

Summary

The terms of reference

My terms of reference consist of several parts. I am to evaluate existing producer responsibility for packaging, tyres and waste paper, the systems for returnable beverage containers, the voluntary measures for office paper and the construction sector, and make recommendations for improvements, when required. I have also been instructed to consider whether the statutory producer responsibility should be extended to additional groups of products. In addition, I am to investigate and make proposals on financial guarantees for compliance with producer responsibility.

Starting points

The evaluation and my recommendations are based on the environmental policy objectives for producer responsibility. The aim is to

- reduce the quantity of waste sent to landfills,
- reduce the environmental impact by resource-efficient use of materials and energy during the life cycle of the product,
- reduce the use of hazardous chemical substances,
- reduce litter.

Other important bases for the evaluation and my recommendations are the roles of the participants and the efficiency of the systems, socio-economic effects and aspects relating to competition, such as, for instance, problems with non-compliance and monopolistic tendencies.

The result of the evaluation

Recycling targets. In my assessment, the recycling targets for the statutory producer responsibility, returnable beverage containers and the voluntary measures have been achieved satisfactorily in most cases. Areas where the targets have not been attained include certain kinds of packaging and the voluntary undertakings of the construction sector.

Environmental policy objectives. The main environmental policy objectives for producer responsibility have been achieved, i.e. reduced quantities to landfill and resource-efficient use of material and energy. Life cycle analyses show that landfilling is the worst alternative from an environmental point of view. Material recovery is preferable to use as a source of energy. In certain cases, the environmental differences between material recovery and use as a source of energy are small, for instance, in the case of paper packaging. Producer responsibility has led to a reduced use of hazardous chemical substances although other legislation has also been very important here. The deposit system for beverage containers has contributed to reducing litter.

Socio-economic effects. The evaluation shows that the current levels of recycling are socio-economically defensible. However, any future changes of the level of objectives must be assessed on the basis of new socio-economic analyses.

The role of the participants and the efficiency of the systems. I note that the problems that exist in the systems are often related to lack of clarity about the role of the participants, which in turn has a negative effect on collaboration. The systems for collection from households are relatively new and need to be further developed, for instance, to make it easier for consumers. Producer responsibility has been developed in stages for different groups of products. In future, a more holistic concept is required as to how the systems are related with a stronger focus on the consumer as an important link in the chain of producer responsibility.

Competition. The statutory producer responsibility has given rise both to monopoly tendencies and problems with non-compliance, i.e. producers who do not take their responsibility. Other problems are insufficient supervision and monitoring.

To sum up, my assessment is that the existing producer responsibility is both environmentally and socio-economically justified. It should therefore continue to apply substantially in its present

form. Since the systems have not existed for such a long period, there are in my view many untried solutions to test to overcome the problems related to competition, the roles of participants and collaboration and the efficiency of the systems.

Link to other means of control. The ordinances on statutory producer responsibility are dependent on other means of control to function well. Those affected must receive information about how the systems work and why they have been introduced. These ordinances also need to be combined with financial means of control that serve as driving forces for increased recycling, e.g. a tax on waste sent to landfills.

It may be an advantage to let legislation on producer responsibility be preceded by voluntary undertakings to gain time to learn more about how the systems work as regards competition, the economy and practical issues. This may also result in voluntary undertaking working so well that legislation is not required.

My vision

In 2010, there is a flourishing recycling market. Progress has mainly been made by extensive voluntary undertakings in the business sector in a dialogue with and working together with the state. Producers think in a life-cycle perspective when products are designed. The end-of-life products are processed on functioning markets. A variety of new technical solutions for sorting and recycling of various kinds of material have been developed. The logistic systems are built up in collaboration with producers, municipalities, property owners, trade, recyclers and others concerned. The consumer is in focus as an important link in the chain of producer responsibility.

In 2010, waste is a resource and not a residue problem.

Recommendations concerning expanded statutory producer responsibility and voluntary undertakings

I have decided to base my considerations on expanded producer responsibility on a number of case studies of some interesting groups of products. These differ, for instance, with regard to environmental impact and in the phase of the products' life cycle

when environmental impact arises. The selection of product groups has been made on the basis of a newly made compilation of expertise, "The environmental impact of different groups of products", but also on the basis of the wishes of different participants.

The construction sector. I note that there are many reasons that argue in favour of a statutory producer responsibility in the construction sector. Some of the most important of these are the large quantity of material and goods that are produced annually and handled by the industry, at the same as large quantities of waste are generated. Another reason for introducing producer responsibility is to obtain better control of the chemicals that building materials may contain. Furthermore, there is a great potential, to economise with resources in the form of energy and materials in the industry through recycling and material recovery. This type of economical use has recently started and a lot remains to be done. It is also a large, complex sector where it can be difficult to get through with the message about voluntary undertakings to all participants.

The construction industry's Ecocycle Council has presented a new action plan to the commission of enquiry. It is considerably better designed than the first action plan, which was concluded in 2000. The objectives are measurable both as regards when the undertaking is to be completed by and what is to be achieved by that date. Moreover, there is a description of the way in which the objectives are to be achieved and how they are to be monitored. In my assessment, the construction sector should have good prerequisites to comply with the new action plan.

Despite there being a lot in favour of a statutory producer responsibility for the construction sector, my assessment is that the work with voluntary undertakings should continue for a few more years. The reason for this is that the sector has presented a new action plan, which makes a credible impression.

Heavy vehicles. I note that a very large proportion of end-of-life heavy vehicles are taken care of already since there is an efficient market for spare parts and material recovery. Moreover, a lot of the second-hand vehicles are exported for continued use in other countries. A new regulatory framework comes into effect on 1 January 2002, and a ban on landfilling of unsorted combustible waste will be introduced. Moreover a new classification of hazardous waste is being introduced. This will increase the demands on how end-of-life heavy vehicles are to be taken care of. In my assessment,

therefore, there are no reasons to introduce a statutory producer responsibility.

Impregnated timber. Impregnated timber needs to be taken care of according to existing rules. Opportunities exist for re-use of for instance posts and sleepers by cutting off damaged parts of the wood. One problem is the large number of users, both large and small. The lifetime can be 30 years or more, which further complicates the situation as regards responsibility. In my assessment, producers should take increased responsibility although a statutory producer responsibility is not currently under consideration.

Lead batteries. Lead batteries are already subject to legislation in the form of the Batteries Ordinance. The taking care of and recycling of batteries is working well. The problem of poor prerequisites to create a long-term approach in planning activities can be solved by changed agreements between Returbatt AB and the Environmental Protection Agency. In my assessment therefore, there is no reason to propose new legislation in the form of a statutory producer responsibility.

Furniture. The flows of material that are created in conjunction with the use of furniture are relatively large in a national perspective. Further measures are required as regards reduced use of chemicals. There is a good potential for increased material recovery. Due to some furniture having a lifetime of a hundred years or more, it is not self-evident how financial guarantees can be created for taking care of them. My assessment is that producers should assume greater responsibility in the furniture industry although the time is not ripe for statutory producer responsibility.

Toys. The quantity of materials used in toys and the quantity of waste that arises are small in relation, for instance, to the construction industry and the furniture industry. Some toys are covered by producer responsibility for electrical and electronic waste. Toys are sometimes handed down from generation to generation and it is not obvious how financial guarantees can be created to take care of them. Viewed from a resource management perspective, there are groups of products that should be given greater priority in an expanded producer responsibility. I therefore make the assessment that there are no reasons to propose a statutory producer responsibility.

However, there is an educational perspective. Toys are children's first possessions of their own. Through the toy industry contributing to taking care of toys that are no longer wanted, the industry

can also contribute to insight among children at an early age of different ways of economising with resources.

A very large proportion of toys are imported. As regards demands for reduced use of chemicals and the design of the product, it may be difficult for a small country to make demands on producers alone. There are therefore strong reasons for co-ordinating demands within the EU.

Paper products from gambling. My recommendation is a voluntary undertaking for paper products from gambling on the basis of the material provided to the enquiry by ATG and Svenska Spel. The aim of the undertaking is, among other things, to increase material recovery by increased sorting at source and to reduce litter.

Agricultural plastic. My recommendation is a voluntary undertaking for agriculture's silage plastic on the basis of the material that the concerned industrial interests have provided to the enquiry. The objective is at least 30 per cent of material should be recovered by 2004. I would additionally like to underline the importance of the plastic that cannot be recovered being incinerated according to current rules.

Summary assessment and recommendations. I have carried out a number of case studies of products to see whether there are reasons for suggesting an expansion of the statutory producer responsibility. I have arrived at the conclusion that there is a clear need for an increased taking of responsibility on the part of the producers to reduce the quantity of landfilled waste, and resource-efficient use of energy and materials, reduce use of hazardous chemical substances and litter.

However, I have not found any products where there are clear justifications for a statutory producer responsibility with immediate effect.

There are a number of reasons for this, a large part of the products have a lifetime of several decades, sometimes a hundred years or more. It is difficult then to create financial guarantees for the fulfilment of producer responsibility and time is needed to find forms that could work. In many cases, an expanded statutory producer responsibility would entail an overlapping of existing ordinances. This can create problems as regards the issue of responsibility, which also requires time to clarify. There are also examples of products where reuse and recycling have made a lot of

progress without legislation and where new legislation in the field of waste will serve as a driving force for further measures.

As an alternative to an expanded statutory producer responsibility, I would like instead to recommend extensive efforts to permit producers to develop voluntary undertakings.

In some cases, proposals exist for voluntary undertakings in this report, based on the material submitted by the affected parties. This is the case for products that are in the border zone of current ordinances, agriculture's silage plastic and paper products from gambling. For the construction sector, there is a proposal on a renewed voluntary undertaking. Some products that can be of interest for new voluntary undertakings, besides those already mentioned are heavy vehicles, textiles and shoes, furniture, impregnated timber and toys.

In order to obtain sufficient interest and back-up from the business sector as regards voluntary undertakings, it is important that the Government underlines the importance of this work and its will to support it and monitor it. One possibility for quickly starting this process is to create a dialogue and consultation body close to the Government.

My recommendation therefore is that the Government appoint a delegation or committee, which will be instructed to assume a driving and supporting role in contacts with the business sector over a three to five year period. I also recommend that a special preparatory group with experts from different ministries be instructed to monitor this work. If these initiatives work well, there may be reason to establish a permanent organisation.

Recommendations on improvements of the current producer responsibility and systems for returnable beverage containers

Overall issues and the whole.

The intention and objectives of producer responsibility. In my view, there are different reasons to make producer responsibility clearer by certain amendments to the Environmental Code. By producer responsibility in this context, I mean all products, i.e. including those that are not subject to statutory producer responsibility. The intention of the amendments to the law, I am proposing here is to create a clearer connection between legislation and the policy work

that is taking place within IPP (Integrated Product Policy), where statutory producer responsibility and voluntary undertakings are a part of policy work.

I propose a supplement in Chapter 1, section 1, of the Environmental Code. This recommendation entails that the Environmental Code's preamble paragraph be complemented, so that the issue of an environmentally compatible product development be more clearly expressed as an issue of special importance in order to achieve the objectives of the code. According to the proposal, a new sixth point is to be introduced in the second paragraph, which establishes that the Environmental Code is to be applied so that the impact on health and environment of goods and products is kept to a minimum with the whole life cycle in mind.

I further recommend an amendment to Chapter 15, section 7 of the Environmental Code to the effect that the Government or the agency appointed by the Government be authorised to notify regulations on the composition, reuse and recyclability of other goods and product groups besides packaging.

I recommend that the Government should consider introducing a new interim target on resource-efficient use of material and energy for goods and services viewed in a life-cycle perspective. This is an interim target of the environmental quality objective Good built environment. The proposed complement means that the most important aims of producer responsibility and IPP should not only be reflected in the environmental quality objectives but also in the interim targets.

As regards the issue of setting objectives at the local and regional level for waste that is subject to producer responsibility, I consider that this would entail an unnecessarily detailed regulation. I propose instead monitoring at municipal level of all fractions which are collected from households and that these be presented as a quantity collected per inhabitant and year. If the national objectives are not achieved, there will then be a basis for assessing the results and the need of further measures on a municipal basis taking into consideration local conditions.

I recommend that the requirements of the Ordinance on Landfilling of Waste on sorting of combustible waste be coordinated with the recycling objectives in the ordinance on producer responsibility for packaging. This should take place in conjunction with the implementation of the EU's revised packaging directives in Sweden.

Increased use of recovered raw material. I propose that industrial associations, materials companies and individual enterprises intensify their efforts aimed at increasing use of recovered raw material and that a life-cycle perspective is taken into consideration. It is also desirable that the proportion of recovered raw material in products is reported.

Improvements from a consumer perspective. I have evaluated alternatives as regards the responsible agents for the collection of packaging and waste paper from households. One alternative is for the municipalities to take over responsibility for collection, the other alternative is that the producers (materials companies) retain responsibility and improve their systems. The intention has been to create clearer roles among the participants and more efficient systems. I propose that responsibility shall remain with the producers (the materials companies) and that they should improve the systems on the basis of the voluntary undertakings that they have submitted to the enquiry. My proposal is in line with the vision I have presented that waste shall eventually become a resource that is processed on functioning markets.

I recommend an expanded collection close to properties, to increase service and accessibility for consumers. This should be developed on a voluntary basis and in co-ordination between materials companies, municipalities, property owners, collection contractors, and consumers. Before collection in the vicinity of properties is introduced, the environmental and financial effects should be considered in each case. It is also important that alternative technical solutions be considered for the choice of collection systems. It can be financially beneficial to co-ordinate collection of waste paper and packaging with other household waste.

I recommend that producers and materials companies in consultation with municipalities, among others, intensify information to consumers as regards collection of packaging and waste paper. Information is required about how the time for work in connection with sorting at source can be reduced, on the benefit of sorting at source and in certain cases information about sorting.

I recommend that the materials companies continue to try to find suitable solutions for rural areas and that the requirement of at least 500 persons in a collection district should not necessarily be linked to an all-year-round shop for establishment of a collection point. It should also be possible to locate recycling stations in the

neighbourhood of schools, day care nurseries, and village halls or in the vicinity of other traffic flows.

Additional information efforts are required for institutional households and other activities with packaging and paper waste. My recommendation is that the work of information that has been started in collaboration between the materials companies and institutional households should continue and that information should if possible be specially adapted for other types of activities.

Reduced monopoly effects. I note that various initiatives are in process and planned on the part of the materials companies to reduce existing tendencies to monopoly. My view is that it is appropriate to allow this work to continue with voluntary undertakings as regards taking action against collection and client monopolies. However, it is important that this work is monitored.

I therefore propose that the Competition Authority be instructed to evaluate producer responsibility and competition within a couple of years to see what are acceptable consequences of legislation and the effects that the voluntary efforts have had.

I propose that new forms of responsibility should be tried out on a voluntary basis as regards waste from activities. The new form of responsibility means that those who produce waste that is subject to product responsibility also bear the financial and physical responsibility for its collection.

The intention is to strengthen the presence of market solutions in the field of recycling, which is a part of my vision. This model can appropriately be developed and tested within the framework of the organisation for development of voluntary undertakings that I have proposed. In my assessment, the voluntary undertaking for agricultural plastic could constitute a pilot project as regards testing new forms responsibility for those who produce waste.

Tools to assess and reduce environmental impact from products. The LCA tool is a good tool for producers who want to show that they comply with the knowledge requirement according to the Environmental Code and it is well in accord with the work of the EU within IPP (Integrated product policy). It fulfils an important function when the producer has to show that the introduction of new material and new product design has been made on an environmental perspective. My assessment is that the time is not yet ripe for a legislative demand for producers to carry out standardised life cycle analyses. My proposal is that the LCA tool be further developed, for instance, within the framework of the

Environmental Protection Agency's work to co-ordinate and make more efficient the Integrated Product Policy (IPP).

I recommend that producers on a voluntary basis and in consultation with the Swedish Consumer Agency expand the sorting instructions on packaging. The Swedish Consumer Agency should be instructed to initiate this work. If this does not work, the Environmental Agency can consider issuing regulations with requirements for sorting instructions pursuant to section 13 of the Packaging Ordinance.

As regards larger products which are not to be taken part by the consumer and which are covered by voluntary undertakings or statutory producer responsibility, some form of permanent labelling is required on the product informing the consumer of what the different parts of the product contain. I recommend that the permanent marking tool be further developed, for instance within the framework of the work of the Environmental Protection Agency to co-ordinate and make effective the existing product policy (IPP).

Supervision. I recommend that Chapter 15, section 6, of the Environmental Code be complemented with a view to creating better opportunities to exercise supervision of the producers that do not comply with their responsibility. Each individual producer must be able to show that his goods or packaging are included in a collection system that meets certain requirements and which is approved in a special arrangement or that the individual producers' own systems are notified to a competent authority. I recommend that these demands be supported by an environmental sanction fee targeted at producers who breach these rules.

The proposal moreover contains demands that the collection systems be better organised and effectively supervised. In this way, the activities of the materials companies will be regulated in legislation and create a formal basis for agency requirements directly targeted on them. The fact that is not possible in the present system has been considered to be a deficiency.

Monitoring. I propose the waste of all fractions, which is collected from households, be monitored on a municipal basis and that the fractions are presented as collected quantity per inhabitant per year. In my opinion, a better link back is required as to how households' sorting at source develops over time. The materials companies for packaging and waste paper have submitted a voluntary undertaking for monitoring from 2002. The

Environmental Protection Agency proposes in its government instruction on ecological handling of household waste that regulations concerning municipal monitoring be produced.

I recommend that monitoring of activities continue to take place at national level.

Proposals concerning individual producer responsibility.

Packaging. I propose that the material recovery targets for aluminium and steel containers be combined in a common target in the Ordinance (1997:185) on Producers' Responsibility for Packaging.

I recommend that recovery levels for packaging of metals be retained according to the existing ordinance.

I recommend that the materials companies continue to work on the basis of the undertakings that they submitted to the enquiry with a view to achieving the new, higher recovery targets that apply from 1 July 2001. However, my assessment is that the Plastkretsen [Plastic group] needs to increase its levels of ambitions over the plans submitted to the enquiry if the objectives are to be achieved. This applied both to increased information initiatives to municipalities and activities.

Cars. I proposed that the Government take an initiative to an enquiry with a view to making more stringent car owners obligations and limit the possibilities of temporary deregistration with a view to preventing dumping of scrapped cars.

I propose that the possibilities of managing and using the car-scraping fund more effectively be further examined. I recommend that this enquiry also take up the issue of the demands of the EC directive for a cost-free handing of cars that are not subject to producer responsibility.

I recommend further research and development with the approach that has been embarked upon with a view to finding cost-effective recycling solutions for cars so that the objectives can be achieved in the longer term.

I recommend that the Swedish Environmental Protection Agency carry out information campaigns to increase knowledge among the smaller importers of cars with a view to those who are not official marque representatives for cars being able to comply with their obligations as importer and producer.

I recommend that certification of car breaking facilities be further investigated with a view to increasing environmental compatibility and preventing distortion of competition.

Tyres. I recommend that the Producer Responsibility Ordinance for Tyres be amended so as to be compatible with the Ordinance (2001:512) on Landfilling of Waste. The reformulation entails more stringent demands to avoid landfilling.

I recommend that requirements for reduced use of environmentally hazardous substances in tyres should be pursued in conjunction with further work to implement EU chemicals policy. The motive is that the major part of tyres are manufactured outside Sweden.

I recommend that the state together with Svensk Däckåtervinning AB finance research that shows the environmental and socio-economic benefits of various ways of taking care of end-of-life tyres, through re-use, material recovery and use as a source of energy. The intention is to obtain better knowledge about the method of handling that should be given priority.

Waste paper. I propose that the Ordinance (1994:1205) on Producer Responsibility for Waste Paper be amended so that the definition of producer is narrowed down. This proposal means that those who print or have newspapers printed are to be exempted from the category of responsible producers. Newspapers in this context include magazines, direct advertising, telephone directories, mail order catalogues, and similar products made of paper. Despite this amendment, the same quantity of waste paper will be covered by the ordinance as before. The intention is to reduce the problem with non-compliance and simplify supervision.

Office paper. I suggest that the Swedish Environmental Protection Agency together with the affected parties produce a new voluntary undertaking which contains increased target levels for collection of office paper.

Returnable beverage containers. I propose that steel cans should be included in the deposit system and regulated in the same way as aluminium cans according to the Act (1982:349) on Recycling of Aluminium Beverage Containers. In conjunction with steel plate being included in the Act, its name should be changed to the Act on Recycling of Metal Beverage Containers. Steel cans and aluminium cans should be commonly defined as metal cans. The recommendation also leads to certain other consequential changes

in the Ordinance (1997:185) on Producer Responsibility for Packaging.

I propose that the definition of the packaging to be covered by the Act (1991:336) on Certain Beverage Containers be changed from solely referring to PET containers to include all containers of ready-to-drink beverages made of polymer material.

I recommend that both the Ordinance (1991:338) on Certain Beverage Containers and the Act (1982:349) on Recycling of Aluminium Beverage Containers be amended so as to check illegal import and trade with PET bottles and returnable beverage cans.

I recommend that the supervisory responsibility of the Environmental Protection Agency under the Ordinance (1991:338) on Certain Beverage Containers be transferred to the Swedish Board of Agriculture.

I propose that the industry through its own undertakings solve the problems with non-achievement of the recycling targets for aluminium cans and recyclable PET. The industry has presented plans to the enquiry for extensive information activity aimed at achieving the targets.

I recommend that the food trade and the brewing industry improve service to consumers by increasing the number of reception points with machines for accepting returnable beverage containers. This increase is motivated, among other reasons because new types of stores are developing. I consider that Systembolaget AB should improve its participation in the return system in a tangible way in addition to the material that has been presented to this enquiry.

In the evaluation of returnable beverage containers, the need for financial efficiency has been highlighted. I recommend that the industry itself should take measures by the undertakings presented to the enquiry.

Electrical and electronic products. I recommend an addition in the form of a reference in the Ordinance (2001:208) on Producer Responsibility for Electrical and Electronic Products to clarify the authorities that should exercise supervision.

I propose that a supplement be made to the Refuse Collection Ordinance (1998:902) in the form of a new section, section 25a. This section means that a demand for sorting at source is introduced for waste from electrical and electronic products.

Financial guarantees for the completion of producer responsibility

Comparison between different kinds of financial guarantees. I have examined a comparison that has been made between different types of financial guarantees, which could be of interest in guaranteeing compliance with producer responsibility. The alternative is a traditional insurance solution, captive insurance, or the producer making a deposit in a fund of his own or a state fund. These alternatives have been analysed with respect to the security offered by the system as regards compliance with producer responsibility, incentives for the producer to make the product environmentally compatible and the possibility for a market return on the capital deposited by the producer.

The evaluation shows that the greatest security for compliance with producer responsibility is obtained by a state fund and secondly by a traditional insurance solution. Security cannot be completely guaranteed in the captive insurance alternative or by alternative of the producer making a deposit in a fund of his own.

Both types of insurance solution and the alternative where the producer makes deposits in a fund provide an incentive for the producer to make the product environmentally compatible and the opportunity for a market return on the capital invested. Funds with the same charge for all regardless of the design of the product, provide scant incentives for environmental product improvements. As regards state funds, funds should be kept separate from central government finances in order to permit a market return on the funds.

In-depth analysis of the insurance solution. With the exception of an in-depth analysis of the possibilities of using a traditional insurance solution for producer responsibility, I note the following:

The Swedish insurance industry is positive to finding insurance solutions for producer responsibility.

Goods, which are relatively large in volume and have a low turnover rate, are suitable for insurance solutions. Goods that can be covered by such a solution are for instance white and brown goods and, if producer responsibility is to apply to these products, other motor vehicles.

A voluntary or compulsory insurance solution for producer responsibility, guarantees financial security is guaranteed at the end of the product's lifetime even if the producer is insolvent or has

ceased operations. Moreover, exactly as in the case where the producer makes his own deposits, the cost for the consumer is low as the insurance premium earns interest and there is an incentive to make environmental product improvements.

I note that a lot of the knowledge that the insurance company requires to calculate premiums and deal with the product must be obtained from the manufacturer of the product.

An advantage with the producer being responsible for financing is that there is a closer connection between the design of the product and the provisions the company is forced to make. The producer receives a clear incentive to adapt the product to the ecocycle.

In conclusion, I make the assessment that a traditional insurance solution is not suitable for all types of products. Since financial guarantees are to be considered for a product group, other solutions should be taken into consideration, everything from funds and insurance solutions to materials companies. The purpose should be to find an optimal solution in the individual case. I have proposed that a committee or delegation be appointed to develop work with voluntary undertakings in a dialogue and consultation with the business sector. This should also include the task together with the affected industries so considering different types of financial guarantees.