

## IV.4 Waste

By *Melissa Shinn*<sup>68,69</sup>

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<sup>68</sup> Senior Policy Officer at the European Environmental Bureau

<sup>69</sup> With the collaboration of Roberto Ferrigno, Christian Hey, Ludwig Kramer

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## IV.4.1 Introduction - Waste facts

According to Eurostat data<sup>70</sup> each year in the European Union 1.3 billion tonnes of waste are produced (including manufacturing and construction and demolition waste but excluding mining and agricultural and forestry wastes which make almost a further 1 billion tonnes). This amounts to about 3.5 tonnes of solid waste for every man, woman and child (*European Environment Agency 2002*).

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According to information published by the European Environment Agency (EEA), five major waste streams make up the bulk of total waste generation in the EU: manufacturing waste (26%), mining and quarrying waste (29%), construction and demolition waste (C&DW) (22%) and municipal solid waste (MSW) (14%), and agricultural and forestry waste the estimation of which is particularly difficult. 2% of this waste is hazardous waste, i.e. about 27 million tonnes<sup>71</sup>.

Waste generation continues to grow practically everywhere in the EU. The OECD expects that by 2020 waste in the European Union might have increased by 45 percent with regard to 1995. The OECD emphasises specific trends associated with this growing **waste burden**<sup>72</sup>. In particular:

- ▶ Chemical products, and the wastes associated with their production and consumption, are substantially **increasing in both complexity and amount**, suggesting uncertain but seemingly growing risks to environmental and human health systems.
- ▶ **“Hidden flows”** materials that support economic activities but do not actually enter the market place, such as mining wastes and eroded soil, can represent as much as 75% of materials used by OECD countries.
- ▶ There is a **linked increase** of Gross Domestic Product (GDP) and municipal waste generation in the OECD area 40% growth in both factors since 1980.
- ▶ OECD wide recycling has been increasing, but without countervailing efforts toward waste prevention, a **near-doubling** of municipal waste within the next 20 years.

Municipal waste (MW) makes up approximately 14 % of total waste. Meeting the objective set in the fifth environmental action programme (5 EAP), to stabilise the generation of municipal waste per capita at 300kg/capita per year<sup>73</sup>, has not been realised. In the 1960s, waste production in Europe was approximately 200 kg per capita per year. Today it is close to 500 kg.

<sup>70</sup> Waste generated in Europe, data 1990-2001, Eurostat, 2003. Eurostat states - *about 2.25 billion tons of waste has been generated in Western Europe between 1998 and 2001*. These numbers cover waste generated in the 18 Western European countries (the 15 EU Member States plus Switzerland, Iceland and Norway) between 1998 and 2001. During the same time period Eurostat estimates 550 million tons of waste have been produced in the 13 Candidate Countries located in Eastern Europe. For EUROSTAT information see <http://epp.eurostat.cec.eu.int/> in the domain of ENVIRONMENT statistics under data category WASTE

<sup>71</sup> Waste generated in Europe, data 1985-1997, Eurostat, 2000, p.37. **Note:** It is still difficult to obtain precise breakdowns on waste quantities at the EU level (despite comprehensive data existing at National level). There is not yet a very complete EU database for waste, and the classification varies widely from one Member State to the other. It is hoped that the Regulation 2150/2002 on waste statistics (2002 OJ L 332 p.1.), adopted in 2002 will, as of 2006, establish a consolidated set of data on waste generation.

<sup>72</sup> ENV/EPOC/PPC(2000)5/FINAL - OECD Reference Manual on Strategic Waste Prevention, August 2000

<sup>73</sup> [1993] OJ C 138/59.

Most of the domestic waste produced is still either burnt in incinerators, or dumped into landfill sites<sup>74</sup>. However, both landfilling and incineration create environmental damage. In particular, land use, air pollution by the release of hazardous substances, and pollution of water and soils remain high. Waste landfilling is a contaminating activity of major relevance: on average, 65% of municipal waste generated in the EU (190 million tonnes in 1995) is still landfilled. In waste landfills leachates can be emitted to the surrounding soils and subsequently enter groundwater and/or surface water. Of particular concern are those that operate, or have operated in the past, without complying with the minimum set of technical requirements set by the Landfill Directive. Landfills are also the biggest source of Green House Gas emission from Waste management activities – mainly due to their emission of methane, a GHG with more than 20 times the GWP of carbon dioxide.

Whilst the bigger volume waste streams are clearly not municipal waste, they pose the major challenge in terms of finding solutions for prevention, collection and recycling and treatment. This is mainly due to the fact that they arise from disperse sources such as households and similar installations whose municipal wastes are unpredictable in their composition and disperse in their many generation points. The majority of industrial waste streams are more uniform and predictable in their nature and so easier to handle (although not necessarily less hazardous). The same can be said for agricultural, mining and forestry waste streams. In most EU Member States industrial wastes are handled by dedicated waste handlers, often adapted to the nature of the specific waste stream in question and paid for directly by the industrial waste generator. Agricultural, mining and forestry wastes all had traditional sources for (mostly) reuse of the wastes – either straight back onto the land or in other sectors such as the energy sector. Mining wastes, mainly a problem of storage have however been a growing environmental problem – but the solution is mostly to be found in the proper provisions for mining waste facilities – also, in theory, funded by the producer of the waste. The organisation of the ‘communal’ funding and collection infrastructure of the different municipal waste streams, mostly from urban sources with the multiplicity of producers and waste types, has been therefore the main challenge of waste authorities.

Some municipal waste streams are of particular relevance in terms of environmental impacts. One example of such a waste stream is waste electrical and electronic equipment. In 1998, 6 million tonnes of **waste electrical and electronic equipment** were generated (4% of the municipal waste stream). The volume of WEEE is expected to increase by at least 3-5% per annum. This means that in five years 16-28% more WEEE will be generated and in 12 years the amount will have doubled. The growth of WEEE is about three times higher than the growth of the average municipal waste. Because of its hazardous content, electrical and electronic equipment causes major environmental problems during the waste management phase if not properly pre-treated. As more than 90% of WEEE is landfilled, incinerated or recovered without any pre-treatment, a large proportion of various pollutants found in the municipal waste stream comes from WEEE. (CEC 2000).

<sup>74</sup> The EU Commission, Answer to Written Question E-1242/03, (2004) OJ C 33 E, p.100: estimated in 2003 that on average, 60 percent of domestic waste in the EU 15 Member States was landfilled (Belgium 32%, Denmark 15%, Germany 46%, Greece 93%, Spain 83%, France 47%, Ireland 92%, Italy 94%, Luxemburg 37%, Netherlands 15%, Austria 43%, Portugal 88%, Finland 57%, Sweden 38%, United Kingdom 83%). For other waste, no sufficient data were available.

Even comparatively small hazardous waste streams are of particular concern. It is estimated that in 2002 at EU level 2,044 tonnes of portable NiCd **batteries** were disposed of in the municipal solid waste stream. **The main disposal route for spent batteries and accumulators is landfilling.** It is estimated that 75% of disposed spent batteries are being sent to landfill sites.. The main environmental concerns associated with the landfilling of batteries are related to the generation and eventual discharges of leachate into the environment. However batteries in waste are also incinerated. In the case of incineration, metals such as cadmium, mercury, zinc, lead, nickel, lithium and manganese are found in the bottom-ashes and fly ashes. Incineration of batteries thus contributes to emissions of heavy metals in the air and to incineration residues, which themselves then have to be landfilled in hazardous landfills. According to risk assessments the EU cadmium emissions of portable nickel-cadmium batteries due to incineration was calculated to be 323 – 1,617 kg of cadmium per year to the air and 35-176 kg of cadmium per year into water. Total cadmium emissions of portable nickel-cadmium batteries due to landfill was calculated at 131-655 kg of cadmium per year (CEC 2003).

The European Environmental Agency stated in 2004: *"Trends in waste generation, a proxy for resource use intensity, are unsustainable. Treatment and disposal options are diminishing as quantitative increase and concerns about their potential impacts grow. Decisions on the location of incinerators have become very controversial in many countries. Landfill options are often limited by space as well as by fears of soil and groundwater contamination and their impacts on human health. The current policy tools for dealing with waste are inadequate and need to be complemented by approaches that promote smarter resource use by changing production and consumption patterns and through innovation"* (EEA 2004, p.6).

## IV.4.2 Legal and policy context of EU waste policy

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### IV.4.2.1 THE EU TREATY AND WASTE POLICY

Normally, European waste legislation is based on **Article 175** of the EC Treaty and member states may maintain or introduce more stringent national provisions than those adopted at European level under article 176. The key **environmental objectives and principles** of waste legislation, which are laid down in Article 174 of the Treaty are essentially a high level of environmental protection, prevention, rectification of environmental damage at source, and the polluter-pays principle. Unfortunately, in practice these principles are not all fully implemented in EU waste legislation.

What is crucial to bear in mind in EU waste policy is that waste is movable and therefore in some aspects treated as a product. Legislation (e.g. on packaging waste or batteries) is based on the product-related provision of the EC Treaty (**Article 95**), and is bound also to Treaty provisions on allowing the free circulation of goods (**Article 28**). The relationship between the Treaty provisions on environmental protection and free circulation is very controversial and often involves the European Court of Justice. The European Court of Justice decided that, in general, waste materials come under the pro-

visions of **free circulation (Article 28)**<sup>75</sup>. This means that where no EU waste legislation exists, any national waste legislation will have to be assessed against criteria for the free circulation of goods. The only safeguard is the environmental protection provisions of the Treaty - in particular that waste management policy should favour a high level of environmental protection and that it should protect, preserve and improve the quality of the environment, provisions which apply also to article 95 of the EC Treaty.

## IV.4.2.2 EU WASTE STRATEGIES AND KEY PRINCIPLES

### IV.4.2.2.1 EU Waste Strategies

An **EU strategy for waste management** was first adopted, in the form of a communication, by the Commission in 1989 and reviewed in 1996 (*CEC 1996*). Both communications were followed by resolutions from the Council and from the European Parliament. Next to them, the EU environmental action programmes, in particular the most recent 6th action programme (6EAP) (*EC 2002*) and the thematic strategies on the management of resources and the prevention and recycling of waste (under preparation) (*CEC 2003b and CEC2003c*), contain elements for the EU's latest political approach in waste management. EU communications and resolutions are not legally binding<sup>76</sup>, allowing them at any time to adopt new approaches, but they have political importance. An important exception is the final Decision on the Sixth Environment Action Programme, which is legally binding on the Commission and Member States.

### IV.4.2.2.2 Waste management principles

EU waste management policy is based on a number of principles<sup>77</sup>. The most important are:

- ▶ Polluter pays principle;
- ▶ Producer responsibility;
- ▶ Proximity principle; and
- ▶ Rectification at source.

<sup>75</sup> Court of Justice, case C-2/90, *Commission v. Belgium*, (1992) ECR I-443, para 28: "it must be concluded that waste, whether recyclable or not, should be regarded as a product the movement of which must not in principle, pursuant to Article 30 EEC" (now Article 28 EC Treaty) "be impeded".

<sup>76</sup> See Article 249 EC Treaty, which enumerates the binding EU instruments, but does not mention communications.

<sup>77</sup> Article 174(2) EC Treaty: "Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay". Note that there is a general problem with the environmental principles laid down in Article 174 EC Treaty which has an impact on the waste management principles. Indeed, it is not clear, what the legal meaning of these principles is. No decision by the Court of Justice has clarified, until now, this problem. In legal literature, some are of the opinion that principles are legal rules which must be respected in each specific case or, at least, in general policy. Others believe that these principles are more political guidelines or orientations. There seems to be consensus that the principles allow a certain measure to be taken, but do not require measures to be taken or legislation to be adopted which complies with this or that principle. The principles of Article 174 EC Treaty are not automatically part of national environmental law, though they may also exist in a rule or provision of national law. In contrast, principles which are laid down in EU Directives or regulations, are applicable in Member States.

In addition to these principles Waste hierarchy is a guiding steering tool, serving as a precautionary proxy for the greatest potential reduction in environmental impacts from waste generation and management.

#### ***IV.4.2.2.2.1 Polluter pays principle***

This principle is found in article 174 of the treaty, enshrined in the waste Framework Directive (WFD)<sup>78</sup> – article 15 - and reflected in a number of other Directives (producers of waste must bear the costs of having licensed transporters and managers of waste handle their waste, especially hazardous waste). However, it is not frequently practised and there is no firm and detailed definition of it. It is generally understood to mean that the costs of waste treatment and disposal shall not be born by the average taxpayer, but by the person that generated the waste. An example of the polluter-pays-principle is the charging of costs for waste collection: where municipalities charge citizens with the costs of household waste collection, treatment and disposal. These means, however, are at the discretion of local, regional or national authorities and are not regulated or mandated at EU level. Even EC legislation transposed or national legislation that does not comply with this principle is legal (for example there are legal acts in the UK that make the application of the polluter pays principle directly to the citizen illegal) (*Eunomia 2003*).

Fundamental to the scope of waste legislation is the fact that in the case of waste the interpretation of waste ‘generator’ can be far reaching and thus precautionary. The Court of Justice has ruled that the owner of the land where waste is (legally or illegally) deposited, can also be considered to be the holder of the waste and thereby responsible for ensuring its safe treatment or disposal<sup>79</sup>. A more recent judgment stated that a petrol company may, under certain conditions, be considered responsible for the contamination of the soil, where fuel leaked from a defective petrol tank at a service station<sup>80</sup>.

#### ***IV.4.2.2.2.2 Producer responsibility***

This principle is not defined in EU legislation. It originally stems from Swedish environmental policy and law, but is used in a different way at EU level. It states the responsibility of the producer for the impact of his products, in the case of waste policy typically at the end of their useful lifetime. However recently producer responsibility has been extended to other life-phases of products, including design (e.g. Directive on restriction on hazardous substances in electrical and electronic equipment (ROHS)<sup>81</sup>, Directive on waste from electrical and electronic equipment (WEEE)<sup>82</sup> – for more information *see chapters IV.4.2.4.3 and IV.4.2.6.2*)<sup>83</sup>. Producer responsibility may take the form of obligations for the producer to recover products or to collect waste, to establish funds or deposit schemes for recovery or recycling, organise recycling or recovery or relate to the design and manufacture of the product in view of the later waste stage.

<sup>78</sup> Directive 75/442 on waste (1975) OJ L 194 p.39; amended by Directive 91/156 (1991) OJ L 78 p.32.

<sup>79</sup> Court of Justice, case C-365/97 Commission v.Italy, (1999) ECR I-7773.

<sup>80</sup> Court of Justice, case C-1/03 Van de Walle a.o., judgment of 7 September 2004

<sup>81</sup> Directive 2002/95/EC OJ L37 p 19

<sup>82</sup> Directive 2002/96 on waste electrical and electronic equipment (2003) OJ L 37 p.24.

<sup>83</sup> Note: Producer responsibility is different from producer liability: while producer liability deals with damage that is caused by a product which has to be compensated, producer responsibility aims at preventing environmental impairment and damage, but does not aim at compensation.

The Commission waste strategy of 1996 stated: "*Considering the life cycle of a product from manufacture until the end of its useful life, producers, material suppliers, trade, consumers and public authorities share specific waste management responsibilities. However, it is the product manufacturer who has a predominant role. The manufacturer is the one to take key decisions concerning the waste management potential of his product, such as design, conception, use of specific materials, composition of the product and finally its marketing. The manufacturer is therefore able to provide the means not only to avoid waste by a considered utilisation of natural resources, renewable raw materials or non-hazardous materials, but also to conceive products in a way which facilitates proper re-use and recovery. Marking, labelling, the issue of instructions for use and of data sheets may contribute to this aim.*" In its resolution of 1997, the Council avoided the use of the notion, but mentioned that "*the producer of a product has a strategic role and responsibility in relation to the waste management potential of a product through its design, content and construction*".

Elements of producer responsibility are to be found in the Directive on end-of life vehicles<sup>84</sup> and on electrical and electronic waste WEEE. The 2002 Sixth environmental action programme called for further development of producer responsibility; this aspect was also identified for discussion in the Commission communication *Towards a future thematic strategy on waste recycling*, but unfortunately the debate was restricted to '*exploring the merits of complementing existing Directives with a new approach addressing materials rather than end-of-life products.*' Overall the communication towards the final Waste Thematic Strategy shows a clear lack of enthusiasm for advancing the producer responsibility approach to the remaining waste streams still not addressed<sup>85</sup>.

#### IV.4.2.2.2.3 Proximity principle

This principle stipulates that waste should be disposed of as closely as possible to its place of generation. The EU Court of Justice developed it from the principle in Article 174 of the Treaty that environmental damage should, if possible, be rectified at source. In the waste framework Directive 75/442, Article 5, it is established for the disposal - but not for the recycling and recovery<sup>86</sup> - of waste<sup>87</sup>. And the Regulation 259/93 on the shipment of waste allows EU Member States to oppose shipments to another Member State, if the shipment is intended for disposal, but only to raise some, explicitly enumerated objections if the shipment is intended for recovery.

<sup>84</sup> Directive 2000/53 on end-of life vehicles (2000) OJ L 269 p.14.

<sup>85</sup> Towards Communication – p 32 - 'addressing smaller waste streams through producer responsibility may involve significant resources (both in legislative/ administrative and financial terms) for a relatively limited environmental benefit.'

<sup>86</sup> Court of Justice, case C-203/96 (1998) ECR I-4075: "It.. follows from the provisions of the Directive (75/442) and the Regulation (259/93), and from the general scheme of the latter, that neither text provides for the application of the principles of self-sufficiency and proximity to waste for recovery.."

<sup>87</sup> Directive 75/442 (see also note 11 above), Article 5: "1. Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of disposal installations, taking account of the best available technology not involving excessive costs. The network must enable the Community as a whole to become self-sufficient in waste disposal and the member States to move towards that aim individually, taking into account geographical circumstances or the need for specialised installations for certain types of waste.

Inside EU Member States, the principle rarely plays a role<sup>88</sup>. However, at EU level, it is often made use of by Member States which want to implement a national waste management policy and keep waste within their borders, also in order to fully use the capacity of waste incinerators, landfills or treatment installations.

#### IV.4.2.2.2.4 Rectification at source

This principle, stated in Article 174(2) of the Treaty, establishes "that environmental damage should as a priority be rectified at source". It was used once by the Court of Justice to justify a national ban for hazardous waste imports<sup>89</sup>. However, this judgment has remained isolated and must be considered to have been superseded by the provisions of Regulation 259/93 on the shipment of waste.

#### IV.4.2.2.2.5 A Note on Definitions

An important function of EU legislation is also harmonisation in interpretation of different terminology. So far the various definitions pertaining to waste management (waste itself, hazardous versus non-hazardous waste, disposal, recovery, recycling, reuse etc) have been established in a generic way in the framework Directive - in particular the definition of waste itself (*see chapter IV.4.2.4.1.1* for more detail) and the operations classified as recovery and disposal (listed in the *Annexes IIA and IIB*), with subsequent greater specificity of definition in the individual waste stream Directives. Especially for the definitions of recycling and reuse<sup>90</sup>.

Clarification between waste recovery and disposal operations is critical for the implementation of EU waste management policies, drawing the line between recovery and disposal affects the interpretation of the waste shipments regime, the fulfilment of mandatory recycling and recovery targets (Packaging, End-of-Life Vehicles, Waste Electrical and Electronic Equipment Directives) and the planning and permitting of waste treatment facilities for recovery and final disposal.

The challenge of revising the outdated lists of Recovery and Disposal operations in the framework Directive is a complex one due to the interdependence with other Directives and the different uses they make of them (restrictions to movement, boundaries of targets, permit requirements). The Commission has recognised this in its preparation document Towards the Thematic Strategy on Waste from May 2003. However the Commissions proposed solution (at the time of writing) is causing the EEB (and other industry and local authority stakeholders) some concern as we fear it may be symptomatic of some deeper changes in policy approaches to waste (*see chapter IV.4.6*).

<sup>88</sup> A notable exception is Germany where the proximity principle is translated into the responsibility of municipalities to take care of the disposal of municipal waste, but recovery ( as opposed to disposal) of waste can be privatised/delegated.

<sup>89</sup> Court of Justice, case C-2/90 *Commission v. Belgium* para 34: "The principle that environmental damage should as a priority be rectified at source .means that it is for each region, commune or other local entity to take appropriate measures to receive, process or dispose of its own waste. Consequently waste should be disposed of as close as possible to the place where it is produced in order to keep the transport of waste to the minimum practicable".

<sup>90</sup> Sometimes however the different legal and political texts and their evolution over time can give rise to some inconsistencies. One example is the notion of re-use: In Article 3 of the framework Directive 75/442 on waste, , re-use is described as a form of recovery of waste. In contrast to that, Article 3(5) of Directive 94/62 on packaging and packaging waste, provides that only packaging that is no longer re-used, becomes waste.

### IV.4.2.3 EU WASTE LEGISLATION

The overall scheme of EU waste policy and law is the following:

#### EU WASTE MANAGEMENT POLICY AND LAW

<b>EU Treaty</b> Articles 28-30 and 174-176 of the Treaty
<b>Community Waste Strategy</b> COM (96)399

1st level - Horizontal legislation							
<b>Waste Framework Directive</b> 75/442(91/156)	<b>Hazardous Waste Directive</b> 91/689			<b>Shipment Regulation</b> 93/259			
2nd level - Waste installations							
<b>Waste Incineration Directive</b> 2000/76		<b>Landfill Directive</b> 1999/31			<b>Port Directive Facilities Directive</b> 2000/59		
3rd level - Specific Waste Streams							
<b>Waste Oils</b> 75/439	<b>Sewage Sludge</b> 86/278	<b>Batteries</b> 91/157	<b>Packaging</b> 94/62	<b>PCBs</b> 95/59	<b>Cars</b> 2000/53	<b>Waste EEE*</b> 2002/96	<b>Animal waste</b> 1774/2002

\* EEE means electrical and electronic equipment

The three legislative levels of this scheme are interrelated, in the sense that, as soon as any of the specific waste streams of the third level address hazardous aspects, the Directive on hazardous waste of the first level comes into play; where batteries are landfilled, the corresponding Directive of the second level is to be examined, etc.

It is important to be aware of the hierarchy of the cascade of legislation from the EU to the national level. Where EU legislation is adopted, it prevails, in cases of conflict, over national law. In the area of waste management policy, the EU acted, until now, almost entirely by binding legislative instruments, Directives or regulations. Generally, these legislative measures were based on Article 175 EC Treaty. Exceptionally, where the measure principally concerned the product and not the waste, such as the Directives on packaging and packaging waste, on batteries, on the ban of dangerous substances in electrical and electronic products, the legal basis was Article 95 EC Treaty, in order to ensure the existence of uniform provisions within the EU internal market. Regulations were only adopted in the areas of transfer of wastes and of agricultural waste where it was deemed to be important to have uniform EU-wide provisions which could not (easily) be amended by national legislation<sup>91</sup>.

<sup>91</sup> An EU Regulation is binding in its entirety and directly applicable in all Member States and, therefore, needs normally not be transposed into national law, while a Directive has to be transposed into national legislation. Furthermore, where EU legislation is based on Article 175, Member States may maintain or adopt more protective measures, see Article 176 EC Treaty. Where EU legislation is based on Article 95 EC Treaty, national legislation may only be maintained or new legislation introduced under the very restrictive conditions of Article 95(4 to 8). And where EU legislation is based on 37 EC Treaty, such as the Regulation on animal waste, Member States may not adopt national amending legislation at all.

## IV.4.2.4 EU HORIZONTAL WASTE LEGISLATION

### IV.4.2.4.1 Waste framework Directive 75/442 amended by 91/156

This Directive was adopted in 1975 and reviewed in 1991 by Directive 91/156<sup>92</sup>. It lays down the EU-wide **definition of waste** and provides for a European Waste List which lists the different categories of waste and of hazardous waste. It introduces a so-called "**hierarchy for waste management**", according to which waste management should first of all aim at the prevention of waste generation. If that is not possible, material waste recycling and incineration of waste with energy recovery should be pursued. At the end of this hierarchy ranks the landfill and incineration without energy recovery.- Note that this hierarchy has been interpreted as establishing a political, not a legally binding orientation of policies, as will be further explained below.

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The Directive requires, furthermore, a **permit for waste treatment or disposal** activities, for which basic conditions are laid down. Waste treatment or disposal measures have to ensure that human health or the environment are not threatened; uncontrolled dumping of waste is prohibited. Member States have to draw up **waste management plans** and to **report on the application** of the Directive every three years.

The Directive introduces the proximity principle for waste disposal, and requires Members to apply the polluter pays principle. It also establishes a committee for adapting the Directive's provisions for scientific and technical progress. This Committee serves more and more as the steering instrument on EU waste management policy.

The Directive's precise scope in terms of types of waste is still legally contested. In particular, it is unclear as to what extent those areas that are mentioned in Article 2(1.b) of the Directive come under its provisions<sup>93</sup>. De facto, the Directive does not apply to radioactive waste, agricultural waste and mining waste. For mining waste, the EU is presently discussing a proposal for a Directive (*CEC 2003d*). Central to operationalising the environmental objectives of the Directive (recital 4 and others) is Article 4 which provides for the general obligations for waste management<sup>94</sup>, a provision against which activities of local, regional and national authorities and operators should be assessed.

<sup>92</sup> Directive 75/442 on waste

<sup>93</sup> Directive 75/442, Article 2(1): "The following shall be excluded from the scope of this Directive: (a) gaseous effluents emitted into the atmosphere; (b) where they are already covered by other legislation (i) radioactive waste; (ii) waste resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries; (iii) animal carcasses and the following agricultural waste: faecal matter and other natural, non-dangerous substances used in farming; (iv) waste waters, with the exception of waste in liquid form; (v) decommissioned explosives". See for a discussion of this provision Court of Justice, case C-114/01 Avesta Polarit, judgment of 11 September 2003.

<sup>94</sup> Directive 75/442 (note 11), Article 4: "Member States shall take the necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment, and in particular: - without risk to water, air, soil and plants and animals, - without causing a nuisance through noise or odours, - without adversely affecting the countryside or places of special interest. Member States shall also take the necessary measures to prohibit the abandonment, dumping or uncontrolled disposal of waste".

#### *IV.4.2.4.1.1 The definition of waste*

The EU definition on waste is that waste is "any material which the holder discards, is obliged to discard or intends to discard". This definition is aligned to that of the UN Convention on the shipment of hazardous waste (Basel Convention). It has an objective element in the sense that a material becomes waste by virtue of a circumstance which is outside the control of the owner or holder of the material; namely the fact of abandoning the material or the fact that there are provisions which determine that certain material is to be classified as waste, for example because it may not be used any more; an example is a product which does not correspond to legal requirements.

It is important to note that the waste definition does not make the classification of waste dependant on the economic value of the material<sup>95</sup>. Where a person places a TV-set on the pavement in order to have it removed by the municipal waste collectors, the TV-set becomes waste, though it may still be in a state to be used.

Economic operators very persistently try to exclude from the notion of waste those materials that have an economic value, that are capable of being re-used, recycled or otherwise used economically. The reason for this is that the material would then be classified as a product and not be submitted to the provisions of waste legislation, regarding transport, export, handling, burning etc. If the legislator were following this request, this would mean that there would be no waste from precious metal production, from metals, wood, glass etc., as all this material is or could be re-used or recycled. Until now, the Court of Justice rejected all such attempts, arguing that this would contradict the EU definition of waste.

It may be asked - What is the problem, if something is considered a product and not waste? The answer is, that for waste materials the control regime is normally stricter than for products and adequate environmental standards for products rarely exist. In other words the waste regime can also be seen as a surrogate precautionary regime that has a function as long as product legislation is not yet developed and complete.

A good indication as to whether something is product or waste is the consideration of whether the generation of material in question would have been avoided altogether, if that had been technically possible. Therefore, the gold dust which is generated when a jeweller makes a gold ring, is waste, though it has a high economic value. Had the jeweller been able to avoid the generation of that dust, he would have done so.

A judgment in the Court of Justice in 2004 clarified that leaking substances - the case in question concerned a fuel leak from a petrol station – constitute waste. independently of whether the contaminated soil was removed or not<sup>96</sup>. This judgment might have far-reaching consequences on new cases of soil contamination, creating financial responsibility for those responsible for the original contamination.

<sup>95</sup> See, for example, Court of Justice, C-304/94 Tombesi, (1997) ECR I-3561.

<sup>96</sup> Court of Justice, case C-1/03 (note 38 above)

Where a material is classified as waste, it remains waste, until the recycling or re-use process is finished. Again, there are attempts from economic operators to have the waste character already finished at an earlier stage, for example after sorting (for paper), or at the first step of the recycling process. The problem is well illustrated by a Court judgment: a truck driver was stopped by the police, because he was transporting waste without a permit for the shipment. He defended himself with the argument that he was transporting the material to a specific installation, where it was to be recovered, that the transport was the first part of the recovery process and that therefore the material was a product, not a waste. The Court however disagreed and concluded that until the recovery process was complete the material should be classified as waste<sup>97</sup>.

As mentioned previously, the definition of hazardous waste depends entirely on the **waste list for non-hazardous and hazardous waste**<sup>98</sup>. Thus, any waste that is listed in the waste list with an asterisk (\*), is hazardous waste. Member States may, under certain conditions, classify other wastes as hazardous. The classification as hazardous waste has the consequence that stricter conditions for issuing a permit to handle such waste apply, that the mixing of such waste is not allowed and that the shipment and landfilling of such wastes is subject to more severe requirements.

Nuclear waste follows rules of its own. It is de facto not covered by EU waste legislation, but follows the rules of the Euratom-Treaty. Also, recyclable nuclear material is not considered waste, but "product", while under Directive 75/442 recyclable waste is waste. There are no attempts to develop specific rules on nuclear waste at EU level though there are some provisions on shipment of radioactive waste.

#### IV.4.2.4.1.2 Waste hierarchy

The EU waste hierarchy is meant to provide a ranking for environmental soundness in waste management and serve as a proxy for the most efficient options for reduction in environmental impacts - prevention being the most efficient, reuse the next etc... The hierarchy is established in article 3 of the waste framework Directive 75/442 and indicates that Member States should strive at ensuring first of all waste prevention, then material recycling, incineration with energy recovery and finally landfilling of waste. According to the 1996 Waste Strategy (*CEC 1996b*) the hierarchy is commonly understood as (starting with the first priority):

- ▶ prevention, then
- ▶ re-use of materials and products;
- ▶ material recycling;
- ▶ incineration with energy recovery;
- ▶ landfilling.

<sup>97</sup> Court of Justice, case C-359/88, Zanetti a.o. (1990) ECR I-1509.

<sup>98</sup> Commission Decision 2000/532 replacing Decision 94/3 establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442 on waste and Council Decision 94/904 establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689 on hazardous waste (2000) OJ L 226 p.3.

One can also indirectly derive this hierarchy from a number of provisions. Article 174 of the Treaty suggests combatting environmental damage, at source if possible, and ensuring prudent use of natural resources. In addition - and this can be interpreted as implementation of the precautionary principle - if you don't know how big the threat is, it is better to avoid it in the first place. A preference for the recovery (material recycling and incineration with energy recovery) with regard to the disposal of waste (landfilling and incineration without energy recovery) can also be deduced from Regulation 259/93 on the transfer of waste. This Regulation allows Member States to completely prohibit the transfer of waste to another Member State, if the waste is to be disposed in that Member State. In contrast to that, if the transfer takes place to recover the waste, Member States may only raise a number of expressly enumerated objections against such a transfer.

Unfortunately, the waste hierarchy does not mean that a Member State is legally obliged to take measures in order to follow the higher level of the hierarchy, before recurring to a lower level. This means that waste prevention measures - in other words, product-related and production-process related measures - would have to be taken, before recycling measures could be adopted or even considered. This is obviously not (radically interpreted) very practical, as any economic activity creates residues (wastes) and intermediate measures are necessary. Consequently, the EU Commission has never considered the hierarchy in Article 3 of the waste framework Directive 75/442 as a legal rule, but rather as a political objective and guideline. However, the absence of a 'legal rule' does not allow the Commission to abandon waste prevention as a priority, to be implemented and stimulated to the best of its powers, despite its unarguable intricacy.

Built into this principle the hierarchy approach is the concept of waste as a form of pollution per se and prevention and reduction of the quantity of waste production (in general but especially for disposal) as a proxy for prevention and reduction of environmental impacts and the achievement of a high level of environmental protection.

The hierarchy and the quantitative proxy have been, and remain, a potentially effective and pragmatic tool towards the greatest reduction in environmental impacts. This approach is then reflected in the specific waste stream legislation and is the basis for the establishment of mandatory targets and the preference given in mandatory targets to recycling over other forms of energetic recovery and the phasing out or limits placed on specific hazardous substances<sup>99</sup>. There has, however, been no proper mandatory implementation of quantitative prevention at the EU level yet.

#### **(a) Waste prevention**

Waste prevention includes the minimising of waste generation (quantitative prevention), but also the minimising of hazardous properties of wastes (qualitative prevention), in order to facilitate recycling and disposal. While recycling (and indeed any other waste management process) is a production process and requires transport of the recyclable waste, energy use during the recycling process, and the disposal of the residues from the recycling production, waste prevention potentially avoids all these activities.

Waste prevention may be done by fixing requirements (limit values etc) for the manufacture or composition of products (**direct prevention measures**), or by influencing the behaviour of man-

<sup>99</sup> Examples are the reductions of hazardous substances in batteries, end of life vehicles and waste electrical and electronic products.

ufacturers or traders through taxes or charges on raw materials. Alternatively consumers/users may be influenced by prices or by quality labels such as eco-labels (see chapter V.4.2) or other information (**indirect prevention measures**).

As mentioned previously, EU provisions on waste prevention are rare and despite the priority given in the policy framework driving prevention has not been given priority in implementation so far. The framework Directive 75/442 mentions clean technologies and the marketing of less hazardous products as a means to achieving waste prevention. It therefore alludes to one critical point: before a material is waste, it is a product. Thus, effective waste prevention policy must involve waste policy that steers **a strong product policy**. So far the EU has not developed a comprehensive product policy which systematically limits the use of materials for the production of goods, reduces the use of hazardous substances and increases reusability and recyclability. Practically no legislation exists that requires products to be made, in whole or in part, from recyclable materials or that they be re-usable and/or upgradable. For this reason, product based prevention measures at EU level are limited to voluntary tools such as the EU Ecolabel criteria scheme which has set criteria on some 22 products so far (see chapter V.4.2). The exceptions are a number of **Directives that prohibit or restrict certain dangerous substances** in products: e.g. mercury in batteries, heavy metals in packaging, in cars or in electrical and electronic equipment and brominated flame retardants in electronic equipment.

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One of the waste prevention approaches that has been on the agenda for many years without much evolution is **EU level waste prevention targets**. The target in the 5th EU environmental action programme from 1993, to limit municipal waste generation to 300 kg per capita per year<sup>100</sup>, remained without widespread effects, most likely because no implementation or control measures were laid down and the target itself was of a voluntary nature. Subsequently the 6EAP calls on the Commission, as one of the priority actions on sustainable resource and waste management, to develop (and implement) Waste Prevention targets to be achieved by 2010. Regrettably, by mid-2005, progress towards such concrete measures had still not been taken at EU level.

Several methods may be used to indirectly influence waste generation. Requiring that products **contain a certain percentage of recycled materials** reduces the overall amount of waste stemming from the production of such products (from extraction and processing of virgin materials). Examples are papers, textile products or glass that contain a percentage of recycled materials. Plastic recycling is not yet technically very far advanced, due partly to the diversity of different types of plastic materials. But it has undoubtedly a very important future role to play in waste management, given the predominance and increasing use of plastics in our products and packaging. Another example of recycling is food residues may be used for the making of animal feed or compost.

Waste generation may also be influenced via such products by tax incentives, financial charges, reduced VAT on eco labels or other instruments that give economic advantages or public recognition to producers that make such products, and to consumers or users that acquire such products. In this regard, **public procurement**, with the considerable market it offers (public procurement accounts for over 16% of the European Union's GDP) could play a leading role, requiring recycled, reusable or recyclable products - paper, office equipment etc - and thus promoting products that promote waste prevention.

<sup>100</sup> Fifth EU environmental action programme "Towards Sustainability" (1993) OJ C 138 p.5

A further very important economic incentive can also be given through Individual Producer Responsibility – bringing the end-of-life costs of the individual product to bear on the original producer (for more on this see chapter IV.4.2.6.2 on Producer responsibility below).

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As regards household and municipal waste, the practice of municipalities of fixing waste fees according to the weight of the household waste (often called **Pay As You Throw**), has, when applied, proven to reduce waste quantities generated (especially Municipal Solid Waste) and simultaneously increase source separation of specific, recyclable waste items - glass, metal, cardboard and paper - and of composting kitchen and garden waste<sup>101</sup>. As EU law does not regulate waste collection fees, national, and very often also regional or local, authorities have been left the responsibility of organising waste separation and collection in a way which reduces waste quantities.

As concerns **reuse** there is also a scarcity of EU action. The closest the EU comes on reuse policy is to set standards for 'reusability' in the context of the packaging and packaging waste Directive. Such standards (which took 10 years to develop) are not expected to deliver any significant support for reuse systems (*for more details see chapter IV.4.4*).

### **(b) Waste recycling**

As mentioned previously, the Commission's waste management strategy of 1996 indicates that material recycling is generally preferable to waste incineration with energy recovery<sup>102</sup>. This statement found the cautious but unambiguous support of the Council<sup>103</sup>. Recycling can save resources: for example, the making of a private car which weighs about one tonne, but has been estimated to take about 60 tonnes of raw material. For each car, about 85 percent of the material by weight can be recycled (steel and other metals, plastics etc)<sup>104</sup>.

Daughter Directives on specific waste streams on waste oils, batteries, packaging and packaging waste, end of life vehicles and electrical and electronic waste, have set targets on this at EU level with mixed success. In the case of waste oils, where no quantified targets have been set (just a

<sup>101</sup> For a comprehensive overview of PAYT in Europe and the results achieved see Report Waste Collection: To charge or not to charge? by Eunomia, March 2003 available from <http://www.eunomia.co.uk>.

<sup>102</sup> Commission COM(96) 399 para 42: "Material recovery implies the separation of wastes at the source. This involves end-users and consumers in the waste management chain and makes them more aware of the necessity and the ways to decrease the generation of waste. Indeed, it is the end-users and consumers who should carry out the separation of wastes before disposal in order to reintroduce recyclable wastes in the production cycle. Furthermore, energy strategies relying on waste supplies should not be detrimental to the principles of prevention and material recovery. Indeed, in many cases it can be assumed that by retaining the existing material structure of the recoverable waste, it will be possible to minimise the additional material and energy necessary to produce a new product. Also, material recovery addresses the concerns about emissions from waste incineration installations.

In view of the above, preference should be given, where environmentally sound, to the recovery of material over energy recovery operations. This reflects the greater effect on the prevention of waste produced by material recovery than by energy recovery."

<sup>103</sup> Council Resolution of 24 February 1997 (1997) OJ C 76 p.1 para.22: "(The Council) recognises, as regards recovery operations, that the choice of option in any particular case must have regard to environmental and economic effects, but considers that at present, and until scientific and technological progress is made and life-cycle analyses are further developed, reuse and material recovery should be considered preferable where and insofar as they are the best environmental option".

<sup>104</sup> Recovery Options for Plastic Parts from End-of- Life Vehicles: an Eco-Efficiency Assessment, Final Report, May 2003, by Okoinstitut e.V. for APME

general priority for recycling) there has been fragmented success. This is also strongly attributable to the conflict between the recycling policy which seeks to encourage recycling and the EU fuels tax Directive which grants tax relief on use of waste oils as fuels and thus encourages its incineration<sup>105</sup>. In the case of packaging waste however the Directive has had significant impact on EU wide levels of recycling, with all Member States achieving the obligatory 2005 recycling targets, contributing significant reductions in impacts of Packaging Waste management (around 1 million tonnes of oil equivalent and 3 million tonnes of CO<sub>2</sub> equivalent as a direct result of the Directive<sup>106</sup>). However, despite the apparent usefulness of recycling targets as a policy measure to stimulate EU wide progress on recycling, the Commission has lately shown preferences to abandoning such approaches (see *chapter IV.4.2.6.1*).

### (c) Waste incineration

Industrial waste generators often prefer waste incineration to material recycling, as material recycling is often still more time - and cost - intensive. Citizens, though, do not like to have waste incinerators in their neighbourhoods. Once an incinerator is constructed - which is often very expensive - it needs to be fed continuously during its lifetime at a certain minimum volume for, on average, periods of 30 years or more. This inflexibility brings pressure on the operator to oblige waste managers to bring the waste to a specific incinerator, though the costs might over time eventually be higher than considering other options, such as material recycling or composting for example. In Germany and apparently also the Netherlands, this practice even led to some cases which oblige waste generators to deliver their wastes to a specific incinerator<sup>107</sup> or obliged them to deliver minimum quantities for incineration<sup>108</sup>.

Public objections to installations which co-incinerate waste (steel works, cement kilns, power plants) are, so far, less evident (also due to the ambiguity of the activity concerned – ie such installations are not specifically built to incinerate waste so they are not such an obvious target), though the emission and pollution risks might be at least equivalent to those from dedicated waste incineration installations and probably greater. This, together with political pressure from the industries concerned to maintain less demanding emission requirements on co-incineration in relevant legislation (e.g. the waste incineration directive) has led to a considerable increase in co-incineration with an even greater increase potential in the future<sup>109</sup>.

<sup>105</sup> As regards waste oil tax reliefs, Directive 2003/96 gives the following member States permission to apply, till end 2006, reduced tax rates for the burning of waste oils: DE ES, FR IRL IT LUX AUT PT FIN UK. After 2006, the Council will take a new decision (and given past experiences probably prolong these derogations).

<sup>106</sup> See Chapter 1.7.3 of the Study on the *Implementation of the Directive on Packaging and Packaging Waste 94/62/EC and options to strengthen prevention and reuse of packaging*, February 2005 carried out for the Commission

<sup>107</sup> Der Anschluss und Benutzungszwang law in Germany establishes specifically a public responsibility (as opposed to private) for taking care of non-recoverable municipal waste.

<sup>108</sup> Note: there is debate as to whether this can in fact be a positive policy in the sense that it may avoid the 'liberal market alternative' with different operators (private and public) collecting household waste, with the possible consequences of waste for disposal being transported throughout the country in search of the most economic solution...

<sup>109</sup> The German Advisory Council on the Environment (SRU) report of 2004 emphasises that waste meets 25% of the energy needs of the cement industry in average. The report notes that out of the total incineration and mechanical treatment capacity in Germany (about 20 Mio tonnes), co incineration is estimated at 1 Mio. tonnes (which means 5%). However there are many co incinerators with up to 90% of their energy needs met by waste and that the average waste share is growing.

#### (d) Landfill

EU waste policy tries to reduce the disposal of waste to landfills, as the materials could instead be recycled, incinerated or otherwise be brought back to the economic circuit, whereas they may constitute an environmental risk at the landfill, by the development of methane gases (a greenhouse gas), the leaking of polluted liquids to the soil and underground waters, or other risks. Within the EU, about two thirds of all waste continues to go to landfills, although there are wide variations between Member States. In almost all EU countries, numerous landfills are operating without a permit (recently over 8000 illegal waste dumps were identified in France<sup>110</sup>) whereby such landfills are normally neither placed on appropriate sites nor equipped with the necessary environmental protection and security mechanisms. Under EU law, any place where waste is stored for more than three years is a landfill. Legal cases concerning land-filling activities are a frequent cause of environmental legislative infringement cases brought to the EU level (mostly however linked to the requirements of the Waste Framework Directive and not the Landfill Directive itself).

##### IV.4.2.4.1.3 Permits

All persons who professionally treat or eliminate, trade or otherwise handle waste, need a permit to do so. For waste incinerators, the most relevant conditions are laid down in the waste incineration Directive; for larger installations the requirements of the Directive on integrated pollution prevention and control (*IPPC Directive*, see *chapter V.3.2*) apply in supplement.

The **incineration** Directive which also applies to co-incineration installations, does not apply to some specific incineration types; but nothing prevents a Member State applying the same or equivalent rules to those incinerators which are not covered by EC law. Applications for a permit for an incineration installation and decisions on that application must be made available to the public. Furthermore, every citizen has, under the legislation on access to information on the environment, the right to see at any moment the complete permit, including all conditions which are laid down in it. No administration is entitled to keep as confidential information on, for example, conditions on emissions into the air or the soil.

The permit must contain a detailed enumeration of all waste types which may be treated; this includes an indication as to whether the wastes are hazardous or not. It must also contain information on the emissions into air and water, the measuring methods and techniques and, where hazardous wastes are burnt, and information on the maximum content of hazardous substances. The permit must furthermore ensure that the legislative provisions on waste water, discharges of hazardous substances into water and air, and on landfills are respected. The permit must be regularly reviewed and eventually be adapted.

Where a waste incinerator also comes under the provisions of the Directive on integrated pollution prevention and control, the permit must achieve the emission levels required by the waste incineration Directives. This can be achieved by applying the "**Best Available Technology BAT**". Those are described in the **Best Reference** (BREF) document for Waste Incineration elaborated by

<sup>110</sup> Commission Press release 13 July 2004 - IP/04/895 – “ *The Commission has furthermore decided to refer France to the European Court of Justice over the existence of numerous illegal and uncontrolled landfills across the country .8,434 sites have been identified by the Commission in France’s 95 departmental waste management plans.* ”

an EU body in Sevilla (Spain)<sup>111</sup>. These BREF documents only constitute guidelines for the permitting administration, but are not legally binding. Eventually the responsibility rests with the permit writers at local levels, how they balance environment and economic interests (*see chapter V.3.2*).

Member States have to regularly control that the conditions laid down in the permit are respected. . Since the use of, or the requirements of, the BAT levels set in the BREFs are not always as ambitious as they should be (*see chapter IV.4.8.3 below on 'Techniques used by installations' for the example of the Waste Incineration BREF*) the scrutiny of such permits is important.

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Note that they are free to apply the provisions of the Directive on integrated pollution prevention and control to all incinerators, also to those that are not listed in the incineration Directive itself.

Similar provisions apply to permits for **landfills**. The application for a permit must also contain a description of the hydrogeological and geological characteristics of the site. The landfill must conform to the waste management plan that was established for the area and in particular indicate, whether the landfill is for non hazardous, for hazardous or for inert waste and which is the landfill's permitted total capacity. The operator of the landfill must be a person who has the necessary technical knowledge to run the landfill operations. Again, the application and the permit are accessible to every citizen, at his request, and may not be kept confidential.

**Other** waste treatment **installations** are only submitted to general requirements for a permit, and Member States may even satisfy themselves with a registration instead of a permit requirement. This also applies to installations which treat hazardous waste; however, in this case, it is the European Commission which grants, under certain conditions, a derogation. In all these cases, applications, permits granted and decisions on derogations must be made publicly accessible by the relevant administrative authority. And once more, nothing prevents a Member State from applying EU provisions to those installations that are not regulated in detail by the incineration and landfill Directives at EU level.

#### *IV.4.2.4.1.4 The siting of waste installations and public participation*

Waste installations are traditionally not popular with the general public. While people recognise the necessity to have waste treated and disposed of, they are concerned about the health and environmental risks that waste treatment, in particular waste incinerators might bring to their neighbourhood.. These concerns can be met in three ways: first of all to plan incineration projects only when absolutely necessary (focussing first on prevention, re-use and material recycling), secondly, to choose the state-of-the art technology and accompanying robust control systems,

<sup>111</sup> "Best available techniques" is defined, in Article 2(11) of Directive 96/61 concerning integrated pollution prevention and control (1996) OJ L 257, p.26 as follows: "'best available techniques' shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole: - 'techniques' shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned, - 'available' techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator, - 'best' shall mean most effective in achieving a high general level of protection of the environment as a whole".

and thirdly, to fully involve the public in the planning and decision making. EU legislation does in fact require public participation, which should include discussion about a proper evaluation of alternatives and the quality of the planned installation<sup>112</sup> (see also chapter V.3.5). Furthermore, for bigger waste management installations – such as incineration plants, an environment impact assessment is mandatory. Unfortunately, however, all other waste treatment or disposal installations have to undergo an environment impact assessment, only if, *'in view of their nature, size or localisation, they are likely to have significant effects on the environment'*.

The impact assessment procedure has the objective of avoiding or at least minimising negative impacts of the project on humans or on the environment<sup>113</sup>. The impact assessment procedure, if properly conducted, can grant the affected public – including those who live close by the future installations, as well as their associations - the right to participate in the elaboration of the impact assessment with a view to including their arguments and seeing their interests taken into consideration. The final decision, however, rests with the administration which must explain the decision taken.

#### **IV.4.2.4.1.5 Waste Management plans**

Practically all EU waste legislation – from the framework Directive to the individual waste streams Directives - requires Member States to set up and regularly review waste management plans. Some of these plans concern the general management; others deal with collection requirements or adapting existing landfills to EU requirements. Whether Member States establish national plans or leave such plans to regional or local authorities, is left to them, as long as the whole territory of the Member State is covered by the plans. Of course, for many sectors, it would make sense to obtain some transboundary planning, for example on incinerators, landfills or collection systems. However, general reluctance from the public to have waste from other Member States or even regions in their neighbourhood, has restricted transboundary planning to a large extent.

Normally, management plans have to be sent to the European Commission, the intention being to progressively achieve an EU-wide waste management overview and coordination. So far however, this coordination has not materialised effectively at EU level. It is also true that for some plans – for example the 'framework' plan required under article 7 of the waste framework Directive there is no periodicity of renewal required so some waste management plans submitted to the Commission have not been revisited or notified to the Commission for many years. Waste management coordination is thus almost entirely left to national administrations or to bilateral cooperation.

Under EU law, the notion of "plan" and "programme" is often used indistinctively. The Court of Justice stated that a plan/programme must constitute "an organised and coordinated system of objectives", that it must contain a timetable and must be reviewed at regular intervals<sup>114</sup>; this means that the adoption of legislation or of practical or ad hoc measures normally is not suffi-

<sup>112</sup> Directive 2003/35 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337 and 96/61 (2003) OJ L 156 p.17. See also Directive 2001/42 on the environment assessment of the effects of certain plans and programmes on the environment (2001) OJ L 197 p.30.

<sup>113</sup> Directive 85/337 (see previous footnote), Articles 2 and 4.

<sup>114</sup> Court of Justice, case C-347/97 Commission v.Belgium (1999) ECR I-309 (concerning a programme for batteries).

cient to comply with the requirement of establishing a plan but this legal interpretation is hardly enforced by the Commission.

The quality of waste management plans varies considerably across Europe. Some plans consist of hardly more than some lines. The EEA concluded recently in a Parliamentary briefing – “Although it is difficult to identify a general relationship between the quality of waste plans and trends in waste generation and management performance, there does seem to be a positive link in countries with very good coverage in their plans, where high levels and strong growth rates for recycling can be found. These countries are also good at limiting landfilling”<sup>115</sup>. Waste management plans are public and may not be kept confidential. Their elaboration must undergo an environment impact assessment (see chapter IV.4.2.4.1.4) and the public has a right to participate in the drawing up of such plans. This is important, as many plans contain provisions on the siting of waste treatment or disposal installations and even some details of the construction and operation of such installations.

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Furthermore the EU framework Directive on waste provides that Member States may object to a shipment of waste that does not correspond to their waste management plans (recital 9). The Court of Justice has however decided that this provision is of no relevance, as the possibilities of objecting to such shipments was regulated by the EU Regulation on the shipment of waste<sup>116</sup>. Revision of this regulation, currently ongoing, appears to be going in the direction of reinstating this possibility (see chapter IV.4.2.4.4).

#### IV.4.2.4.1.6 Reporting

Reporting allows public authorities to assess whether the legislative requirements have been complied with in practice, and adapt, where necessary, the conditions for the specific waste installation or the waste stream.

Member States, based on commonly agreed questionnaires, are obliged to regularly report to the European Commission on the implementation of the Directives. The Commission is obliged to regularly establish an EU-wide feedback report, often specifically to the other EU institutions on the implementation of the Directives; sometimes reports on several Directives or over several years are assembled in one single report<sup>117</sup>.

The national reports are accessible to the public, upon request. The same applies to the EU reports. The EU reports are often disappointing in terms of providing data that would allow verification of environmental protection on the ground, as they limit themselves – according to the information in the national reports - to describing the national legislative and administrative measures, without discussing their practical applications. Thus, the reports do not really constitute a yardstick to assess compliance, enforcement and real fates of waste streams and associated impacts/ improvements. The quality of the information in these reports is very much dependent on the level of detail and type of information required by the questionnaires established for

<sup>115</sup> Court of Justice, case C-347/97 Commission v. Belgium (1999) ECR I-309 (concerning a programme for batteries).

<sup>116</sup> Court of Justice, case C-203/96 (see note above).

<sup>117</sup> Article 16 of the waste framework Directive requires for example that on the basis of reports submitted to the Commission it shall publish a consolidated report every three years, and for the first time in April 1996 (ie in April 1999, 2002, 2005 and 2008 etc...)

these purposes. As these questionnaires are drawn up in committees with no scrutiny or access by stakeholders, excluding ECOs among others, it is difficult to influence their content.

Specifically on those waste incinerators with a capacity of two tonnes per hour the relevant authorities must furthermore establish an annual report on the functioning and surveillance of the installation, which also reports on air emissions and water discharges<sup>118</sup>. Again, this report is required to be accessible to the public. Similar reporting requirements unfortunately do not exist for landfills. Generally, however, it should be noted that all emissions into the air and the water from waste installations which are in the hands of public authorities, must be made available to the public, on request (e.g. article 12 of Waste Incineration Directive).

#### IV.4.2.4.2 Directive 91/689 on hazardous waste

This Directive of 1991<sup>119</sup> defines hazardous waste as those wastes which correspond to the criteria listed in annexes of this Directive and are actually laid down in Commission Decision 2000/532 of May 2000. The general requirements of Directive 75/442, such as permits or management plans are strengthened for hazardous wastes. Specific requirements restrict the mixing of wastes.

#### IV.4.2.4.3 Limiting the generation of hazardous waste through products

Limiting or even completely prohibiting the use of certain substances, because they would make the waste which is generated at the end of a product's life-span hazardous, is current legislative practice, though there is no systematic approach to the problem at all; it also occurs outside the waste sector. For example, ozone-depleting substances or lead in petrol.

The main substances which are affected by such restrictions are heavy metals and other toxic, bioaccumulative or persistent substances. There are numerous provisions in EU law that limit the presence of heavy metals, in particular of cadmium, lead, mercury and chromium in products for example vehicles. Other examples concern polybrominated biphenyls (PBB), polybrominated diphenyls (PBDE), commonly used as flame retardants, which are banned, in addition to heavy metals in the Directive on restriction on hazardous substances in electrical and electronic equipment (ROHS)<sup>120</sup>, or asbestos restricted by the Directive on marketing and restriction of use Directive<sup>121</sup>. In view of the present stage of European integration and the statement in the 6EAP that *"chemicals that are dangerous should be substituted by safer chemicals or safer alternative technologies not entailing the use of chemicals, with the aim of reducing risks to man and the environment"*<sup>122</sup>, Member States may prohibit the use of other substances in products, where otherwise the material would, at the waste stage, lead to the generation of hazardous waste; this possibility has hardly ever been used; an example is the ban of lead in hunting ammunition, adopted by Denmark and The Netherlands.

<sup>118</sup> Directive 2000/76 on waste incineration, Article 12(2).

<sup>119</sup> Directive 91/689 on hazardous waste (1991) OJ L 377 p.20.

<sup>120</sup> Directive 2002/95/EC OJ L37 p 19

<sup>121</sup> For more examples related to products see Directive 76/769 relating to restrictions on the marketing and use of certain dangerous substances and preparations, (1976) OJ L 262 p.1 and its subsequent amendments.

<sup>122</sup> Decision 1600/2002 laying down the sixth Community environment action programme, (2002)OJ L 242 p.1. Article 7(1).

In the future, with the adoption of the Commission proposed legislative revision on chemicals policy, REACH<sup>123</sup> (see chapter V.4.6.4.6) there would be additional tools to prevent hazardousness of waste by reducing and restricting the use of hazardous substances in products and articles. Whilst waste itself is not covered by REACH requirements it is foreseen that products resulting from recycled wastes will be, although there is strong pressure from the relevant industrial sectors to obtain exemptions for such products.

#### IV.4.2.4.4 Shipment of waste, Regulation 259/93

As waste materials are movable objects and Member States - inside the Member States local authorities or other public or private bodies - provide for waste treatment and disposal installations, there is a tendency from Member States to limit the movement of wastes. In contrast, waste holders normally want to bring waste to places where its treatment or disposal is cheapest; they find support in the EU Treaty which generally provides for the application of Article 28 to 30 EC Treaty on the free circulation of goods. The present ongoing EU discussion on reviewing EU shipment rules for waste is likely to give Member States more possibilities to oppose shipments to other Member States.

In order to control waste shipments, the EU introduced the principle of prior informed consent: a shipment may only take place, where the administration of the Member State of dispatch has informed the administration of the Member State of destination of the planned shipment and agreement to the shipment has been given. Details of the procedure, of the documentation to be established and the security measures to be taken are laid down in Regulation 259/93 (EC 1993) on the shipment of waste.

The regulation, in parts is aligned to international commitments (such as the UN Basel Convention on the transboundary movement of hazardous waste), deals with the movements (shipments) of waste within EU Member States and the export and import of waste into the EU. It divides waste into non-hazardous ("green"), hazardous ("amber") and very hazardous ("red") categories and determines, when a Member State may object to a shipment of waste from another Member State.

Member States may object to any waste shipment to another Member State, where the waste is to be disposed of in the other Member State. However, where the waste is to be recovered and not disposed of in that other Member State - recovering includes the recycling and the burning of waste with the recovery of energy - Member States only have few, specifically enumerated grounds for objecting to such shipments.

According to ECJ case law the shipment of municipal waste to a dedicated waste incinerator in another Member State is normally to be regarded as a shipment for disposal and may thus be prohibited by the Member State of dispatch<sup>124</sup>. In contrast to that, the dispatch of waste for incineration to a cement kiln of another Member State (for co incineration) normally constitutes a dis-

<sup>123</sup> COM(2003) 644 final, Brussels, 29.10.2003.

<sup>124</sup> Court of Justice, case C-458/00 Commission v. Luxembourg (2003) ECR I-1553. Note: Some claim that this is a bit to simplistic interpretation of the judgement of the ECJ. They would say, that the judgement has caused new legal uncertainty – and that therefore restrictions against the export of waste based upon the uncertain imperfect between recovery and disposal continue to be very contestable.

patch for recovery<sup>125</sup>. Non hazardous – ‘green’ - waste which is shipped for a recovery operation is however not subject to any restrictions.

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The EU has also prohibited shipments of hazardous waste to non OECD countries<sup>126</sup>. In this case it is irrelevant whether the shipment is for recovery or for disposal. This legislation follows a decision of the Basel Convention, adopted in order to prevent waste shipments to developing countries, where there is often a complete lack of adequate waste management infrastructure. Whilst the EU has made these obligations binding it is still the fact that this BASEL decision is internationally not yet in force. There are frequent attempts to bypass this export ban<sup>127</sup>, for example by passing waste shipment containers through less monitored shipping routes or by selling end of life cars or ships to third countries as second-hand vehicles, to which product, rather than waste, legislation applies (product legislation containing no restrictions on movements).

A major revision of the Regulation is currently being discussed<sup>128</sup>. The ongoing revision contains some important improvements notably as regards the conditions determining when and under which conditions export for “sham recovery” (disposal falsely passed off as recovery) can be forbidden. The proposal (under discussion in the European Parliament and Council) so far foresees new (strengthened) criteria for authorities raising objections based on , among others, the ratio of recoverable and non-recoverable waste, non use of BAT despite having an IPPC permit in the installation of destination, lack of treatment in accordance with *legally binding environmental protection standards in relation to recovery operations, or legally binding recovery or recycling obligations established in Community legislation* and possibilities for raising objections in cases where the planned shipment or recovery would *not be in accordance with national laws and regulations in the country of dispatch relating to the recovery of waste, including where the planned shipment would be destined for recovery in a facility which has lower treatment standards for the particular waste stream than those of the country of dispatch, respecting the need to ensure the proper functioning of the internal market*<sup>129</sup>.

In addition it foresees a *new Article 3.5 which states that municipal solid waste must be managed as waste destined for disposal.*

Note that nuclear waste is not included under the waste shipment Directive, as a separate Directive exists for this (*EC 1992, p. 24*).

<sup>125</sup> Court of Justice, case C-228/00 Commission v. Germany (2003) ECR I-1439.

<sup>126</sup> Regulation 120/97 (1997) OJ L 22 p.14.

<sup>127</sup> A recent report by an EU enforcement pilot project IMPEL revealed significant rates of irregularities in containers opened at some EU ports, IMPEL report November 2004 . A conference held in sequence to this report reported back that recent research in the Netherlands suggests that 50% of all Dutch waste exports to other EU states are possibly illegal, as are over 70% of exports to non-OECD countries. See [http://europa.eu.int/comm/environment/impel/tfs\\_notified\\_waste.htm](http://europa.eu.int/comm/environment/impel/tfs_notified_waste.htm) for more information.

<sup>128</sup> Commission proposal for a regulation on the shipment of waste, COM (2003) 379.

<sup>129</sup> Draft Council Common Position on 2003/0139 (COD) 30 June 2004 - Article 13

#### IV.4.2.5 EU LEGISLATION ADDRESSING WASTE INSTALLATIONS – LIMITING EMISSIONS

EU legislation has laid down detailed provisions on landfills (*EC 1999*) and waste incinerators (*EC 2000b*), but not on installations which treat waste for example by composting or recycling. There is however a lack of provisions on the decommissioning of installations. For waste installations, general provisions of EU law also apply, such as Directive 85/337 on environment impact assessment for the construction of new waste installations (*EC 1985*), Directive 96/61 on integrated prevention and pollution control (*EC 1996c*) or Directive 96/82 on accident prevention (*EC 1996d*).

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##### IV.4.2.5.1 Directive 2000/76 on waste incinerators (including co-incineration)

For waste incinerators and co-incinerators, EU legislation has established relatively strict rules concerning emission limits into air and water. The objective was to ensure the maximum protection of human health and the environment (and at the same time, increase the acceptability of incinerators). The waste incineration Directive, adopted in 2000, replaces earlier Directives on municipal waste incinerators and hazardous waste incinerators, although a number of transition provisions continue to apply until the end of 2005. It deals with all installations that burn waste, also those which burn waste together with other fuels, such as cement kiln or power plants (co-incineration); the Directive does not apply to installations which incinerate radioactive waste, animal carcasses or wood waste.

The Directive fixes detailed conditions for the construction and operation of incinerators, including the minimum temperature of burning waste, emission limit values for air emissions of a number of pollutants - including dust, halogenated gases, NO<sub>x</sub>, SO<sub>x</sub>, TOC, CO and heavy metals as well as dioxins and furans. It also regulates discharges to the aquatic environment of waste water resulting from the cleaning of exhaust in accordance with the emission limit values on TSS, Hg, Heavy metals, dioxins and furans set in Annex IV. It makes a link to other relevant community legislation concerning the release of polluting substances into soil, surface water and ground water.

Larger waste incinerators are obliged to apply the best available technology, though this notion, as laid down in the waste incineration Directive is very vague. Generally, the emission standards are relatively strict, though Member States may even apply more stringent standards (for example in the Netherlands). Due to high potential emission releases particular attention is focused on measures that are planned to be taken in the case of malfunctioning of an installation. EU law provides that the total amount of malfunctioning of an installation may not exceed 60 hours per year. However, it is not clear how this provision is being enforced in Member States.

Furthermore, it must be remembered that small incinerators are not expressly addressed by EU legislation and also that the requirements of using the best available techniques only apply to the operation of large installations. Particular care is therefore needed to control the permits and conditions which are granted to smaller incinerators. This also applies to incinerators which are part of hospitals and to production installations which burn their own waste during the production process etc.

The previous **loopholes for co incineration** have been bigger and have been partially closed by the revised EU Waste Incineration Directive but it still has a number of shortcomings. The Directive does not offer solutions for some areas of potential ecodumping - for example, the threshold values of co-incineration are established in accordance with the waste disposal requirements for only some of the relevant parameters. In particular, limits for particulates (dust), nitrogen oxides and sulphur dioxide are much less stringent for co-incineration. Thus for co-incineration some emission limit values are less strict than for waste incinerators. Moreover, the EU Incineration Directive makes no mention of so called 'feedstock recycling' (burning waste materials for use as chemical as well as energetic input to a process) in installations such as blast furnaces. This is an especially serious omission because these processes are increasingly promoted as 'recycling' (in order to reach recycling targets), especially by the (end-of-life) car plastics industry.

#### IV.4.2.5.2 Directive 1999/31 on landfills

*Landfills for waste* are subject to detailed EU legislation as regards their construction and the permits for their operation. Landfills emit gases, in particular methane, which is a powerful greenhouse gas; liquids (eluates) from landfills may leach into the ground and groundwater, transporting heavy metals or other harmful substances. Technically speaking, landfills that totally protect against this effect do not exist and it is only possible to greatly reduce and possibly delay such effects. Hence the importance of ensuring that the sites for landfills are chosen with caution, and operated with care and that wastes are not accepted at landfills for which the landfill is not designed (liquid or hazardous wastes).

This Directive applies to all new and existing landfills which are in operation. Landfills are divided into landfills for hazardous waste, landfill for non hazardous waste and landfills for inert waste. All waste must be treated before disposal. Landfills for inert waste may not be used for other wastes, landfills for hazardous waste only for hazardous wastes. Liquid waste, hospital waste, complete tyres and explosive, corrosive or inflammable wastes may not be landfilled at all. The Directive also regulates in detail procedures for accepting wastes, provisions on measuring and control procedures and after care measures

For climate change reasons (methane emissions), the disposal of the biodegradable municipal waste fraction is to be progressively reduced – by 25% (by weight) until 2006, by 50% until 2010 and by 65% until 2016, compared with 1995 levels (with extensions in the timetables for some Member States that invoke the escape clause, claiming that they were dependent by over 80% on landfill in 1995 for municipal wastes). Some Member States have taken further action to restrict landfilling of biodegradable waste at the national level - Germany will apply an outright ban on all landfilling of untreated household waste (targeting in particular biodegradable wastes) in 2005 and Norway<sup>130</sup> will apply a similar ban, on landfilling of biodegradable wastes, by 2009<sup>131</sup>.

Landfills must be designed to prevent groundwater pollution as laid down in Directive 1980/68/EC (*see chapter IV.5.7.5*), which requires prevention of input of all hazardous substances into groundwater (black list) and limiting all other pollutants to prevent negative impacts on legitimate uses (e.g. drinking water abstractions).

<sup>130</sup> Norway, although not a Member State of the EU has signed a European Economic Area Agreement that requires, among other things that Norway adopts EU environmental legislation and participates in EU environmental programmes.

<sup>131</sup> In parallel, a recycling target for all types of waste - currently 75% by 2010 is to be increased to 80% by 2009 (source: Environment Daily 1845, 21/03/05).

#### IV.4.2.5.3 Directive 2000/59 on port reception facilities

In order to prevent the dumping of waste at sea, this Directive (*EC 2000c*) requires all EU ports to establish waste reception facilities for waste from ships. Ships that enter the port have to pay a fee for these facilities, irrespective of the actual use of the facility.

#### IV.4.2.5.4 Other waste treatment or recycling installations

So far under EU law, waste treatment ( or other recycling) or composting installations only have to comply with the general provisions of the waste framework Directive 75/442 and, where they exceed a certain capacity, with the requirements of the integrated pollution prevention and control Directive. Details of the permits and conditions of operation are therefore established by Member States, either by legislation or on a case-by-case basis for each installation separately. Permits and the conditions for operation should be publicly available on request. So far there are no EU requirements as to the regular publication of comparative data as regards the emissions, discharges and waste generation of such installations. As concerns specific legislation on biowaste, despite various political calls and even clear commitments from the Commission itself and the existence of a widely discussed draft document (*CEC 2001*) there is a current political reluctance within the European Commission to come forward with a proposal for this waste stream<sup>132</sup>.

### IV.4.2.6 EU LEGISLATION ADDRESSING SPECIFIC WASTE STREAMS

There are specific EU Directives on waste oils (*EC 1975*), sewage sludge (*EC 1986*), batteries (*EC 1991*), packaging and packaging waste (*EC 1994*), PCBs and PCTs (*EC 1996f*), waste from the titanium dioxide industry (*EC 1992b*), end of life vehicles (*EC 2000b*) and waste from electrical and electronic equipment (*EC 2002b*). Animal waste is regulated by a separate regulation (*EC 2002c*), in the context of agricultural policy.

#### IV.4.2.6.1 Separate collection; recycling targets

A key element of EU waste policy and achieving progress in moving collective EU waste management environmental performance level up the waste hierarchy from disposal to recycling is the establishment of minimum EU recycling targets and the associated and necessary separate collection. Whilst there is no general EU obligation to separate waste, in some Member States, - for example Denmark, Sweden, Austria the obligation exists at the National level.

However, specific EU waste stream legislation requires Member States to set up *separate collection* schemes for some waste streams – in particular for batteries, packaging waste, cars and electrical and electronic waste. For some of these waste streams dedicated **collection targets** are set which mean that a certain quantity of a given material must be (separately) collected, (eg. waste from electrical and electronic production, where Member States shall ensure that on average four kilograms of such waste per citizen and per year is collected)<sup>133</sup>. For other waste streams the col-

<sup>132</sup> See Letter to Commissioner Dimas from EEB, ASSURE, FEAD, RREUSE, ISWA and ECN, 7 April 2005

<sup>133</sup> The EEB recommended higher targets, estimating that 4kg was equivalent to less than 30% of the potential collection possible – for more information see EEB argumentation paper *Towards Waste-Free Electrical and Electronic Equipment*, March 2001.

lection objective is more generic<sup>134</sup> or is related to the quantities generated. For example, for batteries (new Directive proposal still under development) it is proposed (by the European Parliament) as a percentage of the national sales of batteries in each country (as the quantities of total battery consumption differs greatly between the old and new Member States).

104 *Recycling targets* are percentages which must be reached for the recycling of certain materials. For example, the Directive on packaging and packaging waste requires that by the end of 2008, 60 percent by weight of glass packaging material must be recycled. Such recycling targets exist, in EU law, by now for packaging waste, cars, electrical and electronic equipment; they were not established for batteries or sewage sludge, where they might be less appropriate.

There is some discussion at EU level, whether such recycling targets for specific sectors should not be replaced by *recycling targets for materials* - for example a recycling target for all glass, not only glass from packaging waste. The problem here is how such a recycling target can be organised (how the responsibilities for achieving the target attributed) and enforced, and whether the efforts in a specific sector would not be diluted by spreading the responsibility over several sectors. (e.g. packaging paper targets if changed to just paper targets would be probably cause a shift to non-packaging sources of paper and possibly reverse progress made on separate collection of packaging).

What is clear is that recycling targets usefully fix objectives for authorities and the public to attain and are capable of mobilising efforts and means. They require better organised collection of data, well developed collection systems and accompanying measures to persuade the public to participate in collecting.

#### IV.4.2.6.2 Producer responsibility, individual producer responsibility

On the basis of the Extended Producer Responsibility principle, producers should be responsible for all costs relating to the management of some waste streams (including collection)<sup>135</sup> – under EU law this is most notably the case for waste electrical and electronic equipment (WEEE) where extended producer responsibility is specified to the level of individual producer responsibility (*article 8 of Directive 2002/96 on WEEE*). **Individual financial producer responsibility** means that each individual producer is liable regarding the costs relating to the waste management activities which are required for its own-brand products when they become waste. It does not however relate to the organisation and logistics of take-back systems, which is a common misunderstanding. Individual responsibility does not prohibit co-operation among producers – but should maintain clear-cut ultimate responsibility by an identifiable individual producer. This means that companies will need to be informed about the waste from their own products and the costs corresponding to them.

<sup>134</sup> For example for waste oils it is simply stated in article 1 - Member States shall take the necessary measures to ensure that waste oils are collected and disposed of without causing any avoidable damage to man and the environment. Which can be interpreted as all waste oils available for collection.

<sup>135</sup> For example for waste oils it is simply stated in article 1 - Member States shall take the necessary measures to ensure that waste oils are collected and disposed of without causing any avoidable damage to man and the environment. Which can be interpreted as all waste oils available for collection.

The added value of the concept of individual responsibility, is that through the **internalisation of external costs, it creates a direct upstream effect which should contribute to designing for the environment**. In this way, every improvement in design will have a direct effect on the costs the producer should have to bear for potential treatment at the end of the product's life and eventually on the price consumers have to pay for the product.

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Improvements in terms of design which will have a direct effect on waste management costs can include improved ease of dismantling (requiring less time equipment), use of easy and positive post-waste value materials for recycling, the direct use of recycle for the manufacturing of new products (cheaper materials) – which will lead in turn to the use of less raw materials and saving in resources<sup>136</sup>.

An important caveat: individual financial responsibility only drives eco-innovation if a very demanding framework is set, thus preventing cost reduction strategies by ecodumping. This applies especially to recycling, collection and chemicals targets. Compromises on those points create incentives to reduce costs by choosing environmentally less performing waste management options that cause more damage to the environment..

The effectiveness of the individual producer responsibility in the WEEE directive will in the end depend greatly on the way the EU directive is transposed into National legislation. According to an industry platform (the Recycling Platform - created to follow-up on the producer responsibility requirements and their implementation) many member states are transposing the EU Directive into National legislation in such a way that producers are, in practice, pushed into systems of collective responsibility.

In contrast to individual financial responsibility, collective financial responsibility does not remunerate the innovating producer. Innovation in ecodesign by one producer will probably get diluted and lost in the collective financing model. Environmental improvement through a collective model may only be achieved via consensus, if the participants of a collective model agree on differentiated fees or if there is competition between individual and collective models. However, producers are unlikely to agree on an environmentally differentiated fee as there will always be some 'losers' that will have to pay a higher fee). So only allowing 'competition' between schemes drives innovation as it gives a company opportunities for choice and hence also for leaving a collective financial responsibility scheme, if it prefers to do so.

### IV.4.3 Voluntary Instruments

The use of non binding instruments in waste policy so far has been exceptional. In 1981, a **recommendation** on the recycling of paper was adopted<sup>137</sup>. However, this recommendation was almost completely ignored by professionals and also by administrations, and had virtually no impact. In a number of cases, manufacturing lobbies have tried in the past to persuade EU insti-

<sup>136</sup> Note: Improvements at the level of waste management costs can also be achieved by a shift in company policy by trying to sell services rather than products. This will also contribute to the idea of sustainable consumption, less use of resources, of hazardous substances, etc. as mentioned earlier. These concepts are not recognised by the Directive.

<sup>137</sup> Council Recommendation concerning the re-use of waste paper and the use of recycled paper (1981) OJ L 355 p.56.

tutions to back up industrial commitments by establishing **voluntary agreements**, mainly in order to escape legislative measures. So far they have been unsuccessful.

## IV.4.4 Standardisation (see also chapter V.4.5)

In the waste sector, few EU standards have been elaborated until now. The standardisation or New Approach<sup>138</sup> has only been adopted in the packaging waste sector. Following the New Approach the EU Directive on packaging and packaging waste, beyond the targets and mechanisms for waste collection and recycling, fixes general provisions in order to define common understanding of the composition and the reusable and recoverable (including recyclable) nature of packaging – these are called the **essential requirements**<sup>139</sup>. Promotion of prevention of packaging waste was also included. The Directive however only laid down very general guidelines and environmental objectives to be reached (in *Annex II of the Directive*), leaving it to industrial standardisation by CEN to elaborate European standards for prevention, reusables, recyclables and other aspects. The approach was a complete failure: though there was a detailed mandate given to CEN, the CEN standards were so poor that the Commission refused to accept them<sup>140</sup> and make them official by publication in the European Official Journal<sup>141</sup>. The EEB and the Consumer Standardisation watch dog ANEC followed these developments closely<sup>142</sup> and the EEB even provided alternative proposals<sup>143</sup>. Unfortunately this refusal did not stop the packaging standards drawn up by CEN: the only effect which the refusal had was that the presumption that packaging complying with the standards complied with the packaging Directive, did not come into effect and so Member States were left to find national solutions for enforcement. Pressure to find an EU solution (and certainly pressure from industry for formal adoption of the CEN standards) led to a second attempt to define the standards in CEN, with a 'new' mandate. The mandate however was not significantly different from the first (as a result even CEN acknowledged it could not achieve very different results from the first attempt). In February 2005 the Commission, after putting the standards quickly through Member State committees, performed a complete U-turn and published the standards (almost identical in content to the ones refused in 2000) in the Official Journal.

<sup>138</sup> The "New Approach" is a specific policy approach characterised by a clear separation of tasks and responsibilities between the European legislator and the European standards bodies (European Committee for Standardisation-CEN, European Committee for Electrotechnical Standardisation-CENELEC and European Telecommunication Standards Institute-ETSI) – for more information see chapter V.4.5 on Standardisation)

<sup>139</sup> The essential requirements only establish the results to be attained, without specifying the technical solutions to do so

<sup>140</sup> With the exception of EN 13432 "Requirements on packaging recoverable through composting and biodegradation" which was published in the OJ. Note that the standard on prevention was 'published' but with an exception for the essential requirements listed under Annex II, point 1 third indent, which means this standard gives no presumption of conformity for the Packaging Directive.

<sup>141</sup> See NGO reaction paper - *Success for EEB and ANEC rejection of packaging standards March 2001*

<sup>142</sup> See EEB position paper *CEN at work\_ How the requirements of the European Packaging and packaging waste Directive are by-passed by the CEN standards*, Sept 2000. All this was done from outside of the formal EU standardisation process as at that time the ECO EU level standardisation watch dog did not exist, only some German EEB members had, albeit restricted, participative access to the German national mirror body. See <http://www.eeb.org/activities/waste/packaging/Index.htm>

<sup>143</sup> See EEB's own alternative proposal for credible standards (to prove that they could have been set) - *EEB on Drafting effective packaging standards*, June 2001.

The standards (as they now stand) still fail to promote packaging prevention, reuse and recyclability<sup>144</sup>. Some illustrative examples are:

- ▶ they allow companies to use vacuous arguments on packaging presentation, such as “it has to look bigger than it is”, to justify voluminous and unnecessary packaging.
- ▶ they allow companies to produce so called ‘refill pouches’ (common for eg in laundry softeners) and claim that this is re-usable packaging while the pouch is in fact a one-way throwaway packet and no re-use in the true ‘multiple trip’ sense occurs. No minimum amount of ‘re-usage’ is defined in the standard.
- ▶ they allow packaging with any percentage of recyclable materials to be called ‘recyclable’. A packaging item with as much as 50% inert (non-burning) material, made of PVC or with unacceptably low energy content meets the standard on ‘energy recovery’.

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**The reasons for the failure of the Packaging standards are primarily due to imbalances in the interests of the parties defining the standard.** (for more information see chapter V.4.5 on Standardisation)

With the general trend of deregulation, simplification of legislation, making ‘better legislation’ etc. it cannot be excluded that standards in the waste sector will become more frequent in future. In theory, they could replace much of the existing legislation, in particular where technical details are regulated, such as acceptance criteria for wastes in landfills or incinerators, emission standards, recycling and recovery targets etc.

## IV.4.5 Taxes and charges

EU waste law does not, so far, provide for **economic instruments**, such as for taxes, charges or fees. Such measures are left to Member States, principally for reasons of subsidiarity: all attempts by the EU to introduce such measures at EU level have been rejected so far<sup>145</sup>.

Economic considerations strongly influence the behaviour of waste generators and holders. A landfill tax increases the price for landfill disposals and may make forms of waste recovery economically more attractive. A tax on metal can packaging makes this form of packaging less attractive for producers and consumers. The example of collection charges for municipal waste graduated according to the weight of waste already mentioned above is another one.

Public authorities have the possibility of influencing waste pricing, as they frequently operate waste treatment and/or disposal operations, organise the collection of municipal waste, and occasionally industrial waste. They also sometimes have the possibility of initiating or even

<sup>144</sup> For more details on how the standards fail to achieve the objectives of the packaging Directive see *ANEC-ECOS Position Paper on the revised Packaging Standards prepared under the second standardisation mandate M317*, January 2001 and EEB press release *Commission encourages increases in packaging waste!*, 22 February 2005

<sup>145</sup> See, for example, Article 15 of Directive 94/62 on packaging and packaging waste, which provides: "Acting on the basis of the relevant provisions of the Treaty, the Council adopts economic instruments to promote the implementation of the objectives set by this Directive". No such measures were yet adopted.

adopting legislative measures. Influencing the pricing of waste treatment and disposal activities via taxes, charges and fees also requires from public authorities, a clear long-term strategy on waste prevention and recycling objectives to be reached, which treatment and/or disposal installations are to be favoured and considerations on what materials should be financially favoured or disadvantaged.

Another good example of the use of taxes is a tax on plastic shopping bags introduced in the Republic of Ireland which has cut their use by more than 90% and raised millions of euros in revenue. 3.5 million euros of the revenue raised is to be spent on environmental projects. The tax of 15 cents per bag was introduced in March 2002, in an attempt to curb litter, among other objectives.

## IV.4.6 Waste Policy today and tomorrow - New approach in the 2005 Strategy?

(Note: This chapter is based on the state of discussion surrounding the elaboration of the EU Waste Strategy in June 2005.)

It is important to realise that waste management within the EU is traditionally marked by the **dispute on competence between Member States**, often also regions and local authorities, on the one hand, **and the EU** on the other hand. As Member States are responsible for constructing and operating waste installations, they can considerably influence waste flows. On the other hand the EU has the possibility of influencing waste management through the provisions on the free circulation of goods (and some wastes) which prevent Member States from closing their borders to waste imports or exports. This tension is a useful one for reinforcing such principles as the proximity principle.

The upcoming features of the Thematic Strategies generated by the 6EAP – in particular on waste prevention and recycling – which follow some new lines of thought, whilst not formalised (and so still subject to changes) are worth mentioning as they illustrate the political environment in which EU waste policy is evolving at this point in time.

The strongest evidence of changes in approach can be seen in the Commission's intentions for amending the waste Framework Directive (WFD). The Commission's proposals **for the WFD** revision involve at least 4 fundamental changes:

1. **undoing the current proxy approach to waste policy (waste hierarchy based on a quantitative approach to prevention > recycling > incineration > landfill)** by introducing a 'new' environmental objective and a lifecycle approach (as a new article 1 of the WFD). While nothing can be said against refining the quantity based approach in order to increase the environmental effectiveness of measures and ensure that environmental trade offs are better taken care off (e.g. climate versus water pollution), it would require a huge amount of data (e.g. chemical compositions of products and waste) and modelling capacity (e.g. predicting ecosystem responses). As this condition is not fulfilled and it is unlikely that Member States or industry

would be willing to invest in it, replacing the current waste volume approach with environmental and life-cycle assessments would

- i. offer no further progress in terms of real implementation (no clarification of Member States' responsibilities/obligations towards implementation for example)
- ii. potentially lead to increased environmental degradation and health impacts.

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Further the 'lifecycle thinking' would need to be carried out at local authority level and their establishing of waste management plans<sup>146</sup>, for which resources are currently not available. At the same time the attack on the credibility of the waste hierarchy gives increased justification for subsidiarity in waste policy - disengaging the EU from its responsibility of steering in waste policy (as Life Cycle approaches and analyses are more robust at the national and local level) good examples of the risks of this approach can be seen in the already existing debate on the packaging and packaging waste Directive.

According to the current WFD the primary objective should be to restrict the production of packaging waste. As an avoidance technique the industry tries to steer the discussion in the direction of merely reducing the lifecycle impacts of each packaging unit. In practice this leads to the distraction of political pressure to reduce quantities of packaging generated and attempts to establish tools such as Packaging Environmental Indicators (PEIs). National pilot projects (for eg in The Netherlands) have revealed difficulties with PEI's ability to deliver good EU steering ie steering to wards recycling/other forms of treatment (primarily due to lack of sufficient data, specific nature of different kinds of packaging and the high weight of the distribution (transport) factor in the lifecycle formula). In general the conclusion is that such indicators would be even less feasible at the EU level where data quality is an even greater challenge<sup>147</sup>.

**2. introduce approaches to establish end-of-waste (fitness for use) criteria that may restrict the scope and precautionary nature of waste policy.** As stressed above the scope of the waste definition is the key to ensuring that the impacts of waste generation are reduced and most importantly that there is a strong (regulative pressure) incentive to generate LESS waste. A key argument for reducing the scope of waste policies is the promotion of recycling. But the actors behind this argument would instead suggest that the main interested actors are co incinerators who want to burn more waste – as a cheap fuel alternative - without too much administrative control, or material streams that would like to shed the material cycling responsibilities – eg plastics wastes. The EEB has explained in a study why it thinks that this is not beneficial to the environment<sup>148</sup>.

<sup>146</sup> The life cycle approach risks asking Member States to go down something similar to the UK Best Practical Environmental Option (BPEO) route. This can lead to to endlessly complicated processes, requiring heavy resources (where citizens' organisations' interests often lose out ) leading in turn to serious governance deficits and the lifecycle analyses are in turn highly vulnerable to distorting boundary and assumptions. The UK environment ministry has recognised this (*Changes to Waste Management Decision Making Principles in Waste Strategy 2000*, DEFRA, Dec 2004) and are now abandoning the BPEO approach. Sources indicate that it will probably go back to applying the waste the hierarchy and **strengthening the hierarchy approach** and consultation practices.

<sup>147</sup> The Study on the Implementation of the Directive on Packaging and Packaging Waste 94/62/EC and options to strengthen prevention and reuse of packaging, February 2005 done for the European Commission concludes that the Dutch experience suggests that 'a simple PEI is too simple for any other application than as a product development tool for industry'

<sup>148</sup> See: EEB study: Ecodumping by Energy Recovery, 2001

**3. introducing pro-incineration approaches to the recovery definitions;** The Commission's proposed solution (at the time of writing) is to establish, through technical committees, a general definition of recovery based on the notion of substitution of resources, including a corrective mechanism to list specific processes in the disposal annex where it is considered that from an environmental perspective it is not appropriate to classify them as recovery (and so remove the recovery status maybe given to them by this very broad definition of recovery – eg landfill with biogas capture could be newly classified as recovery by this definition, and would need to be de-classified to disposal again). This correction mechanism may also make use of efficiency (eg energy efficiency) thresholds to clarify specific cases (ie waste incinerators). The proposal as it stands is unsatisfactory as, among other reasons:

- i. the wider interpretation of substitution of resources will mean that indirect power/heat generation achieved by energy in waste incinerators (substituting that in dedicated power generation installations) will classify all modern waste incinerators as recovery (effectively reversing ECJ ruling on the matter – for more details see below) and,
- ii. the use of efficiency thresholds is undefined, and if used only for energy efficiency, is insufficient to serve the multiple considerations for waste management (prevention hazardousness, separation of recyclables, proximity principle etc). The EEB has proposed an alternative approach for 'credible' recovery criteria.

There also serious concerns at this point in time on the part of the various stakeholders (ECOS and even industry interest groups) as to the democratic adequacy of the committees proposed to carry out such changes given the current poor track record of political decisions taken by the Commission using such committees<sup>149</sup>.

**4. delegating setting of recycling standards to the IPPC Directive instead of setting up a dedicated horizontal daughter Directive** (as has been done for landfill and incineration). The EEB does not believe that the IPPC is the right place to address such waste policy aspects, for several reasons. One such reason is that the implementation of the IPPC Directive seems to be of low quality leading to huge national and regional differences in environmental protection (see *chapter V.3.2*)<sup>150</sup>.

At the same time the Commission shows intentions of revoking (deleting) the Waste Oils Directive. Interestingly the Commission has failed to bring forward any environmental data justifying such a step and despite adequate evidence that the problem is not with the Waste Oils legislation but contradictory to EU economic policies (fuel tax exemptions encouraging the burning of waste oils).

<sup>149</sup> See EEB press release on case of ROHS technical adaptation committee - *Commission risks credibility in its implementation of electronic products safety rules*, 18 March 2005

<sup>150</sup> In July 2003 the Commission reported to Parliament and Council about the progress of IPPC implementation. The findings are alarming: huge delays, inadequate legal transposition and candidate countries facing serious capacity problems. It concludes that successful application of BAT by 2007 is essential to achieve more sustainable production patterns and therefore warns that if efforts of authorities are insufficient it might be necessary to establish a more harmonised approach, i.e. by setting EU wide emission limit values. But the Commission until now refrained from making any concrete proposals to revise or how to complement IPPC.

Similarly the Commission refuses to carry out its previous commitment to complement the waste legislative set-up with a much needed biowaste and composting Directive and prefers to consider product standards or IPPC run process standards as sufficient, leaving the legislative tools to Member States, with each one setting its own Strategies.

Both moves are difficult to place in an environmental impact approach, where there is the evidence for benefits of waste oil regeneration<sup>151</sup> and removing biodegradable waste from landfills and supplying clean compost to European Soils has widely documented benefits.

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To conclude, a change from the existing approach to waste policy with a strongly precautionary (especially in approach to scope) and 'quantity as an impact proxy' approach, making full use of leadership from the EU level and using binding legislative tools to one that uses a complex lifecycle impacts approach, delegating leadership to the national level and preferring standards and non-legislative tools all point in the direction of a Commission that is deregulating on waste policy<sup>152</sup>.

## IV.4.7 Implementation and decision-making

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### IV.4.7.1 RESPONSIBILITIES

Implementation of EU legislative measures is, in principle, the obligation of Member States (*Article 175(4) of the Treaty*). In the area of waste management, this basic principle must not be forgotten, as EU waste legislation presupposes the adoption of national, regional or local legislative measures in order to be fully operational. It is furthermore most important that waste legislation is properly applied at all administrative levels, that the necessary monitoring and control measures are taken by the public authorities and that in particular the illegal shipment, illegal incineration, illegal operation of landfills and illegal disposal of wastes is exposed and stopped. In all Member States, the application of existing legislative provisions by waste operators and other persons continues to be a serious problem<sup>153</sup>. Generally, it must be said that in all Member States bad implementation, application and enforcement is one of the biggest problems for environmental law in general and for waste management law in particular.

<sup>151</sup> See EEB submission to Commission consultation on the revoking of the EEB Waste Oils Directive - EEB response to Waste Oils consultation Feb 2005

<sup>152</sup> For a good and still relevant overview of the challenges waste policy faces see EEB publication – Towards a Low waste Europe – Ten Key Issues, April 2001.

<sup>153</sup> For example the Commission has recently applied to the European Court, because there are more than 8.800 unauthorised landfills in operation in France (see Commission Press release 13 July 2004 - IP/04/895 ). Though this practice is banned since more than a decade, unauthorised landfills operate not only in France, but in all Member States. A similar application is made against Italy, where nearly 5000 unauthorised landfills operate (Commission Press Release - IP/04/930 of 15/07/2004).

### IV.4.7.2 COMPLAINTS

Individual persons and environmental organisations are entitled to complain to the European Commission, whenever they are of the opinion that waste legislation is not being applied correctly. Complaints to the European Commission on the infringement of EU waste legislation are frequent. These complaints mainly concern the siting of waste incinerators or landfills, (some recent examples are *case 156/03 December 2004 Commission versus Italy*, *case 420/02 Nov 2004 Commission versus Greece*, *398/02 June 2004 Commission versus Spain* etc) absence of environmental impact assessments, the operation of unauthorised landfills, and, more generally, the emissions or discharges from waste installations beyond the authorised limits.

### IV.4.7.3 USE OF WASTE MANAGEMENT PLANS

As mentioned before, waste management plans have to be sent to the European Commission with the intention being to progressively achieve an EU-wide waste management overview and coordination. However, until now, the Commission has hardly ever looked at the quality or completeness of waste management plans or tried to integrate different plans into a greater planning structure, or looked at the details of national implementation reports. Waste management plans have a powerful potential for compelling Member States to implement and achieve waste management objectives. The current questionnaire that Member States have for reporting purposes<sup>154</sup> is probably too open and unspecific for these purposes – creating a tendency for Member States to just list what legislation has been adopted. Ideally the questionnaire should be revised and this should be done with proper stakeholder involvement and scrutiny through the use of a formal Waste Steering group (as exists for Air Policy containing both representatives of national competent authorities and stakeholders) and dedicated working groups.

### IV.4.7.4 THE IMPORTANCE OF WORKING LOCALLY

The main challenges for local authorities is to set up waste management strategies and plans that are coherent with national waste management plans. Unfortunately, EU local authorities are generally not equipped to meet these obligations, at a time when strong political pressure for further devolution (of powers from EU level to national level) and more flexibility on waste policies is on the increase. There is an urgent need to fill the gap between those in charge of proposing new legislation, and those with the responsibility for implementing it. As it is often the local authorities that bear the burden of implementing the requirements of EU waste legislation, the need to improve their involvement in the preparation of legislation and to strengthen the support given for the exchange of best practices among them is vital. Working locally to achieve general environmental goals is thus critical for citizens' environmental organisations.

<sup>154</sup> The Questionnaires are laid down in **Commission Decision 94/741/EC** and **Commission Decision 97/622/EC** concerning questionnaires for Member States reports on the implementation of certain Directives in the waste sector. Available online at Commission Waste Policy website <http://europa.eu.int/comm/environment/waste/legislation/d.htm>

## IV.4.8 Links and crossovers with other EU legislation

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### IV.4.8.1 LINKS WITH ENVIRONMENTAL MEDIA POLICIES:

Below are some of the links and crossovers from waste legislation to legislation on other environmental media and public participation requirements. The list is not exhaustive but gives some examples of how, in particular other policies, can reinforce and even strengthen the ambition level of waste policy. This in turn will assist us in achieving the necessary levels of pollutant reductions and reaching the objectives of clean air, water etc.

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#### IV.4.8.1.1 Links to Water Quality

Landfills - see chapter IV.4.2.5.2. Annex I of the landfill Directive establishes requirements for effluent (leachate) collection and treatment and foresees standards on leachate measurement methodologies. The leachates collected must be 'treated to the appropriate standard required for discharge'. Applicable standards can be found in Annex IX of the Water Framework Directive 2000/60/EC and further national and EU wide standards have to be developed following the procedures of the Water Framework Directive as outlined in *chapter IV.5.2.1*. Overall landfill leachates must prevent pollution of soil, groundwater and surface water. Landfills must be designed to prevent groundwater pollution as laid down in Directive 1980/68/EC (see *chapter IV.5.7.5*), which requires prevention of input of all hazardous substances into groundwater (black list) and limiting all other pollutants to prevent negative impacts on legitimate uses (e.g. drinking water abstractions).

Waste Incineration - see *chapter IV.4.2.5.1*. The regulation of incinerator effluents in the waste incineration Directive has a direct link to other **relevant community legislation** as it concerns the release of polluting substances into soil, surface water and ground water. This includes the 1980 Groundwater Directive which can be used to establish the level of environmental protection associated with emissions into water .

Waste oils – the waste oils Directive requires that Member States ensure the prohibition of any discharge of waste oils into internal surface waters, ground water, coastal waters and drainage systems.

On this point it is important to note that the concept of 'good water status' in the Water Framework Directive (see *chapter IV.5*) is defined as good ecological as well as physio-chemical status. This means that emissions to water bodies cannot result in a decline in the ecological health of the water system and must allow the achievement of a close to natural state.

#### IV.4.8.1.2 Links to Air Quality

*Waste Incineration* – see *chapter IV.4.2.5.1*. The Directive on waste incinerators fixes emission limits for some air pollutants. These apply together with the general quality provisions on air specified by the Air Quality framework legislation and daughter Directives on specific pollutants (eg on SO<sub>x</sub>, Particulate Matter (dust) and NO<sub>x</sub>) (see chapter IV.3.3).

*Landfills* – see chapter IV.4.2.5.2. The Directive on landfilling of waste sets emission controls on methane (a powerful global warming potential gas) and requires collection of methane (*Annex I paragraph 4 of the landfill Directive* – all methane must be collected and used or flared). Furthermore biodegradable waste targets are set for diversion of methane producing materials from deposition in the landfill – a 25% reduction (in weight) by 2006, 50% by 2010 and 65% by 2016, compared with 1995 levels (with extensions in the timetables for some Member States that make use of the escape clause that they were dependant by over 80% on landfill in 1995 for municipal wastes).

Waste oils – the waste oils Directive requires that Member States ensure the prohibition of: *any processing of waste oils causing air pollution which exceeds the level prescribed by existing provisions* (i.e. community waste incineration and presumably also therefore air quality legislation)

#### IV.4.8.1.3 Links to Soil Protection

Waste oils – the waste oils Directive requires that Member States ensure the prohibition of deposit and/or discharge of waste oils harmful to the soil.

ECJ Case 1/03 Van de Walle<sup>155</sup> on contaminated soils: This case ruled that where fuel is leaked from a petrol station, the leaked fuel and the contaminated soil are both waste, even before the soil is excavated. Under certain conditions, also the petrol company may be obliged to remove the contaminated soil. This has important implications for enforcement of the polluter pays principle in contaminated soils clean-up situations.

### IV.4.8.2 LINKS WITH INFORMATION AND PARTICIPATION LEGISLATION (see chapter V.2)

National, regional and local waste policies are heavily influenced by grassroots action (for example in the UK the UK government recognises that due to public resistance large increases in dedicated incineration capacities is not a viable political option, leading them to more actively explore not only recycling strategies but also other incineration strategies such as co incineration). In this context the right of access to information is crucial. Applications for a permit and the content of the permit granted, including all conditions on the operation and emissions of an installation, must be made available to the public according to the EU Directive 2003/35 providing for public participation<sup>156</sup>. Administrations are not entitled to restrict access to any data on emissions into the air, the soil or the water that stem from waste installations or the shipment, handling or treatment of wastes.

Citizens and environmental organisations have a right to comment on **applications for a permit, on applications for the construction** or a significant change of a waste installation. Where they might be affected by a waste installation, they are entitled to participate in any environment impact assessment which the administration undertakes. Furthermore, they are entitled to par-

<sup>155</sup> Judgment of 7 September 2004.

<sup>156</sup> Directive 2003/35 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337 and 96/61 (2003) OJ L 156 p.17.

ticipate in the making of waste management plans which often determines the siting of waste installations<sup>157</sup>.

Another useful source of information is the recent establishment of a European Pollutant Emission Register (EPER)<sup>158</sup>. The first set of emissions data, covering the year 2001, was published in February 2004. The second set, covering 2004, will be reported in 2006. EPER contains data on the main pollutant emissions to air and water reported by around 10,000 large and medium-sized industrial facilities (including waste incinerators and waste disposals sites) in the 15 EU Member States and Norway. Fifty pollutants are covered. All reported emissions data are publicly accessible through the EPER website, which is hosted by the European Environment Agency<sup>159</sup> in Copenhagen. The website also provides descriptions of each of the substances, their uses, major emission sources and their impacts on human health and the environment.

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### IV.4.8.3 TECHNIQUES USED BY INSTALLATIONS

Larger waste installations (notably Incineration, Mechanical biological Treatment (MBT), waste storage, some metal and chemical liquid and sludge physio-chemical treatments, immobilising ashes, preparing fuel from liquid waste, preparing waste as fuel) also come under the Directive on integrated prevention and pollution control (IPPC) and must thus comply with best available techniques BAT (see chapter V.3.2). This technique is normally laid down in individual permits and Best Available Technique Reference documents (BREFs) are established at EU level (see chapter on IPPC for more information.) Note that BAT should be used to achieve waste management objectives and emission levels stricter than the specific emission levels set in Waste Directives.

The environmental performance benchmarks contained in the BREFs are not always satisfactory (for information on this see chapter on IPPC V.3.2.3). In the case of the final draft document for the Waste Incineration BREF from May 2005 the BAT associated emission levels were clearly under ambitious. The EEB, which participates in the BREF development process, therefore demanded (in November 2004) that so called 'split views' be recorded in the final text of the Waste Incineration BREF. This means the EEB is not convinced that the emission levels corresponding with BAT in the revised BREF were indeed a good representation of EU BAT. The split views, if maintained in the final BREF document, will show alternative, more ambitious benchmarks that authorities emitting

<sup>157</sup> See Annex I of Directive 2001/42 on the environment assessment of the effects of certain plans and programmes on the environment (2001) for specific criteria OJ L 197 p.30. Annex I includes among other elements ..

(f) the likely significant effects (these effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;

(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;

(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;

<sup>158</sup> 2000/479/EC: Commission Decision of 17 July 2000 on the implementation of a European pollutant emission register (EPER) according to Article 15 of Council Directive 96/61/EC concerning integrated pollution prevention and control (IPPC) (notified under document number C(2000) 2004)

<sup>159</sup> See <http://eper.cec.eu.int/eper/>

Waste Incinerator permits at the local level can require. The split views demanded by the EEB concerned the emission level ranges for releases to air and water and are in the range of 1/2 to 1/3 of the presented ranges. More specifically concerning emissions to air of total dust (as NO<sub>2</sub>), Mercury (Hg) and its compounds, Cadmium (Cd) and dioxins and furans (PCDD/F), and emissions to water of Hg; Cd; Arsenium (As); Tin (Sb); Vanadium (V) and PCDD/F.

#### IV.4.8.4 NATURE PROTECTION

The siting of a waste installation, for example an incinerator or a landfill, within a designated European habitat (*see chapter IV.2*), is additionally subject to assessment under Directives on the protection of birds and the protection of habitats<sup>160</sup>. Only exceptionally do such installations not constitute a significant disturbance to habitats, due to emissions, traffic increase etc.

### IV.4.9 Tips for ECO action (Environmental Citizens' Organisation)

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There are a number of ways in which environmental organisations at local, regional, national and European level could consider taking action.

(1) **Use the complaints procedures (*see chapter VI.2*)**. Make sure that the existing provisions of EU waste law and of national, regional and local waste management law are actually applied. EU law is binding and, in the case of diverging rules, prevails over national, regional or local provisions. Where this is contested, the case should be submitted to the EU Court of Justice as the final arbitrator..

This applies to all areas of waste legislation that were mentioned above: the classification of materials as waste and not as used products, by-products, secondary raw materials etc.; the push towards a policy and concrete measures to increase and improve waste prevention and waste recycling and to get away from landfilling; the development and putting into practice separate collection and recycling of waste fractions; the achievement of recycling targets, where such targets have been fixed etc

(2) There is an accumulating body of **experience on waste prevention** in the EU Community. Good cases and examples on waste prevention initiatives can be found in for example the Belgian (Flemish region) Municipal waste authorities (OVAM) who have a report on their waste prevention planning and indicators<sup>161</sup>, the Spanish (Catalan regional) authorities who recently established the Catalan Foundation for Waste Prevention and Responsible Consumption<sup>162</sup>, the Waste Prevention project in Vienna (Austria)<sup>163</sup>, the EEA EU Topic Centre on waste has a database with examples and

<sup>160</sup> Under COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

<sup>161</sup> See OVAM publication Flemish National Waste prevention indicators (September 2002), translation to English available from EEB

<sup>162</sup> See [www.pangea.org/cepa](http://www.pangea.org/cepa)

<sup>163</sup> See [www.abfallvermeidungwien.at](http://www.abfallvermeidungwien.at)

case studies<sup>164</sup> and the OECD has recently developed waste prevention indicator documents. ACCRR (the Association of Cities and Regions for Recycling-Brussels<sup>165</sup>) is undertaking a study on prevention experiences in local authorities and ICLEI<sup>166</sup> has many useful local authority links. The EEB has also drafted a working document with proposals on EU level Waste Prevention tools and indicators which includes some information on experiences with waste prevention<sup>167</sup>.

(3) Bear in mind that **material recycling** is frequently - and for the great majority of waste fractions - preferable to the burning of waste, even where energy is recovered from the burning process. An incinerator has a lifetime of more than thirty years and requires a constant flow of waste to keep it going. This might stifle innovative techniques for waste recycling. **Do a close analysis of real costs.** Incineration projects are also frequently favoured for subsidies – direct and indirect which reduces their real costs. Investigation of their real costs compared to alternative options – such as flexible combinations of mechanical-biological treatment, composting and source separation for recycling can be very revealing<sup>168</sup>. Do local authorities pay enough attention to the different waste streams? Is collection and sale of economic valuable waste items ensured, in order to lessen the public authorities' burden for waste management? Is composting promoted, with educational and informative campaigns, accompanying that organisation?

(4) **Insist on having waste management plans** being developed and regularly updated which contain details as to the precise quantities of waste that is generated, the places where this waste goes for treatment or disposal and, if any possible, targets and time-plans which indicate how and when the present waste management will be improved. Insist in timely and wide-spread public consultation on the draft plans. The looser such plans are, the higher the risk for the individual citizen to see the bill for waste collection go up at regular intervals. Furthermore insist on these plans being published and made public!

Local authorities must set up waste management strategies and plans that are coherent with national waste management plans. As a basis for this, data on waste amounts and composition have to be gathered and an inventory of existing waste management facilities, including the various dumpsites, has to be drawn up. Based on the future integrated waste management strategy envisaged by the national authorities and in line with European policy, implementation steps to meet aims need to be well planned and effectively executed. This could include the closure of dumpsites, the setting up of waste collection systems with separate waste stream collection and sorting, the building of recycling and treatment facilities, and the building of landfills according to EU standards. A clear division of physical and financial responsibilities between the actors (levels of administrations, producers and importers of waste and packaging, citizens) is essential. A robust financing strategy needs to be included into the planning process.

<sup>164</sup> The long established European database on waste: Wastebase <http://waste.eionet.eu.int/wastebase> has opened a new section counting a total of 90 European waste prevention success stories. Cases from 14 European countries from Norway in the North to Greece in the South, to Belgium in the West and Bulgaria in the East are represented in the new section (European Topic Centre newsletter April 2004)

<sup>165</sup> See <http://www.acrr.org/resourcities/dematerialisation/dematerialisation.htm>

<sup>166</sup> See [http://www3.iclei.org/implementationguide/humansettlements/provision\\_services\\_infra.htm](http://www3.iclei.org/implementationguide/humansettlements/provision_services_infra.htm)

<sup>167</sup> See EEB Working Document: Elaboration of EEB PROPOSALS FOR CONCRETE EU LEVEL WASTE PREVENTION MEASURES TO BE COMMITTED TO IN THE THEMATIC STRATEGY ON WASTE PREVENTION AND RECYCLING, April 2004

<sup>168</sup> For examples of incineration being subsidised see FOE Report on perverse subsidies for incineration in the UK - *Money to burn*, December 2003.

An option as yet unexplored is for ECOs to make use of EU waste management **reporting questionnaires**, either directly – providing alternative implementation information to the EU level authorities or on the basis of ECO developed questionnaires. This has been done with great success (good impacts on National and EU level responsible authorities) by EEB member organisations in the case of implementation challenges of the Water Framework Directive and will be repeated now with the Air Quality daughter Directives.

(5) All **waste installations** are required to have a **permit for operation**. The permit and the conditions of operation laid down in it, including emission limits, and discharges into water must be laid down in the permit. Even where waste installations exceptionally do not come under the requirements of EU legislation on integrated pollution prevention and control, they should apply the best available techniques for operation, in order to minimise damage to citizens' health and to the environment<sup>169</sup>. Where more precise provisions for the operation of installations are laid down in national or regional legislation, insist in comparing the content of the permit with this legislation. It should not be forgotten that EU waste incineration legislation also applies to those installations which principally generate products and only exceptionally use waste for incineration. Note that all provisions of the waste **framework** directive apply to waste incinerators of all sizes.

(6) **Waste installations normally have to report to the permitting authority** on the operation of the installation, the quantity of waste handled, malfunctioning and other incidents. The administration has the obligation to control that permits are complied with and to report its findings. All such reports are accessible to the public under **EU law on access to information on the environment**<sup>170</sup>. Ask to see these reports; compare the data with the data in the permit, in the waste management plan and with other available data. Clarify contradictions between different data and draw the attention of the administration to their obligation to provide information that is accurate, usable and useful.

(7) Be particularly attentive to **the generation of hazardous waste**. Where does it come from and where does it go? What do industrial installations do with their waste: do they separate waste fractions and have them collected separately? Do the figures in waste management plans for hazardous waste correlate with local or regional data? How do waste generators bear their producer responsibility; are there strategies to prevent waste generation, to recycle waste instead of burning or landfilling it?

(8) **Investigate waste shipments**: is waste, as a rule, disposed of as closely as possible to its point of generation? Are the shipment provisions respected? Is there any control of shipments by local or other public authorities? Is waste - for example electronic goods, end of life cars or ships, including pleasure boats – being sold as second hand goods and thereby circumventing waste legislation? A recent enforcement pilot project in a sample of EU Member States carried out under the European Union Network for the Implementation and Enforcement of Environmental

<sup>169</sup> This approach has been successfully demanded by the Dutch EEB member Stichting Natuur en Milieu with reference to Dutch waste incineration installation permits

<sup>170</sup> Under Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information – see <http://europa.eu.int/comm/environment/aarhus/index.htm> for more information.

Law (IMPEL) which is an informal Network of the environmental authorities of the Member States revealed high levels of illegal shipments including many so called 'recyclable' wastes destined for Asia<sup>171</sup>.

(9) A lot of **waste disappears** from public attention; it is dumped at sea or in less accessible places on land, or, more and more frequently, **(co) incinerated** by private persons or companies, mixed with other items and sold as products etc. Try to get clarity on the quantities of wastes that are generated, by installation, by geographical entity or by other criteria. Clarify the differences in data on waste management and ask public bodies, such as prosecutors, administrations or the police to investigate the matter. Public opinion is always a strong ally in clearing up abuses and misuses.

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**(10) Voluntary agreements are rarely suitable for the waste sector** which is marked by the situation that, as a rule, everybody wants to get rid of waste; this is the decisive difference to products which people want to acquire. Furthermore, there are a large number of competing small and medium sized companies in waste management and the fact that waste collection and disposal is also a public interest issue (for reasons of public health) means that it must be ensured that waste is regularly collected and disposed of at carefully selected places or installations. In view of the very different administrative waste management structures in Member States and the difficulties of monitoring the application of non binding instruments, it does not make sense to adopt such instruments (certainly not at EU level). Frequently professionals in the waste sector and often also producers of products prefer the level playing field that is reached by legislative instruments rather than having to deal with free-riders. The OECD has published a report investigating voluntary approaches, reaching the conclusion that they rarely offer much beyond 'business as usual' (OECD 2003).

(11) **Keep a close eye on standards** – at National level and through the European watchdog ECOS. Examples of EU standards that are currently under development that could have potentially important implications for national waste policy implementation are : the EU Solid Recovered Fuel standard (sets – environmentally insufficient - limit values on waste for use as fuels), packaging standards (insufficient to shift producers from business as usual except for compostability standard), methodology for characterisation of leaching from landfills, characterisation waste etc...More detailed information can be found at the ECOS website [www.ecostandard.org/](http://www.ecostandard.org/)

## IV.4.10 The Court of Justice on important waste cases

The waste sector is the environmental sector where most Court judgments were made : between 1976 and end 2003, the Court of Justice handed out 91 judgments, 27 of them alone in 2002/2003. This number is high, because EU waste management legislation is often poorly applied. On the other hand, there is the double conflict between Member States and the EU over

<sup>171</sup> A recent report by an EU enforcement pilot project IMPEL revealed significant rates of irregularities in containers opened at some EU ports, IMPEL report November 2004 . A conference held in sequence to this report reported back that recent research in the Netherlands suggests that 50% of all Dutch waste exports to other EU states are possibly illegal, as are over 70% of exports to non-OECD countries. See [http://europa.eu.int/comm/environment/impel/tfs\\_notified\\_waste.htm](http://europa.eu.int/comm/environment/impel/tfs_notified_waste.htm) for more information.

responsibility for waste management (Member States in general wish to keep the waste ‘at home’ and manage it the way they think fit, the EU prefers that it be subject more to free movement considerations) and between economic operators and EU legislature. Economic operators try to escape waste legislation by trying to have their materials not classified as wastes but as products, by having them classified as non hazardous or by not having restricting shipment rules applied.

Relevant judgments of the Court of Justice include the following:

*(Details on these cases can be found by using the ‘Case Law’ and ‘Search Form’ links at the European Court of Justice website: <http://curia.eu.int/index.htm>)*

### Shipment of waste

C-118/86 Nertsfoeder<sup>172</sup>. A Member State may not completely prohibit the shipment of waste which is to be recovered in another Member State.

C-203/96 Dusseldorp<sup>173</sup>. Exporting waste for recovery is regulated by Reg.259/93. The proximity principle does not apply.

C-209/98 FEAD<sup>174</sup>. Under certain conditions, Member States may provide for local monopolies for waste recovery.

C-228/00 Commission v.Germany<sup>175</sup>. The shipment of waste to a cement kiln for use as a fuel is a shipment for recovery.

C-458/00 Commission v.Luxembourg<sup>176</sup>. The shipment of municipal waste to a waste incinerator normally constitutes a shipment for disposal, even where energy is recovered.

### Packaging

C-302/86 Commission v.Denmark<sup>177</sup>. A Member State may set up a take back system for packaging, even if this makes it more difficult for one-way packaging from other Member States to accede to the market.

C-380/87 Enichem v.Cinisello-Balsamo<sup>178</sup>. Local bans of certain types of packaging are not prohibited.

C-463/01 Commission v.Germany<sup>179</sup>. Deposit and return systems are compatible with the free circulation of goods, but may not discriminate against imports.

### Notion of waste

C-418/97 Arco Chemie<sup>180</sup>.

C-9/00 Palin<sup>181</sup>. Remaining stones in a stone quarry are wastes.

<sup>172</sup> (1987) ECR I-3883.

<sup>173</sup> (1998) ECR I-4075.

<sup>174</sup> (2000) ECR I-3473

<sup>175</sup> (2003) ECR I-1439

<sup>176</sup> (2003) ECR I-1553.

<sup>177</sup> (1988) ECR I-4607.

<sup>178</sup> (1989) ECR I-2491.

<sup>179</sup> (2000) ECR I-4475.

<sup>180</sup> (2000) ECR I-3473.

<sup>181</sup> (2002) ECR I-3533.

C-444/00 Mayer Parry<sup>182</sup>. Production residues for consumer products are wastes.

C-1/03 Van de Walle<sup>183</sup>. Contaminated land is waste, even before excavation.

### Recoverable material - recovery

C-359/88 Zanetti<sup>184</sup>. Also recoverable and reusable waste comes under the notion of waste.

C-422/92 Commission v. Germany<sup>185</sup>. Recoverable materials are not secondary raw materials, but wastes to which EC law applies.

C-304/94 Tombesi<sup>186</sup>. Recoverable items are waste.

C-102/97 Commission v. Germany<sup>187</sup>. Directive 75/439 requires that priority be given to the recycling of waste oils.

C-6/00 ASA Austria<sup>188</sup>. The disposal of waste in old mines may, under certain conditions, constitute a recovery operation.

### Waste and EC Treaty

C-2/90 Commission v. Belgium<sup>189</sup>. Wastes are covered by Articles 28 and 29 EC Treaty. The principle of rectification at source allows import bans.

C-155/91 Commission v. Council<sup>190</sup>. Article 175 EC Treaty is the correct legal basis for Directive 75/442

C-209/94P Buralux<sup>191</sup>. Individuals cannot tackle in court Regulation 259/93.

C-102/97 Commission v. Germany<sup>192</sup>. Directive 75/439 requires that priority be given to the recycling of waste oils.

### Removal of waste - soil contamination

C-365/97 Commission v. Italy<sup>193</sup>. The closing of an illegal landfill is not sufficient. The waste must also be removed.

C-1/03 Van de Walle<sup>194</sup>. Where fuel leaks from a petrol station, the leaked fuel and the contaminated soil are both "waste, even before the soil is excavated. Under certain conditions, the petrol company may also be obliged to remove the contaminated soil.

<sup>182</sup> (2003) ECR I-6163.

<sup>183</sup> Judgment of 14 December 2004.

<sup>184</sup> (1990) ECR I-1509.

<sup>185</sup> (1995) ECR I-1097.

<sup>186</sup> (1997) ECR I-3561.

<sup>187</sup> (1999) ECR I-5051.

<sup>188</sup> (2002) ECR I-1961.

<sup>189</sup> (1992) ECR I-4431.

<sup>190</sup> (1993) ECR I-939.

<sup>191</sup> (1996) ECR I-615

<sup>192</sup> (1999) ECR I-5051

<sup>193</sup> (1999) ECR I-7773.

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