

Comment on the Draft final report May 2001

„Evaluation of costs and benefits for the achievements of reuse and recycling targets for different packaging materials in the frame of the packaging and packaging waste directive 94/62/EC”

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General remarks

The study tried to fulfil the very difficult task to give a more sophisticated picture of costs and benefits of different reuse and recycling targets in comparison. We acknowledge the difficulties in doing that and the achievements which have been made by this study. The study clearly confirms the approach to increase the recycling targets considerably.

The value of this study is very limited due to the fact, that the overall target, giving recommendations for a revision of the directive 94/62/EC was not sufficiently reflected in goal and scope of the study. One main deficit is that the study is based mainly on a state of the recycling technology and derived recycling costs of 1995.

Therefore – taking into account the results of other studies published – it can be concluded that the general result of giving proof of the advantages of higher recycling is soundly based while the detailed results for single materials and for the reuse packaging can not be used for policy making due to deficits in the study and its methodology.

Regarding the LCA part of the study, it does not meet the state of art in LCA as described in ISO EN 14040 – 43. This includes key points like data quality, transparency, discussion of robustness of results, sensitivity analysis, dominance analysis, discussion of the influence of scope, data quality and assumptions on the results and the lack of a critical review.

The CBA part of the study could be improved a lot by applying the methods of LCA as described in the standards e.g. discussing and analysing the main assumptions, making a dominance and sensitivity analysis and looking at the robustness of the results.

By improving the LCA and the CBA part of the study its quality could be improved strongly. We recommend further to give the differences in environmental and

economic impacts in absolute terms (for each country and the total EU). On the other hand many key points which have not been treated sufficiently can not be improved at that stage. The shortcomings have to be considered in the conclusions therefor. If the methodology or the scope of the study is basically not able to achieve sound and robust results this should be clearly expressed and political conclusions should not be drawn from it.

CBA has been proofed to be suitable in the case of the waste incineration directive, where directly related and influenced impacts were subject of the analysis. Only a few impacts were regarded. CBA on a basis where a lot of impacts have to be regarded, which additionally differ completely between the options compared is a much less powerful tool due to the large uncertainties of damage costs. We recommend to extend comparisons by CBA on basis of prevention costs instead of damage costs or to apply eco-efficiency-analysis, which gives a sectional relation between costs and environmental benefit.

Out of scope of the study are considerable effects by the extended producer responsibility schemes. Comparing the Netherlands (no extended packaging producer responsibility) and Germany (full extended packaging producer responsibility) a minimum increase in packaging efficiency in the range of 15-25 % trough EPR was achieved. Main improvements in Germany werde a more efficient and advanced packaging design, avoidance of too much packaging, the choice of most efficient packaging materials, thinner films and investments in modern machinery. Not analysed yet but expected can be similar effects in other member states with EPR schemes (e.g. Austria, France, Belgium).

A detailed assessment of the study and its results was not possible due to

- The very short time between the publication of the draft and the hearing
- The draft itself, which is difficult to read and gives extensive, but too general explications, whereas key assumptions are not clearly expressed and summarised. Some could not be found (e.g. electric energy yield from MWI).

Conclusions

Due to the shortcomings in basic assumptions and methodology the conclusions drawn have to be restricted:

Conclusion 2. Generally separate collection is better for society

Conclusion 3. Household packaging: separate kerbside collection is often preferable

The restrictions made under this conclusion are not robust and soundly based.

Conclusion 4. Industrial packaging: separate collection is preferable

This result may be regarded as consensus already. However it may be necessary to proof it again.

Conclusion 5. Revised recycling targets

Though the study gives sound proof that recycling targets should considerably increased, we feel that the model is too weakly based to give specific recycling targets for each member state.

Conclusion 6: Reuse should not be encouraged for beverage packaging

The study does not allow this conclusion due to the limitation of the comparison to glass and PET. Tin cans, Aluminium, other plastics and LBC have not been considered. Recycling rates of 91 for PET are not likely to be achievable in the EU, even not with deposit systems. The results of CBA are dominated by external costs of PM 10 and traffic congestion. Both factors again are determined by technical or emission standards for trucks.

Comments on some details

The kerbside-recycling concept for packaging is unclear. Unclear is also the method to allocate costs to single materials. If there is a collection scheme already, the removal of one material will save only very low marginal costs.

The sorting costs are too high. Mechanised PET bottle sorting and mechanised mixed packaging sorting including separation of PET bottle, BLCs, steel packaging, aluminium packaging, cellulosic fibres, PE, Polyolefin and PS based on different concepts are state of the art. The material quality applied in the study is too low and separation costs applied in the study are much too high.

The Fe- and Al-recovery rates from MWI slag are far to high. Most advanced MWI reach a 75% Fe-scrap metal removal from the slag. Losses due to oxidation during incineration in a range of 65 % have to be considered additionally. A yield of >50 % even in the most advanced plants is unlikely to occur. The assumed Al-yield of 76% from MWI slag compared to 81% from separate collection is extremely implausible also. The study uses APME date from 1995. Due to mistakes in the CO₂ balance of the APME Eco-profiles they have been corrected in 1997.

It remains unclear, whether costs and environmental impacts of private transports to bring systems have been included into the system boundaries. They might be very important. It also remains unclear, which emission standards for trucks have been assumed – which determines the results for reusable vs. one-way drink packaging.

Global warming costs with 13.44 €/t CO₂ seem to be very low, we feel the same is true for the acidification value. To apply a positive value to terristic eutrophication as fertilisation is ridiculous and ignores the environmental discussion of the last 20 years.