

Report on sources and methods

Norway

Appropriate Description of the data used according to the Article 1 of Commission Decision 2005/270/EC on establishing the formats relating to the database system pursuant to Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste

Climate and Pollution Agency (Norway)

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Data for the year 2007

Delivery date/version: 16.04.2010

1. Introduction

According to article 7 of Commission Decision 2005/270/EC the member states shall send an appropriate description of how the data have been compiled. That description shall also give an explanation of any estimates used.

Norway has implemented Directive 94/62/EC on packaging and packaging waste by different and complementary instruments:

1. Taxes on beverage packaging and approval of take-back schemes for beverage packaging (Chapter 6 of the Norwegian Waste Regulation). The purpose of the provisions is to facilitate effective take-back systems with a high recovery rate for beverage packaging. The take-back systems shall help to prevent littering and reduce the amount of waste produced by this kind of packaging.
2. Agreements on collection and recovery of packaging waste and optimizing of packaging between the packaging industry and the Ministry of Environment. These agreements apply for packaging other than beverage packaging. The purpose of the agreements is to reduce the environmental impact caused by packaging waste.
3. Regulation on concentrations of heavy metals in packaging.

The Norwegian report according Decision 2005/270/EC is based on received reports to the Climate and Pollution Agency from take-back schemes and material companies due to obligations in regulations and agreements.

1.1 Tax on beverage packaging and approval on take-back schemes for beverage packaging (tax system)

The tax applies to all types of beverage containers up to 5 liters of volume. It is paid to Directorate for Custom and Excise by the importers and producers of beverage. The tax rate is decided annually by the Parliament, but the actual tax rate is reduced according to documented return shares. To achieve tax reduction the importers and producers must be members of a take-back scheme that is approved by the Climate and Pollution Agency. The tax reduction is equal to the return share. Norwegian Climate and Pollution Agency adopts return shares for each take-back scheme annually on basis of documented applications. The report in accordance to Decision 2005/270/EC is partly based on these applications.

1.2 Agreements between the packaging industry and the Ministry of Environment (agreement system)

The Ministry of Environment made agreements with the packaging industry (packers/fillers, producers and retailers) in 1994/1995. In 2003 the agreements were updated and extended to include packaging which has contained hazardous substances. The agreements have specific targets for total recovery rates, energy recovery rates and material recycling rates. In addition the packaging industry is committed to work with reducing packaging.

To fulfill the agreement, the industry has established material companies for each material type. The material companies report generation, recycling and recovery of packaging yearly to the Climate and Pollution Agency. The report in accordance to Decision 2005/270/EC is partly based on these reports.

Binding agreements for packaging made of corrugated board, cardboard, plastic, metal and beverage carton have been established. Formal agreements for glass packaging have not been established, but there is an approved take-back scheme, in accordance with chapter 6 in the Norwegian Waste Regulations regarding take-back schemes for beverage packaging, for non-refillable beverage packaging of glass.

It has not yet been established schemes for collection and recovery for wood packaging and paper packaging (paper bags, wrapper paper etc.).

2. Description of the statistics

In the following description the reported figures according to Decision 2005/270/EC is described for each material according to the reporting tables.

2.1 Data sources

Figures are reported annually within 1st of April to Climate and Pollution Agency on standard form according to the following description:

2.1.1 Glass

Norsk Glassgjenvinning AS is reporting glass packaging without deposit or reuse. They organize separate collection (igloo system), sorting, recycling and export. Two different reports:

1. Beverage packaging according to the tax system
2. Packaging other than beverage according to agreement (Norsk Glassgjenvinning has no agreement but still send reports).

Four different return companies with deposit and/or reuse are reporting according to the tax system. Out phased packaging delivered to recycling are reported.

- Bryggeri- og drikkevareforeningens pante- og retursystem (organization of Breweries)
- K.G. Puntervold (producer of lemonade)
- Askim frukt- og bærpresseri (producer of apple juice)
- Ringnes retursystem (producer of beverage)

2.1.2 Plastics

Plastretur AS is reporting plastic packaging without deposit, collected from households and industries. Two different reports:

- Beverage packaging according to the tax system
- Packaging other than beverage according to an agreement. The report have sub reports for Households, Industries, EPS (expanded polystyrene) and packaging which has contained some hazardous substances.

The reports have separate figures for material recycling and energy recovery. Energy recovery is estimated based on waste statistics. Where the size of the fraction of plastic packaging (from waste analysis) and the degree of energy utilization (annually survey of waste energy plants) forms the basis for the numbers.

Norsk Resirk AS is reporting non-refillable beverage plastic packaging with deposit according to the tax system. Out phased packaging delivered to recycling are reported.

The reports have separate figures for material recycling and energy recovery. Energy recovery is estimated based on waste statistics. Where the size of the fraction of plastic packaging (from waste analysis) and the degree of energy utilization (annually survey of waste energy plants) forms the basis for the numbers.

2.1.3 Paper and board

Norsk Resy AS is reporting corrugated cardboard packaging according to agreement.

The reports have separate figures for material recycling and energy recovery. Energy recovery is estimated based on waste statistics. Where the size of the fraction of plastic packaging (from waste analysis) and the degree of energy utilization (annually survey of waste energy plants) forms the basis for the numbers.

Norsk Returkartong AS is reporting beverage carton and cardboard packaging in two different reports:

- Beverage packaging according to the tax system
- Cardboard packaging (other than beverage) according to agreement.

The reports have separate figures for material recycling and energy recovery. Energy recovery is estimated based on waste statistics. Where the size of the fraction of plastic packaging (from waste analysis) and the degree of energy utilization (annually survey of waste energy plants) forms the basis for the numbers.

2.1.4 Metal

Norsk Metallgjenvinning AS is reporting metal packaging, non beverage, separately collected in two reports. The report have sub reports for hazardous material packaging for ordinary materials.

Norsk Resirk AS is reporting metal beverage packaging with deposit according to the tax system.

SAS Norge AS is reporting metal beverage packaging according to the tax system (closed system on airplanes).

2.1.5 Paper packaging

Norway is not reporting paper packaging (paper bags, wrapper paper etc.). There are no tax or agreement on such packaging, and hence no take-back schemes. However, it is assumed that a large proportion of paper packaging is collected and recycled as part of the collection of other paper.

2.1.6 Wood

Norway is not reporting wood packaging. There are no tax or agreement on wood packaging and hence no recycling schemes. However, according to official waste statistics, there is high degree of recycling of wood packaging, mainly by means of energy recovery. In addition, there are high degree of reuse of pallets, but the figures are unknown.

2.2 Data coverage and quality

2.2.1 Generation of packaging waste

Figures of generation of packaging waste are calculated by the take-back schemes on basis of import declarations to Norwegian Customs Service and sales/delivery figures reported to the material companies from members. The calculations are based on several in-depth studies of the marked for the different packaging types.

Quality remarks

Foreign trade statistics are considered reasonably reliable in Norway. However, it may occur errors as a result of missing or incorrect declarations.

Extracts from the foreign trade statistics are based on the material companies' member lists. Errors in the lists or extraction can lead to reduced data quality. There can also be some errors as result of varying definition of packaging.

Reports for the material companies' members sale/delivery may contain errors.

The tax determined by the return shares give an economical motivation to report underestimated generation figures. Eagerness to fulfill the agreements can lead to the same.

Free-riders can lead to reduced data quality, although the participation in take-back systems in general is very high. Generally the take-back schemes have high participation, especially the take-back schemes for beverage packaging. The take-back schemes make several efforts to recruit members. Membership is required to achieve tax reduction, and is an important contribution to reducing the number of free-riders.

2.2.2 Material recycling

The figures on material recycling are based on reports to the material companies from collectors and recyclers. Norsk Glassgjenvinning AS has their own sorting and recycling facilities.

Quality remarks

The quantities reported as material recycling corresponds to total amount sent to recycling. A fraction of these amounts will be segregated to other treatment, basically energy utilization.

The different take-back schemes is to some extent handling materials which "belong" to other take-back schemes. This can be a result of agreements or as a result of mixed materials. This can lead to double counting, but the risk is prevented by different control mechanisms.

The taxes determined by the return shares give an economical motivation to report overestimate recycling figures. Eagerness to fulfill the agreements can lead to the same.

2.2.3 Energy recovery

The figures on energy recovery are based on waste statistics, fraction of packaging (from waste analysis) and degree of energy utilization (annually survey of waste energy plants).

Quality remarks

The calculations of energy recovery are in some cases based on uncertain data sources or estimated factors.

2.3 Calculation

The Climate and Pollution Agency compiles the reports from the take-back schemes and material companies before reporting.

2.4 Validation process

The take-back schemes and material companies have to document their reports and calculation methods. It is required that the reports in the tax system is documented and signed by an accounting auditor.

The Climate and Pollution Agency controls the reports from the material companies as part of the consideration of applications for the determination of return shares.