

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**

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building on the EEB position paper **A Thematic vision : Towards Waste prevention and
steering of waste streams** of December 2003

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1 Introduction

The EEB, in its position paper of December 2003, submitted to the European Commission as a contribution to the stakeholder consultation, on the Towards paper on the Thematic Strategy on Waste Prevention and Recycling laid down some key proposals for the Strategy as pertaining to concrete Community action on waste prevention.

This working document develops some of the most important elements of these proposals in more detail in order to serve as a basis for discussion and debate at the expert meeting to be held by the Commission on Waste Prevention, in the context of the continued and more focused stakeholder consultation.

From the full list of key proposals of the EEB that were contained in ANNEX 1 of the December 2003 position paper only the following are elaborated here:

- Quantitative Waste Prevention Targets
- Accompanying the progress towards the targets in a legal framework
- Accompanying the progress towards the targets via an EU level waste prevention Working group
- Reporting on Waste Prevention
- Waste Prevention Indicators

The measures and proposals contained herein are neither exhaustive nor should be taken as a definitive 'position' of the EEB. They serve merely as a basis for illustration of what should be possible in the context of the Thematic Strategy.

2 The importance of quantitative objectives on waste prevention

2.1 Why targets?

The EEB believes the most important element in the future Thematic Strategy is to set up clear targets defining the strategy's orientating objectives. These targets define the waste prevention vision by defining the dimension of the challenge and form the benchmark against which to design effective policies. Development of priority implementation tools should enable Member States to work systematically towards achieving these targets and so avoid the mistakes committed in the Fifth Environmental Action Programme, whereby targets were set with no resources put into developing and stimulating the tools to achieve them.

7 important reasons for having targets:

- 1) To avoid increasing volumes of waste generation, the associated environmental impacts and costs of waste management
- 2) To implement the 6th Environmental Action Plan (**6th EAP**) **mandate**. Article 8 of the 6th EAP requires : *Developing and implementing measures on waste prevention and management by,inter alia: developing a set of quantitative and qualitative reduction targets covering all relevant waste, to be achieved at Community level by 2010.The Commission is invited to prepare a proposal for such targets by 2002.* The 6EAP is a Decision of Council and Parliament and so should be binding to those institutions.
- 3) To create political will to fully engage all stakeholders – sending a strong political message that prevention is the top priority is vital in order to engage national and local governments and industry
- 4) To provide a framework for industry – by supplying them with a clear common goal towards which they must strive to contribute, through Cleaner Production, within EMAS etc
- 5) To form a policy framework for other vital prevention ‘tools’ - such as IPPC, IPP , Eco-design, LCA, Ecolabel. It is extremely complicated to set EU level benchmarks, minimum requirements or criteria with these tools, if the political objectives are not clear.
- 6) To co-ordinate, harmonise and support different MS activities towards waste prevention – especially in areas such as product policy where harmonisation can play a significant role and action can be taken at the EU level. But also in areas such as PAYT and economic tools whereby isolated application of measures may just result in ‘eco-dumping’.
- 7) To provide a global lead under the commitments of the Johannesburg *10 year framework on Sustainable Consumption and Production*

The EEB called for the Strategy to lay down **“an EU waste prevention vision defined by a binding target for reduction in waste production of 20% by 2010 taking 2000 as base year. The target of 20% reduction should be interpreted as 20% reduction in quantity of MSW arisings, 20% reduction in Industrial waste arisings and a 20% reduction in hazardous waste arisings, for each Member State individually. “**

This paper will not elaborate on the issue of whether 20% by 2010 is a relevant level as a political waste prevention demand, but instead focus on the principal of setting targets and the necessary supporting measures to support the achievements of the targets set.

2.2 A target for each of three waste categories

Why three categories?

It is useful to follow the different major waste streams separately in order to ensure that equal efforts are made on the different waste categories with distinctly different natures and solutions(eg industrial and household - the benefits of Cleaner Production can be immediate for industrial waste prevention but less immediate for household waste). It is important that the differentiation of the targets ensure that the prevention effort is being made across the board, by all sectors and sources, and is not restricted to a few high-volume, easily-reduced waste streams. It is therefore important to distinguish between Industrial and Household and commercial waste (that is, municipal solid waste - MSW).

Qualitative prevention, due to its high environmental relevance also merits a separate focus

The EEB proposes that the waste reduction targets laid down should cover three different waste

categories:

- **Hazardous waste (qualitative waste prevention).** Here it may also be necessary to distinguish between Industrial hazardous waste and Household and local authority hazardous waste streams (batteries, medical appliances, hospital waste, paints). Industrial hazardous waste has probably got more reliable data available but this may mean more easily demonstrable results on industrial hazardous waste initially but this should not distract from the objective on meeting the targets and reporting on both categories
- **Industrial waste,** possibly with high-volume sectors such as extraction, agriculture¹ and construction/demolition counted apart with separate targets.
- **Household waste and similar** (as classified in the waste statistics regulation) including household waste and waste similar to household (small commercial enterprise etc) collected at as MSW

2.3 How to set the quantitative targets?

In order to be workable, a quantitative target must :

- **Have the same reference point for all the Member States,** we suggest the reference value (the value of 100 in Figure 1) could correspond to the mean annual production per inhabitant, for the period 1995-2000
- **Foresee a gradual approach, in four steps, to the target-**we suggest the four steps (slowing increase, stabilisation, decrease, approach of target) be defined by a curve designating a margin of tolerance of deviance from a straight target approximation line (see Table 1). This curve foresees that the straight target approximation line be progressively approached over the timeline set (see Figure 1). This is a methodology adapted from that used to steer progress towards air quality targets –see chapter 3.1.

TABLE 1 – Four steps towards a target

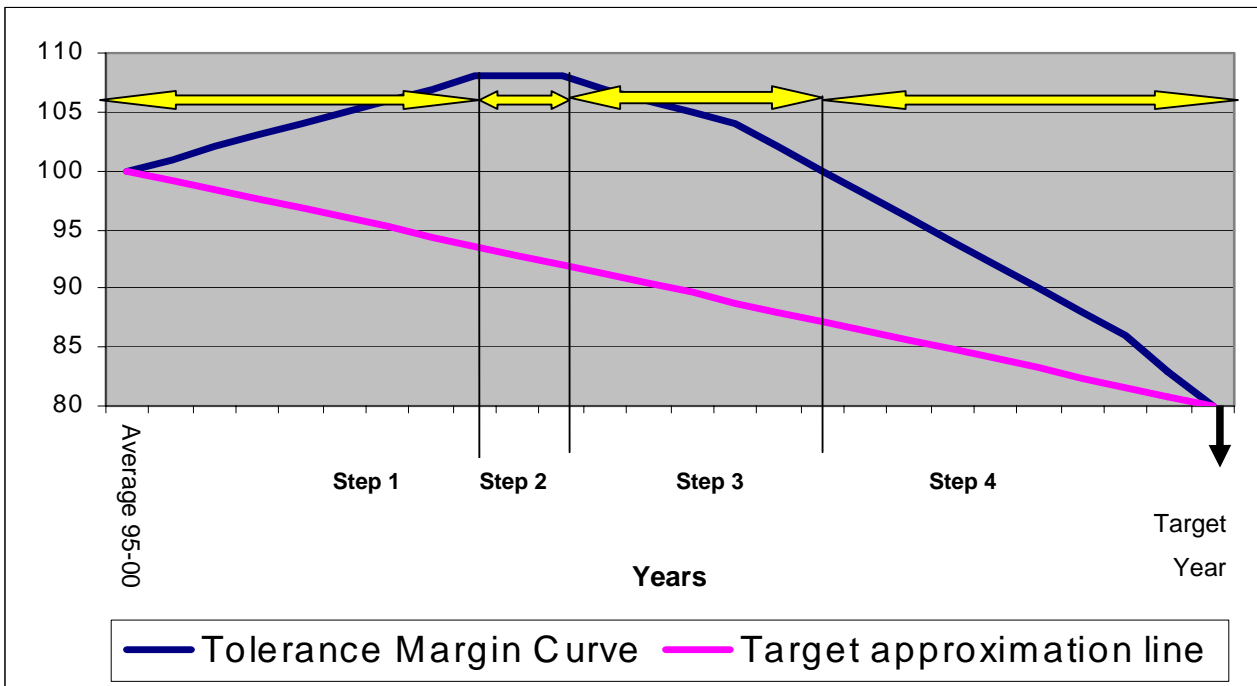
STAGE	OBJECTIVE
Step 1 (if the increase is 0% go straight to step 2)	Slow the increase so that production is below the forecast, extrapolated from the period 1980-2000 (or 1995-2000 for States whose economies have been significantly restructured)
Step 2	Stabilise quantities
Step 3	Reduce the production of waste to the level of the calculated index of 100 (reference period 1995-2000)

¹ In this case only agricultural waste which either leaves the farm and/or is subject to special rules (e.g. pesticide packaging) should be counted

Step 4	Attain the Community reduction targets
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Figure 1 : Example of relationship between waste prevention targets and tolerance margin curve.

(Index 100 = annual waste production 1995-2000)



It should be clearly understood that the political objective to aim for is the target line (straight line), and the margin of tolerance (curve) represents the upper limit which Member States must remain below. Because of the particularity of prevention measures, which may not have immediate effect (for example, buying more durable goods will not impact immediately on waste production, but in the longer term) authorities must therefore plan ahead to keep within the margin of tolerance, and in the event of failure to keep within the margin, must provide a detailed plan explaining the measures they are taking and their expected effects, including a prediction of when they expect to come back within the margin..

2.3.1 How should the index of 100 be calculated?

We would suggest:

a) for household waste:

Index 100 = average total weight of household waste 1995-2000 / average total population 1995-2000

b) for industrial waste (per sector):

Index 100 = A/C or A/B or even (A/B) / C

A = mean total weight of waste of sector 1995-2000

B = mean total output (revenue or units produced) of sector 1995-2000

C = mean total population 1995 – 2000

There are several models on how industrial waste prevention indicators and targets could be set. A commonly held opinion is that industrial waste targets need to be sensitive to sectoral specificity's

and related more to output of a sector than to more absolute benchmarks such as per/capita.

Whilst the EEB has proposed that the EU level target setting be done at the total industrial waste generation level², it may indeed be preferable for Member States, after translation of the EU targets to National level to further translate these targets on a sectoral basis and per output – as is illustrated here. It is however important to have information on absolute levels of waste generation to ensure that its function as an indicator of absolute impacts be maintained.

By also introducing the parameter “population” into the index there is an additional driver to set an absolute cap on waste generation, this may be a stronger driver for waste efficiency than absolute indices. This may be relevant for delocalisation phenomena (for eg to new Member States) with lower salarial costs and lower environmental standards (within the EU environmental legislation derogation period). However there is suggestion that this drives towards shifting industry out of the EU in which case there would then need to be increased accounting for hidden flows (waste burdens associated with imports).

c) for hazardous waste:

Index 100 = mean production 1995-2000.

An absolute measurement, without the per/capita, is justified in this case because of the high priority given to preventing hazardous waste within a short time-span.

2.3.2 Insufficient data for targets?

The Commission claims that whilst it recognises “*the potential usefulness of setting a political ambition in relation to waste prevention*” ... “*there continues to be significant uncertainty about the scope for waste prevention in different sectors of the economy and about the effectiveness of different instruments to achieve waste prevention*” and so it intends only to debate “*the fundamental analysis that can justify waste prevention targets and, in particular, on the link between waste prevention, resource management and Integrated Product Policy*” to “*obtain more clarity with which measures such targets can be achieved and whether such measures would be supported by the respective legislators*”.

The basic assumptions would appear to be :

- 1) that there are not enough good examples to show concrete links between measures such as setting targets, reporting etc and waste prevention results to justify the Commission taking the same actions
- 2) the lack of statistical data on waste generation and the lack of statistical data on the trends of waste generation mean that the quantitative implications of such objectives cannot be calculated and therefore cannot be proposed.

Concerning the existence of good examples with results the EEB would like to refer to some specific cases, to be found in Annex 3.

The best practices in sizeable European municipalities³ (over 150 000 inhabitants, with a dense urban area) already show that it is possible to reach a sustained reduction of absolute quantities of approximately 10% in 10 years. The town of Basel in Switzerland has seen a reduction:

- of about 15% of residual MSW between 1997 and 2002
- of about 7% in total household waste generation between 1997 and 2002 (sorted waste for

² Aggregating all industrial sectors with maybe the exception of heavyweights such as extraction, construction and demolition and agriculture

³ Prevention de la production des dechets – Exemples de politiques locales menees en Europe - 2004– ADEME

recycling + residual waste).

However, Basel began its prevention policy in 1993, which demonstrates the importance of a reasonable time-scale for these policies to have an effect.

Concerning the necessity of statistical data. The relevant differences that the Waste Statistics Regulation⁴ (WSR) will require in terms of waste generation data appear to be mostly related to a greater segregation of economic (non-household – or ‘other’ wastes) into the various specific economic sectors. As concerns the data available on the national level it is, according to some experts, not probable that the new WSR will actually require and/or result in significant changes in data collection and reporting on the national level, as the Regulation was also negotiated to reflect a commonality of practices, as is logic. For example, in most Member States the segregation of data by economic sector was already being carried out.

Frequently the data do exist, and are simply not collected in one place (ie at EU level). The Member States are obliged to have considerable amounts of data in order to establish the management plans of article 7 of the Waste Framework Directive. They do not always transfer the data promptly to the relevant services. For example, on the ETCW⁵ site many French data are missing for 2000, whereas the same data have apparently been published in France by IFEN and ADEME.

However, most importantly, it is unwise to assume that full knowledge of quantities generated and trends must be known before political action is taken. As waste prevention can be taken with so many different measures at different points and covers so many different sectors it would be a mammoth exercise, much disputed, to simulate prevention potential of each measure and source on an EU level. What is required is to recognise existing information on waste trends⁶ and set the political objective towards neutralising and then reversing that trend and to set a date for this achievement. What this means in numbers will come later as a part of the political negotiation process with each member state coming forward with the necessary data. It lacks coherence to argue that insufficient data exist to fix targets, while on the other hand using these same ‘insufficient’ data to produce relatively precise predictions of the trends in waste generation in the EU⁷.

Even if they are imperfect, the data produced by EUROSTAT and by the ETCW⁸ already give us the household and similar waste per inhabitant, industrial waste and hazardous waste. The major problem is more the delay in transmission of data by the States (so that for certain States and for certain waste categories, the most recent data on the ETCW site only date from before 1995).

3 Accompanying the progress towards targets - the support of a legal framework

3.1 Legal precedents in Air and Water quality

Various priority waste stream and waste management directives issued by the EU since the Waste

⁴ REGULATION (EC) No 2150/2002 of 25 November 2002 on waste statistics

⁵ European Topic Centre on Waste and material flows

⁶ It is agreed in the Thematic Strategy (annex II) that data are sufficient to infer trends in waste generation as a whole.

⁷ e.g. page 9 of the Thematic Strategy: “It is generally agreed that, in the absence of specific policy measures, waste generation in the EU is likely to increase for the foreseeable future. The OECD estimates that MSW generation in the OECD region will increase by 43% from 1995 to 2020, reaching 640 kg per capita.” The statement “it is generally agreed”, contrasted with the affirmation of the insufficiency of data in Annex II.

⁸ European Topic Centre on Waste

Framework Directive of 1975 mention repeatedly the high priority of prevention in waste management. However, few or no legal and political actions have appeared to materialise this top priority. In other environmental domains, the Commission has proposed and the Council and Parliament have adopted a more coherent approach by fixing ambitious targets and including the means to achieve them. Two examples are:

- The water framework directive (directive 2000/60/EC)⁹ which sets the target of reaching good water quality, notably by prohibiting the presence of certain substances (Art. 4 to 16 particularly, and annex X listing the “priority dangerous substances”) and by making “management plans” (with scenarios for 2015) allowing the achievement of the target.
- The framework directive 96/62/EC on air quality seeks to achieve long-term air quality objectives¹⁰. The first air quality daughter directive (99/30/EC) establishes a framework to achieve this by setting up obligations for Member States to prepare action plans showing how they will achieve the air quality policy objectives (limit values on specific pollutants) by 2005 and 2010 including reporting and assessment mechanisms evaluating the progress and the triggering of further obligations on exceeding a given *margin of tolerance*. The margin of tolerance is expressed as a percentage of the limit value and differs for each pollutant.

These examples demonstrate how it is possible to organise the steering of Community progress towards a certain environmental quality objectives, by fixing targets and creating a legally binding framework and monitoring process. This methodology could be transferred to a Community waste prevention strategy.

Thus the EEB proposes that the setting of waste prevention targets should be supported by legally binding implementing measures (in a regulation or alternatively a waste prevention directive) setting up a formal accompanying process, on Member State progress towards their national transposition of the EU established targets. The directive should ensure that Member States will have to provide regular monitoring reports on their progress towards the targets, measured against a pre-defined ‘margin of tolerance’ incorporating the four steps of slowing increase, stabilisation, decrease, approach of target (see chapter 2.3). If Member States exceed the specified margins of tolerance within defined monitoring years, they should be required to provide comprehensive action plans showing concretely how the use of specific waste prevention policy instruments, of their choice (for example: pay-as-you-throw or sectoral Cleaner Production measures) will bring them within the ‘margin of tolerance’. The effectiveness of these plans should be subject to regular Commission and Parliamentary scrutiny.

The key elements of the legal text could be:

Objectives: to achieve the objectives laid down in the 6EAP and the Waste Prevention Thematic Strategy

Definitions : clearly establish the distinction between “prevention” and “recycling” or reduction of disposal and clarify the definition of waste prevention. It is important to clarify the differences in definition of prevention for two reasons, among others:

- The different interpretations of the Member States (for example some would probably still consider home composting to be prevention and some recycling)
- The confusion between minimisation (reduction in the widest sense including prevention and

⁹ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy

¹⁰ „... To avoid prevent or reduce harmful effects on human health and the environment as a whole, and to maintain ambient air quality where it is good and improve it in other cases

recycling and reduced disposal) and prevention only (see Annex 4)

Targets : %age target and date. For example 20% by 2010 (compared to the average annual production 1995-2000) of MSW and industrial waste considered separately. In parallel, a reduction of 20% for hazardous waste by 2010 and of 50% by 2020.

National Waste Prevention Plans, that will form part of the waste management plans required under article 7 of the Waste Framework Directive, will translate these targets into national quantities. These plans will specify the types, quantities and origins of waste to avoid. They will favour an integrated approach, particularly concerning the relations between resource consumption and waste production.

Deadlines and Phasing : the States take the necessary measures to reach the targets. When a State's production is above the margin of tolerance, the State has crossed the 'alert threshold' and must:

- Inform the Commission and EU level Waste Steering Group of the measures it intends to take to improve the situation as quickly as possible
- Make a list of the territories and/or the sectors of activity where the tolerance margin is exceeded
- Inform the population of the situation and of the measures envisaged to correct it
- In the zones or sectors where the tolerance margin is exceeded, a corrective programme will be drawn up in order to bring production within the tolerance margin. This programme must be transmitted promptly to the Commission and to the EU level Waste Steering Group.

Accompaniment: the Commission and the EU level Waste Steering Group should be assisted by a EU level Waste Prevention Working Group (including Member States, stakeholders etc.). This Group's task is to follow the progress of prevention in the Member States, to identify and share best practices and to provide assistance in the form of further studies, analysis etc that can assist progress. Each year, the Commission publishes a summary report of global progress.

Follow-up : the Member States send to the Commission an annual report using the relevant waste prevention indicators

Consumer information: Consumers must be helped to exercise their free choice. Measures include an improvement of information on products (cf. the French government's plan to create an experimental standard on product life-span), and setting up instruments improving the attractiveness of sustainable products and services (particularly in cost terms). Linking the billing of the waste collection service to the quantities collected (e.g. PAYT) should be encouraged.

4 Accompanying the progress towards targets - the support of an EU level working group on waste prevention

In order to assist the Commission, Member States and stakeholders to reach the quantitative targets fixed by the EU and at the national level, the Commission should set up a Working Group (WG) on waste prevention which the Member States and stakeholders should attend regularly. This WG could follow a clear work-plan and rules of procedure - balanced participation of stakeholders etc

Interalia the waste prevention WG can:

- Follow the progress of prevention in the Member States and report to an EU level Waste

Steering Group

- Identify the financial, regulatory, technical and social levers in favour of prevention, particularly by using best existing practices
- Provide assistance in the form of further studies, analysis, expertise etc that can assist progress at the national level. Further development of indicators etc
- Identify priority avoidance streams. This prioritisation can be defined with several criteria: hazardous nature, easily avoidable waste (for which alternatives already exist). It can flag particular avoidable waste-streams (supermarkets bags, advertising in letterboxes etc.), and waste streams having a noticeable effect on quantities (e.g. home composting).
- Share the experiences and even the task of raising awareness of waste prevention
- Stimulate the continued work on EU legislation on priority waste streams and prevention
- Contribute to the strengthening /establishment of Product Eco-design legislation and producer responsibility, Re-use legislation, the use of Cleaner Production benchmarking in permitting and funding, Pay –As-You-Throw etc
- In conjunction with the TSSUNR¹¹, identify which priority resource material stream taxes would have the most impact and which environmentally harmful subsidies need to be abolished.
- Make the link to consumption policy. Highlight the alternative modes of producing and consuming available for waste prevention - shifts from products to services, from services to system changes etc.

5 A common EU approach towards reporting on waste prevention

“What gets measured gets done...”. The Waste Framework Directive¹² requires all Member States to prepare waste management plans in order to implement the main objectives of the Directive. The first priority of the Directive is to *encourage the prevention or reduction of waste production and its harmfulness*. However, the enforcement of the Framework Directive (article 7), and indeed daughter directives, have failed to provide specific waste prevention reporting and action requisites, limiting the focus merely to lower priority waste management options like recovery and disposal operations.

In May 2003 the EC published general guidelines, prepared by the European Topic Centre on Waste and Material Flows (ETC/WMF), on how to prepare waste management plans¹³.

The EEB proposed that the Thematic Strategy foresee that the Commission should **“work with the European Topic Centre on Waste and Material Flows to develop a detailed mandatory use template for waste prevention reporting by Member States, [in the waste management plan guidelines]. The template should be, revisable every three years in order to allow it to evolve with increasing availability of waste prevention mechanisms.”**

Initially the EEB foresaw that *the ETC guidelines be revisited in order to incorporate specifications*

¹¹ TSSUNR – Thematic Strategy on the Sustainable Use and Management of Natural Resources

¹² Council Directive 75/442/EEC of 15 July 1975 amended by Directive 91/156/EEC of 18 March 1991.

¹³ “Preparing a Waste Management Plan”, ETC/WMF May 2003

for reporting on concrete (ie quantified) national targets, timelines and implementation measures regarding waste prevention. Further analysis of the nature and the usage of the guidelines reveal that it would probably be more useful, whilst certainly adapting the guidelines (or establishing new ones) on waste prevention planning, to also **set up specific, detailed, reporting obligations on waste prevention**, as has been done for other waste management and waste stream legislation. These obligations can be done **separately** or **within the general waste prevention legal framework** proposed here.

This will require in turn that standardised EU waste prevention reporting **indicators** will need to be established and used in this reporting.

6 Waste Prevention Indicators

6.1 Why waste prevention indicators ?

The EEB proposed to “ **develop harmonised EU indicators (by specific regulation) on waste prevention evaluation and reporting, with differentiation for the requirements of MSW and Industrial waste streams. These indicators are necessary ingredients of the waste prevention reporting.**”

Waste prevention can be analysed by quantitative data indicators, such as reduced arisings / generation, but it can also be analysed by other indirect indicators. Indicators are also needed that allow the EU to measure Member States' progress also along the lines of :

- identifying their best waste prevention policy options (e.g. avoidance potential indicators)
- enter into a process of continuous improvement in resources invested as well as results (e.g. indicators of response and stakeholder participation).

Whatever indicators are used it should be clear that they should always be scrutinised for

- 1) any factors that result in change of figures that are not always directly linked to waste prevention activities only - for example the *'shifting phenomena'* such as the greater segregation between household and municipal commercial wastes that can occur as a side – effect of separate collection of recyclables
- 2) collection efficiencies. As waste generation is often estimated from 'waste collected', trends in quantities collected may reflect the efficiency or maturity of the collection rather than the actual generation. This may be problem for some specific waste streams such as household hazardous waste, where separate collection is less developed.

6.2 The OECD work on waste prevention indicators

The OECD edited in 2000 a “*Strategic waste prevention : OECD Reference manual*” and followed this in 2001 with “*Strategic waste prevention : essential points of an OECD reference manual*”. In this second paper can be found reflections and proposals for setting up waste prevention indicators, drawn up in collaboration with the OECD expert group on the minimisation of waste, these proposals are to be found in Appendix 3 of the 2001 report under *Performance evaluation in waste prevention*. In addition, the OECD has held several workshops to try and determine performance and prevention indicators in the PSR model (pressure, state, response).

6.3 PROPOSAL FOR WASTE PREVENTION INDICATORS BY CATEGORY OF WASTE

The EEB has drawn up some proposals based on a simplified version of the OECD experience among other sources of inspiration. The indicators have been chosen on the following criteria :

- Their interest for the EC in measuring and comparing progress accomplished by different member states (ie all member states should be able to use them)
- They should cover all in the different areas of action of waste prevention – strict avoidance via legislation and eco-labels, resources invested, communication etc
- They should enable different diagnosis between the three waste categories – household, industrial and hazardous

The proposals which follow are sometimes inspired by other work done, in which case a footnote specifies the origin, and are sometimes the fruit of our own reflection.

6.3.1 PRESSURE INDICATORS

Including both indicators of

- 1) Generation, and
- 2) Avoidance potential

TITLE	OBJECTIVE(S)	UNIT	CALCULATION METHOD
TARGET INDICATOR <i>Direct pressure indicator</i> <i>MSW</i> ¹⁴	Measure the evolution in quantities of municipal solid waste	kg/head/yr	Weight of MSW per capita
<i>Decoupling indicator</i> <i>"MSW"</i> ¹⁵	Estimate whether consumption tends towards the decoupling sought by the EU	Index ¹⁶	Annual weight divided by consumption expenditure of households and administrations ¹⁷ divided by the population
TARGET INDICATOR <i>Direct pressure indicator</i> <i>"industrial waste"</i> ¹⁸	Measure evolution of industrial waste quantities	kg/head/yr	Weight of industrial waste / population
TARGET INDICATOR <i>Decoupling indicator for industrial waste</i>	Measure whether the prevention policies are leading to the GNP/waste decoupling sought by the EC (6 th EAP)	Index	For each sector, per year: weight of waste / units or revenue of sector, divided by the population
TARGET INDICATOR	Measure the evolution of	kg/year	Weight of hazardous waste

¹⁴ Source OECD

¹⁵ Inspired by OECD (municipal waste per unit of Private Final Consumption)

¹⁶ See chapter 2.3.1

¹⁷ Data available on the EUROSTAT site

¹⁸ Source OECD

<i>Direct pressure indicator "hazardous waste"¹⁹</i>	hazardous waste quantities		produced ²⁰
<i>Avoidance potential indicator for MSW²¹</i>	Measure in certain representative areas (rural, urban...) waste which could "easily" be avoided if the citizens were well aware	Number of units (weighted)	See main text. Characterisation of certain avoidable products in the waste bin.
<i>Avoidance potential indicator for industrial waste²²</i>	Measure for a representative panel of volunteer firms from different sectors of activity, waste avoided by use of alternative measures ²³	Number of units of product or substance avoided	Measure the tons avoided by the panel, and estimate economies, and extrapolate to the national market (cf. Czech experience)
<i>Resource savings – reduced abiotic material flows</i>	Traditional material flows accounting – mineral, metals etc	Tons	See EEB paper on thematic strategy on natural resources ²⁴
<i>Resource savings – reduced "BAD quality = non certified" biotic material flows</i>	Material accounting distinguishing between certified biotic flows and non-certified biotic flows – wood etc	Tons	See EEB paper on thematic strategy on natural resources
<i>Dematerialisation of consumption indicator (could also be considered a response indicator)</i>	Estimate evolution in purchasing behaviour	EURO	Total spent on private consumption per capita divided by total spent on sustainable products or services (list of "sustainable purchases" to be made with NGOs & Member States)

6.3.1.1 *Indicator of avoidance potential (characterisation of avoidable waste)*

The household waste characterisation tool MODECOM (mode de caractérisation des ordures ménagères) was developed in France and used in Europe under the name of REMECOM - invented by the ADEME in France and used in Europe under the name of REMECOM . This methodology sought to identify the different waste products in the waste bin and identify how much could have been recycled.

This tool could be adapted in order to measure in the residual waste bin of households and firms, instead of materials present, products constituting avoidable waste ie re-usability etc instead of 'recyclability' . It would be possible to draw up a consensual list of products whose presence in the bin could be « easily » reduced, as long as prevention policies offered a simple alternative.

¹⁹ Source OECD, EEA...

²⁰ It will be necessary to watch carefully how Member States estimate the quantity of hazardous waste produces by households, and harmonise accounting methods if appropriate

²¹ Inspired by the MODECOM method (mode de caractérisation des ordures ménagères) invented by the ADEME in France and used in Europe under the name of REMECOM .

²² Inspired by a Czech experience (mentioned by P. Kazmierczyk, EEA)

²³ In the context of its national plan for the prevention of the production of waste, France has decided to work with a network of volunteer firms to measure this avoidance potential.

²⁴ Initial EEB proposals for a European strategy on sustainable use and management of natural resources, November 2003 - http://www.eeb.org/activities/env_action_programmes/main.htm

Some examples :

- o Wearable clothing
- o Biowaste easily compostable at home
- o Drinks containers of less than 50 cl capacity
- o Unopened food
- o Supermarket bags
- o Construction material in good condition, even in very small quantities
- o Batteries, medicines and their packaging, other hazardous waste
- o Toys in good condition
- o Recent books
- o Single-use products (if multiple use equivalents exist), including nappies

Each unit found marks one point, except “batteries, medicines and their packaging, other hazardous waste” (2 points). A higher total means a less effective prevention policy. The results could help local authorities to reorient their prevention policy. The indicator measures the evolution of results over time in a homogenous sector. It is thus a qualitative indicator.

6.3.2 INDICATORS OF STATE (ie environmental status)

Most experts consider that indicators of state are difficult to use for waste prevention (eg. OECD, which considers them “costly or difficult to undertake”). They generally involve complex extrapolations allowing an estimation of the (indirect) emissions and impacts avoided thanks to the prevention policy. We focus mainly therefore on pressure and response indicators.

6.3.3 RESPONSE INDICATORS

These indicators point to resources invested as well as results (e.g. indicators of response and stakeholder participation).

TITLE	OBJECTIVE(S)	UNIT	EVALUATION METHOD
<i>Political will indicator</i> ²⁵	Estimate political commitment of States	YES / NO YES / NO %	<ul style="list-style-type: none"> - Plans established with deadlines and reporting obligations? - Targets fixed, backed up by legal and regulatory measures? - Quantitative and qualitative projections of waste trends (waste prevention) - Prohibition of hazardous substances - % of the population whose local authorities have translated national targets into prevention plans - % of the population covered by a PAYT system

²⁵ Inspired by OECD

<i>Indicator of resources mobilised</i>	Measure the means mobilised by the Member States	EURO	Total annual sum per head dedicated to prevention (budgets, salaries... for State and local authority interventions) Level of activity of reporting to public on waste prevention
<i>Indicator of the dynamic of the policy</i>	Measure the number of stakeholders concerned by the prevention programmes	%	% of firms participating in prevention programmes % of administrations participating
<i>Indicator of the breadth of the policy</i>	Estimate the capacity of States to generate interventions covering the globality of the "production-consumption" chain	%	- % of firms having committed to an eco-design programme - % of sustainable purchases / total public purchases - % of shops or businesses having run, in that year, a campaign in favour of sustainable consumption - % of inhabitants practising home composting
<i>Indicator of stakeholder participation</i>	Estimate (by surveys) the modifications in stakeholder behaviour	%	See following paragraph

6.3.3.1 Indicator of stakeholder participation

Awareness-raising is an essential preliminary to concrete involvement of stakeholders ; it can be measured by the means indicators already mentioned. It allows citizens to understand the issues making them more likely to support them. However, experience shows that where the environment is concerned, there is (unfortunately) no automatic link between support of an issue and actually changing behaviour. Since it is only this behaviour change that can reduce waste arisings and toxicity of arisings, it seems to us important that Member States should be able to measure the participation of stakeholders.

Although awareness and support are not sufficient, they are necessary factors for behaviour change, so we suggest that surveys on representative samples be used to indicate their state. Some ideas on possible questions follow:

Awareness-raising:

- % knowing the waste prevention policy
- % able to state the global and local prevention issues

Support: % stating they are prepared to change their

- production practices (for companies mainly)
- buying habits
- use habits
- behaviour in order to reduce waste collected (e.g. home composting)

Participation: % mentioning having modified their

- production practices (for companies mainly)
- their consumption habits
- their throwing-away habits

Satisfaction:

- % satisfied with their new practices
- % wishing for prevention policies to be strengthened
- Identification of difficulties met (half-open questions with multiple choice)

7 Annexes

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<http://www.oecd.org/dataoecd/7/47/24993546.pdf>
<http://www.oecd.org/dataoecd/41/57/4704311.pdf>
[http://www.olis.oecd.org/olis/2002doc.nsf/LinkTo/sq-sd\(2002\)1-final](http://www.olis.oecd.org/olis/2002doc.nsf/LinkTo/sq-sd(2002)1-final)

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²⁶ Aussi accessible via Internet (format pdf.) à l'adresse suivante : <http://www.oecd.org/dataoecd/12/1/1954291.pdf>

Annex 2

Empty

Annex 3

Some results of local waste prevention policies (data from : Genty, B. Comment développer en France des politiques locales de prévention ?, Mémoire pour le D.E.S.S "Espace et Milieux", Université Paris VII, Septembre 2003.) :

Municipality	Population	Evolution of household waste generation	Start of local prevention effort
Basel (Switzerland)	180.000 hab .	1997 : 367 kg/head/yr 2002 : 343 kg/head/yr	1993/94
Oupeye (Belgium)	23.000 hab.	- 61% (1998-1999)	1997
Mechelen District (Belgium)	240.000 hab.	1998 : 513 kg/head/yr 2002 : 491 kg/ head/yr	1997
Havelange (Belgium)	4.500 hab.	1998 : 279 kg/ head/yr 1999 : 192 kg/ head/yr	1998
Dilbeek (Belgium)	37.500 hab.	- 52 -65 % (1994-1996) 1998 : 294 kg/ head/yr of household waste	1994
Munich (and surrounding rural district) (Germany)	1.557.938 hab.	1990 : 420 kg/ head/yr 2001 : 436 kg/ head/yr (close to stabilisation)	1991

Annex 4

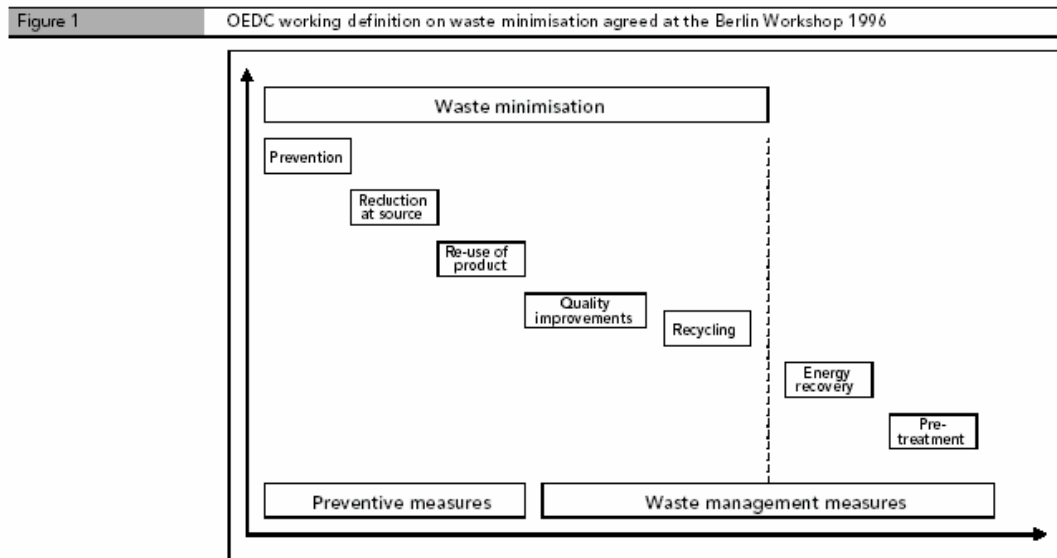
The OECD has developed a solid conceptual framework on waste prevention, which the EEB supports, as described below²⁷.

*Waste prevention encompasses activities that reduce both the **quantity** and the **hazardous character** of wastes. These activities are applicable on a life-cycle basis.*

The consensus understanding of waste prevention achieved by OECD countries (OECD 1998) can be broken down into three types of actions:

- **Strict Avoidance:** *Strict Avoidance involves the complete prevention of waste generation by virtual elimination of hazardous substances or by reducing material or energy intensity in production, consumption, and distribution;*
- **Reduction at Source:** *Reduction at source involves minimising use of toxic or harmful substances and/or minimising material or energy consumption; and*
- **Product Re-use:** *Product re-use involves the multiple use of a product in its original form, for its original purpose or for an alternative, with or without reconditioning.*²⁸

Figure: Illustration of definition from O.C.D.E.²⁹



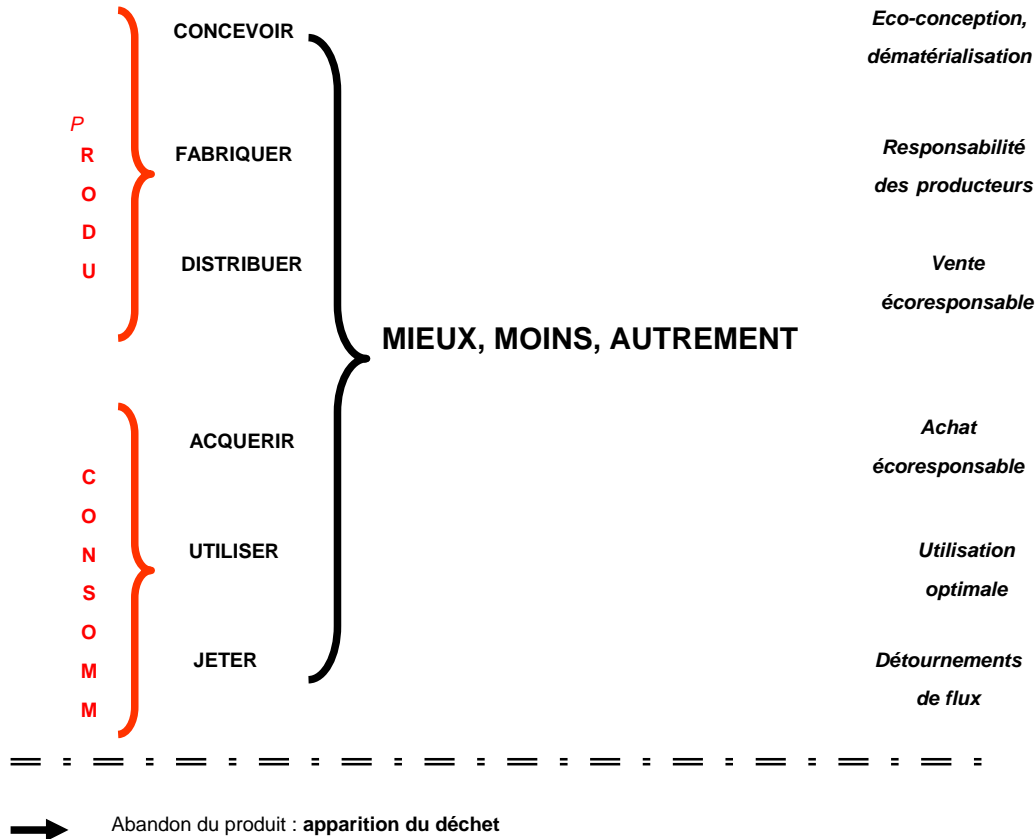
²⁷ OECD, ENV/EPOC/PPC(2000)5/FINAL: Strategic Waste Prevention: OECD reference manual, August 2000.

²⁸ Product re-use defined here is considered to be re-use 'at source' (home composting, re-use of clothes and equipment etc), to be differentiated from re-use 'separate from source', ie after these products enter into the formal waste management system.

²⁹ Agence Européenne de l'Environnement. *Case studies on waste minimisation practices in Europe*. Copenhagen, A.E.E., 2002. Page 6.

The OECD definition offers some clarity on the difference between minimisation and prevention and the box prevention with in the 'prevention measures' is equated to strict avoidance. However, strict avoidance should be further clarified – for example along the lines illustrated in the figure below – which proposes that strict avoidance is essentially 'before the waste becomes waste', ie in the phase of product.

Figure: The different fields of prevention ³⁰



³⁰ D'après F. Chalot, *Livre blanc sur la prévention des déchets*. France Nature Environnement, Paris, 2001. P.12