The Concept of Waste

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I. Introduction

The term "waste" has many different meanings in both ordinary language and in scientific literature. Nonetheless, dictionary definitions are hardly enlightening with regard to the exact significance of the term. Indeed, waste is defined in a relatively vague manner as: "unwanted matter or material of any type, often that which is left after useful substances or parts have been removed",[1] "no longer useful and to be thrown away"[2] or "eliminated or thrown aside as worthless after the completion of a process".[3] Such definitions are of minimal use for lawyers.

As a matter of fact, waste is characterised by its very relativity. The "uselessness" of the material, which allows one to qualify it as waste, actually varies according to time, place and people. An object which appears "useless" to someone at a given time and place, may be useful, even essential, to another person, at another place or time.

Waste also comes in many guises. In one way or another, all sectors of our consumer society produce waste. Furthermore, the numerous regulations which define waste reflect this diversity. Throughout legislation, one finds definitions of "industrial waste", "household waste", "medical waste", "agricultural waste", "inert waste" and "special waste". Moreover, the fact that some pose greater risks than others has also caused the legislators to distinguish between "dangerous and toxic waste" and "ordinary waste".

Furthermore, waste is also unreliable because its evolution is far from uniform. It is very much the result of a dynamic, not a static, process. Time is a central factor. Although much domestic waste disappears quickly because it is biodegradable, other wastes – notably nuclear waste – last for thousands of years. Treatment and disposal processes also play a determinative role in the destiny of waste. Wastes can be disposed of in radically different ways: when solid waste is incinerated, it is dispersed into the atmosphere as particles of pollution; liquid effluents dissolve into the water table or the oceans; waste in landfills simply disappears beneath the ground. Alternatively, however, waste can replace raw materials and thus be reintroduced into the production cycle. It goes without saying that the choice between the various processes for dealing with waste has important consequences for the protection of the environment. Scattering waste into the air, water and soil can adversely affect these different habitats (atmospheric pollution, contamination of soils and water tables, algal blooms and so on ...), whilst saving waste for use as secondary raw materials proves less harmful to the environment.

Hence, the notion of waste varies greatly in space, time, and according to circumstances. In the course of its life cycle a single substance may alternatively be qualified as product, waste or secondary raw material according to the use to which it is put, or according to the norm in force. Put it simply, a substance which is waste at a given moment for a business may, for that same business, months or years later, have lost that character because, for technical (introduc-

1 Cambridge International Dictionary of English, Cambridge 1995.

2 Oxford Advanced Learner's Dictionary, Oxford 1989.

3 The Shorter Oxford English Dictionary, 3rd ed., Oxford 1956.

tion of new technology) or economic (rising price of raw materials) reasons, that which was originally waste can now be used in the production process as a raw material.

This identificatory difficulty is compounded by the fact that the notion may itself be understood from two fundamentally distinct points of view. An intrinsic approach allows one to qualify waste with regard to the substances of which it is composed, or the characteristics which it displays. From this point of view, waste can be qualified as dangerous because of the presence of certain metals. It can be qualified as toxic because of an elevated concentration of a chemical substance. Waste can also be the subject of an extrinsic approach. Here, the substance is considered "waste" not as a function of its origin, composition, or physico-chemical characteristics, but with regard to the presence or absence of a use to which it can be put. This double approach instils in the definition of waste both a substantive and a functional dimension, which are not always capable of being reconciled.

The difficulties which national legislators have encountered in establishing waste-control regulations have especially demonstrated just how hard the notion of waste is to pin down. Because practical problems arose from divergent interpretations of the first European Community definition of the concept, Directive 91/156/EEC amended Directive 75/442/EEC to fundamentally revise the notion of waste.

Despite this change, the definition has continued to cause heated debates over the years. As a matter of fact, in order to evade the Caudine Forks of waste regulation, including the financial burden of waste transfer (taxes, levies), some economic operators have not hesitated to qualify their residues as either products or by-products. The Community definition has thus lain at the root of various controversies in nearly every Member State where national authorities and public officials cross swords with business on the issue of whether such and such a residue constitutes a waste or not. As a result, environmental law journals are rife with discussions as to whether that Community definition encompasses residues, by-products, marketable waste, re-usable waste,..... .[4]

Because it fluctuates according to time, situation and the persons concerned, the notion of waste seems, at first sight, impossible of a uniform legal definition. Nevertheless, judicial certainty requires one to define the notion of waste with reference to clear and pertinent criteria, some of which have been applied by the European Court of Justice.

4 For commentary on the definition of the notion of waste: E.g. among others Billet, "Droit des déchets: notions générales", Jurisclasseurs Environnement 2003, 810, 1-38 ; Cheyne/Purdue, "Fitting Definition to Purpose: the Search for a Satisfactory Definition of Waste", Journal of Envt. L. 1995, 7:2, 149; Cheyne, "The Definition of Waste in EC Law", Journal of Envt. L. 2002, 14:1, 61-73; Demoor-Dirick, "De begrippen 'afvalstof' en 'secundaire grondstof' vanuit Europees en Belgisch perspectief", M.E.R. 1999, 11-12, 346; de Sadeleer, "Les déchets, les résidus et les sous-produits. Une trilogie ambiguë", Revue du Droit de l'Union Européenne 2004, 3, 457-497; de Sadeleer, "Waste, Products and By-products", Journal for European Environmental & Planning Law 2005, 1:4, 46-58; de Sadeleer, Rifiuti, Residui e Sottoprodotti: una trilogia ambigua, Rivista Giuridica dell'Ambiente, 2005; de Sadeleer, "Residuos, restos y subproductos. Una trilogia ambigua", IeZ Ingurugiroa eta Zuzenbidea-Ambiente y Derecho 2005, 11-50; Ermarcora, Der europäische Abfallbegriff und seine nationale Umsetzung am Beispiel des österreichischen Rechts, Vienna 1999; Jurgen, "The Term 'Waste' in EU Law", Eur. Environ. L.R. 1994, 3, 79 and "Zum EG-Abfallrecht und seiner Umsetzung in deutsches Recht", EuR 1994, 1, 71; Krämer, "The Distinction between Product and Waste in Community Law", Environmental Liability, 2003, II: 1, 3-14 ; Picheral, "L'ambivalence de la notion de déchet dans la jurisprudence de la C.J.C.E. ", Revue juridique de l'environnement 1995, 4, 559; Pike, "Waste Not Want Not: An (Even) Wider Definition of 'Waste", Journal of Envt. L. 2002, 14: 2, 197-208; Pocklington, "UK Perspectives on the Definition of 'Waste' in EU Legislation", Eur.Env.L.R. 1999, 104; Purdue/Van Rossem, "The Distinction between Using Secondary Raw Materials and the Recovery of Waste: The Directive Definition of Waste", Journal of Envt. L. 1998, 116-145; Tromans, "EC Waste Law – A Complete Mess?", Journal of Envt. L. 2001, 13: 2, 133-156; Van Calster, "The E.C. Definition of Waste: the Euro Tombesi Bypass and Basel Relief Routes", European Business Law Review 1997, 137.

It is the aim of this article to explore some of the key issues arising in determining the scope of the definition of waste used by the European Community. In so doing, I will pay heed to the historical background.

Last, I would like to dedicate this article to the memory of Betty Gebers who understood the challenges entailed by the harmonisation processes, in particular in the field of waste management.

II. Historical background: the definition of waste under Directive 75/442/EEC, as amended by Directive 91/156/EEC

The concept of waste was originally defined in Directive 75/442/EEC as "any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force".[5] The very general character of this definition was the source of considerable dispute between the Member States, regarding both the transposition of Directive 75/442/EEC into national law, and its subsequent application.

To remedy the practical difficulties caused by the equivocal definition of waste in Directive 75/442/EEC, and the anti-competitive effects to which they might have given rise, the Commission undertook to regularise the Definition.[6]

Article 1(a) of Directive 75/442 EEC, as amended by Directive 91/156/EEC, defines waste as "any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard".[7]

Owing that Directive 75/442/EEC, as amended by Directive 91/156/EEC, has been elevated to the status of Framework Directive and has underpinned, since 1993, this new definition is particularly important. Indeed, it determines in effect the field of application of the whole of the Community's policy on waste.[8] In other words, Directive 75/442/EEC has become a Framework Directive setting out the general principles in this area, thus determining the broad parameters within which Member State action on waste management is to take place. It is still therefore necessary for Community law to flesh out these principles into more detailed rules in more specifically focussed directives or regulations.[9] Thus the definition of the concept of waste constitutes the keystone of all sectoral regulation on waste products, including the Community

5 Former Article 1(a) of Directive 75/442/EEC, OJ 1975 L 194/39.

6 See the Commission proposals for the amendment of Directive 75/442/EEC, in OJ 1988 C 295/3, and OJ 1989 C 326/6.

"The existing differences in the field of application of national and regional legislation are important and, in the context of the common market and the free movement of goods, can have very significant consequences. It is therefore in the interests of industry and of professionals in the waste treatment sector to have access to a single definition of waste and of dangerous waste, in order to eliminate a source both of distortions of competition, and of management and administrative difficulties."

7 Here one sees the similarity between the present definition and that retained in the Basle Convention on the control of waste movements and elimination. Under this convention, waste is "any substance or object which the holder eliminates, intends to eliminate, or is obliged to eliminate by reason of national legislation".

8 Case C-114/01 – AvestaPolarit Chrome Oy [2003], para. 48. Thus in C-444/00 – Mayer Parry [2003] ECR I-6163 considering the definition in Directive 94/62/EC on Packaging and Packaging Waste, the ECJ qualified Directive 94/62/EC as lex specialis (para. 57). The wide scope of the 75/442/EEC Directive is nevertheless limited with respect to by-products (see below section 4.3.3).

9 The EC Commission Communication on the Prevention and Recycling of Waste of 27 May 2003 highlights that the definition is the keystone of waste legislation (p. 38). Consequently, changes to this definition are likely to affect an array of legislative instruments, and as such must be consistent with the objectives of all of them, and also with the principles of legal certainty and legitimate expectations.

rules pertaining to the trans-frontier movement of waste. Essentially, any substance or object that is discarded but, in the light of the particular circumstances, does not fall under this definition is not subject to the administrative obligations relating to collection, sorting, storage, transportation, international transfer and treatment methods that are applicable to waste.

Nonetheless, the wide scope of the 75/442/EEC Directive is limited with respect to by-products (see below section V.). In addition, a number of substances are excluded from the ambit of that Directive provided a number of conditions are met (Article 2(1)). Accordingly, the ECJ has ruled that national lawmakers were empowered to restrict the scope of the Directive 75/442/EEC.[10]

Last, this new definition set out that "the Commission, acting in accordance with the procedure laid down in Article 18, will draw up, not later than 1 April 1993, a list of wastes belonging to the categories listed in Annex I. This list will be periodically reviewed and, if necessary, revised by the same procedure".

III. The three elements of the definition

Because of the multiplicity of terms covered by the European Community definition of waste, one must distinguish between the different elements which are therein combined. We will examine, respectively, the three essential components of the definition: firstly, the terms "substance or object"; secondly, the concept of "holder"; and finally, the act of "discarding" waste.

1. Whether the "substance" or "object" belongs to one of the categories in Annex I of the Directive

The Community's new definition involves the fact that substances or objects capable of becoming waste have to belong to one of the categories set out in Annex I of the Directive. This Annex, itself based upon the Annex to the OECD decision of 27th May 1988 on cross-border movements of dangerous waste, sets out sixteen categories of substance or objects which are to be considered as waste (production or consumption residues, off-specification products, products whose date for appropriate use has expired, materials spilled, adulterated materials, residues of industrial processes, ...).

Among the above categories, one can distinguish, on the one hand, substances composed of residue from industrial production (Q 1, 8 to 11), and, on the other hand, substances which have become unfit for consumption as a result of their use, by accident (Q 4 to 7, 12 and 15), or because they do not meet certain criteria (Q 2, 3, and 13).

Two categories merit particular attention.

Category Q 13 is remarkably close to the concept of an obligation to discard which one meets later on in the definition. This category therefore permits both national and Community legisla-

10 Case C-114/61 – AvestaPolarit Chrome Oy, para. 49. See in this respect the criticism of Krämer, "Member State's environmental legislation and the application of EC Waste law – the classification of waste", Environmental Liability, 2003, Vol. 11, No. 6, 231-233.

tors to broaden the concept of waste simply by banning the use of certain products.[11] Employing this category, however, risks causing difficulties similar to those which arose in applying the definition initially given by the 1975 Directive. In fact, because each Member State has the option of proscribing the use of particular substances or objects, thereby classifying them as waste, there is a risk that the very definition of waste itself will become too variable.

The final category, Q 16, which refers to "any materials, substances or products which are not contained in the above categories" also requires to be commented upon. One notices from the outset that this latter category does not figure either in the corresponding annex to the OECD decision of 27th May 1988, or in the Annex to the Basle Convention on the control of transboundary movements of hazardous waste and their disposal. This category is evidence of the unlimited nature of Annex I of the Directive. Thanks to this oversight, the Member States are able to include in the concept of waste every object and substance which meets the European Community criteria.

One cannot conclude that this list of the various categories of waste is without effects. The list of wastes which the Commission has set up under Article 1(2), – called the European Waste Catalogue (EWC) – borrows from the classifications given in Annex I to the Directive in order to more precisely set out the content of the various categories of waste.[12] The list is made up of relatively broad categories (wastes from the textile and leather industries, wastes from inorganic chemical processes, ...), among which are set out the different types of waste involved (for instance, in the section dealing with inorganic chemistry, one finds acidic and alkaline solutions, waste containing various different metals, etc., ...). The list does not only deal with the industrial sector: also covered are waste from the construction and demolition sector (bricks, concrete, ...); waste from health care activities (syringes, soiled sharps, ...); municipal waste (paper, cardboard, glass, garden and park waste, ...). Each category and each type of waste is preceded by a numerical code.

Moreover, since as a matter of principle the decision endorsing the EWC is binding on all those to whom it is addressed, it is incumbent upon the Member States to incorporate the EC catalogue into a binding national regulation.[13]

However, since the principal purpose of the EWC is to establish a "reference nomenclature providing a common terminology throughout the Community", the list of wastes contained

11 Since it is nowhere specified that one may forbid the use of a material, substance or product, it must be concluded that both the European Community and national legislators have the power so to do, whether by general or specific regulations. (de Villeneuve, "La notion de 'déchets' et de 'déchets dangereux'; les définitions proposées par la Commission des C.E.", Amén-Env. 1990, special edition "Les déchets", 15).

12 Commission Decision 2000/523/EC (3 May 2000), as amended by the Decision of 16 January 2001. This list has also been amended by Commission Decisions 2001/118/EC and 2001/119/EC and the Council Decision 2001/573/EC, dated respectively 16 and 22 January and 23 July 2001 (OJ L 47/1 and 32, L 203/18) and entered into force on 1 January 2002.

13 The ECJ thus found against Luxembourg which had, on the one hand, incorporated the EWC by means of a ministerial circular binding on the administration, but not on third parties, whilst on the other hand introducing alongside the EWC a purely national nomenclature differing from the EWC and having the effect of excluding the use of the EWC for a large number of operations in which the classification of waste is taken into account (Case C-196/01 – Commission v Luxembourg [2002] ECR I-569). Notwithstanding the fact that a national approach could entail greater administrative difficulties for traders, a national classification system differing from that of the Community list of dangerous wastes may nonetheless be acceptable (Case C-194/01 – Commission v Austria).

within it is neither limiting[14] nor exhaustive.[15] Indeed, its essential object is to establish a "reference nomenclature providing a common terminology throughout the Community".[16]

This means that the EWC contains only illustrative guidelines for determining the particular circumstances in which an object is no longer a product and is deemed to be waste. Hence, the fact that a material or substance is not included in the list does not mean that it cannot be classified as waste. Inversely, the inclusion of a substance in the ECW appears to be an excellent indicator that the material meets the definition of waste.[17] In this respect, the Advocate-General highlighted that several categories of the ECW could cover unexcavated soil.[18]

Other EC lists could also be useful for determining whether a substance is to be classified as waste. In this respect, the Court has recently been pointing out that hydrocarbons spilled by accident were considered to be waste on the grounds that they were listed under the Decision 94/904/EC of 22 December 1994 establishing a list of hazardous waste pursuant to Article 1(4) of Directive 91/689.[19]

2. The concept of the "holder"

The concept of "holder" embraces both "the producer of waste" and "the natural or legal person who is in possession of it". Article 1(b), of the Framework Directive on Waste defines the producer as "anyone whose activities produce waste ('original producer') and/or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste". Possession is not however defined, neither in the Directive nor in Community law in general. The acknowledged view on this is that possession entails simply effective control and does not presuppose any proprietary or other legal rights in the object.[20]

Bearing in mind the definition given of the concept of "producer", the notion of "holder" seems very much broader than that of the mere "owner" as it embraces all persons who are in a position to dispose of waste.

Similarly, the central importance of the concept of holder is testament to the autonomy of the definition of waste from the concept of abandonment for the purposes of private law, which presupposes full proprietary rights over an object. Accordingly an oil company selling hydrocarbons to the manager of a petrol station can, in certain circumstances, be considered

14 "The fact that a material appears (in the list) does not indicate that it is in every case waste. Inclusion in this list has no effect unless the material corresponds to the definition of waste". Compare Commission Decision 94/3/EC, note 1.3.2.

15 The list's introductory note specified that even though it is a harmonised list subject to periodic review, "the inclusion of a material in the list does not mean that the material is a waste in all circumstances. Materials are considered to be waste only where the definition of waste in Article 1(a) of Directive 75/442/EEC is met."

16 See Decision 94/3/EC, Introductory Note, point 5.

17 Advocate-General Kokott's Opinion in Case C-1/03 – Paul van de Walle, para. 29.

18 In its opinion in the Case C-1/03 – Paul van de Walle, the Advocate-General indicated in this regard that subsection 17 05 of the European Waste Catalogue, which is headed "soil (including excavated soil from contaminated sites), stones and dredging spoil" includes the items 17 05 03 "soil and stones containing dangerous substances" and 17 05 04 "soil and stones other than those mentioned in 17 05 03" (AG Opinion, para. 14).

19 Case C-1/03 – Paul van de Walle, para. 51.

20 Advocate-General Kokott's Opinion in Paul van de Walle, para. 56.

the holder of the land contaminated by hydrocarbons that accidentally leak from the station's storage tanks, even where the petrol company does not own them.[21]

3. The act of "discarding" waste

In the Framework Directive, the essential element of the definition of waste rests on the identification of three situations: that in which the holder is obliged to discard waste, the act of such discarding, or the intention to discard a substance or object. Before distinguishing between these three situations, it is necessary at the outset to underline the general nature of the act of "discarding", and to examine some of the terminological issues raised by that word itself.

a. General nature of the act of "discarding"

The principal situation envisaged by the European Community definition is where "the holder discards the substance" in the sense that he has no legal use for the substance as either product or raw material (or where he chooses not to have recourse to such a use).

The original text of Directive 75/442 in the English language defined waste as "any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force".[22] However, in 1991, when the Framework Directive was revised, a different term was to be used. Waste then became "any substance or object … which the holder discards or intends or is required to discard". The change, although slight at first glance, is significant, particularly when one compares the English versions of the Directive (original and as amended), with their counterparts in the other languages of the European Community.

In English, "to dispose of", as used in the text of Directive 75/442 can, and commonly does, have a sense which includes that of selling for gain. Thus, a person in possession of waste substances or objects clearly could be "disposing" thereof either by simply throwing them away or by selling them. A difficulty arises, however, out of the fact that "waste" is defined with respect to "disposal", and not vice versa. Thus if one takes the verb "to dispose of" in its usual sense, the original Directive was literally saying that anything capable of being sold thereby qualified as waste. Of course, such an interpretation of the definition is impossibly broad, as most substances and objects bought and sold are patently not "waste" in the sense of being unwanted or of no use.

On the other hand, a restrictive interpretation of the term "dispose" as used in the original Directive, (with only the sense of "to throw away"), tends to lead to the contrary conclusion; that if a substance or object can be sold for gain, then it is not waste within the meaning of the definition. Such an interpretation would allow the unscrupulous trader to stockpile (possibly dangerous or polluting) substances and avoid having to deal with them according to the statutory waste management procedures, simply because they have a nominal resale value. Clearly this is not an attractive reading of the definition from the point of view of environmental protection.

21 Case C-1/03 – Paul van de Walle, paras. 42-61.

22 Former Article 1(a) of Directive 75/442/EEC, OJ 1975 L 194/39.

Although Directive 91/156/EEC amended the Framework Directive so that the definition of waste now depends upon the idea of "discarding", the situation is hardly less confused, particularly if one compares the English texts with those in the other languages of the European Community. The legislator has not completely defined what exactly is meant by the act of "discarding". For instance, in ordinary French or Dutch usage, the terms expressing "to discard" (se défaire, ontdoen), which are used in both original and amended versions of the definition of waste, are traditionally understood in the sense of "to throw away", "to abandon", or "to get rid of" something, but also have the meaning "to sell" something, a sense which is now lacking in the amended English version. Here one sees that the concept of "getting rid of" something may be understood in two ways, depending on which language is used to express it. Conversely, for example, neither of the German versions of the definition admits of a commercial use being made of the waste in question.

I would suggest the best interpretation requires that the act of "discarding" envisage a throwing away in an immediate sense into the natural environment of an object which has become useless, burdensome or unwanted because it can no longer be reintroduced into an economic process.

Thrown away, abandoned, left behind, this object is liable to cause pollution and to be a nuisance. Only in a subsidiary sense may the act of discarding be commercial. When it is not dumped illegally into the natural environment, waste, whether it has a positive or a negative commercial value to the holder, may be the subject of mercantile transactions without necessarily losing its character as waste. Therefore, by using the term "dispose of", the Community legislator did not only wish to envisage the uncontrolled dumping of waste into the natural environment, but also to intervene in the processes of disposal and economic exploitation of waste in order to guarantee an optimal policy of conserving natural resources.[23] This double approach instils in the legislation the objectives contained in Article 174(1) of the Treaty, which conceives of the Community's action in the field of environmental protection in terms of both anti-pollution policy and rational management of natural resources. This is an essential point for understanding the relatively broad scope of the concept of waste.

A final ambiguity deserves attention. One asks oneself whether the act of "discarding" an object might be synonymous with "abandoning" in the sense in which the continental civilian legal systems have traditionally understood this term. Judgments handed down by the European Court of Justice have, in fact, brought a clear answer to this question.

In response to two preliminary questions, under Article 177 EEC, from the Pretora di Atri and the Pretora di San Vito al Tagliamento in Italy, the Court of Justice confirmed that even those substances capable of being economically re-used could be regarded as waste. In these cases, the operators of a transport business were prosecuted for illegally having transported substances defined by the Italian law as waste. The defence argued that the substances in question escaped the terms of the definition in the Italian law because they were capable of being re-used and, as such, were neither abandoned nor destined to be abandoned. The references before the Court involved, inter alia, the question of whether the notion of waste, as defined in Directives 75/442/EEC and in Directive 91/156/EEC on toxic and dangerous waste, also included objects capable of being commercially recycled.

23 This interpretation is confirmed by analysis of the English version of the Directive, where the French term "se défaire" is translated as "to discard". See Jurgen, supra note 4, p. 81.

In his conjoint opinions on the questions put to the Court, Advocate-General F. G. Jacobs decided that "neither definition contains any suggestion that the intention of the holder is relevant. (...) the question whether a substance or object poses a threat to human health or the environment is an objective, not a subjective, one. It has nothing to do with the intention of the person disposing of the substance. Nor is the possibility of such a threat affected by whether or not the product can be recycled or reused."[24]

The Court followed the Advocate-General in the first judgment, replying that under the terms of Directives 75/442/EEC and 91/156/EEC it appeared that "a substance of which its holder disposes may constitute waste (...) even when it is capable of economic [sic.] reutilization.[25]

> "Article 1 of each of those directives refers generally to any substance or object of which the holder disposes, and draws no distinction according to the intentions of the holder disposing thereof. Moreover, those provisions specify that waste also includes substances or objects which the holder 'is required to dispose of pursuant to the provisions of national law in force'. A holder may be required by a provision of national law to dispose of something without necessarily intending to exclude all economic [sic.] reutilization thereof by others."
>
> (...)
>
> "The essential aim of Directives 75/442 and 78/319, set out in their preambles in the third and fourth recitals respectively, namely the protection of human health and the safeguarding of the environment, would be jeopardized if the application of these directives were dependent on whether or not the holder intended to exclude all economic reutilization by others of the substances or objects of which he disposes."[26]

The Court replied to the second part of the question that the notion of waste in the first articles of Directives 75/442/EEC and 78/319EEC did not presuppose, on the part of the management of the waste-holding company, an intention to exclude all commercial recycling of the substance or object by other persons.[27]

In its second judgment, the Court replied that national legislation could not adopt a definition of the notion of waste which would exclude objects and substances capable of commercial re-use.[28] One can only approve of this case-law of the Court. Excluding those wastes capable of commercial recycling from the concept of waste would, in effect, make all controls practically impossible, since holders could always invoke a potential commercial re-use in order to escape their obligations. Reinforced environmental protection, the fundamental objective of Directive 75/442/EEC, inexorably leads to a broad interpretation of the concept of waste.

Moreover, one sees that waste often has a negative economic value for its producers who seek to rid themselves of it with the least possible expense, while at the same time, it represents a positive worth for its purchaser, to the extent to which the latter is able to use it as a

24 Opinion of Advocate-General F.G. Jacobs on Cases 206/88, 207/88 and 359/88, ECR I-1461, p.1470.

25 Cases C-206/88 and 207/88 – Vessoso and Zanetti [1990] ECR 1461.

26 Ibid., pp. 1477-1478.

27 Cases C-206/88 and 207/88 – Vessoso and Zanetti.

28 Case C-359/88 – Zanetti. As we see, this means that control and monitoring regimes may not be differently arranged depending upon the end envisaged for the waste being eliminated.

product or a raw material. The value of waste, whether it be positive or negative, has no influence upon its categorisation as such.[29]

b. The holder "is obliged to discard" the substance or object

We have already seen that under category Q 13 of Annex I to the Directive the legislator, whether European or national, may proscribe the use of any material, substance, or product. By so doing, there is brought into being an obligation to dispose of such substance or product.[30] When the holder of a substance or product is subjected to such an obligation, the substance or object thereby constitutes waste. This categorisation is independent of all considerations as to the possibility of the holder's re-using the product. Legislation which requires holders to dispose of an object is essentially based on the intrinsic approach set out above in the introduction of this chapter.

One may take an example from the European Community legislation. Directive 75/439/EEC on the disposal of waste oils defines such oils as "any mineral-based lubrication or industrial oils which have become unfit for the use for which they were originally intended, and in particular used combustion engine oils and gearbox oils, and also mineral lubricating oils, oils for turbines and hydraulic oils".[31] Once the oil has become unfit, in that it can no longer be use as a lubricant, it must, excepting the situation where it is recycled by the holder, be turned over to an agreed collector. The impossibility of using the oil normally makes it waste and nothing else. Similar examples are to be found in national legislation. Several laws regard automobile wrecks, animal corpses and expired pharmaceutical products as waste. The qualification as waste in each of these three cases depends respectively on the abandoned state of the car, the state of decomposition of the animal, and the out datedness of the medicine. These examples clearly show that there is no intentional element in the working of the first part of the definition.

It is worthy of note that the recent Paul van de Walle judgment attests the importance of the obligation to discard while assessing whether a soil contaminated as the result of an accidental spillage of hydrocarbons has to be classified waste.[32]

In particular, the court took a more radical view to that of its Advocate- General. With regard to the obligation to discard, the Advocate-General stressed that "the property of being waste derives rather from the interplay between waste law and the specialised law regulating the

29 Case 2/90 – Commission v Belgium [1992] I-1.

30 De Villeneuve, "La notion de 'déchets' et de 'déchets dangereux'; les définitions proposées par la Commission des C.E.", Amén-Env. 1990, special edition "Les déchets", 15.

31 Article 1.a of Directive 75/439/EEC, on waste oils, as amended by Directive 87/101/EEC.

32 Case C-1/03 – Paul Van de Walle. That case has already spawned several critical analyses in national environmental law and EU journals alike. E.g. McIntyre, "The All-Consuming Definition of Waste and the End of the Contaminated Land Debate ?", Journal of Environmental Law 2005, 17: 1, 109-127 ; De Bruycker/Morrens, "Is verontreinigde gronde en afvalstof ?", Tijdschrift voor Milieurecht 2004, Vol. 6, 666-668 ; Sambon, "Les terres contaminées sont des déchets au sens de la directive 75.442", Aménagement-Environnement 2005, 1, 53-57 ; Idot, "Commentaire", Europe, November 2004, 25-26; Wrede, "Kontaminierter Boden als Abfall", Natur und Recht 2005, 1, 28-31; de Sadeleer, note CMLRev 2005, to be published.

relevant risks."[33] Typical in this respect is the example of nature conservation.[34] An obligation to remove contaminated soil may also arise from the law on water or special soil conservation regulations. Furthermore, such an obligation can also be founded in civil law.

Indeed the Court went one step further stating that: "The classification as waste in the case of land contaminated by hydrocarbons does indeed therefore depend on the obligation on the person who causes the accidental spill of those substances to discard them."[35] The Court reached that conclusion on the grounds that, as a matter of fact, the hydrocarbons could not be separated from the soil contaminated as the result of the accidental spillage. It follows that the contaminated soils which cannot be distinguished from the discarded fuels must be discarded in order to comply "with the aims of protecting the natural environment and prohibiting the abandonment of waste pursued by the Directive".[36] In other words, contaminated soil is considered to be waste by the mere fact of its accidental contamination by hydrocarbons.

In finding this, the court suggests that the existence of waste can be inferred from the fact that there is an obligation to discard the spilled substances from the contaminated soils.[37] In other words, the heart of the matter is whether there is an obligation on the person who causes the accidental spillage of those substances to discard them. Of course, the answer is clearly yes. According to Article 4 of the Directive, waste can neither be abandoned nor dumped. In other words, it is the obligation to manage the waste with a view to avoiding their abandonment which is the crucial criterion.

c. The holder has the intention to discard the substance

The express inclusion of the criterion of intention in the Community definition avoids several problems. In the absence of this criterion, it could be alleged that particular objects or substances could not be classified as waste, even where they displayed all the required characteristics, because they were neither under the control of the relevant person, nor was that person obliged to discard them. Thus, for example, unscrupulous economic operators could accumulate objects on their land over the years in conditions which were unjustifiable from the point of view of environmental protection, all the time maintaining that they were not waste because the objects had not been discarded and the operator was under no obligation to discard. An express reference to intention to discard was therefore included in the Community legislation precisely in order to thwart such fraudulent schemes.

The intention to abandon substances is accordingly imputed from the inability to point to a legally admissible use of the production residues (for example, due to deposit of residues for an indefinite period).[38] The interesting point is that the Community regime permits the inference

33 Case C-1/03 – Paul Van de Walle, para. 38.

34 Thus, when Article 6(2) of the Habitats Directive requires the Member States to take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats, it may be necessary to remove contaminated soil that threatens the quality of the water in a protected wetland area.

35 Case C-1/03 – Paul Van de Walle, para. 52.

36 Ibid., para. 52.

37 Indeed, the Court stresses that the holder is required to discard the polluting substances and not the contaminated soils (para. 52). The French version of the judgment leads to the same conclusion.

38 Opinion of Advocate-General Jacobs in C-9/00 – Palin Granit Oy, para.34.

from the holder's objective behaviour of the intention to evade the controlled management of the waste. In other words, the holder of a substance "has the intention to discard" when it is clear from the particular circumstances that he or she does not intend to use it as a product or a raw material. The burden of the proof that the holder has the intention to discard the waste lies, naturally, with the state authorities.

By way of illustration, the Antwerp Court of Appeal thus held against the manager of a company which had stockpiled slag for five years, since "his intention, his goal and his actions were aimed at disposing of the slag without using either a legitimate method or using it as secondary raw material."[39]

IV. The role of the ECJ as regards the criteria determining the scope of the waste definition

Against this background the European Court of Justice has been for a number of years trying to elaborate this definition according to clear and concrete criteria. A familiarity with this jurisprudence is of great benefit for national lawyers, because any clarification made by the ECJ in a case brought against a Member State is of a priori theoretical interest for all other Member States of the Community.

1. The interpretation of the definition is underpinned by different environmental principles

The term waste must be interpreted in the light of the objectives of the Directive,[40] which refers to Article 174(2) of the EC Treaty guaranteeing "a high level of protection" of the environment, corresponding with the obligation set out in Article 4 of the Directive.[41] In addition, the policy of waste management is founded on the principles of precaution and preventive action.[42]

2. The Member States can not interpret the definition restrictively

It follows that Member States cannot interpret the notion of waste in a restrictive manner. They cannot therefore subtract any categories of recyclable waste from the applicability of their regulations on waste. In his opinion on the validity of the purported exclusion of certain recovered substances from the ambit of the German law of 27th August 1986 on waste, Advocate-General F. G. Jacobs underlined that "It is clear therefore that the system of supervision and management established by the Directive is intended to cover all objects and substances discarded by their owner, even if they have a commercial value and are collected commer-

39 Antwerp, 6th December 1989, Amén-Env. 1990/4, 205.

40 Joined Cases C-206/88 & C-207/88, Vessoso & Zanetti, (1990) ECR I-1461, para. 12; Joined Cases C-418/97 & C-419/97 ARCO Chemie (2000) ECR I-4475, para. 37.

41 Joined Cases C-418/97 & C-419/97 ARCO Chemie, para.40; Palin Granit Oy, para. 23.

42 De Sadeleer, Environmental Principles, Oxford 2002.

cially for re-cycling or re-use. It may be true that (...) it is sometimes difficult to distinguish between the discarding of recyclable or re-usable waste and the disposal of used goods in the ordinary course of business, since in both cases the goods are no longer required by the owner, but nonetheless have a commercial value. However, the difficulty of distinguishing between marginal cases cannot justify the general exclusion of non-hazardous materials collected for re-use, including materials collected in bulk, from the definition of waste."[43] The Court of Justice followed this reasoning and condemned Germany for failing to meet its obligations under European Community law by having excluded certain categories of recyclable waste from the application of its waste legislation.[44]

By the same token, in Belgium, the legislative committee of the Conseil d'Etat held that a bye-law in the Walloon region which purported to give to the regional Government power to "determine the general conditions according to which it may be concluded that a substance does not qualify as waste" violated the principle of uniform interpretation of the concept of waste throughout the European Community.[45] This interpretation was lateron endorsed by the European Court of Justice.[46]

Similarly, a strict interpretation of the definition precludes any legal assumptions that would have the effect of limiting the application of the Directive by not covering any materials, substances or products falling under the definition of "waste" within the meaning of the Directive. Such restrictions would undermine the effectiveness both of Article 174 of the EC Treaty and of the Directive.[47]

3. Relevant criteria for determining the existence of waste

The European Court of Justice has for a number of years been trying to construe the term "discard" according to clear and concrete criteria. Consequently, various criteria have been proposed for determining when and how an object or substance is discarded and consequently falls within the scope of Directive 75/442/EEC. In particular, the ECJ has emphasised that the application of the concept of discarding implies that all the "circumstances" indicating whether the holder has the intention or obligation to discard be taken into consideration;[48] in other words, in the light of a number of criteria. In particular, the Court has stressed that, in the assessment as to whether a substance or an object falls under the definition of waste, it is necessary to take into consideration whether:

43 Opinion of Advocate-General Jacobs, Commission v. Germany, 16th March 1995. I ECR 1097, points 33 & 34, at p. 1109.

44 Case C-422/92 – Commission v Germany [1995] ECR I-1097.

45 Conseil d'Etat opinion L 24.240/9 relating to preparations for a law on waste (Doc. Cons. rég wall., No. 334 (1994-1995), No. 3, at p. 53).

46 Case C-208/04 – Inter-Environnement Wallonie ASBL.

47 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, para. 42.

48 Joined Cases C-418/97 and C-419/97 – Arco Chemie, paras. 73, 88 and 97; C-9/00 – Palin Granit Oy [2002] ECR I-3533, para. 24. A complete discussion of all the relevant criteria is impossible in the space available here. For a critical analysis, e.g. Krämer, supra note 4, pp. 3-14; de Sadeleer, supra note 4, pp. 1-41.

- the object becomes subject to a disposal or recovery operation under Appendix II of the Directive, or an analogous operation, even where it is destined for re-use;[49]
- the holder of the object uses a type of treatment which is commonly used to get rid of waste;[50]
- · the object retains any economic benefit,[51] in particular where the holder has to pay a specialist company which takes care of collection, transportation and the final treatment of the waste;
- the method of production indicates that the object is unwanted;[52]
- the used substance is a production residue;[53]
- the object is a residue whose composition is not suitable for the use made of it, or where special precautions for the environment must be taken when it is used;[54]
- any use other than disposal can be envisaged for the substance (burial, incineration without energy reclamation);[55]
- the object is included in Appendix I of the Waste Framework Directive or in the European Waste Catalogue (above section 4.2);
- where the company holding the object has accepted that it is waste.[56]

Needless to say, these criteria are merely indicative. Taken in isolation, it is not possible to conclude from them whether a given substance falls under the definition of waste or not.[57] No a priori preference can be given to any one criterion over another, but rather the criteria must be applied on a case-by-case basis in the light of the particular circumstances.

V. Waste and by-product: How to draw the dividing line?

One may nevertheless ask oneself whether the subjective conception of waste is appropriate to the realities of economic life. A large number of economic actors believe, in fact, that the overbroad interpretation given to the concept of waste is harmful to their activities.[58] According

49 Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95 – Tombesi [1997] ECR I-3561; Inter-Environnement Wallonie [1997] ECR I-7411, paras. 25 and 26.

50 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, paras. 69 and 73. However, the fact that the burning of a residue (petroleum coke) is a standard waste recovery method is not relevant since the purpose of a refinery producing this residue is precisely to produce different types of fuel (C-1/03 – Saetti Order, para. 46).

51 Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95 – Tombesi [1997] ECR I-3561, paras. 47, 48 and 52 ; Case C- 9/00 – Palin Granit Oy [2002] ECR I-3533, para. 38.

52 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, paras. 83-87; Case C- 9/00 – Palin Granit Oy, para. 33; C-457/02 – Niselli Order, para. 43.

53 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, para. 84; Case C- 9/00 – Palin Granit Oy [2002] ECR I-3533, paras. 32-37 ; Niselli, para. 42 ; Saetti, para. 34.

54 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, para. 87; Case C- 9/00 – Palin Granit Oy, para. 44.

55 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, para. 86.

56 Joined Cases C-418/97 and C-419/97 – ARCO Chemie, para. 73. Considered in isolation, this criterion is not relevant (Saetti Order, para. 46).

57 C-235/02 – Saetti Order.

58 See Smith II, "The challenges of environmentally sound and efficient regulation of waste – The need for enhanced international understanding", J.E.L. 1993, Vol. 5, No. 1, 91.

to these latter, the subjective conception of the act of disposal does not take account of all the particular commercial facts. Waste is not necessarily abandoned as much of it can usefully replace raw materials.[59] Furthermore, by qualifying re-used materials as waste, one is discrediting the activities of businesses which make an effort to recycle. It would also be preferable to limit the field of application of the waste legislation to only those substances destined to be eliminated. Thus, substances capable of being recovered would be regarded as by-products and would fall outside the scope of ambit of the waste legislation.

As to the issue of by-products, the definition of waste gave rise in the course of the 1990's to two schools of thoughts. In the first place, an objective conception tends to favour recycling or re-use of waste by giving the value of waste a special status.[60] This concerns the more restrictive interpretation of the concept of waste. Secondly, there is a subjective conception, which tends to enhance the responsibility of the producer for substances or residues which he is unable to re-use. This latter conception is rather broader than the former, as it extends the concept of waste to substances of which one disposes, but which are capable of being recycled.

1. The objective view of the act of discarding

This first conception was formulated in Belgium by Morrens and De Bruycker, who point out the distinction between what they call the "waste-substance" and the "product-substance".[61] Their argument is as follows: A substance or an object – such as a residue from production – ought not to be regarded as waste in as much as its holder manages to find a permissible use for the substance or object as either a product or as a secondary raw material, provided this use is self-contained, direct, effective, and distinct from other means of disposing of waste.

This analysis may be objectively qualified. The approach forms part of a theory based on the waste/product dichotomy. The central criterion is whether there exists an effective, direct, and legitimate means of re-using the waste in a production process. By the simple fact of being re-used, given that the other circumstances above are complied with, the substance is a product. The final re-use to which a substance is put therefore has, ab initio, the effect of qualifying the substance of which the producer is disposing as a product, even if it is of no use to the producer himself. On the other hand, the lack of an immediate re-use for the substance, or the need for it to undergo intermediate treatments, qualify it as waste. This may be illustrated with the following example. Both plants which incinerate domestic waste and coal-fired power stations produce large quantities of ash. Although this ash is of no value in the power generating industry, it does have a direct use in the manufacture of certain types of concrete. No prior treatment of the ash is necessary. In this case, the ash ought not to be considered as

59 Waste recovery diminishes the risk which waste poses to the environment an to human health. In fact, when reinserted into a production system, waste no longer risks being abandoned. Recovery ought also to be encouraged, since this meets one of the priorities of waste policy, that of reusing, reclaiming and regenerating waste.

60 In this regard we do not follow the German doctrine which states that the objective conception of waste ("objektiver Abfallbegriff") merely means that the holder has the "obligation to dispose" of the substance or object, and that the subjective conception ("subjektiver Abfallbegriff") merely means that the holder "disposes or intends to dispose" of the substance. Compare Kloepfer, Umweltrecht 1989, p. 684. Instead, we believe that the concept of "disposal" may be simultaneously understood in both the subjective and objective senses.

61 Morrens/De Bruycker, "Qu'est-ce qu'un déchet dans l'Union européenne? Amén-Env. 1993, 3, 154.

waste. However, were it necessary to wash the ash to remove impurities before it could be re-used, it would indeed be waste.

This argument finds support in the original version of Directive 75/442/EEC. There, waste is defined as a substance which the holder discards. His parting with the waste comes within the very general concept of "disposal", a notion which includes [" — the collection, sorting, transport, treatment of waste, including the storing thereof, above or below ground; ....]. Further, the "elimination" operations, by which the holder disposes of waste, break down into final-elimination operations (i.e., those which are intended to do away with the waste altogether), and operations allowing the waste to be re-used (i.e., operations which make possible a fruitful future use for the waste).[62] Under this two-headed approach one may distinguish three categories of substances. The first two consist of "waste-substances", and the third of "product-substances". In the first instance, when the substance is the object of final elimination, it constitutes waste. In the second, when the substance requires further treatment prior to its re-use, it remains waste up to and until such process has taken place. In the third instance, a substance of which a producer or a holder disposes, but which is neither totally eliminated (and which, therefore, does not belong to the first category of wastes) nor pre-treated (thereby also failing to belong to the second category of wastes), does not constitute waste at all. This substance is in fact directly re-used by another business enterprise. This final category can only be conceived of in opposition to the two previous categories. This is precisely where the objective interpretation comes in. The objective character of this approach manifests itself in the fact that the direct re-use of the substance may equally well be on the part of the producer or any third party.[63]

2. The subjective approach to the act of discarding waste

If the terms of Directive 75/442/EEC allowed for an interpretation of the concept of waste excluding substances which are directly re-used – regardless of the identity of this re-user –, the definition introduced by the new Directive 91/156/EEC no longer seems to allow for such a reading.

In the text of the new Directive, waste, being a substance which the holder "discards", may be either "discarded" or "managed". As simply discarding waste is forbidden, the only legitimate means of "discarding" waste is through waste "management". This "management" covers the collection, transport, recovery and the disposal of waste. In any event, neither the collection nor the transportation may lead to any operations other than recovery or disposal. In the last round up, as is pointed out by Article 4 of the Directive, all waste must be the object either of "disposal" or of "recovery".

The notion of "elimination" in the Directive is henceforth understood in a stricter sense than under the previous text of Directive 75/442/EEC, given that it only admits of the total elimination of waste, whereas the initial version also countenanced recovery operations.

62 de Villeneuve, "La notion de 'déchets' et de 'déchets dangereux'; les définitions proposées par la Commission des C.E.", Amén-Env. 1990, special edition "Les déchets", p. 15.

63 A company which has no outlet for the residues which it produces but which arranges to transfer them to another company which directly integrates them into the production process is not, from this perspective, considered to be producing waste.

However, operations such as "reclamation", "recycling", "regeneration", and "re-use", together with a number of other operations intended to obtain secondary raw materials, are brought together under the concept of waste "recovery".[64] Thus "recovered" wastes are not only those substances which have undergone a pre-treatment to allow their use as secondary raw materials.[65] Substances of which the holder disposes, but which are effectively reclaimed or recovered by a third party, without any intermediate treatment, are also included. Therefore, a waste producer is a person who disposes of an object or a substance with a view to either eliminating or recovering it. This concept of waste must be regarded as subjective in as much as the criterion looks at the producer's lack of an effective use for the waste. It concerns itself only with whether the holder "disposes of the substance or object". This test of lack of a use for the waste is confirmed by the obligatory recourse to the recovery or elimination operations set out in Annex II to the Directive.

An extract from the travaux préparatoires of the Belgian law of 22 July 1974 on toxic waste perfectly illustrates the subjective conception of waste. According to the Belgian government of that time, "in order to fully understand the definition (of toxic waste) it must be illustrated with examples, since those products, by-products, wastes or residues which are one enterprise's toxic waste, may be the raw materials of another enterprise. Take, for instance, a business which uses cyanide to treat certain metals. By buying cyanide-salts, it is stocking up on raw materials. By storing these salts with a view to using them some months later, it is holding products which cannot be regarded as waste. If however, following a change in its operating techniques, the business no longer has a use for the cyanide, this latter takes on the quality of toxic waste. Simply belonging to the category of toxic wastes does not mean that the cyanide has become unusable. It has simply become 'useless' to that particular business. In this situation, the means of 'eliminating the toxic waste' would be to sell it to another business which has a use for it. Thus it is necessary to distinguish throughout the definition of toxic waste between what is possible for one business, and what is possible for another. A substance which to one is useless waste does not have the same quality for the other."[66]

Other examples also serve to illustrate the scope of the subjective, rather than objective, conception of waste. They are to do with scrap paper, sludge from sewage purification operations and residues from industrial processes. If one applies the objective notion of waste, one sees that the reclaiming of scrap paper within the paper industry cannot be considered a waste treatment process where the scrap need not be sorted or selected. Applying the subjective notion, there is indeed waste, because the holder disposing of the scrap no longer has any interest therein, irrespective of whether or not the scrap paper is sorted before being re-used.

Sludge from sewage purification processes is often contaminated with heavy metals. By this fact, such sludge falls within the ambit of Category Q 12 of Annex I to the Directive (contaminated substances). Operators of sewage treatment installations often sell their sludge on to farmers who use it as fertiliser by spreading it on their land. Applying the objective conception, the sludge does not constitute waste if it is directly re-used by the farmers.[67] In any case, even if the sludge does not require further treatment before it can be used, any farmer failing to

64 Compare Article 1.b, part one, and the very broad categories in Annex II B to the Directive.

65 This is waste which has undergone an operation "necessary for its reclamation or recycling".

66 Doc. parl., Sénat, No. 134, 9 January 1974.

67 See the Opinion of Advocate-General Stix-Hackl in Case C-416/02, paras. 24-28 and Case C-121/03 – Commission v Spain, para. 32.

respect the conditions imposed on slurry spreading by Directive 86/278/EEC (which relates to the protection of the soil when sewage sludge is used in agriculture), would have to be regarded as holding waste, since he is failing to use sewage sludge in a legitimate manner, as prescribed. On the other hand, if the sludge must be treated before being used as fertiliser, the operator of the sewage treatment plant is regarded as a producer of waste. After such treatment, the sludge is regarded as a secondary raw material. It cannot be denied that this solution is capable of leading to considerable practical difficulties.[68] Looking at the subjective conception, one sees that the operator of the sewage treatment plant will dispose of the sludge by passing it on to the farmer as soon as he no longer has any use for it.

It results from this that the explicit reference in Article 4 of the Directive to the concepts of elimination and recovery no longer allow substances which are directly re-used by a third party to escape from the regime dealing with waste, even though they have not been the object of any pre-treatment. In other words, the "direct recovery" of substances of which one is disposing constitutes a waste treatment operation. Production residues which can be re-used in another production process thanks to a recycling, reclamation or regeneration process, still constitute waste, regardless of whether they have been pre-treated.

For example, damaged metal components from a production line are of no further use for that process, so they must either be "reclaimed" or "recycled" in order to be of use for other ends. In this case, they are indeed waste because one has disposed of them when they became useless.

Nevertheless, the subjective conception of the act of disposal does not bring back into question the fact that, to the extent that the re-user directly integrates the substance into his own production process, one is no longer dealing with waste.[69] In this case, the producer is not disposing of it, but is immediately using it. Furthermore, there is neither reclamation nor recycling of the material, but simply an immediate re-use of the substance in the production process. In this instance, the qualification as "product" or as "raw material" applies throughout the time in which the substance is in technical or commercial circulation, beginning at the time of its production.

This is the case where a production process involves oil. If the oil is immediately set aside for re-use in another production process, it does not constitute waste, since the producer is not disposing thereof. The EC scientific and technical committee on waste legislation seems to subscribe to this interpretation. This committee considered that "a residue the production of which was unintentional, but where the production system has been effectively adapted with a view to its recuperation in situ, does not constitute waste (...)".[70]

Annexes II.A and II.B of the Directive, which set out the different means of eliminating or recovering waste, reinforce, in the case of a certain number of operations for disposing of material, the pertinence of the subjective over the objective notion.

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68 It is undoubtedly for this reason that the third consideration of Directive 86/278/EEC underlines that sewage sludge used in the agricultural sector is not covered by the waste Directive.

69 This is not the case where a company treats solvents which it has leased to clients. Even though the solvents remain the property of the company, the client is obliged to dispose of them by returning them when they contain too high a percentage of impurities. The solvents are of no further use to those actually using them, even though they still have a certain utility for the company renting them out. see R. v. Rotherham M.B.C., ex parte Rankin, 27 October 1989, Queen's Bench Division, J.E.L., 1990/2, 250.

70 EC Scientific and Technical Committee on waste legislation, Doc. TAG/EWS/(#.1, 18-19 February 1993, cited by Hannequart, Le droit européen des déchets, Brussels, Institut bruxellois pour la gestion de l'environnement, 1993, p. 130). One should nonetheless point out that the Committee has no normative power to define the concept of waste.

Thus, the fact that one disposes of scrap paper by burning confirms that one is engaged in a waste disposal operation (cf. part D 10 of Annex II.A) or that one is dealing with a waste recovery operation (cf. part R 9 of Annex II.B).

However, under a reading of Annex II.B, it is no longer possible to argue that the operator of a sewage treatment works who disposes of sludge by passing it on to farmers is not disposing of waste. The agricultural spreading of slurry is, in effect, considered by this Annex as an activity giving rise to the possibility of recovery (cf. part R 10 of Annex II.B). In this case, the sludge does indeed constitute waste, for both the treatment-plant operator and the farmer. The former is disposing thereof. The latter recovers the waste as fertiliser by means of a process envisaged by Annex II.B to the Directive.[71]

Nevertheless, recourse to the Annexes is not a panacea. From the moment a substance becomes subject to a disposal or recovery operation under Appendix II of the Directive, or an analogous operation, there exists a presumption that the relevant object constitute waste, even where it is destined for re-use. However, even though the method of treatment or the means of use of a substance may be indicative of an intention in or obligation on the holder to discard, this factor is not decisive. According to the Court, the mere fact that a product or substance is subject to recovery using an Annex II method does not entail the conclusion that the thing is a waste.[72]

3. The ECJ's case-law

In Palin Granit Oy and AvestaPolarit Chrome Oy, and more recently in Niselli, the Court of Justice appears to have accepted the objective approach described above, albeit in a somewhat confused manner. It introduced a distinction between by-products which undertakings do not wish to discard within the meaning of Article 1(a)(i) of the Framework Directive, and residues covered by the provisions of the Directive. According to the Court, "there is no reason to hold that the provisions of Directive 75/442 which are intended to regulate the disposal or recovery of waste apply to goods, materials or raw materials which have an economic value as products regardless of any form of processing and which, as such, are subject to the legislation applicable to those products".[73]

In order to fall outside the definition of waste, several conditions must be satisfied. Since the definition of waste is framed in broad terms,[74] these conditions must be interpreted strictly. According to the Court, "the reasoning applicable to by-products should be confined to situations in which the reuse of the goods, materials or raw materials is not a mere possibility but a certainty, without any further processing prior to reuse and as an integral part of the production process".[75] The Court then went on to indicate that the holder must additionally "lawfully"

71 In the same scheme of things, one sees that the Tribunal of First Instance of Namur, in Belgium, held that a mixture of poultry manure and wood chips which was imported into the French-speaking region for use as agricultural fertiliser was indeed waste (Civ. Namur, 25 February 1994).

72 Palin Granit Oy, para. 30.

73 Palin Granit Oy, para. 35; AvestaPolarit Chrome Oy, para. 35.

74 Palin Granit Oy, para. 36; AvestaPolarit Chrome Oy, para. 36.

75 Palin Granit Oy, para. 36; AvestaPolarit Chrome Oy, para. 36.

use the substance.[76] The following sections will offer a systematic treatment of the conditions which operators must fulfil if they are to classify their substances as by-products.

a. First condition: integral part of the production process

Where the by-product is exploited or marketed following further processing, this must be "an integral part of the production process".[77] For example, when mining residues that have not been removed from the colliery are used in order to fill galleries in that mine, they can be considered as by-products as long as the operator of the mine holding them has neither the intention nor the obligation to discard them. In other words, the operator needs the residue as part of its principal activity.[78] Accordingly, consumption residues cannot be regarded as by-products of a manufacturing or extraction process which are capable of being re-used as an integral part of the production process.[79]

In addition, it should be noted that use as a by-product cannot be a front for traditional waste disposal methods. The particular treatment operation adopted may not, under the guise of the use of the substance as a product or raw material, be used to mask a waste disposal operation outside the regulatory framework required by the law.

The requirement of integration into the production process can be brought into sharper relief with the aid of several court rulings. Both incineration facilities burning household waste and coal-fired power stations produce a great deal of airborne ash. Although such ash is of absolutely no use to the operators of these installations, it can be recovered directly by other industries for use in the manufacture of certain types of concrete. Various courts have ruled that airborne ash does not constitute waste on the grounds that no treatment operation is necessary.[80] This solution is however questionable from the standpoint of this first requirement of the Court of Justice. In addition to the fact that they may not be subject to any pre-processing, it is also necessary that the ashes be used "as an integral part of the production process". This

76 AvestaPolarit Chrome Oy, para. 43.

77 Palin Granit Oy, paras. 34 and 36; AvestaPolarit Chrome Oy, paras. 34-37.

78 Palin Granit Oy, para. 37.

79 Niselli, para. 48.

80 In a ruling of 23 September 1994 the Antwerp Appeal Court reversed a lower court's finding against importers of slag produced in Netherlands and recovered in Belgium for the manufacture of concrete. The court held that the slag did not constitute waste on the grounds that it had immediately been recovered during the course of an industrial production process in an industry with an express authorisation to do so. The materials in question were, according to the court, secondary raw materials. This judgment has been criticised within the academic literature, in particular because the authorisation to exploit did not expressly provide for the recovery of secondary raw materials (Antwerp, 23 September 1994, T.M.R., 1995/1, p. 24, obs. Lavrysen).

The German Federal Administrative Court (Bundesverwaltungsgericht) adopted a similar viewpoint in two decisions the 24 June 1993. Both construction debris and old tyres are no longer considered as waste when the holder can guarantee an effective and rapid re-use of these objects which does not cause any harm to the environment (BVerwG, Urteil. v. 24.6.1993 – 7 C10/92S and 7 C11/92 S, NVwZ 1993, 988 and 992). However, the negative value of these objects (7 C11/92 S) or the fact that the holder does not have the sufficient technical, financial and organisational means to re-use them without harming the environment is confirmation of their status as waste, since any re-use is very unlikely.

condition would not appear to be fulfilled when the ashes are the residues of the burning of refuse in a household waste incinerator which are then re-used for producing cement.[81]

On the other hand, the following examples would appear to satisfy the requirements laid down by the Court of Justice. The incineration of petroleum coke in an integrated combined heat and power station, supplying the steam and electrical needs of the refinery producing the residue cannot be classified as waste because the treatment is the result of a technical choice.[82] Similarly, any oil which could be immediately filtered out with a view to being re-used in another role would not constitute waste, even where it could not be used in any production process.[83]

b. Second condition: direct use without previous transformation.

If the substance can be used directly in another production process, it acquires the quality of by-product and thus falls outwith the ambit of the waste regulations. The Court requires that the exploitation or marketing of the by-product within the context of a subsequent process not be preceded by any prior transformation.[84]

In any case, this second condition does not require the producer itself to re-use the substance of object. It is sufficient that such a re-use be effectively carried out "as an integral part of the production process", irrespective of the particular economic operator that actually re-uses it.

In a good number of cases, this requirement will not be satisfied by economic operators when it is generally indispensable to sort the production residues (such as for scrap paper and used glass) and treat them (using crushing and regeneration techniques) before they can be re-used. The fact that these different operations are carried out means that the treated residues in question cannot be classified as by-products. It would be necessary to await the completion of the modification process and the consequential transformation of the product into a secondary raw material (see above section II.2), which could then be used as a raw material, in order for the waste regime no longer to apply to the substances.

c. Third condition: complete use

Where the object or substance cannot be completely re-used in the form of a by-product, the surplus or residue must maintain its status as waste and accordingly be managed in accordance with the rules applicable to waste. Thus in the Palin Granit Oy case the Court took note

81 According to the Oliehandel Kuwait order handed down by the European Court of Justice (Joined Cases C-307/00 to C-311/00), economic operators did not challenge the classification by the Dutch Environment Ministry of operations that utilise incineration residues in the manufacture of mortar for concrete as waste management operations (C-308/00 and C-311/00). This dispute turns on the issue of whether the operation involved is one of recovery or disposal.

82 C-1/03 – Saetti Order.

83 The EC Committee on the adaptation of waste law to scientific and technical progress appears to subscribe to this interpretation. The Committee has in fact found that "a production residue, the generation of which is not intentional, but which production procedures allow to be recovered on-site is not a waste". EC Committee on the adaptation of waste law to scientific and technical progress, Doc. TAG/EWS/93.1 of 18-19 February 1993, quoted by Hannequart, Le Droit Européen des Déchets (Brussels: I.B.G.E., 1993) p. 130. It should however be noted that this Committee is not competent to produce binding definitions of the concept of waste.

84 AvestaPolarit Chrome Oy, paras. 34-37.

of the uncertainty surrounding the possibility of "re-using in its entirety" the leftover stone, concluding that the objects were waste.[85] In AvestaPolarit Chrome Oy, the Court held that it was necessary to exclude from the concept of by-product all residues that could not be directly re-used.[86]

d. Fourth condition: admissible use of the substance or object as a product or raw material

It is additionally necessary that such use be legally admissible.[87] Thus the holder of the object or substance must have the right either to use it or to allow it to be used as a product. The following examples are illustrative of the way in which this condition should be applied.

The refinement of oil involves the production of different residues with an important calorific value. Where it is not possible to burn these residues in traditional facilities (steam boilers, industrial furnaces, kilns), they must be considered as waste.

On the other hand, if safety or environmental protection requirements prevented the use of mining residues (on the grounds that residues contaminated by dangerous substances present a threat for the aquifers), the operator of the mine would have to fill its galleries with other materials. The holder would then have to be regarded as being under the obligation to discard the debris that could not be used to fill the de-activated galleries.[88] In the same way, an expired material whose use is forbidden can never be considered as a by-product. Thus, when a substance is classified as waste under national rules in accordance with category Q 13 of the Directive 75/442/EEC, this classification is decisive, even if it is possible for the holder to use or re-use the substance.

The conditions to which the exploitation is subject, contained in the environmental permit granted to the facility where the residues are directly re-used ensure that the respect for these requirements can be monitored. Thus for example, if the manufacturer has no right to use a particular by-product as a substitute for a raw material, this fourth condition will not be satisfied.

Finally, it should be noted that the admissible use criterion allows public authorities to enforce management regulations where immediate recovery of the waste would breach the environmental and human health protection obligations derived from Article 4 of Framework Directive. Under these general police powers, the authorities may intervene even when the relevant recovery operation is not expressly prohibited.

85 Palin Granit Oy, para. 40.

86 AvestaPolarit Chrome Oy, paras. 36-42.

87 AvestaPolarit Chrome Oy, para. 43.

88 AvestaPolarit Chrome Oy, paras. 36-38.

e. Fifth condition: actual use

The use and marketing of the substance or object as by-product must be certain.[89] In other words the substance must be actually re-used. The absence of any guarantee of the use of a residue means that it is subject to EC rules on waste. A declaration of intent is not sufficient. In order to prevent fraud, public authorities should oblige the holder to furnish appropriate guarantees relating to the direct re-use of the by-product, in particular by requiring the posting of a monetary bond.[90]

As it happens, the fact that an undertaking intends to exploit or market a by-product in conditions which are economically advantageous for it is an additional indication that this fifth condition has been met. It is in fact due to such an economic gain that the substance no longer appears as a burden which the holder attempts to discard.[91]

Having said this however, any guarantee of actual re-use could be compromised by the length of time for which the residues destined to be re-used as by-products are stored. The provisional deposit of a residue in anticipation of some indefinite future use is in fact likely to give rise to the very same type of ecological risk as a definitive deposit. An excessive time delay between the production of mining residues and their re-use is invariably indicative of an inability on the part of the holder to guarantee that they will be re-used in accordance with the administrative rules in force. It would appear reasonable to classify such residues as waste due to the inordinate time lapse and the hazards thereby occasioned.[92] Moreover, the indefinite storage of residues is in the final analysis tantamount to a disposal or recovery operation within the meaning of category D 15 of Appendix II.A or category R 13 of the Appendix I.B.

VI. Conclusions

Probably no other definition in EC environmental law has produced so much controversy as the one on waste laid down in Article 1 of Directive 75/442/EEC. From the outset, the definition of waste gave rise to conflicting opinions as to whether reused materials should fall within or outwith the ambit of waste legislations. The broad interpretation endorsed by the ECJ has been thrown into question by some economic operators. In particular, it has been suggested that wastes, which are used or are capable of being used for economic operations should not be defined as waste, but rather as secondary raw materials or by-products. So far, the critics'

89 AvestaPolarit Chrome Oy, paras. 34-37; Niselli, para. 45.

90 AvestaPolarit Chrome Oy, para. 43.

91 Palin Granit Oy, para. 37; AvestaPolarit Chrome Oy, paras. 34 and 37; Niselli, para. 46.

92 In his Opinion delivered in the Palin Granit Oy Case, Advocate-General Jacobs argued that residues which remain indefinitely on an industrial site have been discarded and are consequently waste. The deposit and storage of significant quantities of debris manifestly entails a pollution risk, including noise pollution, and also risks creating a rural eyesore. This is precisely the eventuality which Directive 75/442/CEE attempts to avoid (paragraph 34; see also the Court's judgment in AvestaPolarit Chrome Oy, para. 39). In a case which raised broadly similar issues, a judgment of the French Council of State on the classification of depleted uranium monoxide raises a few conceptual problems. The Council of State found that the fact that the use of the depleted uranium monoxide to produce enriched uranium monoxide "could be deferred in particular on the basis of economic factors was not susceptible to allow the conclusion that the depleted uranium monoxide involved was in fact waste" (Council of State, 23 May 2001, Association pour le défense de l'environnement du pays arédien et du Limousin, No. 201938).

bark has been worse than their bite and, despite political pressure, the EC lawmaker has not inclined to change the definition.

It was the aim of this article to explore the ways in which the concepts of waste, secondary materials, and by-products could be differentiated. In particular, we shed the spotlight on a number of border-line cases. The rather cautious approach endorsed by the ECJ should be welcomed. A careful case-by-case approach, in light of various circumstances, should be followed in the light of the criteria laid down by the ECJ.

Rolling back waste legislation on the ground that the definition is unworkable is dishonest from an intellectual point of view. On the contrary, our analysis demonstrates that it is possible to construe the waste's definition cunningly with the view to providing for a specific regime applying to by-products. Last but not least, the flexible definition construed by the Court allows for quick action in this evolving field.