals between the revised NTL and the Questionnaire are due to the discontinuity discussed in chapter 3.4, but some are also due to the difference in classification and definition of which taxes to be defined as environmentally related taxes. After controlling for these differences (see chapter 4.3.1 - 4.3.3) there are still some discrepancies that need to be explained for the years prior to 2007 when comparing individual tax revenues with figures in the NTL.

The main reason for the differences is the different methods with the use of book value and accrued value, respectively, in the two divisions within Statistics Norway. The figures reported in the NTL-report are generated by the Division of Public Finances, while the figures to be broken down by industries in the present reporting are generated by the Division for National Accounts. The figures for 2007 and earlier are for the most part reported to Eurostat/DG TAXUD as book values, while the figures from the Division of National Account are accrued values adjusted in order to conform to when the tax was actually levied (the same procedure as stated in chapter 4.1).

As part of the revision of the National Accounts finalised in 2011, the processes for the recording of taxes between the Division for Public Finances and the Division for National Accounts were better harmonised. The tax revenues for the years 2008 – 2010 reported as part of the NTL and the data received from the National Accounts now seems to be the same.

The following discussion takes a basis in the current definitions of environmentally related taxes in the revised NTL, i.e. the latest revised version of the NTL done by DG TAXUD, and shows a comparison of the present situation in total revenue when taxes are broken down by industries. It also sheds some light on the source of the differences in each tax category.

4.3.1 Differences for the energy taxes

The main difference when comparing total revenues for energy taxes is due to the different inclusions in the definition of energy taxes prior to 2003 and the exclusion of tax on CO_2 emissions from petroleum extraction in the revised NTL. The exclusion of the tax on CO_2 emissions (and also the tax on NO_X emissions) in the petroleum sector has been caused by the more strict interpretation of the definition of environmentally related taxes when all taxes related to oil and gas extraction were stated to be excluded. In the resent evaluation these two taxes have not been excluded when considered as

energy tax and pollution tax, respectively.[8]

Tax on coal was considered a pollution tax in the definition given in the revised NTL, but according to the definition given in the tax base; this tax should be defined as an energy tax. Both the tax on electricity paid to the Norwegian Energy Fund and the tax on renewal of licences (hydro electric plants etc) was included in the NTL as energy taxes after revision by DG TAXUD, but was excluded in the latest evaluation of national taxes as environmentally related. Further, the tax on sulphur emissions was included as an energy tax in the time period 1999-2002 due to the discontinuity discussed in chapter 3.4.

Due to some double counting of the tax on mineral products (mineral oil) when the totals were reported to the NTL earlier, some differences are present in the years 2004-2006. The NTL figures are higher than when the tax is broken down by industries[9]. The difference is also present for the same years in regards to the CO_2 tax on mineral products. It appears that this error has been corrected since new figures from the national accounts are the same as for totals used for the industry breakdowns.

In total the inclusions and exclusion explains a lot of the differences, but unfortunately not all of them. The smallest differences can be explained by rounding off to nearest million NOK, but the most important difference is caused by the time-lagging of national taxes in the Division for National Accounts. As mentioned above, the practices for the two divisions are the same from 2007 on and yields equal sums for revenue from individual national taxes.

However, the differences in the revenues from the tax on electricity consumption cannot be explained by time-lag and is in need of further enquiry.

4.3.2 Differences for the pollution taxes

As mentioned under energy taxes, the tax on NO_X emissions in the petroleum sector was not included as an environmentally related tax in the revised NTL due to interpretation of definitions. In addition to this, the two main taxes that contributed to the differences are the taxes related to beverage containers, and the natural resource tax and municipal licence fees causes some differences in total revenue in pollution taxes. In the revised NTL, the first taxes are not included for the figures for the years prior to 2000,[10] while on the other hand, the natural resource tax and municipal licence fees were included as a pollution tax in the revised NTL reported 2011, but was excluded in the resent evaluation of defined pollution taxes. This latter decision is discussed in chapter 4.4.8.

The discontinuity is also present here with regards to the tax on sulphur emissions when it previously was categorized as an energy tax up until the year 2003. Another issue regarding the sulphur tax is the discrepancies in the years 2004-2006. This may have been caused by double counting when retrieving the tax figures[11]. When broken down by industries, these totals are much smaller than the figures reported in the revised NTL.

The tax on fertilizers was included under the tax on pesticides in the revised NTL until it was halted in 1999.

In total this led to a significant discrepancy in the total tax revenue from pollution taxes compared to the total figures reported in the definition in the revised NTL.

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[8] This has been confirmed to be correct by Eurostat in e-mail correspondences 6th and 11th of June 2012.

[9] The revenue from tax on mineral and tax on lubricating oil is combined in the NTL. The comparison is executed with regards to total recorded figures equal to the figures reported to OECD.

[10] This may be due to the timing of the making of the list when only current taxes may have been included and backdated when the taxes related to beverage containers underwent a reallocation of the tax basis in 2000, see chapter 7.1.3.

[11] The same double counting problem that was present in the tax in mineral oil and the CO_2 tax on mineral products under energy taxes.

4.3.3 Differences for the transport taxes

When comparing the national taxes considered as transport taxes in the revised NTL, some differences are present compared to the definition of transport taxes broken down by industries. In the latter definition of transport taxes, fewer taxes have been included. The taxes excluded are tonnage tax (payable by shipping companies), anti traffic accident premium paid by enterprises and by households, and annual tax for harbour safety. In retrospect, the anti traffic accident premium should have been included as a transport tax, but due to time limitations and the fact that this tax was in force only in the years before 1994, is was not included this time.

In terms of comparing total revenues, even after controlling for the differences in taxes included, there are still some discrepancies that need explaining. The taxes causing these discrepancies are the motor vehicle registration tax, the tax on air traffic passengers and the annual motor vehicle tax. As previously argued in regards to the other tax categories, this is due to the time-lag used in the Division for National Accounts. The differences vary between years, which emphasize the cyclical variations present in these taxes. Throughout the period the differences in the revised NTL and the present reporting even out in total tax revenue on the individual national taxes. The only difference not explainable is regarding the annual tax on motor vehicles in the years 2002-2006.

When comparing the categorization of the taxes among the four tax categories, the tax on marine engines is relevant for discussion. In the tax base it says that all taxes related to transport should be included as a transport tax. However, in the latest evaluation this tax was defined as a pollution tax instead of a transport tax due to the tax basis it was levied upon, cf. table 3.1 and box 3.2. This may call for further discussion in the future.

4.3.4 Differences for the resource taxes

In the revised NTL, several taxes have been defined as resource taxes while this is not the case in the present reporting. In the present reporting, no taxes have been defined as resource taxes. This issue is further discussed in the next chapter.

4.4 National taxes up for discussion: environmentally related or not?

As several taxes are defined as environmentally related taxes according to the revised NTL compared to the current Eurostat-reporting, some national taxes are up for discussion on whether they should be included as an environmentally related tax or not. This chapter views these taxes in light of the tax base, the argument behind levying of the tax, and in what way the tax affects the economy.

In the latest evaluation of which national taxes to be considered environmentally related, some taxes stand out and are in need of some discussion. This is mainly a question related to the taxes defined as resource taxes in the revised NTL. The main argument used in this discussion is related to the definition of an environmentally related tax, i.e. to be defined as an environmentally related tax, the tax has to have a proven, specific negative impact on the environment and be a tax which is identified in the national accounts as a tax.

The taxes up for discussion are the following, which all are included in the revised NTL from DG TAXUD:

- Hunting and fishing licenses
- Taxes transferred to Svalbard Environmental Fund
- Tax on subsea natural deposits other than petroleum
- Tax on exploration- and extraction rights for minerals
- Tax on control and inspection of aquaculture (fish farming etc)
- Tax, fishing fleet
- Tax on electricity paid to the Norwegian Energy Fund

- Annual tax, fisher boat registry
- Anti traffic accident premium paid by enterprises and consumers
- Natural resource tax and municipal licence fees

Most of these taxes are specifically earmarked to finance the control and regulation in certain industries, levied to finance actions to preserve the environment or levied to prevent damage to the environment. The definition of an environmentally related tax is key when there is a question if these taxes are levied on something that has a proven, negative effect on the environment.

Further, it is also a question about how much weight one should put on the fact that the activities that these taxes are related to (see definition of resource taxes in box 3.2) are listed in the tax base list, if the basic definition of an environmentally related tax is not met.

4.4.1 Hunting and fishing licences

Hunting and fishing licenses are levied on consumers (households) and is a transfer of payments for the right to hunt and fish in seasons. This payment is defined as a tax in the national accounts and may be regarded as payment for a permit and a charge to regulate and control the fish and wildlife stock. In this regard the discussion is related to if the payment for hunting and fishing licences is regarded as an environmentally related tax because this tax is related to the harvesting of biological resources which is included as a tax base for resource taxes.

Status: In the present reporting, these hunting and fishing licences have not been included. The licenses in themselves are not of negative effect on the environment, nor is the fishing and hunting when it is contributing to a sustainable stock in the nature.

4.4.2 Taxes transferred to Svalbard Environmental Fund

Taxes transferred to Svalbard Environmental Fund consists mainly of an environmental tax on travellers to Svalbard (primarily by airplanes), but it also consists of payments for hunting and fishing licenses on Svalbard (see also 4.4.1). The taxes to the Fund contribute to initiate and stimulate good projects and initiatives which aim to protect Svalbard's environment. In this regard the discussion is related to if the transfer of the taxes should be considered environmentally related, and if that is the case, under what tax base is should be placed.

Status: Not included in present reporting since the tax is regarded as imposed to prevent damage, without an actual proven, negative effect on the environment.

4.4.3 Taxes related to mineral activities

Under the category for taxes related to mineral activities we find two taxes on exploration and extraction of mineral products i.e. tax on subsea natural deposits other than petroleum and tax on exploration- and extraction rights for minerals. Both taxes are solely related to the granting of licenses for the purpose of exploration and extraction rights, where one is concerning subsea deposits, and the other is related to land-based exploration and extraction rights. There has only been given two licenses in the past years for subsea natural deposits other than petroleum. If these are to be considered environmentally related taxes depends on what you could consider as the tax base the tax is levied upon.

Status: Not included in present reporting since the tax is regarded as imposed to finance control over certain resources, where the tax base is not the extraction itself, but the rights to exert the exploration and extraction of natural resources, without any relation to the actual extraction.

4.4.4 Tax on control and inspection of aquaculture and tax on the fishing fleet

Tax on control and inspection of aquaculture (fish farming etc) and the tax on the fishing fleet are levied to finance costs of inspecting activities to the fishing industry. In light of the definition of an

environmentally related tax, we cannot say that these taxes are environmentally related due to the fact that the tax is not levied on the activity itself, but rather on an action to finance the control of this activity. One can also argue that the activities in the fishing industry do not have a direct negative impact on the environment in itself, only the consequence of it if the size of the fish stock is not controlled.

Status: Not included in present reporting since the tax is regarded as imposed to finance control over certain resources or to preserve or prevent damage, without an actual proven, negative effect on the environment.

4.4.5 Tax on electricity paid to the Norwegian Energy Fund

Tax on electricity paid to the Norwegian Energy Fund is earmarked Enova Energy Fund to finance environmentally friendly energy restructuring. This is an additional tax to the tax on electricity. The tax falls outside the definition of an environmentally related tax when it is levied to finance specific activities instead of levied to counteracting negative effects on the environment.

Status: Not included in present reporting since it has not been included as a tax in the National Accounts. However, it will be included from November 2012, and a decision must be taken by this time. The tax is considered financially motivated, but the same argument can be used when looking at the ordinary tax on electricity which has been considered an environmentally related tax.

4.4.6 Annual tax paid to the fishing boat registry

An annual tax is paid to the fishing boat registry for each fishing boat registered in Norway. The tax is independent of change of owners i.e. it is not a re-registration tax. The tax can be regarded as similar to the annual motor vehicle tax and therefore considered a transport tax to the extent that it qualifies as an environmentally related tax in having a proven negative impact.

Status: Included in present reporting as a transport tax

4.4.7 Anti traffic accident premium

Anti traffic accident premium paid by enterprises and households was in the period before 2004 collected by insurance companies. After 2004 it became a part of the annual motor vehicle tax and the annual weight based tax on motor vehicles.

Status: The tax is included as a transport tax due to the definition of the tax base, but was not included before 2004 due to previous classification and time limitations other priorities.

4.4.8 Natural resource tax and municipal licence fees

The natural resource tax is a tax only for producers of hydro power where the revenue from the tax is received by the local municipalities and counties. The tax is levied to recognize that Norwegian hydroelectricity production is a national resource deeply rooted locally and regionally, so that the municipalities should be secured steady income from the local power production. The natural resource tax is not an additional tax burden on the companies (producers), because it is deducted from ordinary income tax which in Norway is a state tax.
The municipal licence fees are compensation for inflicted damage in districts where the water resource is located. It is also a policy instrument to give the districts a part of the economic profit from development of hydro power. The revenue from the tax is received by the municipalities, not the State.

The name of the natural resource tax may be the cause of why the tax was included as an environmentally related tax in the NTL. When evaluation the grounds for levying this tax, it was purely financially motivated to create a reallocation of income.

Status: The municipal license fees are presently not included as an environmentally related tax, but this decision may be reconsidered at a later point in time.

4.5 Conclusion

To eliminate the differences between the figures reported in the NTL to Eurostat/DG TAXUD and the figures compiled in the present reporting, the Environmental Accounts team is now responsible for the decisions regarding which taxes are to be defined as environmentally related within Statistics Norway, according to the definitions given by Eurostat.

The figures reported in the future will be consistent between the Division of Public Finances and the Division for National Accounts since they now use the same methods for generating tax figures, based on the final annual national accounts.

To check about the differences between the figures reported to OECD by the Norwegian Ministry of Finance, and to Eurostat by Statistics Norway there has been e-mail correspondence between these two institutions in order to raise awareness of the future obligatory reporting of environmentally related taxes by Statistics Norway. However, there will still be a slight discrepancy in regards to total revenue due to the different methods in registering the tax revenue between the Ministry of Finance and Statistics Norway i.e. book values and accrued values, respectively.

As part of the new established work process, Statistics Norway will send a copy of the NTL to the Ministry of Finance when reporting this list to Eurostat/DG TAXUD. Although there is a representative from the Norwegian Ministry of Finance that on a regular basis joins the DG TAXUD-meetings, the new procedures will hopefully make the information in the NTL available earlier than before.

After developing these coordination activities, a process flow chart for the development of the statistics for environmentally related taxes was developed and is presented in the next section.

5 Process flow chart for work with environmentally related taxes

The process of preparing figures for environmentally related taxes by industries in accordance with the reporting requirements in the EU-regulation involves several work phases and several divisions in Statistics Norway. For regular production of these figures and to contribute to the quality of these statistics, it is important that robust processes related to the persons involved in the data collection, validation and reporting are agreed upon.

As part of evaluating the Norwegian figures for environmentally related taxes by industries, a flow chart of the data collection, validation and reporting of environmentally related taxes by industry has been established.

The process flow-chart is based on the Statistics Norway's business process model (Statistics Norway, 2008), and aims to get an overview of the process with the input(s) needed , the main process steps and, finally, the outputs which in this case is the reporting of figures to Eurostat in accordance with the EU-regulation 691/2011 on environmental economic accounting.

Figure 5.1 displays in a flow chart the main actions undertaken in order to prepare figures for the Eurostat-reporting. The different boxes have been assigned numbering according to the actions in table 5.1 below.

The work processes related to the reporting of figures for the final year asked for in the reporting tables to Eurostat has a somewhat different process path compared to the other years. The work processes that are undertaken for hence "final" and "preliminary" figures are elaborated further in chapter 6.3 and 6.4, respectively.

Figure 5.1: Flow chart of main actions for work with environmentally related taxes

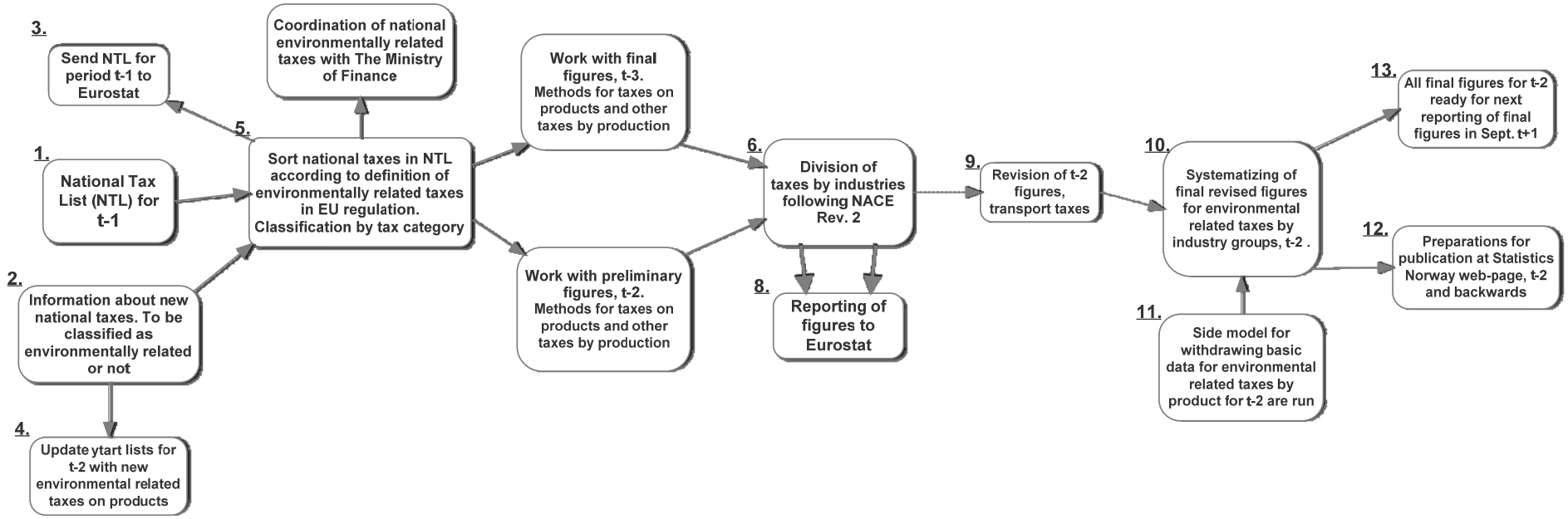


Table 5.1: Annual plan for the activities and actors involved with environmentally related taxes

	Year t (2012)		**Type of Activity:** **1**=Definition of population **2**=Final figures **3**=Preliminary figures **4**=Reporting to EU **5**=National publication	**Division of Public Finances**	**Division for National Accounts**	**The Environmental Account Team**
1.	May/June	Inform the Environmental Account Team about new taxes for t-1(2011) introduced in the NTL.	**1**	**X**		
2.	May/June	Decide whether new taxes for t-1 (2011) are to be regarded as environmentally related ones or not. If new tax is defined as an environmentally related tax, the tax category has to be decided	**1**			**X**
3.	July-Sept	Send NTL to Eurostat/DG TAXUD for period up to 2011 with copy to the Ministry of Finance. When receiving revised NTL from DG TAXUD, comments have to be followed up. Always affirmative / not affirmative reply to DG TAXUD.	**1**	**X**		
4.	July/Aug	Update the "YTART-lists" for t-1 (2011) and t-2 (2010) with new environmentally related taxes on products send to the Division for National Accounts	**1**			**X**
5.	May/June	Preparing the input data for the EU-reporting of figures for the environmentally related other taxes on production, i.e. preliminary industry breakdown for t-2 (2010).	**3**			**X**
6.	May/June???	When work with the industry breakdown of the environmentally related other taxes on production for **t-2 (2010)** is finalised, send relevant information to the Environmental Account Team	**3**		**X**	
7.	August	Preparing input data for the EU-reporting of figures for the environmentally related taxes on product, i.e. preliminary industry breakdown for final figures for t-2 (2010).	**2**			**X**
8.	September	**Reporting to Eurostat** of environmentally related taxes by industries (A64) for preliminary figures for t-2 (2010) and revised figures for t-3 (2009 is now final) and backwards.	**4**			**X**
9.	Sept/Oct	When work with the industry breakdown of the environmentally related taxes on transport is finalised for final figures for t-2 (2010), send relevant information to the Environmental Account Team. Revision of 2010-figures.	**2**		**X**	
10.	Nov	Final revised figures for environmentally related taxes by industries for t-2 (2010) are systematised in tax categories and by industry groups (NACE A64 and national industry classifications)	**2**			**X**
11.	Nov	The side model for withdrawing the basic data for environmentally related taxes by products for final figures for t-2 (2010) are run, and data is sent the Environmental Account Team	**2**		**X**	
12.	Dec	Preparations for publication at Statistics Norway web-page for final figures for t-2 and backwards	**2, 3 and 5**			**X**
13.	Dec	Fill in Eurostat-tables for the final figures for t-2 (2010) and backwards (these revised 2010-figures are now ready for the next reporting of figures in September year t+1 (2013).	**5**			**X**

6 Which industries pay the environmentally related taxes?

When streamlining the scope of Norwegian environmentally related taxes in the reporting of figures to Eurostat, DG TAXUD and OECD, it is the total figures that are in focus.

The present reporting of the Questionnaire to Eurostat differs from other reporting-arrangements of taxes to Eurostat/DG TAXUD and OECD by dividing the environmentally related taxes by the activities (industries) and households that are actually paying the taxes.

Chapter 6.1 and chapter 6.2 provide basic information about allocation of taxes broken down by industries.

The remaining parts of chapter 6 will give an overview of the processes undertaken in Statistics Norway in order to set up the present reporting tables for Eurostat for the environmentally related taxes broken down by industries. There are two main processes undertaken, one for the figures based on the final national accounts (see chapter 6.3) and one for the figures compiled for the last year (t-21 months) asked for in the Questionnaire (see chapter 6.4).

6.1 Methods used to allocate the environmentally related taxes to industries

The environmentally related taxes are allocated according to economic activity – broken down by 64 groups of industries (NACE rev. 2 A64) as well as households and non-residents as consumers. In this way the present reporting gives information on who actually pays the environmentally related taxes. There is also a category for not allocated when the economic activity is impossible to allocate to one of the tax categories.

With exception of the last year to be reported (t-21 months), the basis for the environmentally related taxes is the final national accounts. The industry breakdown for the figures based on the final national accounts is already given by the published national accounts figures. However, neither the industry breakdown of the taxes on products in general nor the environmentally related taxes are specifically shown in the published national account figures. An IT model was established in 2010 in order to separate the environmentally related taxes on products from the other taxes, as well as to distribute the various environmental taxes by industries. For a description of the method used, see Smith et. al, 2010. For the environmentally related other taxes on production, the environmentally related taxes are already divided by industry.

For the environmentally related taxes for the last year to be reported in the Questionnaire, the final national account cannot be used as a source since it is not yet finalised. The detailed information needed for the industry breakdown of the EU requirements does not exist in the preliminary national accounts, and other sources and methods therefore have to be developed. In chapter 6.4 in this report some possible methods and sources to use in order to improve the timeliness of the data will be reviewed.

6.2 Industries with tax exceptions

The information on tax exceptions is important information, both in the work with the allocation of taxes by industries and when analysing the final results. It is also required reporting in the Questionnaire in the table where questions regarding methodology and coverage of the data is accounted for.

The information on tax exceptions is for taxes on products included as an integrated part of the National Account balancing process. Input files for each tax (ytart) are prepared, containing information about which industries are exempted from paying the tax and if relevant which industries

are facing a lower tax rate than the general one. These input files are easily available from the national Account system (see annex D).

For other taxes on production, information about tax exceptions is not an integrated part of the National Account balancing process. Information about tax exceptions are taken care of before any information about other taxes on production is incorporated into the National Account balancing process. An overview of these exceptions still does not exist.

One could from the different tax regulations see what actions actually should have been exempted from being levied with a tax. However, it is not sure that all these exemptions actually have been possible to incorporate when the various tax revenues have been allocated to the various industries.

The present work has revealed a need to establish an overview of what actions according to the tax regulation should be exempted from the tax and to what degree these exemptions have been possible to implement in the national Account system in addition to information about how often these input files for exemptions are updated.

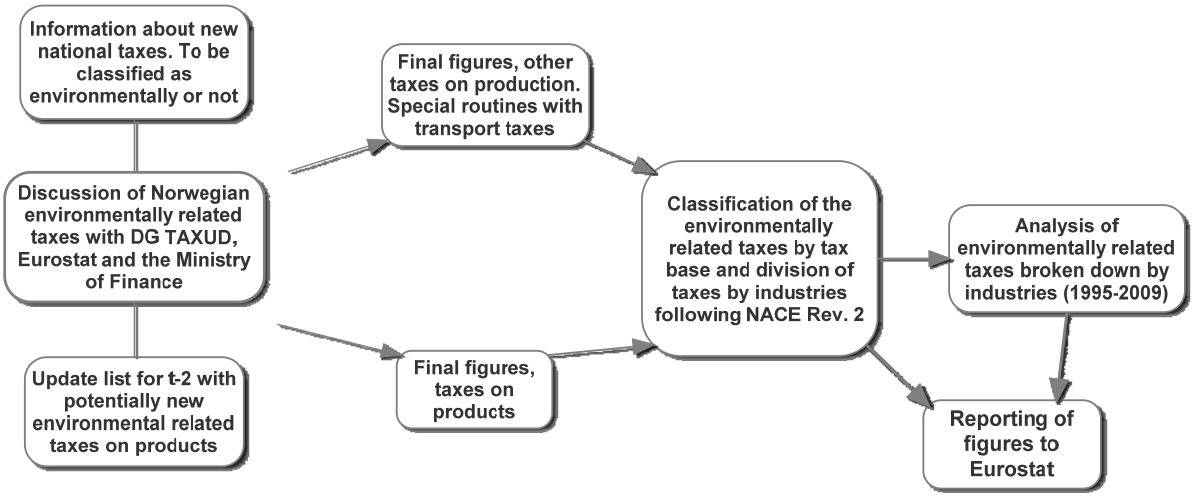
6.3 Using the final National Account as a source to compile final figures

Final figures for environmentally related taxes broken down by industries are comprised of tax revenues for year t-3 and backwards. The presentation here has a basis in the flow chart in figure 6.1.

6.3.1 Flow chart for work with final figures

The flow chart presents the work undertaken to report final figures for environmentally related taxes on a breakdown by hierarchical classification of economic activities for the producers, and the reporting of consumers paying the taxes in the economy.

Figure 6.1: Flow chart for final figures using the National Account as the main source



6.3.2 Process prior to producing final figures

The first step when starting a new process of reporting environmentally related taxes is to clarify potentially new national taxes that may have arisen since last reporting. This information is to be given from the Division of Public Finances to the Division for Energy and environmental statistics who then assesses if the new taxes are in accordance with the definition given by the EU regulation.

The next step is to place the potentially new environmentally related taxes in the tax category where the new tax belongs. This is done by the Environmental Accounts Team (activity 2 in table 5.1). When this is finalized, the total newly revised list over national environmentally related taxes is sent to the Division for National Accounts to break down the national taxes by industries. The previously identified national environmentally related taxes have already been categorised according to the official definition.

In 2008 a new structure and method for incorporating taxes on products into the national accounts became a standard part of the compilation of final national accounts figures when new input files was produced. The new structure uses the Standard Industrial Classification from 2007 to break down the taxes to industry level. In 2011, the industry classification NACE rev 2 A64 was implementing in the national accounts, where the industry classification NACE rev 1 A17 was previously used. A system for the years 1995-2002 are still sought after, as the so far produced figures are not as detailed as desired.

6.3.3 Different processes for taxes on products and other taxes on production

When presenting the national taxes, a distinction between the different methods used concerning taxes on products and other taxes on production is necessary. The classification between the two tax types used in this reporting is made by the Division for National Accounts (other Divisions may use another classification). As mentioned above, taxes on products are broken down by industries by the Division for National Accounts in accordance with the respective use of the products. For other taxes on production, the taxes are allocated on specific industries when input files for the National Accounts are produced. An exception is some of the transport taxes.

The division of Environmental and Energy Statistics sort the taxes to the different tax categories before they are sorted according to the industry breakdown in the Questionnaire (NACE Rev. 2). Finally, the taxes on products and other taxes on production are assembled.

6.4 Identification of sources and methods for preliminary figures

The EU-regulation states that “Statistics shall be transmitted within 21 months after the end of the reference year” (Annex II, section 4, point 2). Using the annual final national accounts, we will not be able to meet this requirement (final national accounts figures are published 23 months after the end of the reference year). In order to base the calculations on the provisional annual national accounts, the Eurostat-financed project in 2009 concluded that a mix of different methods should be used according to the nature of the tax and available information (Smith et. al, 2010).

Examining what other method and source(s) to use in order to meet the reporting requirements for the last year to be reported in the Questionnaire (t-2) is therefore important.

For each of the environmentally related taxes, the final figures for the total of the taxes exist for t-2 at the time of reporting figures to Eurostat. The challenge is to allocate these totals to the industries levied with the tax.

Notice that the figures for the environmentally related taxes on products for 2010 (t-2) in the present reporting to Eurostat is compiled using the same allocation as used in 2009. The proposed sources and methods presented in chapter 6.4.2 is still not applied. This will, if proved to work out, be accomplished for t-2 (2011) as part of the first obligatory reporting of figures in 2013.

See table 6.1 for an overview of which sources are proposed for the various preliminary calculations of the environmentally related taxes.

Table 6.1: Proposed sources for preliminary figures (t-2) for each environmentally related tax

Name of tax	Chapter/ post	Code in NTL	1 = other environmental taxes on production 2 = tax on product	Tax-category	Proposed source for preliminary figures	Final/ preliminary
Tax on CO_2 emissions from petroleum extraction	5508/ 70	D214LB	1	Energy tax	National Accounts.	Final
Tax on NO_X emissions in the petroleum sector	5507/ 70	D29FB	1	Pollution tax	National Accounts.	Final
Petrol Tax (41361)	5536/ 76	D314AA	2	Energy tax	Energy account	P (energy accounts data)
Diesel Tax (41345)	5536/ 77	D214AB	2	Energy tax	Energy account	P (energy accounts data)
Tax on lubricating oil (41347)	5542/ 71	D214AE	2	Energy tax	Energy account	P (energy accounts data)
CO_2 tax (41364)	5543/ 70	D214AF	2	Energy tax	Energy account	P (energy accounts data)
Sulphur tax (41365)	5543/ 71	D214AO	2	Pollution tax	Government Accounts.	P (average)
Base tax on mineral oil (41346)	5542/ 70		2	Energy tax	Energy account	P (energy accounts data)
Tax on the final treatment of waste	5546/ 70	D29FA	1	Pollution tax	National Accounts.	Final
Tax on trichloroethane and tetrachloreten	5547/ 70/71	D29HC	2	Pollution tax	National Accounts.	Final
Tax on greenhouse gases HFC and PFC (41341)	5548/70	D214AH	2	Pollution tax	National Emissions Inventory	P
Base tax on disposable beverage packaging (41366)	5559/ 70	D214AP	2	Pollution tax	Government Accounts.	P (average)
Environmental tax on disposable beverage packaging (41367/41368/41369)	5559/ 71/72/73/74	D214AQ	2	Pollution tax	Government Accounts.	P (average)
Tax on electricity (41349)	5541/ 70	D214AD	2	Energy tax	Government Accounts.	P (average)
Tax on NO_X emissions, petroleum sector excluded (41348)	5549/ 70	D214AX	2	Pollution tax	National Emissions Inventory	Not allocated
Motor vehicle registration tax (41351/41352)	5536/ 71	D214DA	2	Transport tax	Norwegian vehicle registry	P
Annual weight based tax on motor vehicles	5536/ 73	D29BA	1	Transport tax	National Accounts.	Final
Annual motor vehicle tax	5536/ 72	D29EB	1	Transport tax	National Accounts.	Final
Re-registration tax on motor vehicles	5536/ 75	D214DB	1	Transport tax	National Accounts.	Final
Tax on pesticides	5550/ 70	D214AG	1	Pollution tax	National Accounts.	Final
Marine engine tax (41363)	5537/ 71	D214AC	1	Pollution tax	Government Account	P (average)
Annual tax, fisher boat registry[12]	5575/ 73	D29EJ	1	Transport tax	National account	Final

[12] The annual tax to the fisher boat registry was introduced under other taxes on production in 2009.

6.4.1 Other environmental taxes on production – same source as for final figures

The review of the internal procedures for the compilations of final figures for other environmental taxes on production, revealed that these taxes are allocated by industries by the Division of Public Finances and the Division for National Account at such an early time that figures for t-2 are regarded as final at the time of reporting of the Questionnaire to Eurostat. These input data can therefore be used without having entered the National Account balancing procedures. Same procedures as for the final figures for other environmentally related taxes on production are followed.

The total revenues of the other environmentally related taxes on production was in 2009 22.9 per cent of the total environmentally related taxes.

6.4.2 Environmentally related taxes on products – new sources & methods to be identified

For each of the taxes on products, the first checks undertaken were made to find out if the allocation of the tax by the industries used for the final t-3 figures can also can be used for t-2 figures (or if a moving average of the last several years could be used). This was done by looking at the variations in the revenues on detailed industries for each tax.

Using same allocation as earlier years was not recommended if variations were regarded as too high, together with an evaluation in regard to the size of the tax as a share of the total revenue and knowledge about changes in tax regulations. Then other sources than those used in the final national accounts were sought after. This was mainly the case for the majority of the energy taxes on products.

The method used is in fact the opposite to that used in the National Accounts. Instead of taking a total amount and distributing across the industries, it is proposed to look at the use of the different products by the different industries and calculate the tax amounts based on the product use. This approach could be used for energy products for which we have detailed information in the energy accounts. The detailed use information needs to be combined with the tax rates – including which industries are exempted – to calculate the amount of tax that the industries should pay.

For the petrol tax and the diesel tax, trial calculations were undertaking using the energy accounts which proven to be a satisfactory alternative source for allocation to industries.

Trial calculations for the CO_2 tax and tax on mineral oils were more challenging. We think this is due to the fact that these taxes are levied on several different energy products with various exceptions and various tax rates for the different industries. At the current time, the trial calculations were not proven to be satisfactory. However, an ongoing project with trial compilations of the physical energy flow account as well as future work to improve information on tax exceptions (see chapter 6.2) will most probably improve the possibilities of using the energy account as a source for the preliminary industry allocation of energy taxes.

For the other taxes on products the conclusion was:

Marine engine tax (41363) (7.3 % of total pollution taxes in 2009)

This tax is only levied on two industries in addition to households, of which one of the industries in the time-period 2003 – 2009 has annually has paid over 80 per cent of this tax. As long as no major changes are introduced for this tax, the preliminary figures will be estimated based on an average of the distribution among the economic actors for the last 5 years.

Sulphur tax (41365) (2.7 % of total pollution taxes in 2009)

This tax is levied on several industries, of which one of the industries in the time-period 2003 – 2009 annually has paid approximately 20 per cent of this tax. The other 80 per cent is distributed among several other industries with very small absolute values. As long as no major changes are introduced for this tax, the preliminary figures will be estimated based on an average of the distribution among the economic actors for the last 5 years.

Base tax on disposable beverage packaging (41366) and Environmental tax on disposable beverage packaging (41367/41368/41369) (51.7 % of total pollution taxes in 2009)
The vast majority of revenues from these taxes are paid by the households. In addition to the households, two other industries have in the time period from 2003 to 2009 paid this tax. As long as no major changes are introduced for these taxes, the preliminary figures will be estimated based on an average of the distribution among the economic actors for the last 5 years.

Tax on NO_X emissions, petroleum sector excluded (41348) (3.3 % of total pollution taxes in 2009)
The preliminary allocations of this tax by economic actors will not be undertaken by using moving averages from previous years. The allocation of revenues among the economic actors is too large from year to year. Other methods or sources in order to allocate this tax by industries have to be found. We will consider looking at the national air emissions inventory data as a potential source of information to distribute these taxes.

Tax on greenhouse gases HFC and PFC (41341) (9.9 % of total pollution taxes in 2009)
The preliminary allocations of this tax by economic actors will not be undertaken by using moving averages from previous years. The allocation of revenues among the economic actors is too large from year to year. Other methods or sources in order to allocate this tax by industries have to be found. We will consider looking at the national air emissions inventory data as a potential source of information to distribute these taxes.

Tax on electricity (41342) (22.5 % of total energy taxes in 2009)
This tax is levied on most of the industries. The variation in the distribution among the industries in the time period 2003 – 2009 is surprisingly low. As long as no major changes are introduced for these taxes, the preliminary figures will be estimated based on an average of the distribution among the economic actors for the last 5 years.

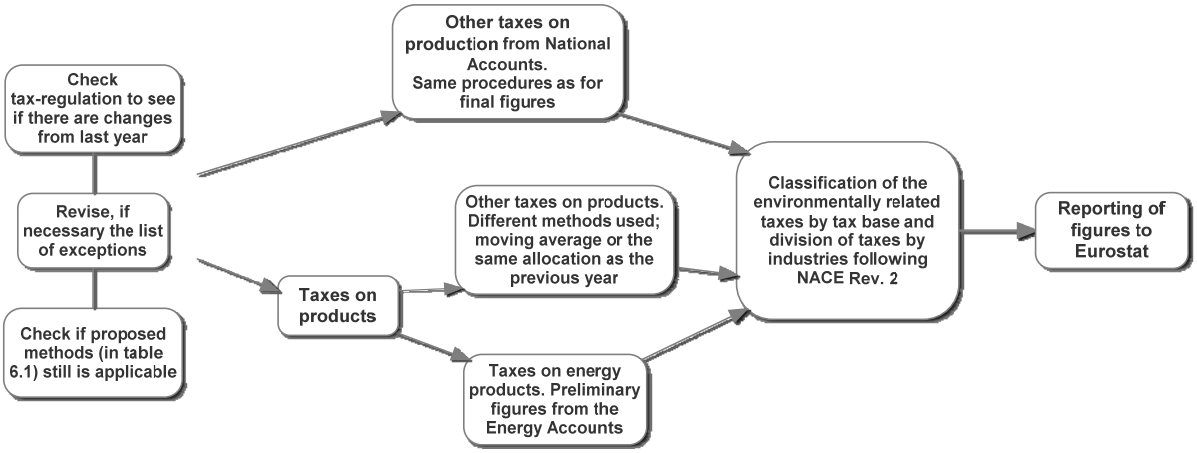
Trial calculations using the consumption of electricity in the energy accounts as an alternative source did not prove well. This was mainly due to the complex system of exceptions for this tax. The energy account is not detailed enough in order to incorporate the various tax exceptions (particularly those exceptions related to the geographic locations of the various economic actors).

Motor vehicle registration tax (41351/41352) (59.9 % of total transport taxes in 2009)
Work is still remaining in finding methods to compose the preliminary figures for the tax on motor vehicle registration. The Norwegian vehicle registry is suggested to use in calculation of this tax.

6.4.3 Flow chart for work with preliminary figures

The flow chart presents the work undertaken to report for year t-2 the preliminary figures for environmentally related taxes on a breakdown by hierarchical classification of economic activities for the producers, and the reporting of consumers paying the taxes in the economy.

Figure 6.2: Flow chart for preliminary figures



7 Evaluation of the detailed figures comprised in the Questionnaire

Statistics Norway has as part of previous grant agreements with Eurostat reported environmentally related taxes by economic activities on a rather aggregated level (Nace rev 1. A17). The obligatory reporting from 2013 requires data on a much more detailed industry level. Annex D includes the Questionnaires for energy taxes, transport taxes and pollution taxes broken down by economic activities (Nace rev 2 A64) as well as households for the years 2003 – 2010. No estimates for non-residents are currently part of the national accounts tax system so no adjustments are included at this time.

For total environmentally related taxes, the time series goes back to 1995. For the years prior to 2003, the total economic activities are broken revenues for each tax-category is broken down by 10 main industry groups for each of the tax categories. Due to the discontinuities in the time series for 2003 for taxes on product, the detailed figures prior to 2003 are not regarded suitable for publication.

The focus is in the first part of chapter 7 on the development in the difference tax categories and the changes present. More precisely, section 7.1 sheds some light on what caused the increases/decreases and what causes the fluctuations in the total revenue of the tax categories. This is important basic information when the taxes by industries are to be evaluated.

In section 7.2, the focus is on the development within the tax categories when the environmentally related taxes are broken down by industries. Possibilities of evaluating the quality of the detailed statistics are discussed – with a focus on the consistency over time.

7.1 Total revenues from environmentally related taxes

The aggregated sum of environmentally related taxes gives an overview over the total development in the environmentally related taxes during the period from 1995 to 2010. The aggregated sum consists of revenue from energy, pollution and transport taxes, and is given in current prices. As the situation is presented today, no taxes are defined as resource taxes.

Figure 7.1 a) Totals for 3 tax categories by year. Norway. 1995-2010. Million NOK. Current prices.

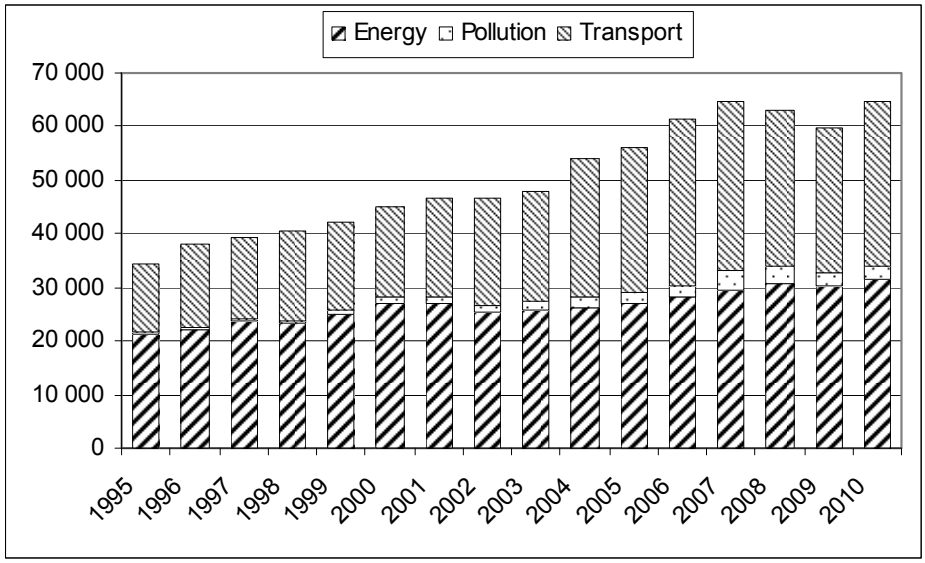
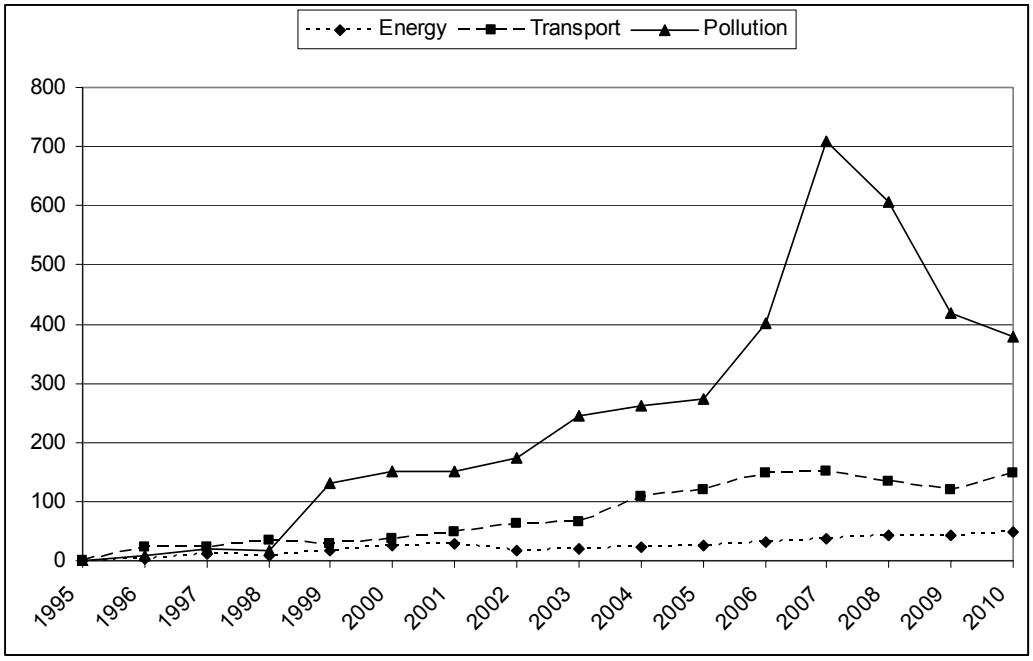


Figure 7.1 a) shows the development in the total revenue from environmentally related taxes divided into the three tax categories in the period from 1995-2010, given in million national currencies. The revenue is given in current prices without adjustments made.

The most prominent increase is in the revenue from transport taxes in regard to increase in absolute figures, while the share of pollution taxes from total revenue had the highest increase in relation to the other tax categories throughout the period, cf. figure 7.1 a) and b)

In 1995, energy taxes made up 62.3 per cent of the total revenues, while transport taxes made up about 36.4 per cent and pollution taxes 1.3 per cent. During the period, the share that energy taxes constituted for in environmentally related taxes fell, and was in 2010 at 49 per cent. Transport taxes was then at 49 per cent and pollution taxes at 3.4 per cent in 2010. Pollution taxes' proportion of total environmentally related taxes has more than tripled since 1995, mainly due to the introduction of the tax on final treatment of waste in 1999. However, the pollution taxes only amount to a minimal proportion of the total revenue.

Figure 7.1 b) Tax revenues by environmental categories, development by year, per cent



The same development in the tax categories is also evident when looking at figure 7.1 b). This figure shows the development in each tax category, where the development in each tax category is more visible when shown in percentage change from the reference year 1995. From figure 7.1 b) the revenue from energy taxes is relatively stable compared to the other tax categories with a 50 per cent increase from 1995 to 2010. For pollution taxes, this increase is 700 per cent from 1995 to 2007, with a fall back to a little under 400 per cent in 2010. Compared to the reference year, transport taxes have experienced an increase of between 100 and 200 per cent in the years after 2004.

We also observe a slight but continuous change in the relationship between revenue from the different types of environmentally related taxes since 1995, mainly caused by the increase in revenue from transport taxes, figure 7.1 a). The sharp increase in transport taxes from 2004 to 2007 resulted in a short period where transport taxes constituted the largest share of environmentally related taxes, while energy taxes in the rest of the period were dominating in absolute revenues.

An extended discussion of the tax categories follows below with a short elaboration over the development of the respective taxes included in each category.

7.1.1 Energy taxes

Most of the energy taxes were already present when the time series started in 1995; however, some changes have occurred during the period. At the end of the 1990s, a change was made for taxes on consumption of energy products. A CO_2 tax and a sulphur tax on mineral products replaced the tax on mineral oil, tax on coal and coke, and CO_2 tax on petrol in 1999. As the new CO_2 –tax also included consumption of petrol for transport purposes, the CO_2 –component in the petrol tax was pulled out. This explains a (moderate) decline in revenue from the petrol tax from 1998 to 1999[13]. In line with the new allocation of taxes, a base tax on mineral oil (initially named base tax on fuel oil) was implemented in 2000 and was a tax levied additionally to the two taxes on mineral products, that is the CO_2 tax and the sulphur tax on mineral products.

The tax on production of electricity was discarded in 1998, while the tax on electricity consumption remained in force.

More than half of the total revenue from energy taxes mainly comes from petrol and diesel tax, 60 per cent in 1995, but with reduced share of the total revenue over the time period. In 2010 the share was down to about 51 per cent. The tax on CO_2 –emissions and the tax on electricity consumption also contributed to a pronounced share of the total revenue from energy taxes. Tax on CO_2 –emissions[14] made up 12 per cent in 1995 and increased to 21 per cent in 2010, with a peak in 2003 with 27 per cent. The tax on electricity consumption amounted to 15 per cent in 1995 and increased to 23 per cent in 2010.

7.1.2 Transport taxes

In Norway the transport taxes have primarily a fiscal purpose, but in accordance with the definition from Eurostat they are included in the environmentally related taxes, where transport taxes “mainly include taxes related to the ownership and use of motor vehicles”.

Some alterations have occurred through the period in the composition of transport taxes. In 1993 the mileage tax for diesel vehicles was lifted and replaced by the tax on diesel and the annual weight based tax on motor vehicles to meet the need for a system that had a neutral impact on international transport. The tax on air traffic passengers was introduced in 1994 and was initially established for all commercial flights for passengers from the Norwegian airport to abroad, and replaced the tax on charter travel by airplanes. The tax later included main domestic flights until it was lifted in 2002. The latest transport tax introduced was the annual tax to the fisher boat registry which was introduced in 2008, which corresponds to the annual tax on motor vehicles.

The motor vehicle tax, the re-registration tax on motor vehicles, the annual motor vehicle tax, the annual weight based tax on motor vehicles, and the tax on marine engines[15] are defined as user-independent taxes by the Ministry of Finance since they are levied without a direct connection with emission from transport. Meanwhile, these five taxes make up the entire revenue from transport taxes in the period from 2004 to 2008, up until the annual tax on fisher boat registry was introduced. The taxes are included when they have potential environmental effects.

During the latest years, the tax base for the registration tax and annual weight tax has been differentiated based on environmental purposes. The annual weight tax consists of a weight graded and an environmentally differentiated annual tax. The environmentally differentiated tax is graded

[13] Cf. Table 3.2.

[14] The tax on CO_2 emissions consists of emission in the petroleum sector and CO_2 tax on mineral products. The growth in revenue of CO_2 taxes was mainly due to the introduction of CO_2 tax on mineral products in 1999.

[15] This tax is defined as a pollution tax.

based on the emission requirement the vehicle fulfil. In January 2007, the registration tax was reorganized so that CO_2–emission replaced engine volume as one of the tax components in the registration tax. The main purpose of the change was further to motivate to the purchase of vehicles miserly on use of fuel with low CO_2–emission. In 2004, the anti traffic accident premium was included in the annual motor vehicle tax and the annual weight based tax on motor vehicles, when previously collected by insurance companies.

The revenue of transport taxes mainly comes from the registration tax on motor vehicles (about 63 per cent in 2010) and the annual motor vehicle tax (28 per cent in 2010). During the period 1995-2010 these two taxes has constituted for between 82 and 92 per cent. They have also contributed to the increase in total revenue from transport taxes in the period after 2003. This may to some extent be due to the inclusion of the anti traffic accident premium in 2004 in the annual motor vehicle tax.[16]

7.1.3 Pollution taxes

Since 1995 there has been a huge development in the revenue from pollution taxes in the Norwegian tax system. This development entails both introduction of new pollution taxes and alternations of already existing taxes. The total changes in the composition of pollution taxes can give an idea over how the total revenue from pollution taxes has evolved, see figure 7.1 b) or figure 7.5.

The environmental tax on disposable beverage packaging was introduced already in 1973, but was originally put on different beverage containers according to the contents (i.e. beer packaging, wine and liquor packaging, packaging of carbonated beverages or still soft beverages). In 2000 the classification of the tax was altered to be levied on the material of the beverage containers and not on the contents inside the containers.

The tax on mineral products was implemented in 1970. As already mentioned under energy taxes, the tax on mineral products was in 1999 split into a CO_2 tax on mineral products and a sulphur tax on mineral products, where the sulphur tax is categorized under pollution taxes in accordance with the tax base list, cf. Box 3.2.

Other changes in the composition of pollution taxes include the termination of the tax on fertilizers in 1999 and the introduction of tax on the final treatment of waste that was introduced the same year. The introduction of the tax on final treatment of waste made a substantial increase in the total revenue from pollution taxes and amounted to a share of up to 42 per cent in the reported period. The tax on trichloroethane and the tax on tetrachloroethane came in 2000, while the tax on greenhouse gases HFC and PFC was introduced in 2003, making some impact in the total revenue from pollution taxes.

The tax on NO_X was introduced in 2007 and was levied on both NO_X emissions in the petroleum sector and NO_X emissions in industries excluding the petroleum sector. The introduction of this tax contributed to a large part of the increase in the total pollution taxes in 2007 and was levied as a mean to promote cost-effective reductions in emissions of NO_X and together with other methods help to meet commitments of reduced emissions under the Gothenburg Protocol.

The revenue from pollution taxes comes mainly through the base tax on the disposable beverage packaging and tax on final treatment of waste. The revenues from pollution taxes have been relatively low compared to the revenues from energy and transport taxes. The increase in pollution taxes from 2005 to 2006 was due to increased revenues from tax on disposable beverage packaging and tax on final treatment of waste. The strong increase in environmental tax on disposable beverage packaging from 2005 to 2006 was caused by legislation in January 2006 that the environmental tax should include all beverages (NOU 2007:8).

[16] See chapter 4.4.7.

7.2 Environmentally related taxes, broken down by industries

The presentation over the environmentally related taxes by industries gives an overview over the development of the tax revenues distributed over industries in the economy within the tax categories, respectively energy, transport and pollution. There is also a short elaboration around households' share of the total revenues from environmentally related taxes.

The goal of the evaluation of the detailed figures in the Questionnaire is to view how the tax revenues in the tax categories are allocated across industries, and to evaluate the consistency of the reported figures. Until the obligatory reporting of figures in 2013, these current detailed figures are still to be regarded as preliminary.

The final figures for the industry breakdown of the environmentally related taxes are totally based on the final National Accounts. However, the National Account does not publish taxes on product divided by industries nor by individual taxes or any kind of tax groups. The total revenues from other taxes on production are published divided by industries.

Although the present detailed figures in the Questionnaire are based on detailed data from the final National Accounts, which can be seen as a certain type of guaranty for quality in itself, there is still a need for some quality checks of the final data presented in the Questionnaire. This is due to that data in the National Accounts for taxes have been compiled for another purpose than what we now use these data for.

Establishing methods in order to evaluate the quality of the time-series has proved to be a challenge and is an area of work that has to be further developed. Some checkpoints for this kind of quality evaluations has as part of this project been discussed and tested out, but no already established methods or routines for this kind of quality-evaluation has been used.

When evaluating the detailed figures in the Questionnaire, one or several of the following checkpoints have been looked into for each of the tax categories:

- The development in the payments from the industry groups (and households), first by aggregated level and then, when necessary, at a more detailed level. When analysing these time-series, we have to bear in mind that the tax revenues are given in current prices.
- The development in the share of the revenue paid by the industries (and households).
- If huge changes in revenue paid by an industry(group), or the household;
    i. check in basic data on changes in type of taxes
    ii. check if there have been changes in the tax-regulation (tax rates, tax exceptions, tax-base etc)
- See if there exists other sources that can be used in order to compare results. This is valuable in order to have a reference for evaluating if the detailed figures in the questionnaire can be considered having developed according to what could be expected. Both the energy accounts and the emission accounts, as well as information from the National Accounts on consumption and production patters are valuable other sources that can examined.

The analysis will primarily focus on explaining the changes in total tax payments of *final figures* in the tax categories and within each industry category i.e. only figures for 1995-2009 are evaluated. If necessary, or if convenient, a more detailed analysis of the different industry sections and divisions will be undertaken.

The industries in the economy are presented in the following ten categories:

- Agriculture, forestry and fishing, (A 01 – A 03)

- Mining and quarrying, (B 05 – B 09)
- Manufacturing, (C 10 – C 33)
- Electricity, gas, steam and air conditioning supply, (D 35)
- Sewage, waste management, remediation activities, (E 36 – E 39)
- Construction, (F 41 – F 43)
- Wholesale and retail trade; repair of motor vehicles and motorcycles, (G 45 – G 47)
- Transport and storage, (H 49- H 53)
- Services, (I 55 – U 99)
- Households, (h)

The ten categories are chosen on the background of the given division in the Questionnaire. The section and division according to NACE rev. 2 are given in brackets. The last industry category, Services, includes several divisions and sections from the economy. The figures referred to in the following analysis are taken from Annex D, which presents the Questionnaire reporting to Eurostat for the three relevant tax categories.

The analysis of each tax category by industries is made keeping out revenues from households to maintain the focus on the industry sections[17] . Due to confidentiality regards, industries C19 – Manufacture of coke, refined petroleum products – and C20 – Manufacture of chemicals and chemical products – are reported in aggregate.

Some of the break in the time series may be explained by the transition over to a new Standard Industrial Classification from 2007 to 2008 when breaking down the environmentally related taxes by industries.

It is worth noticing that when the previous work with breaking down environmentally relates taxes by industries were undertaken in 2010, the industry classification NACE rev. 1.17 was used. This resulted in some limitations in the present reporting in analysing more detailed figures by industries in the years prior to 2003 when these earlier figures were used, with some dependence on tax category and the definition of the tax i.e. tax on products or other taxes on production. For instance, for energy taxes, the industry classification can be evaluated in a detailed analysis with NACE rev. 2 when available figures for taxes on products date back to 2003, while transport taxes mainly consist of other taxes on production divided on industries using a special method. The methods used regarding the transport taxes make some of the more specific analysing difficult when explaining the increases and decreases in certain taxes and period.

7.2.1 Energy taxes, by industries

When analysing the energy taxes, it is possible to use the energy balance/energy accounts to see if the consumption of certain products was the cause for changes in the tax payments, if changes in tax rates cannot explain the changes alone. However, the industries in the energy balance are given on selected, aggregate levels, which means that some industries are not included or may be too widely defined.

In the Questionnaire, main industries are reported with their share of the total tax on CO_2 emission included under energy taxes in the economy for the years 2003 and onwards. The shares for the different industries has been quite steady through the period, where the mining and quarrying industry has had the largest share of the payments, and households and the industry transport and storage has had an opposite development compared to each other, cf. Annex D.

Throughout the period, the development in the aggregated industry levels with energy taxes is quite steady. The industries that constitute for the biggest share of the total energy taxes are transport and storage, mining and quarrying, wholesale and retail, and services. This is mainly caused by the tax on petrol and diesel used in transport, and the tax on CO_2 emissions from the petroleum sector included

[17] A discussion of households shares in both total tax revenues and divided into tax categories are given in chapter 7.2.4.

under energy taxes. Revenue from both the tax on petrol and the tax on diesel has increased through the period.

Figure 7.3 Energy taxes by industries (NACE rev 2) Excluding households. Norway. 1995-2009. Million NOK (current prices)

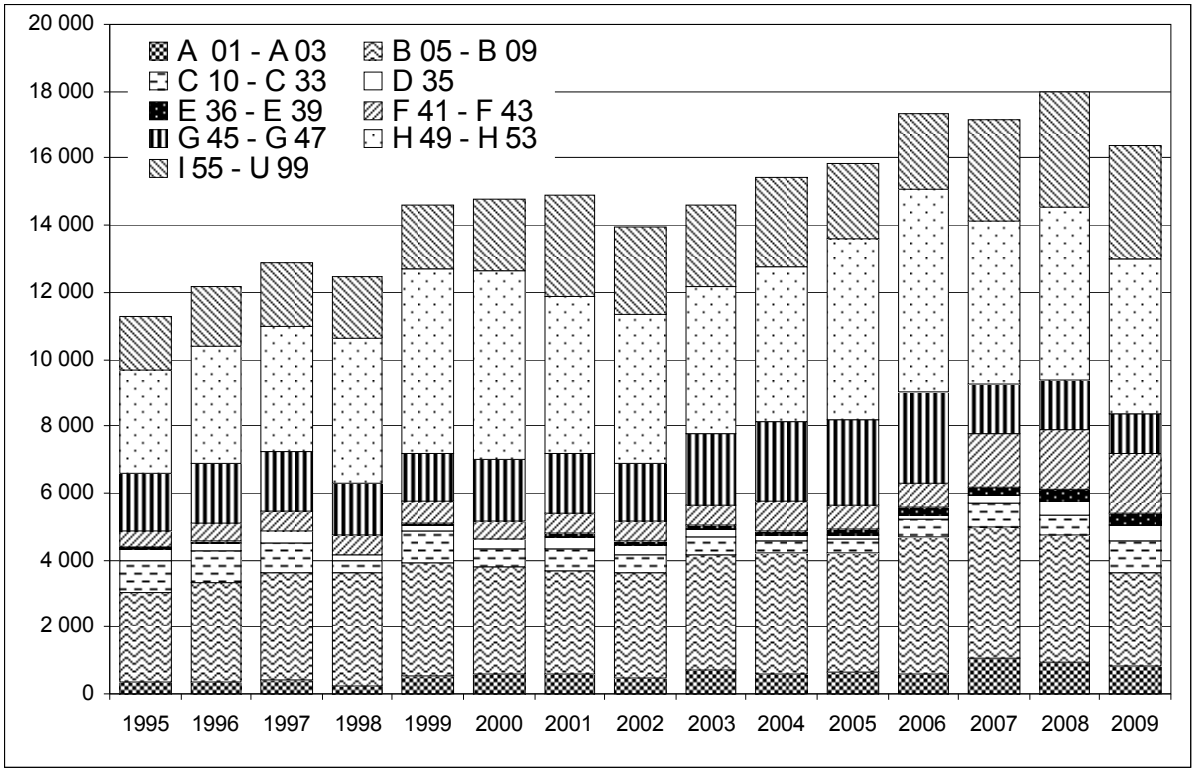


Figure 7.3 shows the development in the industry categories as part of the total tax revenue from energy taxes. Mining and quarrying experienced a peak in the tax payments in 2006. The same goes the industries for wholesale and retail and transport and storage, where after a steady increase the previous years and the payments fell the years after. For mining and quarrying, this was caused by higher payments from tax in CO_2 emissions in the petroleum sector, which make up for the largest share of energy taxes in this industry section.

Construction experienced an increase from 2006 to 2007 that was mainly caused by an increase in the payments from tax on diesel and tax on petrol. The increase came from increase consumption rather than increase in tax rates, where the increase in consumption of diesel contributed most of all with a durable higher consumption after 2007.

In the manufacturing industry there has been significant variation during the reporting period, both on aggregate level and within each industry section. Manufacture of basic metals experienced continuing fall in payments of energy taxes through the period, while most of the other manufacturing industries experienced variations between years without any specific pattern. This industry section contains most of the exception present for the environmentally related taxes. A change that stands out is regarding the industry division Manufacture of other non-metallic mineral products with an increase from 2006 to 2007 due to an increase in tax on diesel. There was also an increase in the payments on petrol tax in 2009 in this division that explained the additional increase.

The industry division Sewerage, waste collection, treatment and disposal activities, contributed to most of the variation between years in the industry section Sewerage, waste management, remediation activities. The variation came from the taxes on petrol and diesel, in addition to tax on electricity

consumption, tax on mineral oil, and from the CO2 tax. There is no clear pattern in the payments of the different taxes without the increase in payments to diesel tax in 2006 and increase in petrol tax on 2007 that persisted the following years.

Wholesale and retail trade has had tax payments that make up between 7 and 16 per cent of the total payments from industries on energy taxes with a peak in 2006 mainly driven by payments from petrol tax and diesel tax. With disregards to the peak, the payments have been relative stable in absolute value, while experienced a decreasing share of the total revenue when the other industry sections increased. Before 2003, the tax revenue from the wholesale and retail trade section was reported in aggregate, and not industry divisions. When looking at the development of the divisions in this section after 2003, the division of Wholesale trade, except of motor vehicles and motorcycles stand out with some bigger changes in tax payments. After steady increase in tax payments from 2003, a persistent fall in payments followed after the year 2007. The decrease was caused by a decrease in payments on petrol tax and diesel tax, and to some degree caused by reduced payments from tax on electricity consumption and CO_2. Similar development is also present in the industry division Retail trade, except of motor vehicles and motorcycles.

The transport and storage industry constitutes for the largest share of energy taxes for the most part of the period when excluding households. From 2003 a noticeable development away from payments of tax on diesel and over to higher payments of tax on petrol is present. The increase in the industry division Water transport in the years 2004-2006 is worth mentioning when it was caused by a temporary increase in tax on diesel from international shipping, including both transport of goods and passengers.[18]

The overall trend of service industries shows a somewhat inconsistent development through the years. However, to be able to say something about the more specific development, we have to look at each industry section or industry division within this industry category. As with the wholesale and retail industry, some industry sections are given is aggregate for the years prior to 2003, while given on division the years including and after 2003.

The two industry sections professional, scientific and technical activities and public administration and defence have had a somewhat opposite development through the period. It is unclear what may have caused this development; it may be due to some reallocation within the industries or may be due to the transition over to a new way of divide the taxes among the industries in total.
The peak in 2004 in the industry real estate activities was caused by abnormally high payments on petrol tax, tax on CO_2 emissions and diesel tax that year. The increase after 2008 in this section was due to increased payments of electricity tax.

In total, we can conclude that the quality of the energy taxes broken down by industries is satisfactory, especially when we look at the nine industry categories. Most of the changes can be explained by shifts in the composition of different taxes within the industry section. Why the shifts occur, we cannot explain in the present analysis without analysing the industries more in depth. A more thorough analysis requires knowledge of development in the tax rates, what industries are exempted from energy taxes and the energy use in the different industries.

7.2.2 Transport taxes, by industries

In total, the industries that pays the larges share of transport taxes all through the period are services (excluding transport and storage), wholesale and retail trade, followed by the industries transport and storage, constriction and manufacturing.

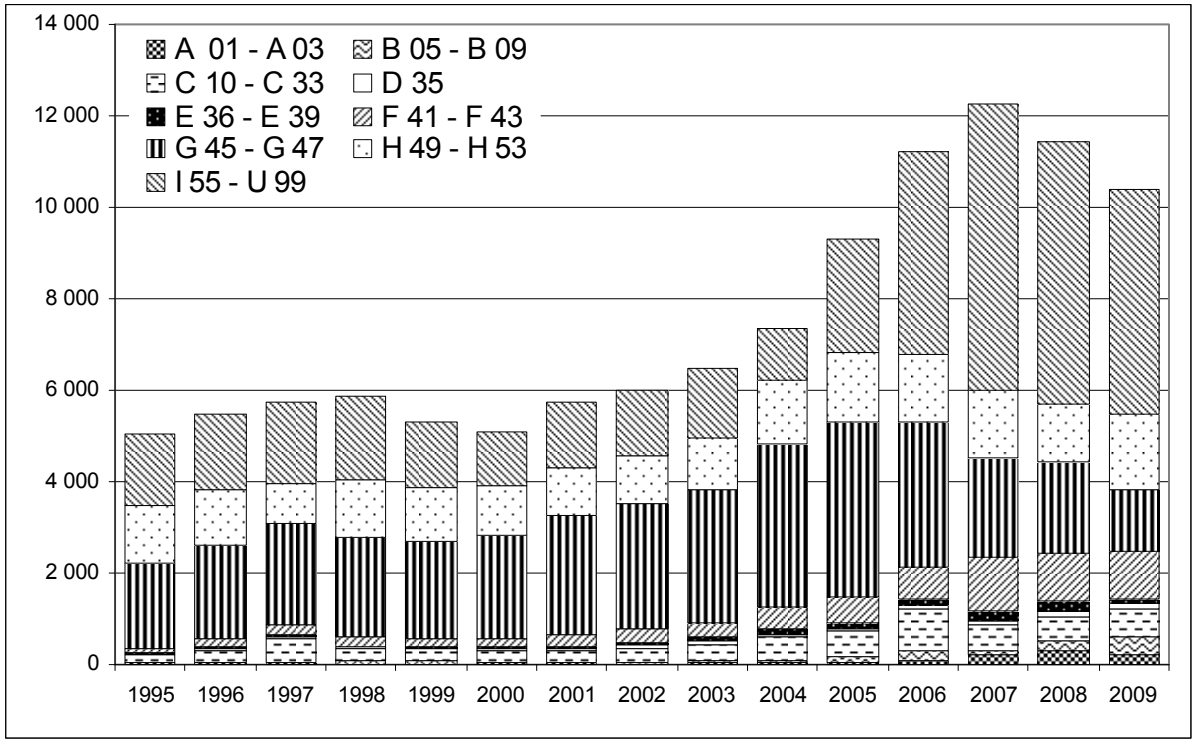
[18] There is a different industry divisions under transport and storage used in the national account compared to NACE rev. 2 such that the divisions water transport and land transport; transport via pipelines is not allocated in the Eurostat-reporting, bur rather reported in aggregate.

For revenue from transport taxes broken down by industries prior to 2007, several taxes are given on less detailed industry level, rather than on NACE rev. 2 A*64, on the grounds of available data previously collected. As with energy taxes, transport taxes has been quite steady when it comes to alterations within the tax category. With the exception of the discontinuation of the tax on air traffic passengers and the introduction of the annual tax to fishing fisher boat registry, there have not been any major changes in the taxes included in this tax category. The changes are therefore mainly due to revisions to the tax fees and charges, and in the consumption of the products or use in production.

The wholesale and retail industry has experienced the biggest changes in tax payments related to transport taxes. The industry had a somewhat stable increase in current values until 2005, where the payments fell quite drastic the years following.

The aggregate industry category services had the biggest increase in payments from 1995 to 2007, both in absolute current value and in share of total transport taxes, from a share of 30 per cent in 1995 to around 50 per cent in 2010. Even though the development looks stable at the aggregate level, the industry sections included under services made a shift in the development of payments from the year 2006 to 2007 cf. Annex D. More specifically, four the industry sections that either had noticeable increases or decrease were information and communication, real estate activities, professional, scientific and technical activities, and administrative and support services activities.

Figure 7.4 Transport taxes by industries



Motor vehicle registration tax

For one of the transport taxes, the motor vehicle registration tax, we checked the Norwegian vehicle register in order to see if 1) information existed in order to compare the results in the Questionnaire with other sources and 2) to check for possibilities of separating the CO_2-component incorporated in this tax.

Norwegian cars, lorries and other self-propelled vehicles are subject to a tax at the first instance of registration in Norway, whether it is new or imported second hand. Since 2008, the carbon dioxide

emissions have been an explicit component of the tax. The tax base and tax rates change each year as policy priorities evolve. Also, the tax rates vary with vehicle category. The carbon tax is progressive, where intervals of higher emission rates are taxed more heavily. For vehicles with particularly low emissions, the carbon tax is negative and the carbon tax component changes into a subsidy in the form of a deduction on other components of the registration tax.

A standardised emission level for each vehicle is recorded in the Norwegian vehicle registry. It proved to be possible to calculate a CO_2-part of the motor vehicle registration tax. The question is then if this CO_2-part is to be recorded as part of energy taxes or still be a part of the transport taxes?
For the time being, it is still kept as part of the transport taxes.

7.2.3 Pollution taxes by industries

As discussed in chapter 7.1.3, the tax category pollution taxes has undergone great alterations during the relevant reporting period. The greatest alterations are owed to the introduction of tax on final treatment of waste – visible in the industry section sewage, waste management, and remediation activities – and the tax on NO_X emissions.

From figure 7.5 we see an increase in every industry in 2007 caused by the introduction of the tax on NO_X emissions the same year. The industry that experienced the largest increase was mining and quarrying with a specific tax on NO_X emissions in the petroleum sector. In 2008, several trade organisations entered into an agreement with the Ministry of Environment to reduce the emissions of NO_X in accordance with the Gothenburg protocol. This led to a reduction in the tax revenue that year and the following in compliance with the contract with reduced emissions. The agreement also gave tax exemptions from 2008 to 2010 for the businesses that signed the agreement.

The industry sewerage, waste management and remediation experienced a rapid increase in 2001 after the introduction of the tax on final treatment of waste. It was more precisely the industry section Waste collection, treatment and disposal activities; materials recovery, that was affected by this tax. Moreover, this tax also made up almost the entire tax payments in this industry section, with the exception of some relatively minor payments in the Water collection, treatment and supply division trough the years.

The decline in payments of pollution taxes in the manufacturing industries after 2000 may have been caused by the alteration attached to the tax on mineral products, which in that year was broken down into a CO_2 tax on mineral products and a sulphur tax on mineral products. The increase from 2002 to 2003 is somewhat caused by inclusion of the tax on marine engines and the sulphur tax (this will most likely change with the use of new figures broken down by industries in the years prior to 2003).

In the construction industry, the taxes on greenhouse gases HFC and PFC made up a large share of the total payments, where the tax on the greenhouse gases is solely levied in this industry. In addition, the tax on sulphur emissions and the NO_X tax were prominent in this industry section. The industry division Manufacture of basic metals was levied the tax on trichloroethane and the tax on tetrachloroethane entirely. Further, in the manufacturing category, the tax on marine engines is almost entirely paid by this category, with the exception of some payments by households.

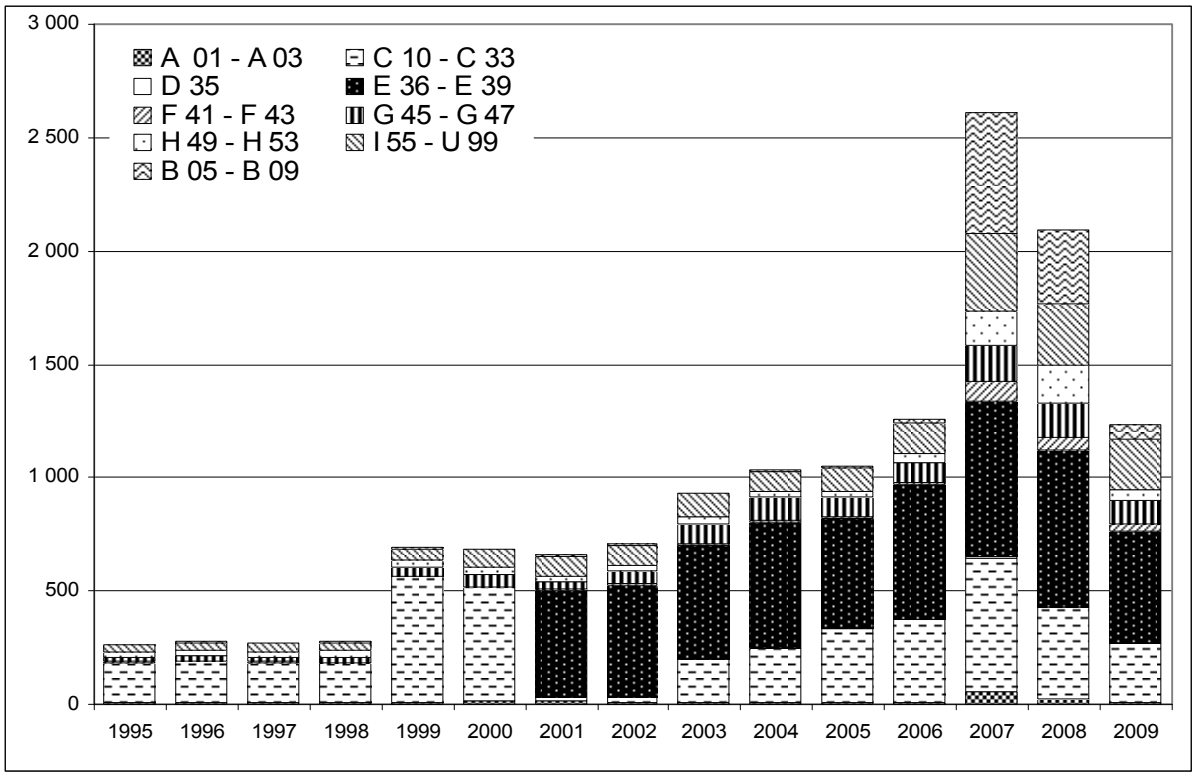
In contrast to transport and energy taxes, the industry category services (excluding transport and storage) make up an considerably lesser share of total pollution taxes. With minor exceptions, the two industry wholesale and retail and accommodation and food service activities constitutes for the entire revenues until the introduction of the tax on NO_X emissions.

As households' share of total revenue is excluded here, the taxes on disposable beverage packaging are no longer the dominating tax in pollution taxes. This also eliminated some of the increase from 2005 to 2006 in total revenue from pollution taxes where this tax was the leading cause of the increase. The industry section Accommodation and food services activities, included under Services,

constituted for most of the remaining tax on beverage packaging. The tax also made up most of the payments in this industry.

In total, the development in the industry categories from payments of pollution taxes expresses good quality and a valid division among the industry categories.

Figure 7.5 Pollution taxes by industries[19]



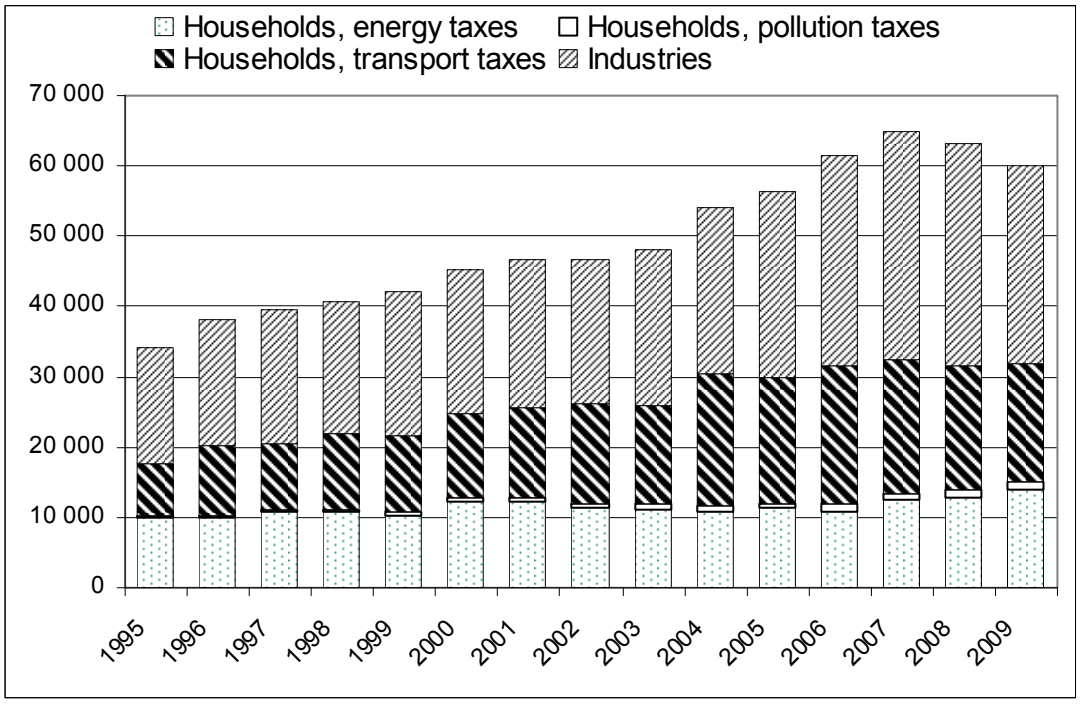
7.2.4 Households

In the economy as a whole, the household contributes to a substantial part of the tax revenues from environmentally related taxes. Figure 7.6 below contains the same total of tax revenues from environmentally related taxes as figure 7.1 a), i.e. separated into tax categories, but is now divided into the respective part of the tax categories households' consumption amounts to. The remaining tax revenue belongs to the industries in the economy, without separating between the tax-categories.

The households' share has had some variation both between the tax categories and through the period in question. In total, households contribute to over 50 per cent of the total revenue from environmentally related taxes in the economy throughout the period. For energy taxes the households make up between 41 and 47 per cent of the total revenue, mainly through the tax on petrol, tax on electricity consumption and through the CO_2 tax on mineral products. Of total transport taxes, the households' share amounts to between 62 and 72 per cent in the period, which also contributes to a large part of the total revenue in the economy as a whole. As mentioned before, pollution taxes have the lowest share in total revenues, where households contribute to a share of between 34 and 51 per cent of this during the period, mainly through the tax concerning beverage containers.

[19] The mining and quarrying industry has been moved to the top of the graph to emphasise the effect of the introduction of the tax on NO_X emissions in this industry and to .

Figure 7.6 Households



7.3 Conclusion

The quality of the figures has mostly been considered in terms of the consistency over time and in relation to the totals found in the Public Finance statistics and in the National accounts statistics.

We have found a number of breaks in the time series (2003 and 2007) primarily because of changes in how the national accounts have implemented NACE rev 2. These problems will not influence the quality of the data to be reported to Eurostat which begins with 2008 as the first year of reported data but it will be problematic for analyses that require long time series of data.

From the coordination discussions regarding the national tax list and the reported totals for this list, we have found inconsistencies between the national accounts and the public finance data. There have been a number of improvements implemented which have resulted in the coordination of these figures between these two divisions at Statistics Norway. This means that from 2007 onwards these two figures are the same.

By developing a distribution key for each of the different taxes based on information regarding which industries are exempt or have special rates and the supply and use tables for products we use the most detailed data available. The tax rates will be reviewed annually and any adjustments to these tax rates will be adjusted in the system. Any further improvements with respect to the allocation of taxes to the different industries will need to be implemented by the national accounts division.

In terms of timeliness, the estimates for t-2 still require some improvements. Efforts will need to be made with respect to a few specific taxes which a final method has not yet been determined due to the fluctuations in the data over time so that moving averages do not seem to be appropriate estimation methods.

A more systematic evaluation of the quality of the statistics and the production process will need to be made in the next phase of establishing these statistics as official statistics.

8 Overall conclusions and future work

The project on establishing national environmentally related taxes broken down by industries for reporting on an annual basis commenced to meet the requirements given in the EU-regulation 691/2011 led to a number of important concrete results.

The main results from the project include:

- the coordination of a national set of environmentally related taxes which are agreed upon within Statistics Norway (and Ministry of Finance is informed)
- identification – and the making of suggestions to fill - the gaps between the list of the DG TAXUD and Eurostat for the environmentally related taxes
- processes to compile figures for the environmentally related taxes broken down by industries on a detailed NACE rev 2-level (A64) plus households from 2003 onwards
- mapped out the procedures for annual reporting and identified the future work needed to secure further quality checks and timeliness in the reporting
- made proposals to identify sources and methods for the reporting of preliminary figures
- identified the CO2-part of the energy taxes (and transport taxes) in order to report the “energy tax sheet” as requested by Eurostat.

The process began with a new, thorough evaluation of the definition of Norwegian environmentally related taxes and a classification of the relevant taxes in accordance with the EU-regulation. This has led to closer collaborations between the divisions within the Statistics Norway and a disclosure of internal routines. New routines for future reporting were also established and a consensus about the Norwegian environmentally related taxes was made.

The Ministry of Finance was also made aware of the future obligatory reporting to Eurostat by Statistics Norway with the expectations of a national definition of environmentally related taxes as part of the national tax list. This work was important in order to minimise the current problem of different figures being reported to different international organisations (such as DG TAXUD and the OECD).

For the years from 2007 – 2009, the statistics are considered final figues. The analysis of total tax revenues and by tax category has been included for 1995-2010 when these figures are considered final. For the years 1995 – 2002, work was not undertaken to address the discontinuities regarding both the differences due to earlier classification of tax categories and the former use of another industry break down than used after 2002. Between 2003 and 2007, figures can be provided at detailed levels upon request but the figures for the other taxes on production have a further need of quality checks. The present conclusion is that the figures for environmentally related taxes for 2007 onwards to t-3 years are of good enough quality to be reported on an annual basis.

With regards to the preliminary figures, i.e. for year t-2, several methods for reporting of these figures were considered. For most of the taxes a decision regarding the methodology for allocating the tax revenues to the different industries and households has been made. Different methods will be used for other environmentally related taxes on production and environmentally related taxes on products.

Future work will need to focus on the remaining few taxes for which a final decision regarding t-2 estimation methodologies has not been made as well as establishing quality evaluations of the data. Work to establish this area as official statistics is also needed. This work will involve the establishment of metadata descriptions into various systems here at Statistics Norway.

A substantial amount of the work needed to establish production processes for this new area of statistics has been done but there is still some minor work to be accomplished before Statistics Norway is ready to report these statistics on an annual basis to Eurostat as prescribed in Regulation 691/2011.

Annexes

A. Table from Questionnaire on questions on methodology and coverage

ENVIRONMENTAL TAXES BY ECONOMIC ACTIVITIES – QUESTIONS ON METHODOLOGY AND COVERAGE
1: Please list the names of the taxes included in category 1 Energy.
See table 3.1 and chapter 7.1.1 in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597. Petrol Tax Diesel Tax Tax on electricity Tax on mineral oil CO2 tax Tax on coal and coke Tax on CO2 emissions from petroleum extraction Tax on lubricating oil
2: Please list the names of the taxes included in category 2 Pollution.
See table 3.1 and chapter 7.1.3 in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597. Marine engine tax Tax on pesticides Tax on greenhouse gases HFC and PFC Base tax on disposable bevarage packaging Environmental tax on disposable bevarage packaging Tax on NOX emissions, petroleum sector excluded Tax on NOX emissions in the petroleum sector Tax on the final treatment of waste Tax on tricloreten and tetracloreten Sulphur tax
3: Please list the names of the taxes included in category 3 Resource.
No taxes are currently defined as resources taxes. See chapter 4.3.4 in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597 for explanations.
4: Please list the names of the taxes included in category 4 Transport.
See table 3.1 and chapter 7.1.2 in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597. Motor vehicle registration tax Re-registration tax on motor vehicles Annual motor vehicle tax Mileage tax for diesel vehicles Tax on air traffic passengers Annual weight based tax on motor vehicles Annual tax, fisher boat registry Anti traffic accident premium
5: Please give an overview of the methods you used to allocate the environmental taxes to the economic activities.
See Eurostat Grant Agreement 2009-report for Norway No. 50304.2008.001-2008.337 for a detailed description on how the taxes are divided by industries in the National Accounts.

6: Please list the industries that have tax exceptions and in which tax categories they are (1-4).
See annex C in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597 for an detailed overview of tax exceptions
7: If you have differences with the DG TAXUD totals, please explain the reasons why.
See chapter 4 in Eurostat Grant Agreement report for Norway No: 50904.2010.004-2010.597 for an detailed overview of the current differences with the DG TAXUD
8: Please provide a detailed list of the environmental payments included in the row 'environmentally related payments to government (fees and charges)' at the end of each data sheet.
At the moment no such overview exists
9: Please enter the name and email address of the person that filled in this questionnaire.
kristine.kolshus@ssb.no trine.braathu@ssb.no

B. Ytart-list

YTART	NAME OF THE TAX	FROM	TO	YTART GROUP	YTART GROUP, TEXT
41341	Tax on greenhouse gases HFC and PFC	1991	9999	3	ET1200_Pollution_taxes
41342	Tax on electricity	1991	2003	1	ET1100_Energy_taxes
41343	Tax on mineral oil	1991	1999	1	ET1100_Energy_taxes
41344	Tax on coal and coke	1991	1999	1	ET1100_Energy_taxes
41345	Tax on diesel	1993	9999	1	ET1100_Energy_taxes
41346	Base tax on mineral oil	1999	9999	1	ET1100_Energy_taxes
41347	Tax on lubricating oil	1991	9999	1	ET1100_Energy_taxes
41348	Tax on NOx emissions	2007	9999	3	ET1100_Pollution_taxes
41349	Tax on electricity	2004	9999	1	ET1100_Energy_taxes
41351	Registration tax on motor vehicles	1991	2000	2	ET1400_Transport_taxes
41352	Registration tax on motor vehicles	2001	9999	2	ET1400_Transport_taxes
41361	Tax on petrol	1991	9999	1	ET1100_Energy_taxes
41363	Tax on marine engines	1991	9999	3	ET1200_Pollution_taxes
41364	Tax on CO2 emissions	1999	9999	1	ET1100_Energy_taxes
41365	Sulphur tax	1999	9999	3	ET1200_Pollution_taxes
41366	Base tax on disposable beverage containers	1994	9999	3	ET1200_Pollution_taxes
41367	Tax on beverage containers, wine and liqour	1991	9999	3	ET1200_Pollution_taxes
41368	Tax on beverage containers, beer	1991	9999	3	ET1200_Pollution_taxes
41369	Tax on beverage containers, non-alcoholic	1991	9999	3	ET1200_Pollution_taxes
41379	Tax on air traffic passengers	1991	2002	2	ET1400_Transport_taxes
41391	Tax on trichloroethane and tetrachloreten	2000	9999	3	ET1200_Pollution_taxes

C. List of exemptions from payment of environmentally related taxes on products[20]

Tax category→	Energy taxes					Pollution taxes					
Name of tax→	Diesel Tax	Tax on mineral oil	Tax on electricity consumption	Petrol Tax	CO_2-tax	Tax on HFC and PFC	Tax on lubricating oil	Tax on Nox-emissions	Marine engine tax	Sulphur-tax	Tax on disposable beverage packaging
Ytart→	41345	41346	41349	41361	41364	41341	41347	41348	41363	41365	41367/68/69
NACE rev 2											
01	100%										
03.1		100%			100%		X		100%	100%	100%
05			X								
06	100%	100%		100%	100%		100%			100%	100%
07		X			X						
08			X								
09.1	100%	100%		100%	100%		100%	100%		X	100%
09.9			X								
10.1			X								
10.2		100%	X		X						
10.3			X								
10.4			X		X						
10.5			X								
10.6			X								
10.7			X								
10.8			X								
10.9			X								
11 - 15			X								
16			X		X						
17			100%		X						
18			X								
19		X	X		X		100%				
20.1		X	100%		100%					100%	
20.7			X								
20.8			X								
21 - 22			X								
23.1			X								
23.2			X		X					X	
23.5			X		X					X	
23.6			X							X	
24.1			100%		100%					X	
24.3			100%								
24.4			100%		100%					100%	
24.5			X								
25.1			X								
25.9			X		100%						
26			X								
27			X		100%						
28- 29			X								
30.1			X								
30.2			X								
30.9		100%	X		100%						
31			X								
32			X								
33.1			X								
33.2			X								
38			X								
46										X	
49.1			100%								
49.3			100%								
49.5	100%	100%		100%	100%		100%			100%	100%
50.1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
50.2	100%	X	100%	100%	100%	100%	100%	100%	100%	100%	100%
50.3		100%			X			100%	100%	100%	
51				100%	X		100%	100%			
58			X								
86				100%							
Households			X							100%	

[20] 100% indicates total exemption from tax. X indicates that part of the consumption in the NACE industry is exempted from paying the tax.

D. Tables from Questionnaire by tax category, 2003-2010.

Industry classification, Energy taxes		2007	2008	2009	2010
A 01	Crop and animal production, hunting and related services	356	324	270	284
A 02	Forestry and logging	71	58	72	77
A 01- A 02	Agriculture and forestry	427	382	342	361
A 03	Fishing and aquaculture	632	584	492	540
A 01 – A 03	*Agriculture, forestry and fishing: of which CO2 taxes*	*250*	*152*	*111*	*114*
A 01 – A 03	**Agriculture, forestry and fishing**	**1 059**	**966**	**834**	**901**
B 05 – B 09	*Mining and quarrying: of which CO2 taxes*	*3 576*	*3 461*	*2 274*	*2 227*
B 05 – B 09	**Mining and quarrying**	**3 907**	**3 804**	**2 757**	**2 752**
C 10 – C 12	Manufacture of food products, beverages and tobacco products	170	216	220	239
C13 – C15	Manufacture of textiles, wearing apparel and leather products	5	3	5	5
C 16	Manufacture of wood and of products of wood and cork	41	42	93	96
C 17	Manufacture of paper and paper products	34	20	160	174
C 18	Printing and reproduction of recorded media	8	5	9	10
C 19	Manufacture of coke and refined petroleum products	180	38	33	36
C 20	Manufacture of chemicals and chemical products				
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	4	3	2	2
C 22	Manufacture of rubber and plastic products	16	18	24	26
C 23	Manufacture of other non-metallic mineral products	103	90	169	174
C 24	Manufacture of basic metals	30	30	27	29
C 25	Manufacture of fabricated metal products, except machinery and equipment	38	23	53	57
C 26	Manufacture of computer, electronic and optical products	1	0	2	2
C 27	Manufacture of electrical equipment	6	4	5	5
C 28	Manufacture of machinery and equipment n.e.c.	23	24	69	70
C 29	Manufacture of motor vehicles, trailers and semi-trailers	10	7	5	5
C 30	Manufacture of other transport equipment	31	32	32	35
C 31- C 32	Manufacture of furniture; other manufacturing	10	6	42	41
C 33	Repair and installation of machinery and equipment	21	19	33	36
C 10 – C 33	*Manufacturing: of which CO2 taxes*	*276*	*135*	*238*	*242*
C 10 – C 33	**Manufacturing**	**731**	**580**	**983**	**1 041**
D 35	*Electricity, gas, steam and air conditioning supply: of which CO2 taxes*	*16*	*62*	*72*	*75*
D 35	**Electricity, gas, steam and air conditioning supply**	**212**	**390**	**482**	**502**
E 36	Water collection, treatment and supply	32	38	27	28
E 37	Sewerage				
E 38	Waste collection, treatment and disposal activities; materials recovery				
E 39	Remediation activities and other waste management services				
E 37 – E 39	Sewerage, waste collection, treatment and disposal activities	259	316	307	313
E 37 – E 39	*Sewerage, waste collection, treatment and disposal activities: of which CO2 taxes*	*56*	*67*	*60*	*62*
E36 – E39	**Sewerage, waste management, remediation activities**	**291**	**354**	**334**	**342**
F 41 – F 43	*Construction: of which CO2 taxes*	*331*	*377*	*351*	*364*
F 41 – F 43	**Construction**	**1 564**	**1 806**	**1 781**	**1 894**
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles	266	244	219	228
G46	Wholesale trade, except of motor vehicles and motorcycles	751	767	523	544
G47	Retail trade, except of motor vehicles and motorcycles	461	449	428	452
G 45 – G 47	*Wholesale and retail trade: of which CO2 taxes*	*198*	*233*	*138*	*142*
G 45 – G 47	**Wholesale and retail trade**	**1 478**	**1 460**	**1 170**	**1 224**
H 49	Land transport and transport via pipelines	3 227	3 318	2 817	2 946
H 50	Water transport	675	984	946	1 032
H 51	Air transport	524	410	394	409
H 52	Warehousing and support activities for transportation	353	441	404	424
H 49 – H 52	Land transport etc.	4 779	5 153	4 561	4 811
H 53	Postal and courier activities	107	54	86	90
H 49 – H 53	*Transport and storage: of which CO2 taxes*	*1 392*	*1 336*	*1 197*	*1 240*
H 49 – H 53	**Transport and storage**	**4 886**	**5 207**	**4 647**	**4 902**

Industry classification, Energy taxes		2007	2008	2009	2010
I 55 – I 56	**Accommodation; food and beverage service activities**	**210**	**191**	**199**	**210**
J 58	Publishing activities	76	64	69	70
J 59 – J 60	Motion picture, video and television programme production, sound recording and music publishing activities	102	92	76	76
J 61	Telecommunications	141	143	176	178
J 58 – J 63	**Information and communication**	**362**	**345**	**375**	**380**
J 62 – J 63	Computer programming, consultancy and related activities; Information services activities	43	46	54	55
K 64	Financial service activities, except insurance and pension funding	20	21	22	24
K 65	Insurance, reinsurance and pension funding, except compulsory social security	3	14	14	15
K 66	Activities auxiliary to financial services and insurance activities	9	7	7	8
K 64 – K 66	**Financial and insurance activities**	**32**	**42**	**43**	**46**
L 68	**Real estate activities**	**239**	**383**	**466**	**494**
M 69-M 70	Legal and accounting activities; activities of head offices; management consultancy activities	64	65	83	84
M 71	Architectural and engineering activities; technical testing and analysis	85	80	126	131
M 72	Scientific research and development	8	9	17	17
M 73	Advertising and market research	19	17	20	20
M 74 – M 75	Other professional, scientific and technical activities; veterinary activities	33	36	31	31
M 69 – M 75	**Professional, scientific and technical activities**	**209**	**207**	**277**	**283**
N 77	Rental and leasing activities	74	71	60	60
N 78	Employment activities	9	10	11	11
N 79	Travel agency, tour operator reservation service and related activities	11	15	13	13
N 80 – N 82	Security and investigation activities, services to buildings and landscape activities	144	105	110	111
N 77- N 82	**Administrative and support services activities**	**238**	**201**	**194**	**195**
O 84	**Public administration and defence; compulsory social security**	**635**	**787**	**847**	**895**
P 85	**Education**	**307**	**282**	**283**	**299**
Q 86	Human health activities	172	214	172	182
Q 87 – Q 88	Social work activities	273	292	263	275
Q 86 – Q 88	**Human Health and social work activities**	**445**	**506**	**435**	**457**
R 90 - R 92	Arts, creative, entertainment, museum, libraries and archives, gambling and betting activities	97	149	62	65
R 93	Sports activities and amusement and recreation activities	51	47	51	54
R 90 – R 93	**Creative, arts and entertainment activities**	**148**	**196**	**113**	**119**
S94	Activities of membership organisations	130	111	91	93
S95	Repairs of computers and personal and household goods	10	23	14	15
S96	Other personal service activities	34	135	81	86
S 94 –S 96	**Other services activities**	**174**	**269**	**186**	**194**
T 97 – T 98	**Activities of households as employers**				
U 99	**Activities of extraterritorial organisations and bodies**				
I 55 – U 99 (excl. H49-H53)	*Services excluding Transport and storage: of which CO2 taxes*	*547*	*638*	*524*	*539*
I 55 – U 99	**Services**	**2 999**	**3 409**	**3 418**	**3 570**
G 45 – U 99 (excl. H49-H53)	**Services excluding transport and storage**	**4 477**	**4 869**	**4 588**	**4 794**
h	Households: of which CO2 taxes	1 410	1 655	1 830	1 896
h	**Households**	**12 405**	**12 842**	**13 928**	**14 466**
	Total of CO2 taxes for the economy	8 052	8 116	6 795	6 901
	Total energy taxes for the economy	**29 532**	**30 818**	**30 334**	**31 593**
	Total energy taxes issued from DG TAXUD (for comparison and check)	26 878	28 114	28 884	30 336
	% difference between total energy taxes for the economy and total energy taxes issued from DG TAXUD	9,0 %	8,8 %	4,8 %	-4,1 %

Industry classification, Transport taxes		2007	2008	2009	2010
A 01	Crop and animal production, hunting and related service activities	166	155	154	174
A 02	Forestry and logging	7	9	10	11
A 01- A 02	Agriculture and forestry	173	164	164	185
A 03	Fishing and aquaculture	37	132	34	47
A 01 – A 03	**Agriculture, forestry and fishing**	**210**	**296**	**198**	**232**
B 05 – B 09	**Mining and quarrying**	**84**	**240**	**417**	**472**
C 10 – C 12	Manufacture of food products, beverages and tobacco products	148	94	232	264
C13 – C15	Manufacture of textiles, wearing apparel and leather products	6	16	12	12
C 16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	33	23	15	17
C 17	Manufacture of paper and paper products	7	2	4	4
C 18	Printing and reproduction of recorded media	6	5	39	39
C 19	Manufacture of coke and refined petroleum products	8	24	68	81
C 20	Manufacture of chemicals and chemical products				
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	3	3	1	1
C 22	Manufacture of rubber and plastic products	9	8	5	5
C 23	Manufacture of other non-metallic mineral products	112	68	48	55
C 24	Manufacture of basic metals	34	62	18	20
C 25	Manufacture of fabricated metal products, except machinery and equipment	42	50	43	48
C 26	Manufacture of computer, electronic and optical products	6	6	2	2
C 27	Manufacture of electrical equipment	6	7	7	8
C 28	Manufacture of machinery and equipment n.e.c.	38	51	42	47
C 29	Manufacture of motor vehicles, trailers and semi-trailers	8	11	3	3
C 30	Manufacture of other transport equipment	14	16	18	20
C 31- C 32	Manufacture of furniture; other manufacturing	73	26	37	41
C 33	Repair and installation of machinery and equipment	21	34	20	22
C 10 – C 33	**Manufacturing**	**574**	**506**	**614**	**689**
D 35	**Electricity, gas, steam and air conditioning supply**	**67**	**116**	**127**	**145**
E 36	Water collection, treatment and supply	11	18	18	20
E 37	Sewerage				0
E 38	Waste collection, treatment and disposal activities; materials recovery				0
E 39	Remediation activities and other waste management services				0
E 37 – E 39	Sewerage, waste collection, treatment and disposal activities	234	216	74	75
E36 – E39	**Sewerage, waste management, remediation activities**	**245**	**234**	**92**	**95**
F 41 – F 43	**Construction**	**1148**	**1053**	**1023**	**1145**
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles	407	388	327	362
G46	Wholesale trade, except of motor vehicles and motorcycles	952	918	575	648
G47	Retail trade, except of motor vehicles and motorcycles	825	684	455	506
G 45 – G 47	**Wholesale and retail trade**	**2184**	**1990**	**1357**	**1516**
H 49	Land transport and transport via pipelines	1267	1026	1332	1466
H 50	Water transport				
H 51	Air transport	6	1	120	143
H 52	Warehousing and support activities for transportation	141	165	121	131
H 49 – H 52	Land transport etc.	1414	1192	1573	1740
H 53	Postal and courier activities	74	47	56	64
H 49 – H 53	**Transport and storage**	**1488**	**1239**	**1629**	**1804**

Industry classification, Transport taxes		2007	2008	2009	2010
I 55 – I 56	**Accommodation; food and beverage service activities**	**54**	**29**	**37**	**42**
J 58	Publishing activities	19	22	15	17
J 59 – J 60	Motion picture, video and television programme production, sound recording and music publishing activities	48	36	33	37
J 61	Telecommunications	70	116	131	149
J 58 – J 63	**Information and communication**	**199**	**233**	**236**	**268**
J 62 – J 63	Computer programming, consultancy and related activities; Information services activities	62	59	57	65
K 64	Financial service activities, except insurance and pension funding	1142	894	1283	1457
K 65	Insurance, reinsurance and pension funding, except compulsory social security	18	19	18	20
K 66	Activities auxiliary to financial services and insurance activities	6	6	7	8
K 64 – K 66	**Financial and insurance activities**	**1166**	**919**	**1308**	**1485**
L 68	**Real estate activities**	**2177**	**179**	**187**	**211**
M 69-M 70	Legal and accounting activities; activities of head offices; management consultancy activities	106	45	38	43
M 71	Architectural and engineering activities	363	645	260	294
M 72	Scientific research and development	65	32	16	18
M 73	Advertising and market research	5	13	12	14
M 74 – M 75	Other professional, scientific and technical activities; veterinary activities	54	44	27	30
M 69 – M 75	**Professional, scientific and technical activities**	**593**	**779**	**353**	**399**
N 77	Rental and leasing activities	1478	3031	2274	2558
N 78	Employment activities	3	9	7	8
N 79	Travel agency, tour operator reservation service and related activities	4	3	2	2
N 80 – N 82	Security and investigation activities, services to buildings and landscape activities	79	99	90	104
N 77- N 82	**Administrative and support services activities**	**1564**	**3142**	**2373**	**2672**
O 84	**Public administration and defence; compulsory social security**	**207**	**237**	**150**	**170**
P 85	**Education**	**38**	**39**	**43**	**48**
Q 86	Human health activities	0	0	0	0
Q 87 – Q 88	Social work activities	15	24	25	27
Q 86 – Q 88	**Human Health and social work activities**	**15**	**24**	**25**	**27**
R 90 - R 92	Arts, creative, entertainment, museum, libraries and archives, gambling and betting activities	2	2	14	14
R 93	Sports activities and amusement and recreation activities	59	33	28	32
R 90 – R 93	**Arts, entertainment and recreation**	**61**	**35**	**42**	**46**
S94	Activities of membership organisations	21	26	30	35
S95	Repairs of computers and personal and household goods	6	7	41	42
S96	**Other personal service activities**	140	114	97	111
S 94 –S 96	**Other services activities**	**167**	**147**	**168**	**188**
T 97 – T 98	**Activities of households as employers; Undifferentiated goods- and services-producing activities of private households for own use**				
U 99	Activities of extraterritorial organisations and bodies				
I 55 – U 99	**Services**	**6 241**	**5 763**	**4 922**	5 556
G 45 - U 99 (excl. H49-H53)	**Services excluding transport and storage**	**8 425**	**7 753**	**6 279**	**7 072**
h	**Households**	**19 058**	**17 576**	**16 808**	**19 000**
	Total transport taxes for the economy	**31 299**	**29 013**	**27 187**	**30 654**
	Total transport taxes issued from DG TAXUD (for comparison and check)	31 744	29 309	27 557	31 074
	% difference between total transport taxes for the economy and total transport taxes issued from DG TAXUD	-1,4 %	-1,0 %	-1,4 %	-1,4 %

Industry classification, pollution taxes		2007	2008	2009	2010
A 01	Crop and animal production, hunting and related service activities	31	15	6	4
A 02	Forestry and logging	2			
A 01- A 02	Agriculture and forestry	33	15	6	4
A 03	Fishing and aquaculture	19	7	2	1
A 01 - A 03	**Agriculture, forestry and fishing**	**52**	**22**	**8**	**5**
B 05 - B 09	**Mining and quarrying**	**535**	**321**	**63**	**31**
C 10 - C 12	Manufacture of food products, beverages and tobacco products	14	3	3	3
C13 - C15	Manufacture of textiles, wearing apparel and leather products	1			
C 16	Manufacture of wood and of products of wood and cork	2		3	2
C 17	Manufacture of paper and paper products	14	6	10	5
C 18	Printing and reproduction of recorded media				
C 19	Manufacture of coke and refined petroleum products	185	105	63	56
C 20	Manufacture of chemicals and chemical products				
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	1			
C 22	Manufacture of rubber and plastic products	2		1	1
C 23	Manufacture of other non-metallic mineral products	7	1	2	1
C 24	Manufacture of basic metals	8	5	3	2
C 25	Manufacture of fabricated metal products, except machinery and equipment	2		1	1
C 26	Manufacture of computer, electronic and optical products				
C 27	Manufacture of electrical equipment				
C 28	Manufacture of machinery and equipment n.e.c.	13	16	5	4
C 29	Manufacture of motor vehicles, trailers and semi-trailers	2			
C 30	Manufacture of other transport equipment	299	237	162	190
C 31- C 32	Manufacture of furniture; other manufacturing	1			
C 33	Repair and installation of machinery and equipment	43	31	12	14
C 10 - C 33	**Manufacturing**	**594**	**404**	**265**	**279**
D 35	**Electricity, gas, steam and air conditioning supply**	**5**	**1**		
E 36	Water collection, treatment and supply	2	1		
E 37	Sewerage				
E 38	Waste collection, treatment and disposal activities; materials recovery	684	697	491	279
E 39	Remediation activities and other waste management services				
E 37 - E 39	Sewerage, waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	697	704	494	281
E36 - E39	**Sewerage, waste management, remediation activities**	**699**	**705**	**494**	**281**
F 41 - F 43	**Construction**	**85**	**50**	**29**	**27**
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles	10	7	4	4
G46	Wholesale trade, except of motor vehicles and motorcycles	28	54	31	33
G47	Retail trade, except of motor vehicles and motorcycles	122	90	69	66
G 45 - G 47	**Wholesale and retail trade; repair of motor vehicles and motorcycles**	**160**	**151**	**104**	**104**
H 49	Land transport and transport via pipelines	70	24	11	9
H 50	Water transport	23	112	26	1
H 51	Air transport		3	3	3
H 52	Warehousing and support activities for transportation	56	22	11	6
H 49 - H 52	Land transport etc.	149	161	51	20
H 53	Postal and courier activities	3	6	2	1
H 49 - H 53	**Transport and storage**	**152**	**167**	**53**	**21**

Industry classification, Pollution taxes		2007	2008	2009	2010
I 55 - I 56	**Accommodation; food and beverage service activities**	**172**	**184**	**169**	**173**
J 58	Publishing activities	2			
J 59 - J 60	Motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	1	5		
J 61	Telecommunications	2	2	3	3
J 58 - J 63	**Information and communication**	**7**	**8**	**4**	**4**
J 62 - J 63	Computer programming, consultancy and related activities; Information services activities	2	1	1	1
K 64	Financial service activities, except insurance and pension funding	5	4	8	9
K 65	Insurance, reinsurance and pension funding, except compulsory social security				
K 66	Activities auxiliary to financial services and insurance activities				
K 64 - K 66	**Financial and insurance activities**	**5**	**4**	**8**	**9**
L 68	**Real estate activities**	**61**	**8**	**4**	**3**
M 69-M 70	Legal and accounting activities; activities of head offices; management consultancy activities	2			
M 71	Architectural and engineering activities; technical testing and analysis	9	7	2	2
M 72	Scientific research and development	1			
M 73	Advertising and market research				
M 74 - M 75	Other professional, scientific and technical activities; veterinary activities				
M 69 - M 75	**Professional, scientific and technical activities**	**12**	**7**	**2**	**2**
N 77	Rental and leasing activities	11	20	13	14
N 78	Employment activities				
N 79	Travel agency, tour operator reservation service and related activities				
N 80 - N 82	Security and investigation activities, services to buildings and landscape activities	5			
N 77- N 82	**Administrative and support services activities**	**16**	**20**	**13**	**14**
O 84	**Public administration and defence; compulsory social security**	**38**	**11**	**7**	**4**
P 85	**Education**	**13**	**9**	**3**	**2**
Q 86	Human health activities	7	4	4	3
Q 87 - Q 88	Social work activities	12	10	3	2
Q 86 - Q 88	**Human Health and social work activities**	**19**	**14**	**7**	**5**
R 90 - R 92	Arts, creative, entertainment, museum, libraries and archives, gambling and betting activities		1		
R 93	Sports activities and amusement and recreation activities		4	1	1
R 90 - R 93	**Arts, entertainment and recreation**	**0**	**5**	**1**	**1**
S94	Activities of membership organisations		6		
S95	Repairs of computers and personal and household goods				
S96	Other personal service activities	2	2	1	1
S 94 -S 96	**Other services activities**	**2**	**8**	**1**	**1**
T 97 - T 98	**Activities of households as employers; Undifferentiated goods- and services-producing activities of private households for own use**				
U 99	Activities of extraterritorial organisations and bodies				
I 55 – U 99	**Services**	**343**	**277**	**218**	**217**
G 45 - U 99 (excl. H49-H53)	**Services excluding transport and storage**	**505**	**429**	**323**	**321**
h	**Households**	**1 198**	**1 159**	**1 149**	**1 167**
	Total pollution taxes for the economy	**3 825**	**3 257**	**2 384**	**2 198**
	Total pollution and resource taxes issued from DG TAXUD (for comparison and check)	5178	4977	4368	4280
	% difference between total pollution and resource taxes for the economy and total pollution and resource taxes issued from DG TAXUD	-35 %	-53 %	-83 %	-95 %

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