MILJØVERNDEPARTEMENTET
Ministry of the Environment

Normal screen
Similar documents

Waste policy

Contents

White Paper no. 8 (1999-2000) The Government's environmental policy and the state of the environment in Norway

Preface

The Government has launched White Paper no. 8 (1999-2000) The Government's environmental policy and the state of the environment in Norway. This White Paper takes a look at the whole spectrum of environmental policy. Chapter 7 and appendix 3 of the report contains a particularly broad discussion about policy on waste. This is in reply to Parliament's request for a new White Paper on waste and recycling.

What you are now looking at is a shortened version of the section referring to waste in the report. Waste policy is perhaps the sphere where work on the environment is most visible and tangible for us all in everyday life. Several times a day we throw something in the garbage bin and, fortunately to an increasing degree, we also throw something in the recycling bin. This means that most people are concerned about waste policy. For this reason I hope that we will be able to reach a larger public with this shortened version.

I am really pleased that the surveys we have made show that the Norwegian public is on the whole positive to separating at source and support wholeheartedly the arrangements that have been made. It is important for me that people see that it's worth the effort – because it is! Developments show that we are now in the process of turning the waste stream away from the landfills. Recycling of waste is increasing from year to year. In this way the environmental problems which occur when waste ends up on landfills or in incinerators are being reduced.

At the same time there is a big challenge to prevent environmental problems and limit the amount of waste that occurs. The White Paper is a tool with which to combat this challenge – the way ahead. I hope that it and this shortened version will be along in helping each individual consumer, each individual company in the country and all the country's local authorities do their bit in the effort to achieve a successful policy on waste!

Guro Fjellanger

Minister of the Environment

Why have a policy on waste?

– The environmental problems

Everything that we throw away because we don't want it anymore, or because we can't use it anymore, becomes waste – the leftovers from our production and our consumption. In 1996 there was a little less than 1.4 million tons of household waste, over 4 million tons of industrial waste and about 650 000 tons of special waste. In addition to this there was about 18 million tons of rubble, stones and gravel which is also waste but which does not make any significant contribution to the environmental problems. Waste is one of several sources of today's environmental problems. It is when the waste undergoes its final treatment at the landfill or in the incinerator that the most important environmental problems arise.

When waste is disposed of on landfill methane gas is formed. The United Nations climate panel has rated methane as having a climatic hazard potential that is 21 times greater than CO_2. Methane emission from the dumping of waste contributes to 7 percent of total Norwegian emissions of climatic gasses.

Seepage from municipal landfills has high concentrations of a number of damaging substances amongst others organic materials, nitrogen, iron, primeval organic salts, heavy metals and toxic organic combinations. Seepage from about half the landfill waste leaks out untreated. Pollution from landfills can continue for many hundreds of years after they have ceased to be operational. In this way we are pushing the environmental problems over onto future generations.

The incineration of waste leads to the atmosphere being polluted by environmentally hazardous chemicals, dust and acid formation resulting from the incineration of waste. The most important environmental consequences are emissions of heavy metals like cadmium, mercury and lead and poisonous chlorine organic combinations such as dioxides.

Waste facilities take up space, even after they are closed down, and they lead to obnoxious smells, noise and risks of transmitting diseases via birds or rats.

Pollution is against the law and often limits the possibilities we have of using the countryside for recreation and outdoor activities. Burning waste in small stoves makes up a very small part of the total incineration of waste. But the combined emissions from small stoves are for some specific substances greater than from all the large incineration plants combined.

These are the environmental problems that need to be solved by the policy on waste.

Principal waste terminology

Consumer waste:
Normal waste, including larger items such as fixtures and fittings etc., from households, smaller shops and offices. The same applies to waste of similar type and quantity from other businesses.

Production waste:
Waste from industry and services, which in type or quantity differ significantly from consumer waste.

Special waste:
Waste that cannot be adequately dealt with together with consumer waste because it may lead to serious pollution or hazards that are damaging to humans or animals.

Household waste:
Waste from private households.

Industrial waste:

Waste from public and private enterprises and institutions.

Municipal waste:
All waste that is dealt with by municipal refuse disposal, i.e. almost all household waste and large amounts of industrial waste.

Where are we going? – Specific goals

Environmental problems arising from waste are extensive, can be serious and in many cases are transferred to the next generation. The Government has therefore set out three specific goals for the policy on waste – national objectives – in order to show clearly the ambitious target level of the policy and in order to be able to test whether things are developing in the desired direction. The Government will report to Parliament every year about developments in relation to these objectives.

Objective 1

"Growth in the volume of waste that is generated should be significantly lower than the rate of economic growth."

Economic growth has been significant in our country especially since the war. We also expect a significant growth in the future. This growth has up until now also contributed to an increase in the volume of waste and in this way increased the environmental problems. The economic growth and the volume of waste have roughly speaking increased at the same tempo. In the period from 1974 to 1998 the average quantity of household waste per person increased from 174 kg to 308 kg per year, an increase of 77 percent. Figure 1 illustrates the growth in household waste in relation to the growth of consumption. If the growth in the volume of waste continues we will inflict increased harm to the environment. There are practical limits as to how much of the waste can be recycled and as to how stringent the requirements made on the waste facilities can be. It is therefore necessary to force a wedge between future economic growth and the growth in the volume of waste.

The Government's target is that the volume of waste should grow at a significantly slower rate than the rest of the economy. This means that there should be a significantly large benefit that accrues over time. Even if the national objective in the first instance is concerned with breaking the link between the generation of waste and economical growth, the Government will work so that the volume of waste that is causing environmental problems will be reduced in the long term.

Objective 2

"Given the fact that the quantity of waste for final treatment is to be reduced to a socio-economical and environmentally reasonable level, the aim is that the quantity of waste dealt with by final treatment should, by the year 2010, be equal to approximately 25 percent of the quantity of waste generated."

When we talk about final treatment we are referring to disposal and incineration without conversion to energy. In the case of incineration involving an energy utilisation lower than 100 percent then it is the portion of waste that corresponds to the portion of unused energy that is regarded as finally treated. If, for example, the utilisation of energy in a plant is 70 percent, then 30 percent of the quantity of waste is considered to be finally treated, but if the utilisation of energy is 90 percent then 10 percent of the quantity of waste is considered finally treated.

The goal is that at least around 75 percent of the waste is to be recycled either by utilising as materials or as energy from the waste. Some types of waste are only suitable for material recycling e.g. metals that cannot be incinerated. Other types of waste like bark and

chippings are unsuitable for material recycling and would therefore most likely be used for energy utilisation. Some waste will be suitable for both material recycling and energy utilisation. If socio-economic assessments show that material recycling can be placed on an equal footing with energy utilisation, then material recycling will be preferred.

The objective allows for great freedom of implementation. There is room for modification for local situations and varying levels of ambition. How much of the individual types of waste is to be recycled and how much is to be material recycled or energy utilised can vary on a national basis dependent on e.g. local market potential, quality criteria and prices.

The best municipalities have already achieved over 70 percent recycling. Nonetheless the costs involved in waste management in these municipalities are not significantly higher than the national average. On a national basis approximately 57 percent of the waste was used as a source of energy or as raw products in 1996. That is to say that 43 percent went to final treatment. This amount is to be reduced to 25 percent within the year 2000.

From 1992 to 1998 the quantity of household waste for material recycling increased from below 100 000 tons in 1992 to nearly 500 000 tons in 1998. This is an increase in the course of 6 years from 9 percent to 34 percent. This increase has been so large that the volume of household waste for final treatment has actually been reduced over the same period of time. The amount of industrial waste that was sent to material recycling rose from 8 percent in 1992 to 20 percent in 1997.

The goal is in line with today's development towards increased recycling, see figures 2 and 3 which illustrate this. This development will become more pronounced by the measures suggested in the report.

Objective 3

"Practically speaking all special waste is to be dealt with in a safe and acceptable manner, and is either to be sent to recycling or is to be guaranteed sufficient national capacity for its treatment."

Special waste is waste that contains chemicals that are hazardous to health and the environment. When wrongfully managed this waste can cause serious pollution or endanger both humans and the environment. The most dangerous chemicals are broken down slowly and accumulate in the food chain.

Special waste makes up 650 000 tons a year. Of this 340 000 tons are collected and delivered for domestic treatment. 240 000 tons are treated within the industry, 40 000 tons are exported and approx. 30 000 tons are disposed of in an unknown manner. It is assumed that a large amount of this waste ends up in the wrong places and thereby causes serious pollution. The collection of volumes of special waste in Norway has increased significantly in the last few years, see figure 4.

The other part of the objective is based on our international duty to have sufficient national capacity for the treatment of special waste. When NOAH's (Norwegian Waste Mangement) treatment plant for organic special waste in Brevik is in full operation we will be able to deal with nearly all special waste ourselves. Nonetheless this will continue to be an ongoing objective – it is a necessary part of our environmental and industrial infrastructure.

The way ahead – Methods and strategies

In the further development of methods and measures to be taken in the waste sphere, the Government will emphasise that:

- the principle that is to be adhered to is that it is the polluter who must pay

- great emphasis should be given to the principle of "being prepared" when the suggested measures or methods reduce serious threats to the ecological system
- suggestions for methods and measures to be taken are to build upon socio-economic assessments
- in a choice between different alternatives, the most cost-effective measure is to be chosen.

The sphere of waste is, and should continue to be, regulated through a combination of different measures and of various central and local regulations. The Government will stress that central authorities are only to establish the general framework, so that the local authorities are free to choose the specific solutions for collection and treatment locally. When further defining methods in waste policy it will also be emphasised that many measures have already been established and are expected to have an increasing effect. New measures are first and foremost intended to augment and complement those that already exist.

Less waste

The Government will:

- invite central participants from industry, local authorities, consumers and environmental organisations to participate in a committee which will advise on the reduction of waste
- examine the possibility of an increase and a change in the form of taxation on the final treatment of waste
- assess the introduction of a materials tariff
- further encourage and direct the local authorities towards greater differentiation in sanitation fees and possibly assess the need to introduce a differentiation imposed by law
- examine whether consideration for the environment can be established more successfully through regulations governing purchase
- fund projects for environmentally friendly products, designs and the environmental "lighthouse" scheme.

Increased awareness at all levels

An important part of the Government's waste policy is to prevent waste, see objective no. 1. Many of the measures that already exist in waste policy, such as the tax on final treatment and the codes governing manufacturers' areas of responsibility, already contribute to the reduction of waste. It is important to develop these further and to ensure that there is the greatest possible harmony between these different measures.

In order to succeed in the work with the reduction of waste it is necessary to increase the public's knowledge, commitment and environmental interest. Increased exposure in the marketplace can also contribute to companies giving greater emphasis to the work of reducing waste. It is also important that efforts made to reduce waste are rewarded, for example that less waste disposed of in the residual waste container results in less duty on waste. All stages in the life of a product are significant for the waste that will later arise. Emphasis should be placed on waste problems from the time when the raw products are chosen, at the design phase, during production and at purchase. This is often not the case today. It is therefore especially important to strengthen the measures in these different phases.

The introduction of environmental management systems in industry, the local authorities' work with the local Agenda 21, the Green state project and the sector based environmental management plans are important in order to provoke increased awareness about the volume of waste and about action being taken to promote the reduction in waste.

The Government welcomes co-operation

Waste arises because of powerful forces in society. Norway, like most other OECD countries, experiences that it is difficult to find the right measures to promote the reduction of waste. At least short term. It is therefore important to be aware that this takes time. At the same time the necessary processes and modifications must start now. Therefore it is important that industry, local authorities, consumers and environmental groups work together to gain knowledge and communicate the necessary experiences. The Government would therefore like to invite central figures from these groups to participate in the work to find methods and measures to reduce waste.

Developing green taxes further

Taxation in the sphere of waste is an important tool in the work of making the transition from taxation on income and work (red tax) to taxation on pollution and use of resources (green tax). Green taxes will be used to put a price on the environmental consequences of dumping and pollution from the treatment of waste. This is to safeguard the principle that the polluter shall pay. In this way it will reward consumers and industry to choose environmentally sound solutions.

Tax on final treatment

This tax was introduced from 1st January 1999 and is a really important tool in waste policy. The polluter must now pay for the environmental problems arising from the final treatment. In this way it becomes relatively speaking financially more rewarding for the individual to reduce the volume of waste and increase recycling. In this way prices contribute to controlling the waste for the best socio-economic solutions. The Government will assess this tax and evaluate whether to increase and possibly change its form in order to achieve the best possible effect.

Material duty

The materials used can be the source of various environmental problems throughout the course of their life until they end up as waste. If these environmental problems are not seen to the pile of materials may become too big. In connection with certain materials, which create significant environmental problems, the Government will examine whether a material duty could be a relevant tool to use.

Increased differentiation in waste tariffs

At present the local authorities are to set the waste tariffs so that they cover all the costs involved in managing waste. As the arrangement is at present many local authorities demand a fixed yearly waste tariff independent of the quantity of waste that is delivered. There are therefore many consumers who experience that their expenses are not reduced even though they reduce the amount of waste.

The local authorities are encouraged to differentiate the waste tariffs, i.e. fix the tariff dependent on the quantity or type of waste that is delivered. In this way the size of the container, the frequency of collection and payment for the weight of the waste can be used separately or combined. The Government will work out guidelines for the local authorities showing the different alternatives that exist. Both national and international experience in this area will be made available. If differentiation is not carried out extensively enough, the Government will evaluate whether to impose this on the local authorities.

Work directed towards the product

Assessment of environmental considerations in the purchasing law

Some of the paragraphs in the law governing purchase can have environmental consequences. The regulations governing complaints/refunds may for example influence the purchaser's chances of getting the product repaired free of charge. This may in turn influence the manufacturer to extend the product's lifetime. In order to utilise the product's life it ought to be as simple as possible to repair free of charge for the customer. The Government will assess whether environmental considerations can be worked into the regulations governing purchase in a better way.

Support for environmentally friendly product designs

Product designers can through their choice of materials influence such things as repair possibilities and the life of the product. These are important factors in achieving the reduction in waste. The Institute of Technology, the Norwegian Design Council and GRIP Centre for Sustainable Production and Consumption have together worked out a suggestion for a five year program to profile environmental design for small and medium sized companies. The Government will subsidise this work.

Support for environmental management in smaller companies

The environmental "lighthouse" concept is an innovative environmental management system for small and medium sized companies, which fall outside the EMAS and ISO schemes. The scheme can provide important motivation for many small and medium sized companies to implement good environmental measures. The reduction of waste is a central element in the scheme. The Government will give support to the spreading and further development of the scheme so that it can spread nation-wide.

Better standards of products

An extensive work is taking place to standardise products both nationally and internationally. This work effects to a large extent the environmental characteristics of a product for example the possibility for repair, its quality, lifetime and choice of materials. The Government will encourage industry to take the environment into consideration when forming product standards. It will also be evaluated how the authorities can contribute to this work.

More recycling

The Government wants to:

- increase utilisation of energy potential in waste and reduce polluting emissions from the incineration process by:
- improving the market potential for waste based energy
- contributing to increased knowledge about emissions from the incineration of unsorted waste fractions
- tightening up the requirements for incineration facilities
- increase the recycling of construction and demolition waste and reduce the problems involved with illegal dumping of this type of waste by:
- subsidising the ØkoBygg-program (EcoBuild porgam)
- giving the local authorities power to demand the necessary information about the volume of waste and its form of disposal from the person in charge of the construction work.
- increasing the recycling of wet organic waste by establishing a project to work on improving the possible uses for waste.

Recycling should profit society

Recycling contributes in general to reducing the burden that waste is on the environment. In

this way environmental costs will also be reduced. However both recycling and traditional final treatment costs money just like everything else in society. In order to achieve the best solutions, the advantages and disadvantages have to be weighed up. The correct level of recycling will be different for the different types of waste because business management costs and environmental costs vary. Many factors decide the correct level of ambition for recycling. The public's evaluation of environmental costs change. The prices of recycled materials, of new raw products and of energy also change. Technology is in constant development and this will effect the profitability of the different schemes. All these situations have an influence on how much waste is socio-economically viable to recycle either as materials or to utilise as energy. Increased knowledge and improved statistics can also provoke the need to modify our course. When we assess what is the correct level of ambition for the future it is important to have long-term considerations in mind, which take into account that profitability in the short term can vary. This means that recycling solutions may be relatively unprofitable in the short term but nonetheless be the right thing for society as long-term profitability may be good. In assessing how much waste should be recycled, fluctuations in profitability must be weighed up against more lasting changes which make it right to modify the level of ambition. The Government uses socio-economic evaluations as a basis for the shaping of recycling schemes.

Energy from waste is to be better utilised

A lot of waste is not suitable for material recycling. Some of this is organic waste like timber, bark, chippings, bits of paper/cardboard, plastic and textiles. If this waste ends up on a landfill it will lead to emissions of the climatic gas, methane. It is therefore desirable to keep the organic waste away from the landfills. The organic waste can have a high level of energy potential which can be utilised in different ways. Some of the waste can be made into pellets and briquettes, which can be used, for heating. Methane gas, which is formed when waste is broken down, can be used as fuel for vehicles. Energy from incineration can be used as process heat in industry or in other systems for distant heating and proximity heating and for the production of electricity.

The utilisation of waste for energy purposes can replace other sources of energy and will often lead to a reduction in the usage of fossil fuels like oil. In this way we achieve a two-fold effect on the emissions of climatic gas. As part of our efforts to promote renewable sources of energy the Government wants to stimulate the increase of the utilisation of energy from this waste.

From waste to fuel for busses and cars

In the municipality of Uppsala in Sweden gas from waste is used as fuel for busses and cars. A biogas facility, which started operation in the autumn of 1996, today provides biogas (methane) for about 20 busses and 15 cars. The facility receives wet organic waste from slaughterhouses, restaurants, catering establishments and retail stores. They also accept manure from cattle and pigs. The facility will be enlarged to receive food waste from households. The establishment of this facility has resulted in waste now being used as fuel. In this way emissions from waste on the landfills are avoided and emissions into the atmosphere from fossil fuels are reduced. Experience with the operation of busses and cars run on gas is extremely positive and the bus companies have shown great interest in expanding this venture.

A lot of unutilised energy in waste

Today around 1.8 million tons of waste is incinerated in about 650 waste to energy facilities. About 600 of these facilities are smaller energy plants that burn waste timber or other unsorted waste, which doesn't require advanced processing prior to incineration. Five large municipal waste incineration facilities burn mixed waste. Altogether about 7 TWh/year energy is generated from the incineration of waste. This corresponds to the electricity consumption of approx. 300 000 households.

The degree of energy utilisation of these five large waste incineration facilities has

increased consistently over the last ten years. In 1998 the degree of utilisation was about 70 percent.

It is estimated that the potential for increased energy utilisation from waste is approx. 3,5 TWh a year which corresponds to the electricity consumption of about 150 000 households. The estimate is uncertain and neither is it certain that it is socio-economically profitable to utilise the entire potential.

Better economic conditions for the sale of waste based energy

A scheme supported by investment has been started to create suitable conditions for increased usage of renewable sources of energy such as bioenergy, waste and waterborne heat based on these sources of energy. 75 million kroner was set aside for 1999 for this scheme in the national budget. The Government Environmental Fund can also give favourable loans for the establishment of biofuel facilities. In order to provoke an even greater increase in the usage of renewable sources of energy and waterborne heat, the Government is preparing an extensive development program ("the energy packet"). This includes an increase in the electricity tax combined with subsidies for investments of up to 5 billion kroner over a ten-year period. These measures should also lead to better market potential for waste based energy.

Local co-operation is important

It is important to build up local markets that function satisfactorily. The local authorities have planning authority with responsibility for area planning, and therefore they can prepare the way for increased use of waste based energy. In many cases it is advantageous that the local authorities, the sanitation department, the energy department and industry work together on projects.

It is important for local authorities choosing to invest in facilities for waste incineration to build the plant with the right dimensions in relation to the potential for the reduction and material recycling of waste. Flexible solutions ought to be sought. New facilities ought to be built with a large degree of energy utilisation in mind.

Reduced emission from waste incineration

At the same time as it is desirable to increase the generation of energy from waste it is also important to continue to work to reduce environmentally damaging emissions from facilities that incinerate waste. There is a need to increase knowledge about emissions from the incineration of various types of waste in the different incineration facilities. It is also important that the waste is separated and that the quality is ensured prior to incineration. The Government will instigate the establishment of good schemes for ensuring the quality of waste based fuels.

Construction and demolition waste

There are large amounts of waste that arise from construction and demolition sites. This waste is very composite and contains considerable amounts of chemicals hazardous to health and the environment. As of today only a small amount of construction and demolition waste goes to reusage, material recycling or energy utilisation. There is a huge potential to increase this and thereby reduce the amount that goes to landfills.

The tax on final treatment is an important means of reaching this goal. The building trade has already started an extensive work to promote the reduction and increased recycling of waste. They have for example established a 5-year trade development program, ØkoBygg (EcoBuild), which aims to reduce the volume of waste going to landfills by 70 percent. With support from the ØkoBygg program the building trade has started drawing up a national plan for the management of construction and demolition waste, see inset. The Government will support the ØkoBygg program through subsidies.

National plan for the management of construction and demolition waste

Based on the desire to change the present trend of construction and demolition waste, the National Union for the Building Trade and the National Union for Technical Contractors have started drawing up a national plan for the management of construction and demolition waste.

The management plan will consist of specific goals for the reduction and recycling of waste, as well as measures to attain these goals. A viable economic and environmental management of construction and demolition waste requires co-operation, co-ordination, preparation, motivation and practical schemes and will involve large sectors of the industry. The management plan will concentrate on how this can be best accomplished in such a large and complex sector. The plan is to be presented in the summer of year 2000.

The local authorities are given increased powers

Several local authorities have had a lot of trouble with the illegal disposal of construction and demolition waste. This means that the polluter gets out of having to pay taxes and tariffs for the waste. Some municipalities e.g. Oslo, have as part of a trial project received the power to demand information and reports about how the waste from building sites is managed. This has led to these local authorities being able to prevent illegal disposal and promote recycling of this waste (see inset about the example from Oslo municipality). The Government will now give all local authorities the opportunity to introduce such schemes. It will be up to the local authorities as to whether they want to avail themselves of this possibility. The Government will assess at the next revision of the planning and building law whether they will make it mandatory for all builders to provide information about management of their waste.

More recycling of wet organic waste

Wet organic waste, i.e. waste from the food industry, food waste from large-scale catering and private households, as well as garden waste, is one of the most polluting types of waste. The disposal of wet organic waste leads to emissions of methane gas and emissions of environmental toxins into the earth and water through seepage water. Therefore on the whole it will not be permitted to deposit this waste on landfills after the year 2000.

The waste contains important nutrients that it is important to utilise better than we do today. There is a huge potential for increased recycling of wet organic waste both as fodder and as fertiliser or a means of improving the land and thereby returning it into nature's cycle. One condition for this is that the products are of a quality that is compatible with the quality production of food. Different requirements are laid down in the law for products that are involved in the manufacturing of food and for products that are to be used on green areas, roadsides etc.

The Government establishes collaboration projects

It is necessary to develop markets for the sale of waste based fodder and compost products. In order to do this, products supplied must be able to show well-documented results, have high utilitarian value and a large degree of confidence in the market. Strengthening of competence and confidence is vital. There is also a need for a change in attitude, product development and a better dialogue between the manufacturer and the consumer. In order to meet these challenges the Government is taking the initiative by establishing a five-year project in close collaboration with the participants within the waste and agriculture sectors.

Construction and demolition waste in Oslo municipality

In Oslo the illegal dumping of construction and demolition waste has created serious problems. In order to put an end to this, in 1994 Oslo municipality passed a new by-law concerning the management of production waste after the Ministry of the Environment had

delegated them authority according to the pollution law.

The building authorities can in matters of building, rehabilitation and demolition demand that the builder must provide a summary of the volume of waste that will arise in connection with the project, and submit a plan of how the waste will be disposed of. When the work is completed the builder has to submit a final report documenting that the waste has been managed in accordance with the previously approved plan. In this way the builder is encouraged to plan the disposal of his waste and it will also be easier for the authorities to control that the waste has been managed in a responsible manner.

Experience from Oslo so far shows that the new by-law has given the municipality a clearer picture of the volume of waste involved and better control over the waste streams. Competence amongst the builders and transporters has increased and the amount of separating at source has also increased.

Better final treatment and reduced illegal management of waste

The Government will:

- tighten up the requirements regarding and control over emissions from the disposal and incineration of waste even more
- delegate power to the local authorities to regulate illegal waste incineration and encourage them to prioritise supervision and control of illegal waste management.

More stringent licensing requirements

The licensing requirements for landfills and incineration plants for waste have been increased significantly in the last few years. This has led to reduced emissions. However the Government still feels it is necessary to tighten up the requirements even more. EU has now suggested new rules, which Norway supports both concerning the incineration and disposal of waste. The directives will lead to reduced emissions and joint standards for the management of waste. In this way there will be less danger of importing and exporting waste in order to be able to get cheaper treatment with lower environmental standards.

Illegal management of waste

Dumping and uncontrolled waste incineration is forbidden. Nonetheless this illegal management of waste goes on to a certain extent; burning in the back garden and dumping in ditches and woods.

It is also important that the local authorities use their power to stop illegal dumping. In addition the Government will give the local authorities power to regulate and implement measures against illegal incineration of waste and draw up directives and guidelines for the local authorities' work in this area.

As of today the municipality's authority for the supervision of illegal waste management only applies after the transgression has taken place. The Government will evaluate whether the local authorities also ought to have the right to demand documentation from the various participants beforehand to show that they have sufficient schemes for their waste. This can possibly be carried out through delegation or a change in the law.

Management of special waste

The Government will:

- constantly evaluate the need for classifying new types of waste as special waste
- reduce the volume of special waste that is unaccounted for by:

- making sure that the local authorities have satisfactory facilities for receiving waste
- examining special measures for specific types of special waste, e.g. nickel cadmium batteries and special waste packaging
- increasing the collection of waste oil through measures such as modification of the reimbursement scheme
- maintaining sufficient national capacity for an environmentally responsible treatment of special waste through licensing practices and the responsibility of Norwegian Waste Management (NOAH) to ensure this.

Special waste not accounted for

Chemical policy has the goal of reducing emissions that are hazardous to health and the environment. As measures are put into practice the amount of dangerous substances in products will be reduced and thereby there will also be a reduction of these substances in waste. At the same time we know that the use of chemicals has increased in the last few years. This results in new product groups appearing as special waste. The Government will make it a priority to ensure that waste containing hazardous components is classified as special waste so that it is guaranteed special treatment.

Every year there is about 30 000 tons of special waste which is unaccounted for. Some of this is quietly looked after in a responsible manner but the rest can cause serious pollution if it becomes mixed with other municipal waste, poured down drains and into ditches or other illegal disposal. A whole range of measures is necessary in order to ensure the responsible collection of this waste.

The local authorities have since 1996 been obliged to have sufficient facilities to receive special waste from smaller generators of waste, but the success of these measures has been varied. Guidelines have been drawn up for the local authorities showing how they ought to meet the requirements for "the existence of sufficient facilities". If the local authorities do not establish satisfactory schemes the Government will introduce minimum requirements for the collection of special waste in the municipalities.

In addition the Government will:

- stipulate requirements for the collection and management of nickel cadmium batteries
- extend the reimbursement scheme for waste oil
- assess measures concerning special waste packaging
- assess the need for special measures for other special types of waste.

The national management capacity

Norway through the Basle convention is obliged to limit the transport of special waste abroad to a minimum. It has therefore been a longtime goal to establish sufficient national capacity for the managing of special waste in Norway. In 1991 the government and industry worked together to solve this problem and established the company Norsk avfallshandtering AS (NOAH) (Norwegian Waste Management AS). This objective was attained with the establishment of NOAH’s plant for the management of organic special waste in Brevik in 1999. Sufficient capacity for the management of special waste will also be taken care of in the future by a licensing practice that is open to competition in the market for the management of special waste. At the same time it is important to ensure that at all times the management of this waste is carried out in a safe and responsible manner. NOAH will therefore continue to play an important part in the system for special waste through its obligation to receive and select appropriate treatment for all types of special waste.

Changes in work forms and distribution of responsibility

The Government wants:

- to extend industry's responsibility and freedom of action concerning their own waste through a change in the pollution law's definitions of waste and by assessing the further development of manufacturers' responsibilities
- clarification of the sectors' responsibility through sector environmental management plans to contribute to strengthening and making the waste policy more effective
- the project Green state to show the way as to how the nation can contribute on its own initiative to the reduction of waste and increased demand for recycled materials
- local Agenda 21-processes in the municipalities to inspire measures for better waste solutions by involving inhabitants and local industry.

Industry gets more responsibility and freedom of action

The Government is assessing firstly extending industry's freedom of action concerning the management of their own waste and secondly extending the responsibility of manufacturers for special products.

Increased freedom of action for industry

Some industries are today encompassed by compulsory council refuse schemes. By giving these industries the possibility of choosing who collects and disposes of their waste, more flexible solutions can be promoted and lead to a reduction in waste and an increase in recycling. In the light of this there is a suggestion for a change in the law. The suggestion is that the local authorities shall only have the right to and be obliged to take care of waste from households, whilst the management of industrial waste will be a matter of supply and demand, see figure 5. The local authorities will be able to compete in the same way as other participants in the market for the management of this waste. The suggestion has been sent out for comments. Before the Government presents its final suggestion to Parliament, the parties in question will be contacted so that all points of view can be considered.

Increased responsibility for the manufacturers

The Government is evaluating special treatment for specific types of waste where the general measures are insufficient. A good solution may be increased responsibility for the manufacturers which means the manufacturers and importers would bear the waste costs for their products. This would contribute to increased recycling, stimulate reduction in waste and reduced usage of substances in products which are hazardous to health and the environment.

The Government's responsibility

The Ministry of the Environment has responsibility for many measures in waste policy, but other departments also influence the sphere of waste through the methods used in their sectors. The sector authorities are to have a clear picture of how the businesses in their sector effect the environment, set goals and develop measures within their area of responsibility. The individual sectors are to work out environmental management plans for each sector involving measures and methods to contribute to the achieving of the goals in waste policy.

The Government also has responsibility for waste arising from its own enterprises. State enterprises are important both because of their size and because they give out signals to other businesses in society. It is of great significance that the state itself behaves in the way that it wants others to behave. The Government therefore introduced the project Green State in 1998. The aim of the Green State project is to reduce the burden on the environment caused by the operation of state enterprises and form a basis for assessing how the integration of environmental considerations in the state can best take place. Reduced amounts of waste and increased separating at source are amongst the priorities that the enterprises will be working on, as well as the establishment of an environmentally

conscious purchasing strategy.

Local Agenda 21

In the waste sphere the local authorities have many possibilities and considerable responsibility to create solutions which make it easy and profitable for companies and households to choose what is environmentally correct. Many local authorities have begun this work by finding good and creative solutions for waste. Local authorities, local industry, organisations and inhabitants can work together to create a stronger local community. In the inset about concentrating on waste in the Flora municipality we can see that some local authorities have become forerunners in this work, see inset.

A Competence Network for local Agenda 21 has been set up. The Competence Network is to distribute information about relevant measures that local authorities can implement in order to be more environmentally friendly, such as measures to reduce the volume of waste and the amount of health and environmentally hazardous chemicals in the waste, as well as measures to promote reuse and recycling.

Concentrating on waste in the Flora municipality

By using simple, educational worksheets Flora council has written "recipes" specially adapted for different enterprises and groups for things such as the minimising of waste. Hospitals, schools, playschools, shops and hotels have received tailor made check lists with specific tips on how they can attack the waste problem. Industry increasingly understands that its awareness of the environment is a competitive advantage. The council has also contributed by organising an infrastructure so that households are also able to separate at source in the home without having to transport glass, paper and other types of waste to various recycling stations.

Possible measures in the municipalities in order to promote the reduction of waste and increased recycling of waste

– information to inhabitants to build up understanding and motivation

–examination of the council’s own operations (choice of products, routines, own separating at source, reuse, repair etc.)

– active use of a waste plan as a starting point for co-operation between the public and local industry

– establishment of reusage workshops

- create own goals in the waste sphere
- motivate industry to examine their own operations.

General measures and methods

The Government will:

- use information as a tool and encourage the participants in the waste sphere to co-ordinate information
- increase the quality of waste statistics and increase knowledge about the connection between development in society and the reduction of waste, and about technology for improved waste management and utilisation of energy.

Concentrating on information

Information is a prerequisite for increased support for reducing the volume of waste and using recycling schemes. There are many participants who provide information in the waste sphere such as return companies and the local authorities. Co-ordination of information can give profits and the Government encourages this. At the same time the protection of the environment authorities will assess how they can contribute to this work.

Surveys show that people are on the whole positive to separating their own waste and are good at using the schemes available in their own municipalities. Eighty percent of those asked are of the opinion that there are huge environmental gains to be made through separating at source. At the same time thirty percent say that they do not have any confidence that waste is being properly managed. It is therefore important to provide information so people can see the results of separating and recycling and be made to feel that it's worth the effort.

The Government intends to design a system for presenting the volume of household waste for final treatment, spread over the municipalities in the country.

The Government wants to continue to concentrate on the Norwegian Resource Centre for Waste Management and Recycling (Norsas) as the national competence and information centre for waste and recycling. On the net Miljøstatus i Norge (Environmental status in Norway) will be used as an active channel. The Network for Environmental Education can provide information for pupils. The environment authorities will also continue their co-operation with the voluntary organisations. These often have widespread contacts and can effectively spread their gospel.

International work

International work is important for solving problems involved in the transport of waste over borders and for solving global and regional environmental problems caused by waste. Emissions of environmental toxins and climatic gasses are not confined by borders. International co-operation will also ensure a co-ordination of the methods that are used and thereby contribute to avoiding undesirable competition between countries. At the same time co-operation gives access to other countries' experiences and competence. The international work on waste goes on in a whole chain of forums and organisations.

– The Nordic Council

– The European Economic Area (EEA-agreement)/European Union (EU)

– The Organisation for Economic Co-operation and Development (OECD)

– The Basle Convention

– UN's international shipping organisation (IMO).

New knowledge and research

The statistical basis of the waste sphere is still incomplete. Statistics and knowledge about the volume of waste, emissions and methods of treatment is important information that the authorities need for the assessing and forming of new measures. The quality of waste statistics must be improved.

There is also a need for more knowledge about the connection between the development of society, the use of different measures and the generating of waste. In addition to this there is a need for more knowledge about a whole chain of technical situations e.g. in connection with technology for the extraction of methane gas and several situations concerned with incineration and the utilisation of energy.

A lot has been done – present day methods

The White Paper deals first and foremost with how future policy in the waste sphere will be. This therefore does not cover all the existing methods. In the course of the last few years a series of methods have been introduced and measures have been taken to improve the collection and treatment of waste, both in the local authorities and in industry. The effect of these measures has been good. It will nonetheless take time before the total effect is apparent. Technical adjustments that are required in order to implement certain measures can be time consuming and it also takes time to alter the routines and habits of local authorities, industry and people in general. The suggestions in the report are in addition to the existing schemes. In order to show the overall picture of waste policy a short summary is given below of the most important present day methods that are used in the waste sphere.

Some methods are general and cut across environmental problems and types of waste while other methods are aimed directly at specific types of waste or specialised forms of treatment.

The pollution law– the waste policy's main support

The law states that it is illegal to pollute, but in certain circumstances exceptions can be made. The law also forbids dumping and states that the local authorities can order the "dumper" to clean up. The law for example aims to reduce the amount of waste and states in its guidelines that the costs of waste management ought to be borne by those who are responsible for the waste. Facilities for the treatment of waste must get permission from the pollution authorities.

The local authorities – the kingpins of waste policy

The local authorities have responsibility for collecting and managing consumer waste. It is the local authorities that regulate how waste collection and separating at source is to take place locally. They are to work out waste plans and they set waste tariffs. The tariffs are intended to cover all the costs of collecting and managing the waste. Many local authorities comply with the request to differentiate the tariffs, i.e. have a system where the price depends on the amount and type of waste that is delivered. In this way it will pay to deliver less waste and do more separating.

Industry is responsible for its own waste

Industry is responsible for whether the manufacturing waste that arises in a company is recycled or delivered for safe treatment. In addition industry is given increasing responsibility for its own products when they end up as waste.

Duty on the final treatment of waste

The duty is to cover the environmental costs of the final treatment of waste. These are costs that have not previously been specified. For landfill the duty is 300 kroner per ton. For incineration there is a basic charge of 75 kroner per ton waste and an additional charge (225 kroner per ton) which is reduced according to the degree of energy utilisation. The charges make the final treatment of waste significantly more expensive and therefore promote the reduction of waste, increased material recycling and energy utilisation of the waste.

Special rules for special waste

Special waste has a special hazard and pollution potential. Therefore this waste is

regulated through a special statute which for example stipulates that everyone who manages special waste needs permission from the authorities. All businesses where special waste arises should deliver it at least once a year to approved facilities. The local authorities are obliged to ensure that sufficient facilities exist for the reception of special waste from households and smaller enterprises.

Recycling of return paper

Paper makes up about 17 percent of all household and industrial waste. In 1990 three times more paper was deposited than material recycled, whilst in 1997 the amount of paper that was material recycled was greater than the amount that was deposited, see figure 6. The Ministry of the Environment has made an agreement with Norske Skogindustrier ASA (Norwegian Timber Industries ASA) where they commit themselves to build a plant for the recycling of return paper. This plant will be completed in the first half of 2000.

Return scheme for electric and electronic waste

Each year there is about 144 000 tons of waste from electric and electronic products (EE waste). Some of this waste is special waste. As the first country in the world Norway has stipulated statutes that ensure the collection and managing of this waste. The statute that came into power on 1st July 1999 enables consumers to deliver their waste to dealers that sell similar products and to the local authorities. Importers and manufacturers of these products have, for example, responsibility to look after the collection and safe management of these products. In accordance with an agreement between the Ministry of the Environment and the EE industry, the industry is to establish a nation-wide system that will ensure that 80 percent of all EE waste that arises is collected within 5 years.

Deposits ensure a high level of collection of car wrecks

The wreck deposit scheme for car wrecks was established in 1978 for vehicles of under 3,5 tons. When purchasing a new car a charge of 1 200 kroner is paid, (suggested increase to 1 300 kroner in the national budget for 2000). When the discarded car is delivered to an approved reception facility, the car owner is given a deposit of 1 500 kroner. This ensures that about 90 percent of all car wrecks become part of the return system. About 75 percent of the car wrecks (measured in weight) are recycled.

Packaging waste – tariffs and voluntary agreements

Packaging for drinks are regulated by a tariff system. The tariff is reduced according to how much of the packaging is returned for reuse or recycling. In addition a charge accrues per unit of disposable packaging.

Other packaging is regulated through agreements entered into in 1995 between the Ministry of the Environment and the packaging industry. The industry is obliged to work to reduce the amount of packaging waste which arises and to attain within 60-80 percent recycling within the course of 1999. In accordance with the requirements in the agreements special return systems have been established for the different types of packaging. In total nearly 57 percent of packaging waste was material recycled in 1998 with an additional 11 percent in energy utilisation.

KFK-gasses in refrigerating equipment will be safely extracted

KFK-gasses break down the ozone layer when they escape into the atmosphere. This substance was previously used in refrigerating equipment. Safe waste treatment of this is guaranteed through a separate statute from 1996. According to the statute the dealers must be willing to receive the refrigerating equipment. They can then deliver the equipment free of charge to the local authorities who are obliged to provide sufficient facilities for its reception and to ensure safe treatment of the refrigerating equipment so that emissions of KFK gasses are hindered.

All lead batteries are recycled

The battery statute stipulates that dealers must be willing to receive discarded lead batteries free of charge. Importers of lead batteries are obliged to organise free collection from the dealers and local authority facilities and to ensure at least 95 percent recycling. The obligations in the statute are further guaranteed through an agreement between the Ministry for the Environment and AS Batteriretur who have committed themselves to financing and organising a nation-wide system for the collection and recycling of at least 95 percent of all types of used lead batteries. Since this scheme was started in 1994 the collection of batteries has been almost 100 percent.

It is forbidden to dispose of tyres on landfills

The tyre statute of 1994 stipulates a prohibition against the disposal of discarded tyres and gives the tyre industry responsibility for ensuring the safe collection and recycling of tyres. Consumers have the right to deliver their discarded tyres free of charge to tyre dealers, while tyre manufacturers and importers are obliged to fetch the collected tyres and ensure the recycling of the same. The statute is supplemented by an agreement with the industry where they commit themselves to establishing a nation-wide collection system for waste tyres. In 1998 86 percent of tyres were collected for recycling.

Reimbursement scheme for waste oil

Used lubricating oil is called waste oil and is special waste. Lubricating oil from a number of different usage areas is taxed. At the same time reimbursement is given when waste oil that comes from taxable lubricating oil is delivered. This scheme was introduced in 1994 and has led to the collection of waste oil increasing from about 54 percent in 1990 to about 73 percent in 1998. See figure 9. In order to increase the collection even more it has been suggested to extend the reimbursement system to give reimbursement for all waste oil, independent of whether it comes from taxable lubricating oil or not with the exception of waste oil from ships engaged in foreign trade.

Other areas are also regulated

In addition there are special statutes regulating individual specialised forms of treatment, for example the incineration of municipal waste, the incineration of hazardous waste and the incineration of waste oil. A special statute has also been stipulated which regulates the export and import of waste as well as a statute about the registration of waste management which ensures a central nation-wide waste register.

Publisher: The Ministry of the Environment

This publication can be ordered from

Statens forurensingstilsyn (SFT) (The Norwegian Pollution Control Authority)

Strømsveien 96

Postbox 8100 Dep., 0032 Oslo

Telephone: +47 22 57 34 00 Telefax: +47 22 67 67 06

http://www.sft.no/bestilling.html

Design and layout: Gazette

Illustrations: Trude Tjensvold

Translation: Follo Språkservice

Print: Optimal a.s.

Copies: 3 000/February 2000

This publication is printed on recycled soft drink cartons.

http://www.miljo.no

T 1312 ISBN 82-457-0272-2