

An Ecoefficient Society: non-toxic, resource-saving environmental life cycles

Summary of Government Bill 2002/03:117



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Main provisions of the Ecoefficient Society Bill

Swedish Government Bill 2002/03:117 proposes objectives, strategies and measures to bring about a society characterised by non-toxic, resource-saving environmental life cycles. Our economic development is based largely on production and consumption of products. These processes use up materials and energy. Achieving ecological equilibrium in our use of communal resources is crucial if we are to create a sustainable society. It is also part of the task of fulfilling many of the environmental quality objectives adopted by the Riksdag.

Our production and consumption result in abundant waste. One key aspect of environmental life-cycle management is therefore ecologically sound management of waste. In this Bill, the Government develops Sweden's national waste policy further. Waste management is an essential part of the infrastructure that must function smoothly in society. Recent years have seen the adoption of many new policy instruments, while various parties have greatly intensified their commitment. Systems that are credible and easily accessible to producers and consumers alike are therefore called for.

The Government will give the Swedish Environmental Protection Agency (EPA) primary responsibility for coordinating the strategy for attaining a society with non-toxic, resource-saving environmental life cycles. The EPA should be charged with coordinating the inputs of all parties engaged in environmental life-cycle management issues in society.

To make progress towards ecologically sound waste disposal, we need to reduce the volume of waste. From the manufacturing stage on, producers must consider a product's environmental impact in life-cycle terms. Design, choice of materials and consumption of energy in production and use must be taken into account.

Sustainable environmental life-cycle management is, moreover, attainable only if most waste can be reused and recycled. This allows saving of both material and energy and, at the same time, a decrease in environmental problems from waste. Legislation on producer responsibility and bans on landfilling of waste are parts of the Government's work in this area. Supplementing present-day policy instruments is desirable. This Bill involves further development of producer responsibility for packaging and waste paper. It also gives the municipalities greater influence over information and planning with respect to producer responsibility. The return system for aluminium cans and polyethylene terephthalate (PET) bottles is also being developed further. In the long term, this will be extended to include all plastic and metal containers for ready-to-drink beverages. The Government also proposes new interim targets regarding biological waste treatment, to improve the recovery of nutrients and phosphorus from food waste.

One important means of making waste management ecologically sustainable is to reduce hazardous waste. Substances that are hazardous to health or otherwise harmful must be removed from environmental life cycles. One measure the Government will undertake is further clarification of the municipalities' responsibility for households' hazardous waste. The Government will also require long-term storage of mercury in deep rock locations.

Work on the Bill

The Bill, which is based on an agreement between the Social Democratic Government, the Left Party and the Green Party, refers to the following commission proposals and reports. The commissions and assignments concerned were initiated by the Government.

- The Producer Responsibility Commission (M 2000:01), on the Government's behalf, evaluated current producer responsibility for packaging, waste paper, tyres and vehicles. Systems for returning beverage containers and voluntary commitments concerning office paper waste, on the one hand, and building and demolition waste on the other, were reviewed. The Commission presented its proposals in its report on resource recycling and recovery (SOU 2001:102).
- The 2001 Waste Tax Commission, on the Government's behalf, evaluated the functioning of the system of waste tax, and also evaluated and analysed the economic and environmental consequences of introducing a tax on waste that is incinerated. The Commission's proposals were presented in its report on current and future tax on waste (SOU 2002:9).
- The Mercury Commission (M 1999:01), on the Government's behalf, was appointed to coordinate and investigate further national work on final storage of mercury-containing waste in rock shelters. The Commission presented its proposals in its report on the safe storage of mercury (SOU 2001:58).
- The Swedish EPA, on the Government's behalf, evaluated the development of waste management over the past few years. The results of this evaluation were reported in its report (No. 5177) on ecologically sustainable waste disposal, which also contained proposals for amendments and additions to current legislation on disposal of waste.
- The Swedish EPA, on the Government's behalf, issued a report (No. 5237) on waste collection and recycling that followed up producer responsibility for 2001 and proposed amendments to the Motor Vehicle Disposal Act (1975:343).
- The Swedish EPA, on the Government's behalf, issued a report (No. 5225) on progress towards environmentally sound products after being instructed to devise documentation for continued development of environmentally sound product policy.
- The Swedish EPA, on the Government's behalf, issued a report on its government assignment to investigate landfilling of waste in sparsely inhabited rural areas. This report concerned the suitability of applying the scope for granting exemption to 'isolated settlements', as defined in the EU Landfill Directive (1999/31/EC).
- The Swedish EPA, on the Government's behalf, issued a report that followed up the bans on landfilling of waste by describing the outcome of, and compliance with, the bans on landfilling of combustible and organic waste.
- In consultation with the Ministry of Finance and the National Road Administration, the Ministry of the Environment put forward proposals for legislative amendments to supplement the regulations concerning the vehicle-disposal charge. On 3 April 2003, the Government resolved to request the Council on Legislation's opinion of the legislative proposals contained in the bill. The Council's statement has resulted in minor adjustments in the Ministry's proposals.

Swedish environmental policy — environmental quality objectives and action strategies

To guide efforts to bring about a sustainable society, the Riksdag has adopted 15 national environmental quality objectives. These define intended conditions in the Swedish environment within a generation. They also specify the course of environmental efforts at all levels in Sweden and also work in international contexts. The 15 objectives were formulated on the basis of how much the environment can withstand, and with five basic amenities as their premise.

The environmental quality objectives are aimed at:

- improving human health
- protecting biodiversity and the natural environment
- taking care of the cultural environment and the amenities of the cultural heritage
- preserving the long-term production capacity of ecosystems
- ensuring sound conservation of natural resources.

Over and above the national objectives, the Riksdag has also adopted various interim targets for each of the environmental quality objectives. The interim targets are intended to ascertain whether the transition to a sustainable society within one generation is going in the right direction. These are measurable, and they are to be attained at specific dates.

A few activities in society are causing several current environmental problems. Examples are transport services, use of energy and flows of goods, materials and chemicals. The Government has proposed three action strategies, one for each of these areas, to coordinate measures to attain several of the environmental objectives. The leading strategies for attaining the environmental quality objectives are:

- A strategy for more efficient energy use and transport services.
- A strategy for non-toxic, resource-saving environmental life cycles ('the life-cycle strategy').
- A strategy for conservation of soil, water and the built environment.

The life-cycle strategy: a guide to attaining Sweden's environmental objectives

Goods that circulate in society contain large quantities of various materials. Many require abundant energy to produce and contain substances found in limited quantities. For society to achieve sustainable environmental life-cycle management, it is therefore essential for us to administer joint resources with a view to the long term. Many products, moreover, contain substances that are toxic or hazardous, and should not be released into the environment. This means that the most harmful substances should be phased out and that substances still in use should be handled in a safe manner.

The life-cycle strategy is intended to bring about a society with non-toxic, resource-saving environmental life cycles. It includes changed consumption patterns, more effective

production methods and a system of waste management more geared to recycling. The life-cycle strategy is based on an approach to materials and products that considers their entire life cycle, so as to give as complete a picture as possible of their environmental impact. The energy consumed for a product should also be included in the assessment.

The Government considers that environmental life-cycle management needs developing, and that one means of doing so is coordination of various public agencies' measures in product policy and waste management. The high degree of mobility of goods across national borders also means that there is a great need for joint international initiatives. For example, work is under way in the EU to draft an integrated, environmentally oriented product policy. The life-cycle strategy has also made up a key part of Swedish efforts since the 2002 World Summit on Sustainable Development in Johannesburg.

Swedish Environmental Protection Agency in charge

The Government's assessment: the Swedish EPA should be given primary responsibility for coordinating and developing the strategy for non-toxic, resource-saving environmental life cycles (the 'life-cycle strategy'). The Government intends to commission the EPA to draft proposals on how to develop the strategy further.

Work to create non-toxic, resource-saving environmental life cycles calls for collaboration in several areas. Many of the environmental objectives and action strategies that various public agencies are working towards are related to the life-cycle strategy. For this strategy to attain its aims, greater coordination of inputs is required. This is why the Government has appointed the EPA as the agency with responsibility for the life-cycle strategy. The EPA was already the agency responsible for overall environmental issues. However, being in charge of coordinating the life-cycle strategy does not mean that the EPA is now taking over responsibility from the various agencies involved in attaining the environmental objectives.

Current work linked with the life-cycle strategy

Measures to create an environmentally oriented product policy

A product affects the environment throughout its life cycle. Energy and resources are used during every stage, from production and processing of raw materials to the use of the product and its final disposal as waste. To obtain a comprehensive picture of a product's environmental impact, a life-cycle perspective of this kind is essential. Work on an environmentally oriented product policy is being conducted internationally by the Swedish EPA, among other agencies.

Within the EU, too, work is under way to draft a proposal for a common, environmentally oriented product policy — the 'integrated product policy' (IPP). The purpose of this policy is to reduce the environmental load of goods throughout their life cycle and to make resource use more efficient. The Government considers that this joint work needs to focus particularly on finding ways of breaking the connection between economic growth and

adverse environmental impact. The task of creating a more attractive market for recycled materials is also important.

Vital work is also under way at global level. At the Johannesburg Summit, the delegates agreed to establish a ten-year framework of programmes for sustainable production and consumption. For Sweden's part, the Government has presented proposals for developing best practice in its work on an environmentally oriented product policy. We shall also engage in technological collaboration and other exchange of experience with various developing countries.

The Swedish Environmental Management Council's new activities

For trade and industry, making goods and services ecoefficient affords new business opportunities. Swedish companies are already well ahead in the area. The work under way in enterprises and the public sector on environmental management systems, environmental labelling and environmental requirements in procurement are additional key aids to efforts for sustainable consumption and production patterns. The Swedish Environmental Management Council will be given a more active role in the area and work on, for example, environmental requirements in public procurement. As before, the Council has been working on the EU's voluntary Community eco-management and audit scheme (EMAS), and on certified environmental product declarations (EPDs).

New chemicals policy in the EU

A new chemicals policy is being developed in the EU. This involves a reorganisation for which Sweden has long striven. The aims of continuously replacing hazardous substances and applying the precautionary principle are generally dominant in the new policy. These measures are also crucial in Swedish chemicals policy. Both new substances and those already in existence must be covered by the same system of registration, assessment and approval of chemicals (REACH). Responsibility for building knowledge on the properties of substances is being laid on industry. This information must be recorded in a joint EU register.

The Council of Ministers has approved the basics of future chemicals policy, and the European Commission is working on its final wording. In its efforts henceforth, Sweden should work to ensure that the new European policy becomes an effective tool for remedying problems in the chemicals sector.

Environmental technology in the waste sector

Sweden has a tradition of active, innovative environmental policy. This has gone hand in hand with major investments in infrastructure, such as treatment equipment for wastewater and incineration plants, and in techniques of material recovery.

The focus on technical solutions to environmental problems has resulted in Swedish environmental-technology companies being among the foremost worldwide. The global market for environmental technology is expanding rapidly, and is expected to amount to SEK 6,000 billion a year by 2010. Despite Sweden's great expertise in the area, Swedish companies have only a very small share of this market. In 2000, exports of environmental technology amounted to SEK 8 billion.

Stepping up exports of Swedish environmental technology would favour both the environment and growth in the environmental-technology sector as a whole. To support companies in their export drives, the Swedish Trade Council is engaged in activities in Russia, the Baltic countries and the other EU candidate nations, and also in Asia. These are regarded as budding export markets in great need of waste-management systems.

To provide further support for businesses, the Government aims to establish a national centre for development, entrepreneurship and export of environmental technology. This centre will build on the sector's lead, and work to further promote commercialisation and export of environmental technology.

Ecologically sound waste disposal

Waste policy for a non-toxic, resource-saving environmental life cycle

Waste can be both a resource and an environmental problem. Waste management that functions poorly entails immense wastage of valuable material and can also result in environmental and health problems. The objective is to utilise as far as possible the resources contained in waste. At the same time, it is important to reduce its adverse impact in the form of emissions of methane from landfills and carbon dioxide from incineration plants, and discharges of heavy metals and organic environmental toxins.

There is a hierarchy for the management of waste. First, it means that we should try to produce as little and as harmless waste as possible. For waste that nonetheless arises, material recovery should be a higher priority than energy recovery when this is environmentally justified. As a method of last resort, the waste should be disposed of by landfilling.

In the choice between material recovery and incineration, there are no self-evident answers to the question of which method is preferable for all types of waste. In general, several analyses support material recovery, which enables materials and nutrients to be recycled. In recent years, the Government has taken numerous measures with respect to waste, to encourage a shift towards sustainable environmental cycles.

Examples of recent regulation in the waste sector are:

- Producer responsibility for packaging, waste paper and tyres (1994)
- Producer responsibility for vehicles (1998)
- Tax on waste (2000)
- Producer responsibility for electric and electronic products (1 July 2001)
- Ban on landfilling of unseparated combustible waste (2002)
- Ban on landfilling of organic waste (enters into force on 1 January 2005).

The Government wishes to maintain its measures in waste policy and considers that a key part of this work consists in a clearer consumer perspective. It must be easier for households to sort and hand in their waste, so that a growing proportion of waste is recycled. Information on the purpose and benefits of household participation is also

important. Moreover, the Government sees a need for improved coordination of the various systems of collection, such as those for packaging, waste paper, household waste, hazardous waste, batteries and bulky refuse.

One overall change that is required for us to make Sweden's system of waste disposal more ecoefficient is a reduction in the quantity and hazardousness of waste. This cannot be attained by measures at the waste stage alone but, rather, is largely dependent on changes in production and consumption. Today, quantities of waste are increasing in line with economic trends. A fundamental means of attaining the objective of sustainable environmental life-cycle management is more resource-saving production and consumption, to break the association. Here, companies that design and manufacture products have a major responsibility for reviewing the environmental impact of products throughout their life cycle, using more recovered and recycled materials, and considering the need for future recycling of the products. Consumers, too, have a key role in the choice of products and their use. In Sweden, the EPA is working for an environmentally oriented product policy. Similar efforts are under way in the EU and at international level.

Priorities in waste management

A smaller volume and harmless waste
reduce consumption of resources and the spread of toxic substances.

Material recovery
saves resources and energy compared with use of new raw materials.

Energy recovery
Incineration makes use of the energy in waste for which material recovery is not worthwhile.

Landfilling is the last resort, when neither materials nor energy can be recycled.

The EU member states have agreed on a hierarchy for ecoefficient waste disposal. First of all, measures to prevent waste arising are to be taken. An environmental impact assessment includes a ruling on how to dispose of the waste that nonetheless arises.

Improved material recovery from waste

A comprehensive approach to waste is required for ecologically sound waste management to be attained. Various measures are necessary to reduce quantities of waste and redirect flows according to the hierarchy of various treatment methods. Increasing the rate of material recovery from waste is one means. Recovered raw materials represent energy saving compared with use of new raw materials. Moreover, material recovery often results in lower emissions than other treatment methods. When producers start recovering

materials, a valuable link with environmentally aware product development also arises owing to their wish to rationalise production.

The Government intends to strengthen the structure of material recovery that has evolved over many years.

Biological treatment methods are an area in which the Government recognises a need for supportive measures. Here, new interim targets are proposed for food waste and waste from the food industry.

Responsibility for various parts of waste management also needs clarifying. Clearer responsibility for the waste owner means that industrial and other activities must consider using scope for material recovery. In addition, measures to improve households' collection of packaging and waste paper are needed. Large-scale incineration of waste should also be reviewed. Industrial and other activities must consider and use various methods for material recovery.

The Government is to investigate whether tax on waste that is incinerated should be introduced, to encourage an increase in material recovery.

Over and above the interim targets for biological treatment of food waste, there is interest in another interim target relating to conservation of materials and energy for goods and services in a life-cycle perspective. A interim target in this area must, however, fulfil the same criteria that apply to the other interim targets, i.e. it must be measurable and a date must be set for its attainment. The Government considers that EPA, as the coordinating agency with future responsibility for the life-cycle strategy, and the National Board of Housing, Building and Planning should be jointly commissioned to present proposals to the Government for the next bill on environmental objectives in 2005.

Interim targets for recovery of food waste

The Government's proposal: two interim targets should be added to the existing interim targets under the national environmental quality objective 'A good built environment':

- Not later than 2010, at least 35 per cent of food waste from households, restaurants, catering establishments and shops should be recycled through biological treatment. This objective relates to food waste sorted at source and destined for both home composting and central treatment.
- Not later than 2010, food waste and other comparable waste from the food industry etc should be recycled through biological treatment. This objective relates to the kind of waste that arises without being mixed with other waste, and is of the quality that, after treatment, is appropriate for use in plant cultivation.

Biological waste from households, restaurants and food stores contains plant nutrients and other valuable substances. This easily biodegradable waste can, after biological treatment, be recovered and used for plant cultivation. This would afford several advantages compared with present-day landfilling, on the one hand, and incineration on the other.

Phosphorus, an element that is a finite resource, could for example be included in a recycling process.

According to the Government's proposals for interim targets relating to food waste, the quantity that undergoes biological treatment is expected to rise from the current figure of approximately 140,000 tonnes to 350,000 tonnes in the year 2010. This is a national interim target. In municipalities where commitment is strong and the scope for achieving natural nutrient cycles is good, superior results are expected. In municipalities where conditions are less favourable, a lower level of recovery and recycling is acceptable.

Biological waste from food companies should also be included in these processes. However, this does not apply to waste that contains contaminants or pollutants and thus cannot meet appropriate standards for use in cultivation. Nor does it apply to food waste that is mixed with other waste.

To bring about biological waste that is consistently of a high enough quality to be usable for food-crop cultivation after treatment, low concentrations of environmental toxins and contaminants are essential. This calls for highly developed collaboration throughout the chain from the farm to the kitchen. There also needs to be cooperation between all the parties who sort waste, municipalities with responsibility for waste collection and the end users of compost or decayed organic waste.

Facilitating biological methods, which are often relatively costly and laborious, also requires policy instruments of various types to ensure actual use of such methods when they are environmentally justified. The Swedish EPA estimates that attaining the food-waste objective will represent additional annual costs of some SEK 155 million. This sum consists largely of the extra expense of containers, bags and collection, which will be covered by municipal waste-disposal charges. One support measure advocated by the Government is extended tax exemption on propellants composed of biogas derived from biological treatment processes. This tax exemption will apply up to and including 2006. At present, renewal of this exemption must be approved by the European Commission.

Another aspect of recovering phosphorus and other plant nutrients is the question of increased use of sewage sludge in agriculture. The EPA has proposed objectives for restoring phosphorus to farmland from sewage sludge, and the Swedish Government is working on this issue.

Waste incineration

The Government's assessment: waste incineration with energy recovery is a method of managing the kind of waste that is not suitable for material recovery or biological treatment. Waste intended for incineration should be well separated, classified and checked. Hazardous waste should not be transported for incineration mixed with other waste. Moreover, waste that is suitable for material recovery or biological treatment, or not combustible, should be separated.

The Government intends to instruct the Swedish EPA, in consultation with the Swedish Energy Agency, to investigate the scope for regulating in more detail

the requirements in the Waste Incineration Ordinance concerning, and inspections of, waste consigned to incineration.

Efforts to reduce the formation of dioxins and, as far as possible, eliminate dioxin emissions should continue. Fly ash, which consists largely of dioxins, should be managed and disposed of in such a way as to minimise the risk of emissions.

Waste incineration is set to increase over the next few years as a result of the bans on landfilling of separated combustible waste. The advantages are that more energy can be extracted from the waste and that the environmental impact from methane-gas emissions and leachate from landfills will diminish. For waste incineration to contribute to sustainable environmental life-cycle management, however, the quality of the waste incinerated is essential. A report from the Swedish EPA shows that few analyses are being carried out to check whether this waste contains hazardous and non-combustible components, or whether it is such that material recovery would be a better solution.

The Government considers that better routines are required to inspect waste consigned to incineration. The EPA is therefore being instructed, in consultation with the Swedish Energy Agency, to investigate how new provisions can be worded.

Discharges of toxic substances from waste incineration, including heavy metals, have been decreasing sharply for several decades. The new waste-incineration requirements may, according to the EPA, result in a further reduction in the quantities of dioxins released into the atmosphere. Conversion of Swedish waste incinerators will result in a decrease in dioxin formation and, by the same token, a reduced quantity of dioxin in fly ash. The EPA is being instructed to survey sources of emissions of unintentionally formed dioxins, and it will provide guidance on precautionary measures to be taken in the disposal of this ash.

Tax on incinerated waste

The Government's assessment: a commissioner should be appointed with the task of submitting proposals as to the possible legal technicalities of a tax on waste that is incinerated and assessing whether it is advisable to introduce a tax of this kind or whether, instead, other financial instruments are to be recommended. The commissioner should also assess what tax rate is appropriate with reference to the desired control effects.

It is often difficult for methods of dealing with waste, such as reuse, material recovery and biological treatment, to compete financially with waste incineration. At the same time, extending waste incineration, biological treatment and material recovery alike is a prerequisite for attaining the Government's objective of discouraging landfilling of waste.

One way of attempting to balance these priorities is to impose a tax on waste incineration. A commission on waste tax has found both good reasons for and risks entailed by such a tax.

At present, there is insufficient documentation for a decision to introduce a tax on waste that is incinerated. Further analyses are needed for an assessment of whether such a tax is the best method of steering waste management in a desirable direction. The Government therefore wants to appoint a commissioner to investigate whether a tax on incineration of waste should be introduced and, if so, when this would be appropriate and what the tax rate should be.

Landfilling of waste

Waste deposition in landfills disrupts natural cycles and creates environmental problems in the form of leachate containing toxic substances, and emissions of methane — which affects the climate — from degradation processes. To boost environmental life-cycle management, a ban on landfilling of separated combustible waste has been in force since 2002. There is also a requirement that combustible waste be stored and removed separately from other waste. A ban on landfilling of organic waste will come into force on 1 January 2005.

Bans on landfilling of separated combustible waste and organic waste

The Government's assessment: the 2002 ban on depositing separated combustible waste in landfills should be retained. The option of granting exemption from the ban is only a temporary solution. Further measures may need to be taken to eliminate landfilling with exemption in its present-day form.

When the ban on depositing separated combustible waste in landfills came into force, there was a marked shortage of capacity to dispose of the waste other than in landfills. Consequently, the Government introduced an option for county administrative boards to grant exemption from the ban. This exemption applies for a year at a time, and the county administrative boards are estimated to have granted, or be planning to grant, exemptions for roughly 1,600,000 tonnes of combustible waste.

The EPA expects this quantity to decrease continuously over the next few years, especially in the light of the current extensions in capacity for both waste incineration and biological treatment. A forecast based on the county administrative boards' reports shows that the ban on landfilling of combustible waste will largely be implemented in the course of the period 2004–06.

The Government considers that the exemption option, in its present form, should be retained only in the short term and abolished as soon as this is deemed feasible. In the longer term, exemption will be granted only in exceptional, individual cases.

No rise in tax on exempt landfilling of waste

The Government's assessment: no special tax should, at present, be imposed on landfills of the kind of waste covered by an exemption from either of the bans on landfilling, relating to separated combustible and organic waste.

Under the Waste Tax Act (1999:673), which came into force in 2000, a tax of SEK 250 was imposed per tonne of waste deposited or stored for a period exceeding three years. The purpose of this tax is to boost financial incentives to treat waste in a way that is superior in terms of the environment and natural resources. To date, the tax rate has been raised on two occasions and is now SEK 370 per tonne.

In the EPA's view, combustible waste deposited under exemptions should be liable to a tax of an additional SEK 50 per tonne. This would support the bans on landfilling of combustible and organic waste, and effect a switch to other methods of waste management. However, the Government considers that there are reasons to wait and see what the effects of the recently adopted rise in the waste tax will be. In the years immediately ahead, there will be a need to build up capacity for waste disposal.

Landfilling of waste in isolated settlements

The Government's assessment: the option of granting exemption for individual landfills is sufficient. The Government finds no reason to use the option of granting exemption for landfilling of waste in isolated settlements under the Landfill Directive.

The EU Landfill Directive (1999/31/EC) was adopted in 1999. It forms the basis of Swedish regulations relating to landfilling of waste. The provisions of the Directive include the environmental requirements to which landfill sites should be subject. The member states can choose to exempt landfill sites in isolated settlements from certain parts of the directive.

However, the Government chose instead to introduce an option of issuing exemptions for individual landfills. A general exemption, based on the definition of 'isolated settlement' in the Directive, would affect only two Swedish landfill sites and reduce scope for imposing environmental requirements. On the one hand, individual exemptions are not dependent on geographical location; on the other, an assessment is based on the site's impact on health and the environment.

Although municipalities in sparsely inhabited areas may find it difficult to dispose of waste in their own landfill sites and be obliged to transport it to larger municipalities, this is often environmentally justified. Surveys show that collected waste can be shipped long distances without substantial impact on energy consumption or the environment. However, the Government considers it important to reduce, as far as possible, the shipments that nonetheless occur and their environmental impact.

Waste management — part of society's infrastructure

A smoothly functioning system for disposing of waste is an essential element in the infrastructure of society. It is comparable to the electricity and water supply or the transport network. The infrastructure of waste management comprises collection, transport and various means of waste disposal. Household, public-sector activities and companies all depend on municipal or private actors offering a workable system of waste management.

Several major changes have affected waste management in the past decade. During the 1990s, producers assumed responsibility for packaging, waste paper, tyres, vehicles and electronic products. The result has been a sharp increase in recycling of waste, but the changes have also led to dissatisfaction among municipalities and households because of the lack of clarity regarding responsibility, and to littered recycling depots. At the same time, the previously municipal waste management has been opened to market actors, and this has resulted in new roles with respect to waste collection and disposal. These changes have been implemented at the same time as the technical requirements to which landfills are subject have been made more stringent and bans on the landfilling of certain types of waste have been introduced.

The Government sees a need for several aspects of waste management to be reviewed. Producer responsibility for packaging and collection of hazardous waste needs developing further. In addition, the division of responsibility among different parties should be clarified. Knowledge about waste can also be accumulated in a better way. The Government sees these changes as important means of promoting a further shift to sustainable environmental life-cycle management.

Swedish Environmental Protection Agency's broader role

The Government's assessment: waste management should be seen as part of society's infrastructure. The Government therefore considers that the Swedish EPA's functions include monitoring waste-management capacity and methods, and working for waste management to take place in an efficient and, for consumers, simple manner. However, this does not mean that the municipalities', producers' and other parties' responsibility diminishes.

In recent years, major changes have taken place with respect to waste management. The need for further development makes it necessary for the state to increase its commitment in this sector. This should be effected through increased responsibility on the EPA's part.

The EPA's remit emphasises the agency's responsibility for providing an impetus in the shift to sustainable waste disposal. To date, this work has largely been restricted to the ecological dimension of waste management. This task should be expanded to include monitoring of waste systems' capacity and efficiency.

Nevertheless, it is important to point out that the EPA's responsibility should be confined to monitoring and observing the development of waste management. Responsibility for ensuring that the systems for collection and disposal of waste function properly should be borne by municipalities, producers, operators and other parties.

Formation of a council for waste issues

The Government's assessment: a council to deal with waste issues should be set up in the Swedish EPA, to advise and assist the EPA in the implementation of waste policy and broaden consultations with various parties.

There are many stakeholders in waste management. A forum for both public and private parties to discuss waste-related issues is needed. The Government therefore wishes to set up a council for waste issues to enable public agencies, producers and municipalities to discuss various issues, such as the bans on landfilling of combustible and organic waste, present-day collection systems and producer responsibility for new product categories.

The purpose of setting up this council is not to create a new public agency as such, but to establish an organisation to coordinate work relating to waste. The council should work for a simple, efficient system of waste management. It should perform an advisory role and assist the EPA in the implementation of waste policy. Representatives of central parties in the waste sector should, in particular, be included but the business sector, consumers and voluntary organisations should also be represented.

Boost to municipal, regional and national waste planning

The Government's assessment: the instrument of waste planning should be reinforced at municipal, regional and national level. The planning should be aimed at laying down clear strategies for attaining objectives in the waste sector. The planning should also be used to enhance knowledge of waste quantities and flows, and of disposal capacity. The EPA is to be charged with drawing up a national waste plan. The responsibility of the county administrative boards will be strengthened, and municipal waste planning will be adapted to prevailing conditions.

To date, waste management has taken place almost exclusively at municipal level. Most municipalities previously had their own landfills for disposing of their inhabitants' waste. Nowadays, the municipalities are no longer solely responsible for ensuring that there is sufficient capacity and infrastructure to deal with waste. The new requirements concerning waste management and disposal call for effective coordination in large areas. The Government therefore considers that regional and national waste planning needs developing as well.

The principal function of waste planning is to serve as a policy instrument that translates the national environmental quality objectives and other objectives relating to waste into practical action. The waste plans should serve as decision-making agencies' documentation for new measures in the waste sector, and also to guide businesses considering decisions on investments for waste disposal. Waste plans should contain facts about the volume of waste, capacity for its disposal and overall strategies for the work.

The activities involved in waste planning at national, regional and municipal level differ in nature and, in part, in purpose. However, they have much in common and it is therefore important for the various levels to be capable of functioning in chain fashion.

- **Municipal waste planning**

The municipalities' practical responsibility for waste management has been progressively reduced, but the Government considers that they still have a key function to perform in order for waste systems to work properly. To its residents, a municipality is often the natural point of contact when they have views on waste management, regardless of who is formally responsible for the waste. It is important for the municipalities to maintain their local overview by means of waste planning. To permit control of the quantities and flows of waste in the municipality, overall municipal planning responsibility should continue to apply to all waste that arises in the municipality, and not only to waste for which the municipality is responsible in terms of collection and disposal.

- **Regional waste planning**

New requirements concerning treatment of waste require collaboration across municipal borders. Long-term strategies, technically complicated and expensive treatment methods and fulfilment of regional objectives are factors that indicate the need for regional planning. Today, many municipalities are already collaborating regionally to devise municipal waste plans. The county administrative boards' role in planning work should be strengthened so as to enable them, for example, to initiate consultations on future waste-treatment capacity. The Government is very much in favour of other voluntary regional forms of collaboration that may also involve the business sector.

- **National waste planning**

There is a need for clear strategies of waste management at national level as well. The Government considers that a national waste plan should be developed. This should contain overall strategies, long-term policy instruments and details of a division of responsibility for the attainment of the various objectives. The plan should also include a report on the quantities of various categories of waste, and a follow-up of the workings of waste collection: this concerns, above all, the level of services to households. How waste should be treated and the environmental impact of waste management should also be covered. The EPA will be charged with drawing up a national waste plan by 31 December 2004.

Clarification of the waste owner's responsibility

The Government's proposal: the responsibility incumbent on every waste owner should be spelt out in the Swedish Environmental Code. It involves an obligation to ensure that waste is managed in a manner that is acceptable from the health and environmental points of view. The regulation should serve to remind the parties concerned that, under other regulations, producers and municipalities are already or may at some future date become obliged to manage waste, or that in some cases waste should be managed by the municipalities.

The environmental legislation contained in the Environmental Code includes various rules relating to the waste sector. One is that all those who produce waste — private individuals and businesses alike — must have sufficient knowledge to avoid adverse environmental impact. The Code also contains requirements that every party must conserve energy and resources, for example through reuse and recycling.

The Swedish Environmental Code thus applies to every member of the community. Responsibility for waste that arises in the course of commercial activities is regulated only in the general rules of consideration. This has proved to result in a lack of corporate awareness of the responsibility they actually bear for disposing of their own waste in an acceptable manner. Municipal responsibility for household waste, for example, does not entail ensuring that there is capacity for disposal of other waste.

The Government considers that clear responsibility combined with requirements concerning knowledge of resource efficiency may result in an increase in material recovery, and therefore proposes that this responsibility be clarified in the statutory provisions. Under the proposed provision, an owner of waste must ensure that it is managed in a manner that is acceptable with respect to its health and environmental impact. The proposed provision is not, however, restricted to waste that has arisen in the course of commercial activities. Instead, it focuses on all those who produce waste. This clarification of the legislation should be supplemented by the provision of guidance and information to businesses concerning the implications of the Environmental Code and ways in which companies can address waste issues.

Producer responsibility for packaging and waste paper

The Government's assessment: statutory regulation of producer responsibility for packaging and waste paper should be retained. Responsibility and obligations for collection of packaging and waste paper should be clarified for all the parties involved.

Producer responsibility for packaging and waste paper was introduced in October 1994, and means that producers are responsible for collecting and disposing of discarded products. The purpose of producer responsibility is to induce producers to modify their products, making them more ecoefficient, so as to minimise environmental load and resource consumption as a whole. The intention is also for products to be designed in such a way as to permit their reuse or recycling.

A commission of inquiry has reviewed producer responsibility, especially in the packaging sector. In general, this showed that the objectives of producer responsibility for packaging and waste paper have largely been attained. This applies both to recycling levels and to environmental purposes, such as resource conservation and reduced volumes of waste landfilled. The commission also found that the level of current recovery is macroeconomically justifiable.

The commission found some shortcomings in the system. First, consumers lack sufficient scope for participating in the systems. Secondly, there are unclear points concerning the

responsibility and obligations of various players in the sector. There is, for example, uncertainty in the interplay between producers and municipalities regarding the issue of who is to run, own and develop the systems. Producer responsibility meant that a number of materials companies were formed. These engage private or municipal entrepreneurs to collect and dispose of the waste. The materials companies' operations have a bearing on several spheres of municipal decision-making, such as municipal waste planning.

In the Government's view, producer responsibility has largely fulfilled its purposes and entailed a valuable link between product and waste management. It should therefore be retained, but needs developing further. One measure sought by the Government is clarification of the division of responsibility in the areas where unclear points persist.

Producers given responsibility to improve accessibility to consumers

The Government's assessment: it should be simpler for consumers to participate in the sorting of packaging and waste paper at source. This can be effected through an improvement in services to consumers. Producers' collection systems should be adapted to local conditions, preferably by means of collection points close to buildings where appropriate.

Producer responsibility means that producers should offer collection systems that enable households to sort out their packaging and waste paper from the rest of household waste. The Government considers it important for consumer participation in the system to be easy. Consumers must also have environmental motives for sorting their waste. Present-day systems of recycling depots make it difficult for many groups in society to participate, since they are a long way from the nearest collection point. Collection of household packaging waste and waste paper needs developing and should, to a larger extent, take place closer to the place where the waste arises.

The Government therefore considers that the producers' collection systems must be extended in such a way that neighbourhood collection takes place on a larger scale. This extension must be effected in consultation with municipalities and property owners. The Government also considers that there is reason for both the municipalities and producers to jointly adapt their systems for collecting household waste in such a way as to provide simple, easily accessible systems for consumers.

According to the commitment made by producers through the materials companies, neighbourhood collection is to be extended in order to cover at least 25 per cent of households by 2003. According to the Government, this commitment is a step in the right direction, but all households are entitled to a full service level. There is therefore reason for further extension of collection close to buildings. More stringent requirements concerning accessibility of producers' collection systems will therefore be imposed.

There is also uncertainty as to who is responsible for waste collection and disposal around the producers' recycling depots. The Government considers that this issue is important to clarify. Poor scope for households to hand in their bulky refuse may contribute to the littering that occurs. The Government should review whether there is a need for clearer stipulations that the municipalities should provide good services in this area.

Clarification and strengthening of the municipalities' role in producer responsibility

The Government's assessment: the municipalities should be given responsibility for planning collection systems and issuing information for households.

The municipalities are already responsible for collecting and disposing of household waste from their inhabitants. Accordingly, the municipalities also have a key role to play in collection of packaging and waste paper from households. At present, municipal responsibility is confined mainly to supervising the operation of collection.

Producers' extension of their collection systems should, as far as possible, be adapted to the structure of municipal collection of household waste. The municipalities' responsibility for waste planning should, to a greater extent, include planning of the collection systems for packaging and waste paper in consultation with producers or their representatives.

To make it easy for consumers to take part in the systems, there is a need for information to be developed and, to a larger extent, drawn up at local level. It is important for the provision of information to be coherent and adjusted to local conditions. Overall responsibility for providing information to households should therefore be borne by the municipalities. The information also needs improving through instructions as to how the sorting should be done, where and why, but also the outcome to which it has actually given rise in the form of genuine recycling.

Development of consultations between producers and municipalities

The Government's assessment: local consultations should be developed and clarified.

Producers are obliged to consult with the municipalities concerning collection systems for removal of packaging waste. However, an unclear division of responsibility has meant that collaboration has not worked properly and often foundered on questions of how many recycling depots should exist and where they should be located. The amendments in existing ordinances sought by the Government will clarify who is responsible for what. This will mean that the unclear points are reduced and there will be better scope for collaboration between the parties involved.

It is advisable to review how these consultations could develop, and to clarify which issues they should cover. As mentioned above, the Government considers that the municipalities should be given more influence over planning of producers' collection systems for packaging and waste paper.

Improved management of hazardous waste from households

The Government's assessment: municipalities' responsibility for collecting households' hazardous waste, and households' responsibility for sorting this waste according to the municipality's instructions, should be strengthened and clarified.

One precondition for environmental best practice in waste disposal is that the waste should contain a minimal quantity of hazardous substances. It is therefore essential for hazardous waste to be separated from other waste. It is also important for this collection to take place at a high and even rate, with the ambition of collecting all hazardous waste. This sorting can enhance the scope for reducing the spread of harmful substances while making it possible for them to be disposed of in a better way.

At present, there is a major difference in levels of ambition between the municipalities in terms of collection of hazardous waste from households. A high service level in the form of numerous collection points has proved to be connected with a larger volume of hazardous waste collected. Like other aspects of managing waste from households, high-quality services to households and scope for households to participate easily in the system are important. Improving access to collection systems is therefore vital.

The Government wishes to amend the Waste Ordinance to clarify municipalities' responsibility for collecting households' hazardous waste. Households' responsibility for sorting this waste, according to municipal instructions, should simultaneously be elucidated. The Government also deems it necessary to issue improved information for households on what hazardous waste is and how to dispose of it.

Review of municipalities' sole right to manage hazardous waste

The Government's assessment: the scope for the municipalities to secure the sole right to waste management, through increased responsibility for transport, recycling and elimination of hazardous waste, should be ended in accordance with previous Government decisions. However, one precondition is the existence of a system that assures good control over the flows of hazardous waste. The Swedish EPA should therefore be commissioned to explore whether additional or other types of measures are needed to ensure good control over hazardous-waste flows.

At present, the municipalities can assume responsibility for disposing of hazardous waste. The Government has already abolished the municipalities' monopoly in the disposal of non-hazardous waste. The purpose was to give the business sector increased responsibility for ecological production of goods. Another step in this direction would be to expose to competition the parts of waste management that do not relate to households.

The Government has previously reached the assessment that the monopoly for hazardous waste, too, should be abolished. However, reduced municipal influence presupposes that

the regulatory system takes such a form as to afford good control over, and knowledge of, the flows of hazardous waste. Today, there are regulations for management of hazardous waste in several phases, such as transport, recycling and elimination, and also for cross-border shipments of hazardous waste. In the Government's view, municipal monopolies are not the only way of obtaining good control of hazardous-waste flows.

On the other hand, the Government considers that whether the existing regulations are sufficient has not been investigated. An overview of existing regulations and control systems should therefore be implemented before a final decision is reached. The Government is instructing the EPA to investigate whether the existing regulations are sufficient or whether new measures are needed, and if so which. The objective is for an overview of the regulations to be implemented to permit deregulation to be reconsidered.

Legislation on waste and definition of waste

The Government's assessment: to promote waste recycling, the Government intends to continue working for an improvement in the regulations governing waste management, while a high level of protection for human health and the environment is retained. A simplification should therefore involve clarifying the definition of waste.

The extensive regulations relating to waste include unclear points regarding the definition of waste, in particular. These mainly concern the question of when something becomes waste and that of when something ceases to be waste. Today, the provisions are perceived as obscure and various applications are made.

The current obscure and complicated regulations may be an obstacle to the attainment of a society adapted for maximum recycling and recovery. Anything regarded as waste is subject to a completely different set of regulations than what is not waste. Depending on how the definition of waste is interpreted, various requirements may thus come to apply. The question of when waste should be classified as hazardous is also perceived as unclear. The waste definition is used throughout the EU, and Sweden therefore has only limited scope to clarify this through legislative amendments and guidance. The European Court of Justice has adjudged a large number of cases relating to the interpretation of the waste definition, and this shows that interpretation problems are ubiquitous in the EU.

Intensified supervision and guidance

The Government's assessment: guidance and supervision are crucial both in directing waste to the right treatment installation and in ensuring a high level of environmental protection in landfilling, incineration and material recovery alike. Guidance on application of the regulations is important to ensure their application at a high and even level throughout Sweden, but also to increase the impact of generally worded provisions, such as the general rules of consideration contained in the Swedish Environmental Code.

Legislation on waste has changed substantially in the past few years. A large volume of new or amended legislation has, for example, been introduced. The Environmental Code is the paramount example. One innovation it contains is a general obligation for everyone in society to conserve raw materials and energy, and to make use of opportunities for reuse and recycling.

To investigate how the Code is being applied, the Government is implementing an evaluation of the new legislation. This work shows that the new portions of legislation, regarding conservation of raw materials and energy, have still not brought about any major change. This is because of uncertainty as to how this should be translated into specific requirements in individual cases. The Government considers that guidance is needed to ensure that the principles of the environmental life-cycle approach in the Code have an impact. A change in this area is extremely important to attain effective use of energy and raw materials, thereby reducing both climatic impact and the volume of waste.

The EPA should be able to use its role as the leading supervisory authority to step up its guidance concerning the Code. The Government considers that there is also a need for guidance and supervision for several ordinances relating to waste, to make interpretation correct and equivalent throughout the country. These ordinances include the Landfill Ordinance and the Waste Incineration Ordinance.

Responsibility for supervising producer responsibility for electrical and electronic products should also be clarified. At present, only submission of information to the EPA is required. The Government is to impose requirements concerning supervision of producer responsibility for electrical and electronic products.

Specific product categories and types of waste

Tighter controls on producers' goods

The Government's proposal: if it is necessary to promote a decrease in the amount of waste that arises, or waste management that is acceptable from the health and environmental points of view, the Government or the agency appointed by the Government may issue certain regulations. These regulations would concern producers' obligations to ensure that their products have a certain composition, and are reusable and recyclable in some degree. Regarding products other than packaging, these regulations may be issued only if they are necessitated by Sweden's membership of the European Union.

The composition and content of goods have a major bearing on the scope for their environmentally sound disposal as waste. Here, producers have a key role; this is shown in, for example, the statutory provisions on producer responsibility for various types of packaging. With these statutes, the Government can impose requirements concerning the materials used for making the packaging and how well these can be recycled.

To affect the total volumes of waste in society, imposing controls on packaging is obviously not the only requisite measure. The same connections between the composition

of a product and its potential management as waste are, of course, generally applicable. Thus, scope for extending the requirements to all producers is important. This allows enhancement of their awareness that the design of their products, in terms of the materials used and how they can be recycled, has a crucial bearing on the work of bringing about sustainable environmental life-cycle management. The scope for issuing regulations at national level is limited, partly given the fact that national requirements concerning the composition of goods may be trade barriers that are unacceptable in the EU. However, producer responsibility is beginning to assume more importance in the Union's waste legislation, partly owing to two new directives relating to electronics. These regulate waste in the form of electrical or electronic products and the use of certain hazardous substances in the same. These two directives enable members to encourage producers to design their electrical and electronic products in such a way as to facilitate dismantling and recycling.

The Government's assessment is that work to make goods more ecoefficient at European level has a high priority, since joint efforts of this kind yield the largest environmental effect. From the Swedish point of view, however, it is important to proceed further with work to develop environmentally sound goods and products at national level as well.

Financial guarantees for producer responsibility

When products are discarded and need to be disposed of as waste, recycling companies want remuneration for the costs of their waste management. If the product is regulated by any of the provisions on producer responsibility that have been introduced, it is usually the producer who has to defray the costs. This is a system that works as long as the producer is still in business. There is a risk of problems when it comes to long-life products, such as cars, white goods and various types of home electronics.

This problem can be solved with voluntary or compulsory insurance for producer responsibility. A minor cost increment added at the time when the product is purchased is placed in a fund that guarantees that the waste management can be paid for even if the producer has gone out of business. Payment of interest on the insurance premium permits a low cost to the consumer.

The Government regards it as advisable for industrial sectors with long-life products to consider various types of financial guarantees for disposal of discarded products. This is an issue that the EPA, in collaboration with the sectors concerned, can develop further in conjunction with its continued work on an environmentally oriented product policy.

Extended system for return packaging

The Government's proposal: the Act (1991:336) on Certain Beverage Containers and the Act (1982:349) on Recycling of Aluminium Beverage Containers should be repealed. Instead, the Government or the agency it appoints is authorised to issue regulations obliging producers to ensure that plastic and metal containers for ready-to-drink beverages are covered by return systems, and that these systems are designed in a way that, through payment of a deposit or premium, encourages people to return the containers. In addition, the Government is authorised to issue the kinds of regulations

concerning transfer, labelling, permission and charges that are currently contained in the above-mentioned statutes.

For several years, there have been laws on return and deposit systems for beverage containers made of aluminium, as well as PET. Paying a deposit prompts consumers to take back the packaging for recycling. The system is well established and enjoys high credibility with consumers.

The Government considers that it is urgent to retain and develop present-day return and deposit systems. Collection rates are high, and there is reason to review scope for expanding the systems to include other plastic or metal containers for ready-to-drink beverages. The Government proposes that the requisite amendments to the Environmental Code be carried out to permit provisions on expanded return systems to be drawn up.

It is also important, when consumers return their containers, for easily accessible systems to exist for this purpose. The Government therefore sees a need for food retailers and the brewery industry to increase the number of reception sites with automatic machines for return of beverage containers.

Metal cans

Aluminium is not the only metal used as a material in cans. In 2000, some 20 million steel-plate beverage cans were imported into Sweden. Granted, these cans are covered by producer responsibility for the containers, but they are not included in any deposit system. For the consumer, it is not easy to decide whether a can is made of aluminium or steel plate. Consumers may therefore perceive it as frustrating to obtain a deposit only for some of the cans they return. The risk is that this may cause a problem of credibility for the deposit system. Studies also show that containers for which no deposit is payable cause an increased risk of littering, compared with containers included in the deposit system.

Consumers' continued confidence in return systems for metal cans is important. The result will be a continued high recycling rate and reduced littering. In the Government's estimation, it is vital from the environmental point of view that all metal beverage containers commercially imported into or sold in Sweden should be included in return-deposit systems. These systems should therefore be demanded from producers.

Plastic bottles

Provisions concerning return systems for plastic beverage containers apply only to those made of PET. The background is that when the law was introduced there were no alternative plastic materials on the market. Today, there are several other reasons for considering an extended deposit system.

Development has taken place since then and there are now several varieties of plastic bottle in which PET is combined with layers of other plastics. Entirely new materials and combinations will probably be developed in the future. One consequence of the deposit requirement currently applying to PET bottles is, moreover, that containers made of other polymeric materials (various types of plastic material) is relatively inexpensive. This may be disadvantageous to the types of containers included in the present-day return system.

All in all, this means that containers made of other polymeric materials should be covered by the same regulations as PET bottles. The Government's assessment is that it should be made clear that all plastic bottles for beverages that are commercially imported into Sweden or sold here should be included in return systems with deposits to encourage the consumers to take the bottles back.

Private import of beverage containers

With Sweden's EU membership, private imports of beer and wine have increased. The cans and bottles that enter the country are not included in the Swedish deposit system and no funds have been allocated for their disposal. The containers end up either in Swedish systems of container collection or in household waste, where they result in resource wastage. The Government will therefore instruct the Swedish Board of Agriculture to monitor trends of private imports and, in consultation with the Swedish EPA, present proposals for measures if necessary. Glass bottles should also be included.

Refined producer responsibility for vehicles

Since 1998, producer responsibility for vehicles has been in force. Anyone who has manufactured or imported vehicles into Sweden must ensure that their materials and components are reused, recycled or otherwise disposed of in an environmentally acceptable manner. The foremost obligation for a producer is to take back, without remuneration, all scrapped vehicles registered before 1998. The producer must ensure that an end-of-life vehicle is destroyed according to the rules in the Motor Vehicle Disposal Act. Under this Act, only authorised vehicle-disposal operators are permitted to carry out this destruction. As an incentive for vehicle disposal by authorised operators, a vehicle-disposal premium has been introduced. This premium is disbursed to the owner of the vehicle when it is scrapped, and is intended to cover the charge for vehicle disposal. The size of the premium depends on the age of the vehicle, in order to reflect the operator's charge for its disposal.

The vehicle-disposal premium from 1 July 2001 is as follows:

- SEK 700 for end-of-life vehicles covered by the Ordinance on producer responsibility for vehicles
- SEK 1,200 if, when scrapped, the vehicle is more than seven but less than 16 years old.
- SEK 1,700 if the vehicle is more than 16 years old.

Supplementary regulations on the vehicle-disposal charge

The Government's proposal: the provisions of the Motor Vehicle Disposal Act (1975:343) relating to the vehicle-disposal charge with new provisions concerning payment of the charge into a special account; when the charge should be deemed to have been paid; and interest calculation and payment.

With effect from 1 January 2003, the Swedish National Road Administration has taken over primary responsibility for the charge from the National Tax Board. In conjunction with the review of the Motor Vehicle Disposal Act, the Government wishes to make minor

amendments regarding the vehicle-disposal charge. These amendments relate to interest on the charge, grant of respite and collection of the charge.

Change in supervision of compliance with Motor Vehicle Disposal Act

The Government's proposal: the municipal committee or committees that perform functions relating to protection of the environment and health in a municipality should exercise the requisite local supervision of compliance with the Motor Vehicle Disposal Act (1975:343) and regulations issued pursuant to this Act. The Swedish EPA should retain its role as the central supervisory authority. The local supervisory authority should be given the power to decide on the injunctions or prohibitions required to ensure compliance with the Act or regulations issued pursuant to it. An injunction or prohibition decision may be issued under penalty of fine.

At present, the EPA is the sole supervisory authority for the Motor Vehicle Disposal Act. The Government proposes that municipalities be given local responsibility for ensuring that vehicle disposal and dismantling comply with the requirements laid down in the Environmental Code. Central responsibility for supervision should be retained by the EPA, with such functions as coordination of local supervision and provision of support and advice to the municipalities.

The advantage of having the municipality as the local operative supervisory authority is that it permits supervision that is more active. This can protect serious vehicle-disposal operators against competition from operators who do not comply with legislation. With the system proposed, the municipality will become the authority in charge of supervising both vehicle disposal as an environmentally hazardous activity under the Environmental Code, on the one hand, and, on the other, vehicle-disposal operators' compliance with the administrative requirements pursuant to the Motor Vehicle Disposal Act.

Sanctions in the Motor Vehicle Disposal Act

The Government's proposal: a sanction provision should be inserted into the Motor Vehicle Disposal Act (1975:343), whereby a person who engages in commercial vehicle-disposal activities without authorisation may be liable to pay fines.

Under the Motor Vehicle Disposal Act, passenger cars, buses and trucks with a total weight not exceeding 3.5 tonnes must be disposed of by authorised vehicle-disposal operators only. However, it is common for vehicle-disposal operations to be conducted by unauthorised persons or businesses. These activities involve a risk of inferior material recovery and disposal of hazardous substances in vehicles.

Today, unauthorised vehicle disposal is an intractable problem. By law, the only punishable offence is falsely giving oneself out as an authorised vehicle-disposal operator. Operators who neither are authorised nor pretend to be such thus cannot be stopped. The

Government therefore proposes an extension of the prohibition to make it punishable to engage in commercial vehicle-disposal activities without authorisation.

Financing future vehicle collection and recycling

The Government's assessment: in accordance with the Motor Vehicle Disposal Directive, final owners should be able to leave their end-of-life vehicles for disposal free of charge. The Government intends to investigate whether it is feasible to achieve this by ruling that payment for vehicle disposal be made direct from the Motor Vehicle Disposal Fund to the vehicle-disposal operator. This work should also include making proposals as to how the option of vehicle deregistration should be changed in such a way as to reduce dumping of end-of-life vehicles.

The vehicle-disposal premium that owners receive on leaving their vehicles for disposal was raised on 1 July 2001. The purpose of this rise was to compensate vehicle owners for increases — expected and already implemented — in vehicle-disposal operators' prices. As yet, there are no data showing that, owing to this premium rise, fewer vehicles are now abandoned or dumped. The premium system appears to govern the operators' reception charge for vehicles, in that raised premiums also lead to higher charges. To some extent, this may be explained by the tightening of environmental controls on vehicle disposal, but it may also be that the raised premiums are taken out as higher profits by the operators.

The Government's assessment is that a system in which the cost of vehicle disposal is paid direct from the Motor Vehicle Disposal Fund to the vehicle-disposal operator is an interesting option. It could solve the difficulties entailed by the current vehicle-disposal premium, and also enable owners to leave their vehicles for disposal free of charge. The Government wishes to investigate how owners' handing-in of vehicles free of charge could be organised in collaboration with vehicle manufacturers, vehicle-disposal operators, consumer organisations and the public agencies concerned. Another relevant part of this work is a detailed survey of vehicle owners' obligations and deregistration options.

Final storage of mercury

The Government's assessment: waste containing at least 1% mercury by weight should be consigned to permanent storage deep down in the bedrock. Exemptions should be permissible only with respect to tiny quantities of waste or if other special reasons exist. If it is found compatible with the intentions of the Swedish Environmental Code, waste containing at least 0.1% mercury by weight should also be stored in deep rock locations. The Government intends to insert such requirements into the provisions of the ordinance concerned. The requirements on deep rock storage should apply with effect from 1 January 2015. The Government will appoint a coordinator to coordinate implementation, taking technical, environmental, social and economic conditions into account. Reports on the implementation should be submitted to the Government every three years to ensure that work proceeds according to plan.



Mercury is a highly toxic metal that is deposited in nutrient chains and is not degradable. It can cause extensive damage to health and the environment. In Sweden, restrictions on the use of mercury already exist. According to the chemicals strategy that has been drawn up for the environmental quality objective 'A Non-Toxic Environment' (Govt. Bill 2000/01:65), newly produced goods must, as far as possible, be free from mercury by the year 2003. Existing goods that contain mercury should be handled in such a way as to prevent its leaking into the environment. The objective is for the overall use of mercury, with some exceptions, to have ceased by the year 2010 at the latest.

As a result of efforts to eliminate mercury from the natural environment, there will be an abundance of mercury waste by 2010: an estimated 15,000 tonnes of waste with a concentration of mercury exceeding 1%. This waste must be disposed of and stored safely. Several commissions of inquiry have indicated that the method of storing mercury deep inside the bedrock is, in environmental terms, the best option for final storage despite the high investment costs involved. Unlike surface storage, deep rock storage can isolate the mercury for periods exceeding a millennium and, accordingly, avoid problems for future generations.

Companies that produce mercury-containing waste should collaborate to devise a joint solution, but the Government's view is that an external party should be charged with coordinating this work. Financing and storage location are salient issues. In the Government's estimation, final storage of mercury-containing waste should be initiated by the year 2015. Reports on work to achieve this aim should be submitted every three years.

Sweden is well ahead in international endeavours to eliminate mercury from the natural environment. Both in the EU and in UN, discussions on the mercury issue have started and Sweden is a driving force in bringing about policy decisions resembling those taken in Sweden. The Government's view is that a future Swedish system may be a model for other countries to follow.

Improved disposal of building and demolition waste

The Government's assessment: development in the building sector's waste management, especially with respect to hazardous waste, has been too slow to date. The Government therefore intends to instruct the National Board of Housing, Building and Planning, in consultation with the Swedish EPA, to develop policy instruments for supervision and guidance, and to propose additional measures and possibly new interim targets for waste management in the building sector. However, the Government is in favour of the voluntary commitment made by the 'Ecocycle Council for the Building Sector' to pursue and monitor the sector's efforts to attain the national environmental quality objectives.

Waste from building and construction contains large quantities of materials that can be recovered, including wood, plastic and metal. Nevertheless, a great deal of building and demolition waste is deposited at landfills every year. Apart from the importance of

recycling materials, buildings contain many different types of components that may contain organic environmental toxins, mercury and other heavy metals. These substances must be disposed of in such a way as to prevent their release into the environment.

The 'Ecocycle Bill' of 1993 marked the inception of environmental life-cycle management in the Swedish building and construction sector. 'The Ecocycle Council for the Building Sector' was formed and presented its plan of action, with voluntary commitments and objectives for environmental work. There has been an improvement in the management of hazardous waste, and sorting of building and demolition waste at source has increased.

More recycling of building and demolition waste

Today, many companies in the sector engage in advanced separation of waste into several fractions. Part of the building industry's voluntary commitment was to halve landfilling of building and demolition waste by the year 2000. The estimate of the quantity of building and demolition waste deposited at landfills is, however, based on highly uncertain figures. This uncertainty makes it impossible to show whether the target of halved landfilling has been attained.

Landfilling has also proved difficult to avoid, partly because of undeveloped markets for reuse and material recovery. The Government's assessment is that a functioning market for recycling can be created only if building and construction companies themselves start to demand it.

Although there has been an increase in separation and recycling of building and demolition waste, it is necessary for these efforts to be developed further. The proposed clarification of the waste owner's responsibility applies to the building and construction sector, as to others. Here, the EPA has a key role to play in providing guidance concerning building methods, property maintenance and demolition.

Safe disposal of hazardous waste

In recent years, knowledge of the components in buildings that contain environmentally hazardous substances has grown. Despite inputs on the part of the industry, there are still major shortcomings in the management of hazardous waste, especially in demolition and conversion work. Substances like mercury and PCBs may constitute a substantial risk unless they are disposed of in special ways.

The Government's conclusion is that application of the regulations concerning hazardous waste has been poor, given the voluntary nature of the industry's commitment. The inputs made have not been sufficient to ensure that hazardous substances are identified and disposed of in a safe manner.

Sale of the state's shareholding in Sydkraft SAKAB AB

The Government's proposal: the Riksdag authorises the Government to sell its remaining shareholding in Sydkraft SAKAB AB.

Svensk Avfallskonvertering AB (SAKAB) was formed in 1975 to be the sole enterprise in charge of final disposal of environmentally hazardous waste. The state has repeatedly reduced its stake in SAKAB according to its assessment that the state should not steer development in individual companies or sectors. Since 1995, a state shareholding in this company has been retained to afford continued influence by such means as board representation. Sydkraft is the principal owner of SAKAB, which has changed its name to Sydkraft SAKAB AB.

On 1 July 1994, the Government abolished SAKAB's sole right to dispose of hazardous waste in Sweden. Several companies have established themselves on the market for disposal of hazardous waste. The Government considers that there is therefore no longer any reason why the state should continue to exert influence on the company, and proposes that the state's shareholding in Sydkraft SAKAB AB be sold.