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The Dual System in Germany

- 13 years of experience -

I. Background

What was the situation in Germany like in the late 1980's? Under what circumstances did the Dual System come into existence?

For years, waste disposal policy was a subject of intense debate at the local, state and federal level in Germany. Nobody seemed to have an answer that was equally satisfactory to all interested circles involved. In many cases, urgently needed landfills, incinerator plants or composting facilities were not built because people living in the respective neighbourhood – concerned about contamination, toxins and smell – used all available legal and political means of resistance. Meanwhile, the consumption of packaging by private households and small-scale businesses (the very target of the Dual System) rose by over 33% from 5.63 million tonnes in 1989 to over 7.54 million tonnes in 1991, and an end to this growth trend was nowhere in sight. Already, there was an alarming bottleneck in existing landfill capacity that called for a totally altogether new approach to questions of waste disposal.

The Packaging Ordinance 1991 was implemented to reverse the phenomenon that I just described. The collapse of the waste disposal system was imminent. This suitable legislative instrument introduced for the first time the principles of the closed cycle economy and product responsibility. Of course, the Packaging Ordinance only applied to packaging waste.

In addition, the Packaging Ordinance sought to integrate disposal costs into the product sales price and to close the materials loop. This was done in an attempt to achieve a major reduction in packaging waste going into landfill disposal.

The enactment of the Packaging Ordinance was already imminent at the end of 1990. It was planned to impose return and disposal obligations on manufacturers and distributors. These plans prompted industry to address the question how these new requirements, formulated for the first time ever, could be met in a manner that would be in compliance with the law, avoid impairments of the free flow of goods, and encompass the least amount of competitive bias and cost.

As a result, it was decided in mid-1990 to set up the Dual System. The industries involved wanted to use the opportunity to rid themselves off their individual take-back and recycling obligations by creating a nation wide system for the collection and recycling of used sales packaging. In addition, the system eliminated the need for retailers to accept returned packaging at the point of sale, and avoided a mandatory deposit on packaging.

The Dual System, was originally supported exclusively by fillers and retail organisations. It was the hope of its founders to meet legal requirements in the most effective manner, both economically and ecologically, while providing the best possible service to participating companies and to the general public.
However, the implementation of the system did not proceed without problems. In mid-1993 it threatened to collapse under a mountain of debt estimated at 500 million €.

What had given rise to this problem?

- Within a mere 18 months, a nation wide system had to be installed from scratch serving a population of 82 million people as a second fully-independent mechanism operating alongside municipal waste disposal schemes. Since no adequate collecting and sorting resources were in place at the time, prices had to be paid which, from hindsight, appear to be extremely high.

- Despite the virtual absence of recycling capacity, specifically for plastics, it was necessary to collect 50% of all sales packaging as of 1993, and to recycle at least 9% of all plastics. This rate was raised to 64% as of July 1, 1995.

- In addition, there was no control of those companies who did not participate in the Dual System.

- The Dual System had to conclude agreements with municipalities to take over collecting facilities already in place, regardless of whether this made sense or not.

- Activities were limited exclusively to domestic sales packaging, and only mechanical recycling was allowed – energy recovery was not a permitted option.

The entire cost of the collection, sorting and recycling of this packaging material had to be shouldered by the German industry and business community. It was due to these circumstances, that the Dual System was (and still is) one of the most cost-intensive systems in Europe.

In 1998 the German Packaging Ordinance was amended to solve some of the problems inherent in its 1991 predecessor:

- Companies who do not participate in the Dual-System must meet the same recovery quotas, and must furnish evidence of doing so.

- For companies unwilling or unable to achieve this, Dual System participation is mandatory.

- Energy recovery is, in part, permitted.

- Disposal contracts must be awarded by a competitive tender process.

Moreover, the recycling quotas were revised and redefined between 60% and 75%:

The 60 % quota for plastics recycling seems to be particularly note worthy. By comparison: even the revised EU directive only requires 22.5 %. Generally speaking, the current proposal for the revised Directive targets to be met in 2008 still falls significantly short of the quotas which are applicable in Germany since 1999.

II. Structure of Dual System of Germany (DSD)

On September 28, 1990, a second (“dual”) disposal system for used sales packaging – operating alongside the municipal waste disposal schemes – was set up by retailers, the packing industry, packaging manufacturers and raw material suppliers under the name Dual System Germany. Originally headquartered in Bonn, the company subsequently moved its main offices to Cologne. Moreover, it has been converted into a stock corporation and is now called “Der Grüne Punkt – Duales System Deutschland AG” (The Green Dot – Dual System Germany).

The company has a share capital of 1.541 million €, which is held by retail organisations, fillers, packaging manufacturers and raw material suppliers. Each shareholder holds a package of five shares with a nominal value of 512 €. Membership in the company does not confer any economic privilege. The articles of association exclude the distribution of profits to shareholders.

The supervisory board, elected by the shareholders, consists of 6 members, each two from the retailers, the fillers and the packaging producers.

The system finances itself through license fees. The Dual System charges fees for trademark utilisation rights. The Green Dot is the company’s financing symbol. It is an internationally registered trademark. The license is granted through the signing of a trademark use agreement. By signing the trademark use agreement, the licensee obtains the right to attach the Green Dot to his sales packaging. At the same time, all licensed packaging is exempted from all return and recovery obligations under the Packaging Ordinance.

Imported products from the European Economic Area are integrated into the Dual System on an equal rights basis. The application for a Green Dot license may be filed either by the foreign product manufacturer domiciled in the EU or EEA or by the importing company.

The licence fee varies from 6 EURO-cent for 1 kg of glass up to 128 EURO-cent for 1 kg plastics.

The Green Dot is no eco-label. Its sole purpose is to mark sales packaging covered by the Dual System, and it is awarded to manufacturers and distributors to exempt them from their packaging return and disposal obligations under the Packaging Ordinance.

The actual collection of used sales packaging and its separation into the various waste fractions is performed on behalf of the Dual System by a number of supra-regional (private or municipal) waste management companies. The Dual System has integrated existing collection and sorting systems as required by the Packaging Ordinance, and has co-ordinated its disposal scheme with the public (law) entities in charge of waste management. As a result, there is no uniform nation-wide collection system, but a plurality of mechanisms adapted to municipal preferences and circumstances. A distinction can thus be made between bring-in and collection systems, and between mixed and special models.

The waste management companies initially received a tonnage-based fee. By now, their remuneration has been switched to a per-capita basis.

Collected and sorted packaging is made available by the disposal contractors to the so-called Acceptance and Disposal Guarantors. These are either the industries from which the individual packaging materials originate or other specific companies set up for the purpose of recycling and other marketing secondary raw materials. They ensure that the packaging materials collected under the Dual System will actually be accepted and committed to material recycling.

Moreover, the disposal partners are free to market the collected packaging themselves, except for plastics and composites.

Now how does the system operate in practice?

A citizen, having consumed a product, is expected to place all packaging waste in one of the various containers set up by Dual System, separately according to material fraction. Glass packaging can be brought to a bottle bank and placed in the appropriate container according to colour (white, green or brown glass). This eliminates the sorting step, with the result that the collected glass can be returned directly to the glass factory for the manufacture of new glass.

For paper we have both bring-in and collecting systems in Germany, and even some combined schemes. Paper and cardboard packaging is collected together with graphic papers, then sorted according to grade in special sorting facilities. The sorted material is then delivered to the paper mills for reprocessing into new packaging, newspapers, or sanitary paper products.

So-called lightweight packaging is collected in a “yellow bag” or “yellow bin”. This category includes tinplate, aluminium, composites and plastics packaging. Collected material of this type is sorted into the diverse fractions in a sorting facility, with plastics being further separated into various sub-fractions. The sorted items are then made available to the recycling companies for reprocessing.

III. Results

What has the Dual System achieved over the past 13 years?

Has it been worth the effort and the costs?

As you can see, the annual per-capita collection volume is steady at about 77 kilogramme. Naturally, this figure dropped in 2003 to approx. 72 kilogramme due to the introduction of the mandatory deposit on beverage packaging.

The same is true for the amount of plastics packaging recycled each year. As you can see, we had to make an intense initial effort, specifically in the years 1992 through 1994, to build the capacity to actually recycle all collected plastic packaging. The quantity of this packaging increased tenfold in a period of just two years.

In 2003 we were again able to fulfil all prescribed recycling quotas. In the paper segment you will notice one of the problems which persists even 13 years after the introduction of the Packaging Ordinance - I am referring to the problem of "freeriders", i.e., companies which are subject to a recycling obligation but fail to comply with it.

The next slide, which you will also find in your materials, shows the detailed results for 2003.

One of our greatest achievements over the last few years, apart from the creation of collection and recycling capacity, has been the de-coupling of packaging consumption from economic growth. This slide shows you that the consumption of packaging today is still 8% below 1991 levels, although the economy has grown by about 16% in this period.

It is evident that the financial motivation for companies to save licensing fees through improved packaging solutions shows tangible success.

A few more facts and figures about the Dual System: The sales volume is decreasing slightly since its all-time high in the year 2000. This corresponds to the decrease in the total amount of packaging licensed. The volume of collected and recycled packaging remained at the same level in the past 3 years.

On the next slide you will see a few more details about the Dual System, for instance, the number of companies participating in our scheme with their packaging. The number is by now steady at around 19.000.

A key factor for the system's acceptance and success is the individual consumer. If he/she doesn't assist with the collection, there will simply be nothing to recycle. The public relation work is very important to boost individual motivation. One example of this effort are the Recycling Days held at various locations in Germany every two years.

This activity usually involves "open house" events held by our recycling partners who invite consumers to visit their sorting and recycling plants. To date more than 1 million people have made use of this opportunity.

All efforts taken together, plus the German public's high environmental awareness, have resulted in the situation that at present, some 90% of the German population are separating their waste.

However, we must continue our activities in this field to preserve this public willingness to separate waste, and to increase the quality of the waste recovered.

In the end of my presentation, I would like to summarise our experiences and the results.

The difficult nature of packaging waste management can best be solved by entering into a dialogue and joining forces with all players involved in the packaging chain.

The co-operation between the Federal German State and the business community has led to the development of efficient recycling structures for post-consumer packaging in Germany.

The cost burden for companies in Germany is higher compared to most of the other European states that also use the Green Dot as financing mark. This is the result of the full-cost-model applied in Germany by limiting the scope of the system to household packaging at the same time and the demand of high recycling quotas.

There are still considerable cost cutting potentials (For instance advanced technology, waste stream management, call for tenders).

The Green Dot has reached a high level of social acceptance.

Moreover we found out some very important facts which underline the sense and the necessity of our work.

By collecting and recycling used packaging we are not “just” saving landfill-space.

By recycling we were able to save a lot of energy (67.5 billion megajoules only in 2002) and avoid climate-damaging gases (1.5 million tonnes in 2002).

Therefore we have started to check all our recycling-activities and to have a look which change or amendment would lead to which results regarding energy and climate-damaging gases saving.

What will the future hold for our system?

We are facing a lot of challenges at the moment:

We have called for tender for new collection and sorting contract with waste management companies starting in January 2004.

Contrary to our expectations and the expectations of the German competition authorities we had to learn, that the call for tender did not automatically result in cheaper prices so that we cancelled around 50% of the tenders and called again for tender 3 months ago. The new results will be published soon.

The mandatory deposit for parts of the one-way-beverage containers causes a loss in income of about 300 million € but we are not able to reduce our costs at the same time. Up to now there exists no nation-wide deposit system so that only about 60% of the deposit packaging are returned; so less than we had collected with our kerbside-system! Most retailers and fillers decline to spend more than 1 billion € to build up that nation-wide system. They simply stopped selling one-way-beverage containers.

At the same time the government tries to simplify the deposit regulations and to increase the scope to all "bad" i.e. "ecologically disadvantageous" beverage containers. Only refillable and TetraPak containers are "good", i.e. ecologically advantageous packaging do not fall in the scope of the new regulations.

But it is not sure whether the German Bundesrat, the chamber of the 16 German states, will agree to this amendment.

The new CEO of our organisation, Mr Repnik, has started a process to gain more flexibility to the Dual System to be able to ensure a high quality of recycling, but increase the efficiency and to lower the costs.

We are sure that this new strategy will enable us to face all these challenges in the future.

Thank you for your attention.